MONICA OLVERA de la CRUZ
Department of Materials Science & Engineering
Department of Chemistry
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EDUCATION:

1981-85	Ph.D. in **Physics** at the Theory of Condensed Matter Group**,** Cavendish Laboratory, Cambridge University, Cambridge, England. Thesis title: "Dynamics of Separation Processes in Polymers". Advisor: S. F. Edwards
1977-81	B. A. in **Physics**, Universidad Nacional Autonoma de Mexico (UNAM), Mexico City, Mexico. Thesis title: "Phase Transitions in Two-Dimensional Systems". Advisor: A. J. Mondragon

APPOINTMENTS:

2015-Present	**Director** – Center for Computation and Theory of Soft Materials, Northwestern University
2015-2018	**Co-Director** – Northwestern University/Art Institute of Chicago Center for Scientific Studies in the Arts (NU-ACCESS)
2014-Present	**Co-Director (2014-17)** – **Deputy Director (2017-21)** Center for Bio-Inspired Energy Science, Northwestern University
2009-Present	**Lawyer Taylor Professor** of Materials Science & Engineering, Professor of Chemistry, Professor of Chemical and Biological Engineering, and of Physics and Astronomy, Northwestern University
2006-13	**Director** – Materials Research Center, Northwestern University
1998-09	**Professor**- Department of Materials Science & Engineering, Northwestern University
1995-97	**Senior Staff Scientist (Engineer C3)** – Service de Chimie Moleculaire, Commissariat a l'Energie Atomique, Centre de'Etude, Saclay, 91191 Gif-Sur-Yvette, France
1991-98	**Associate Professor**- Department of Materials Science & Engineering and Department of Chemical and Biological Engineering, Northwestern University
1986-91	**Assistant Professor**- Department of Materials Science and Engineering, Northwestern University
1985-86	**Guest Scientist, Polymers Division**- National Institute of Standards and Technology (formerly NBS), Gaithersburg, MD. **Post-doctoral Research Associate**- Polymer Science and Engineering Department, University of Massachusetts, Amherst, MA (Advisor: I. C. Sanchez)

AWARDS AND SIGNIFICANT HONORS:

2024	G. N. Lewis Memorial Lecture, University of California, Berkeley
2023	Mulliken Medal, University of Chicago
2020	Guillermo Soberón Award
2020	Fellow, American Philosophical Society
2017	Polymer Physics Prize, American Physical Society
2016	Miller Institute Visiting Professor, University of California, Berkeley
2012	Member, National Academy of Sciences
2010	Special Civil Merit Award, State of Guerrero, Mexico
2010	Fellow, American Academy of Arts and Sciences
2010-15	National Security Science and Engineering Faculty Fellowship
2007	Engineering and Applied Sciences Cozzarelli Prize, Proceeding of the National Academy of Sciences

2003	Visiting Professor, Service de Physique Theorique, Commissariat a l'Energie Atomique, CE-Saclay, France
2001	Fellow, American Physical Society
1993	Visiting Scientist, Service de Chimie Moleculaire, Commissariat a l'Energie Atomique Commissariat a l'Energie Atomique, CE-Saclay, France
1991	Member, Materials Research Society
1990-95	Presidential Young Investigator Award, National Science Foundation
1990-92	Alfred P. Sloan Fellowship
1989-94	David and Lucile Packard Fellowship in Science and Engineering
1988-93	FIRST Award, National Institutes of Health
1981-84	UNAM scholarship from the Direccion General de Asuntos del Personal Academico, Mexico, held at Cambridge University, England
1982-84	Overseas Research Scholarship award (ORS-award) England, Cambridge University, England
1981-82	Graduate Studies Fellowship, Trinity College, Cambridge University, England (declined)
1979-81	Conacyt-UNAM scholarship, Mexico, held at Universidad Nacional Autonoma de Mexico, Mexico

SELECTED SIGNIFICANT SERVICES AND EXTRACURRICULAR EDUCATIONAL ACTIVITIES:

- **2024-Present** – International Advisory Board, Condensed Matter Physics Center (IFIMAC), Universidad Autónoma de Madrid, Madrid, Spain
- **Mar 4-8, 2024** – Organizer, APS March Meeting: John H. Dillon Medal Symposium, Minneapolis, MN
- **Jun 21-23, 2023** – Co-Organizer, Faraday Discussion: Iontronics, Edinburgh, UK
- **Mar 27-May 19, 2023** – Co-Organizer, Kavli Institute for Theoretical Physics: Nanoparticle Assemblies Conference, Santa Barbara, CA
- **2022-Present** – Committee on Publications, *National Academy of Sciences*
- **2021-Present** – Editorial Board, *Proceedings of the National Academy of Sciences*
- **2021-Present** – Condensed Matter and Materials Research Committee (CMMRC), NRC, NAS
- **2020** – Subcommittee, Basic Energy Sciences, Strategies in Research, Facilities, and Funding Mechanisms, Office of Science, U.S. Department of Energy
- **2020-2026** – International Scientific Committee, Ecole Supérieure de Physique et Chimie Industrielle de la ville de Paris (ESPCI Paris)
- **2019-2027** – Gordon Research Conferences Board of Trustees
- **2017-Present** – CIC biomaGUNE Scientific Advisory Board, San Sebastian, Spain
- **2017-2018** – Commemorating the 40th Anniversary of Basic Energy Sciences, Department of Energy, Subcommittee of the Basic Energy Sciences Advisory Committee (BESAC)
- **2016** – Committee on Vision of the Future of Center-Based, Multidisciplinary Engineering Research, The National Academies of Sciences, Engineering & Medicine
- **2015-2024** – International Scientific Advisory Board, Max Planck Institute for Polymer Physics, Mainz, Germany
- **Sep 24-25, 2015** – ARO Workshop on Potential Future Directions, NC
- **May 6-8, 2015** – ARO Biennial Review of Life Sciences
- **2015-2022** – Senior Editor, ACS Journal of Central Science
- **2014** – National Science Foundation (NSF) Advisory Committee for International Science and Engineering
- **2013-2020** – Advisory Committee, Center for Scientific Studies in the Arts (NU-ACCESS), Northwestern
- **Oct 20-22, 2013** – Co-Chair, NSF Workshop on Opportunities in Theoretical and Computational Polymeric Materials and Soft Matter, Santa Barbara, CA
- **2013-2014** – Co-Organizer, Evolution of Colloidal Matter, New York City, NY

- **2013** – Committee on Key Challenge Areas for Convergence and Health, National Research Council (NRC), National Academy of Sciences (NAS)
- **2012-2022** – Basic Energy Sciences Advisory Committee (BESAC), Department of Energy (DOE)
- **2012** – Committee on Societal Benefits from Condensed Matter and Materials Research, NRC
- **2012-2013** – Science and Technology for Defense Warning, NRC, NAS
- **2010-2012** – Chair, Condensed Matter and Materials Research Committee, NRC, NAS
- **2009** – Launched NSF funded Univ. Texas San Antonio PREM in association with NU-MRSEC
- **2009-2015** – Board of Physics and Astronomy, NRC, NAS
- **2009-2010** – Vice-Chair, Condensed Matter and Materials Research Committee, NRC, NAS
- **2008-2009** – Vice-Chair, Solid State Science Committee, NRC, NAS
- **2008-2009** – Chair, NSF-MRSEC Directors Executive Committee
- **2007-2009** – Research at the Intersection of Physical and Life Sciences, Committee on Forefronts of Science at the Interface of Physical and Life Sciences, NRC, NAS
- **2007-2009** – Chair, NSF Division of Materials Research Advisory Committee
- **2007-2008** – NSF Advisory Panel on Light Source Facilities
- **2006-2008** – Leadership Council, NSF National Center for Learning and Teaching in Nano-Science and Engineering (NCLT)
- **2005-2008** – Solid State Science Committee, NRC, NAS
- **2005-2009** – NSF Mathematical and Physical Sciences Directorate Advisory Committee
- **2004** – Co-Organizer, Plenary speaker, NSF Role of Theory in Biological Physics and Materials
- **1999-2006** – Director**,** Summer Research Experience for Undergraduates (REU) and Minority Research Initiative (MRI), Northwestern University
- **1997-2004** – Director & Co-Founder, Integrated Graduate Program to Prepare Educators of Materials Technologists, Northwestern University (created the degree)

PUBLICATIONS (Google Scholar: https://scholar.google.com/citations?user=bLeuseAAAAAJ&hl=en ; Web of Science: "delacruz MO" from 1986-96 and "de la Cruz MO" from 1997-Pre):

1. G.M.Amato., F. Jimenez-Angeles, M. Olvera de la Cruz, "**Valence-Selective Electrophoretic Transport in Neutral Carbon Nanotubes**", *arXiv preprint arXiv:* 2611.02077. (2026). http://arxiv.org/abs/2611.02077
2. J.B. Chatterjee, E. Krucker-Velasquez, H. Sai, K.J. Gray, Y. Liu, W. Skyrud, E.C. Grosvenor, S.E. Branovsky, S.I. Stupp, J.J. Richards, M. Olvera de la Cruz, C.AC.Chazot, "**Aqueous-Phase Polyelectrolyte Behavior of Hydroxypropyl Chitosan,**" *ACS Polymers Au* 6 (5) 1301-1314. (2026). https://doi.org/10.1021/acspolymersau.6c00071
3. S.G. Levya, A. Shrestha, M. Olvera de la Cruz, **"Active Ionic Fluxes Induce Symmetry Breaking in Charge-Patterned Nanochannels,"** *Physical Review Letters* 137 (14)**,** 148202 (2026). https://doi.org/10.1103/k9sp-h4c3
4. B.K. Johnson, N. Pogharian, S. Wang, S.A. Egner, Y. Yang, L.C. Palmer, M. Olvera de la Cruz, S.I. Stupp, **"Electron Donor-Acceptor Hybrid Bonding Polymers Exhibit Lattice Symmetry Breaking and Ferroelectricity,"** *Journal of Materials Chemistry C,* (2026). https://doi.org/10.1039/d6tc01300g
5. E. Krucker-Velasquez, E. Kirkinis, M. Olvera de la Cruz, "**Universal Behavior in Diffuse Charge Dynamics with Patterned Electrodes,**" *arXiv preprint arXiv*:2609.25265. (2026). https://arxiv.org/pdf/2609.25265
6. A.G. Davis, J.A. Cintrón Cruz, S. Fitz, K. Ko, E.O. Bobylev, M. Olvera de la Cruz, J.A. Johnson, **"Topologically Selective Deconstruction of Polymer Networks,"** *chemrxiv*, https://chemrxiv.org/doi/pdf/10.26434/chemrxiv.10001693/v1

7. S.A. Crane, F. Jimenez Angeles, M. Olvera de la Cruz, I.J. Dmochowski, K.J. Stebe, "**Gelation of Functional Peptides by Trivalent Cations at the Air-Water Interface**", *arXiv preprint arXiv*:2607.14061 (2026). https://arxiv.org/pdf/2607.14061
8. I. Smith, N. Pogharian, F.J. Solis, T.D. Ngyuen, M. Olvera de la Cruz, "**Electric Field Effects on Electrolytes Near Rough Dielectric Surfaces by GPU-Accelerated Code**", *arXiv preprint arXiv:* 2609.17791. (2026). https://arxiv.org/pdf/2609.17791
9. DA Matoz-Fernandez, S Li, M Olvera de la Cruz, R Sknepnek, **"A Flexible Framework for Efficient Simulations of Elastic and Liquid Membranes"** *npj Comput Mater* (2026). https://doi.org/10.1038/ s41524-026-02236-1
10. A. Gomez, B. Mehrafrooz, C. Waltmann, C. E. Mills, N. W. Kennedy, J. B. Miller, D. Tullman-Ercek, M. Olvera de la Cruz, "**Engineering the Self-assembly of the Bacterial Microcompartment Shell Proteins via Charged Mutations**" *ACS Nano* 20 (32): 22931–22946 (2026) *(cover article*); https://doi.org/10.1021/acsnano.6c09991
11. S. Leyva, A. Shrestha, M. Olvera de la Cruz, "**Active Ionic Fluxes Induce Symmetry Breaking in Charge-Patterned Nanochannels**" *Phys. Rev. Lett* (in press); https://arxiv.org/pdf/2510.15092
12. C. Deng, S. W. Fitz, M. Olvera de la Cruz, "**Solvent-Dependent Mechanical Response of De Novo Helix Repeat Proteins**" *The Journal of Physical Chemistry B* 130 (25), 6311-6319 (2026); https://doi.org/10.1021/acs.jpcb.6c00970
13. Z. Sang, S. Nguyen, K. Ko, S. Lin, H. Jang, S. Gonzalez-Zapata, S. Fitz, Y. Kai, S. Kooi, M. Olvera de la Cruz, M. Koslowski, H. J. Kulik, S. L. Craig, K. A. Nelson, J. A. Johnson, "**Mechanophore Cross-Linking Enhances Ballistic Energy Dissipation of Polymers**" *Nature* 654 (8117), 85-91 (2026); https://doi.org/10.1038/s41586-026-10557-w
14. B. N. Onusaitis, E. Krucker-Velasquez, M. Olvera de la Cruz, "**Crystalline Ordering of Ionic Liquids Under Confinement**" (in review)
15. Y. Na, D. Le, P.-A. Lin, Z. Zhang, J. Pombo, F. Jiménez-Ángeles, K. Han, L. Zhang, C. Do, H. T. Chiang, M. Olvera de la Cruz, A. Frañó, G. Arya, F. A. Tezcan, "**Role of Polymer–Protein Interactions in the Dynamics of Polymer-Integrated Protein Crystals**" *J. Am. Chem. Soc.* 148 (17), 18080-18094 (2026); https://doi.org/10.1021/jacs.6c02182
16. F. Jimenez-Angeles, M. Olvera de la Cruz, "**Unstructured protein mimics have enzymatic activity**" *Chem* 12 (3), 102996 (2026); https://doi.org/10.1016/j.chempr.2026.102996
17. V. Agrawal, M. Olvera de la Cruz, "**Electrostatically driven pattern formation in mixed charged–neutral multicomponent elastic membranes**" *PNAS* 123 (11), e2536038123 (2026); https://doi.org/10.1073/pnas.2536038123
18. A. Shrestha, E. Kirkinis, M. Olvera de la Cruz, "**Oscillating electroosmotic flow in channels and capillaries with modulated wall charge distribution**" *Phys. Rev. E* 113, 015106 (2026); https://doi.org/10.1103/zhmf-zp4j
19. S. Leyva, Z. Zhang, M. Olvera de la Cruz, K. Bishop, "**Self-oscillating synchronematic colloids**" *Nature Communications* 17, 1841 (2026); https://doi.org/10.1038/s41467-026-68552-8
20. L. E. Ortuno Macias, F. Jimenez-Angeles, S. S. KT, K. J. Stebe, M. Olvera de la Cruz, M. K. Bera, W. Bu, B. Lin, C. Maldarelli, R. S. Tu, "**Supramolecular Assembly of Lanthanide-Binding Tag Peptides for Aqueous Separation of Rare Earth Elements**" *ACS Nano* 19 (41), 36171-36183 (2025); https://doi.org/10.1021/acsnano.5c05056
21. J. Yin, D. Qian, T. S. Plaha, Y. Huang, M. Olvera de la Cruz, E. Kumacheva, "**Ion Conductivity of Polyelectrolyte Hydrogels with Varying Compositions**" *ACS Nano* 19 (39), 34797-34806 (2025); https://doi.org/10.1021/acsnano.5c10246
22. Y. Xiong, C. Deng, S. Wei, L. M. Campos, M. Olvera de la Cruz, "**Design Principles of Stimuli-Responsive Covalent Adaptable Networks**" *Macromolecules* 58 (17), 9546-9555 (2025); https://doi.org/10.1021/acs.macromol.5c01102

23. F. Jimenez-Angeles, N. Pogharian, B. N. Onusaitis, M. Olvera de la Cruz, "**Functionalities of Simple and Complex Electrolytes in Confinement**" *J. Am. Chem. Soc*. 147 (31), 27105-27121 (2025); https://doi.org/10.1021/jacs.5c04186
24. L. Lopez-Flores, M. Olvera de la Cruz, "**Charge regulation effects on colloidal mixture nanoparticles**" *J. Chem. Phys.* 163 (3), 034303 (2025); https://doi.org/10.1063/5.0277107
25. C. Hemmingsen, S. Chapman, C. Deng, Y. Xiong, C. Hanley, V. Zhang, M. Olvera de la Cruz, J. Kalow, "**Rheological Isotope Effects for Molecular Insight in Covalent Adaptable Networks**" *Macromolecules* 58 (15), 7957-7966 (2025); https://doi.org/10.1021/acs.macromol.5c01258
26. A. Shrestha, E. Kirkinis, M. Olvera de la Cruz, "**Self-generated electrokinetic flows from active-charged boundary patterns**" *Physical Review Research* 7 (2), 023223 (2025); https://doi.org/10.1103/PhysRevResearch.7.023223
27. Y. Xiong, A. Aggarwal, M. Olvera de la Cruz, "**Chemo-Mechanical Coupling in Hydrogels: Dynamics in the Diffusion-Limited Regime**" *Advanced Functional Materials* 2507078 (2025); https://doi.org/10.1002/adfm.202507078
28. A. Shrestha, E. Kirkinis, M. Olvera de la Cruz, "**Universal behaviour in boundary-driven electrokinetic flows**" *Journal of Fluid Mechanics* 1010, A50 (2025); https://doi.org/10.1017/jfm.2025.288
29. Surabh S. KT, B. Qiao, J. G. Marmorstein, Y. Wang, D. C. Favaro, K. J. Stebe, E. James Petersson, R. Radhakrishnan, C. de la Fuente-Nunez, R. S. Tu, C. Maldarelli, M. Olvera de la Cruz, R. J. Messinger, "**The Role of Asparagine as a Gatekeeper Residue in the Selective Binding of Rare Earth Elements by Lanthanide-Binding Peptides**" *Chem. Eur. J.* 31 (33), e202501318 (2025); https://doi.org/10.1002/chem.202501318
30. J. M. McCourt, L. Lopez-Flores, S. Kewalramani, N. B. Welke, M. Olvera de la Cruz, M. J. Bedzyk, "**Coupling of Charge Regulation and Geometry in Soft Ionizable Molecular Assemblies**" *The Journal of Physical Chemistry B* 129 (15), 3814-3828 (2025); https://doi.org/10.1021/acs.jpcb.5c00162
31. C. DelRe, H. Hong, F. Jiménez-Ángeles, M. B. Wenny, D. P. Erdosy, J. Cho, S. Britt, M. Olvera de la Cruz, J. A. Mason, "**Protein Coatings Dictate the Dispersibility and Stability of Hydrophobic Zeolitic-Imidazolate Frameworks in Water**" *The Journal of Physical Chemistry B* 129 (11), 3120-3130 (2025); https://doi.org/10.1021/acs.jpcb.5c00972
32. E. Esposito, H. Lopez-Rios, M. Olvera de la Cruz, H. M. Jaeger, "**Actuating Superparamagnetic Nanoparticle Monolayers**" *PNAS* 122 (13), e2424073122 (2025); https://doi.org/10.1073/pnas.2424073122
33. Z. Song, M. Farnese, A. Shrestha, M. Olvera de la Cruz, "**Blockage effects in the chemotaxis of diffusiophoretic particles**" *Soft Matter* 21, 4692-4699 (2025); https://doi.org/10.1039/D5SM00270B
34. S. D. Cezan, A. Aggarwal, C. Li, H. Yuan, L. C. Palmer, M. Olvera de la Cruz, S. I. Stupp, "**Autonomous phototaxis of hydrogel swimmers**" *PNAS* 121 (50), e2411092121 (2024); https://doi.org/10.1073/pnas.2411092121
35. A. Aggarwal, S. Chen, E. Kirkinis, M. I. Khan, B. Fan, M. M. Driscoll, M. Olvera de la Cruz, "**Wobbling and Migrating Ferrofluid Droplets**" *Commun Phys* 7, 385 (2024); https://doi.org/10.1038/s42005-024-01871-8
36. N. Sadaba, E. Sanchez-Rexach, C. Waltmann, S. L. Hilburg, M. Olvera de la Cruz, H. Sardon, L. R. Meza, A. Nelson, "**Strain learning in protein-based mechanical metamaterials**" *PNAS* 121 (45), e2407929121 (2024); https://doi.org/10.1073/pnas.240792912
37. E. Kirkinis and M. Olvera de la Cruz, "**Evanescent and inertial-like waves in rigidly rotating odd viscous liquids**" *Journal of Fluid Mechanics* 996, A13 (2024); https://doi.org/10.1017/jfm.2024.791
38. N. Pogharian, P. M. Vlahovska, M. Olvera de la Cruz, "**Effects of Normal and Lateral Electric Fields on Membrane Mechanical Properties**" *The Journal of Physical Chemistry B* 128 (38), 9172-9182 (2024); https://doi.org/10.1021/acs.jpcb.4c04255
39. C. Waltmann, A. Shrestha, M. Olvera de la Cruz, "**Patterning of multicomponent elastic shells by Gaussian curvature**" *Physical Review E* 109, 054409 (2024); https://doi.org/10.1103/PhysRevE.109.054409
40. L. E. Ortuno Macias, F. Jimenez-Angeles, J. G. Marmorstein, Y. Wang, S. A. Crane, S. KT, P. Sun, B. Sapkota, E. Hummingbird, W. Jung, B. Qiao, D. Lee, I. J. Dmochowski, R. Messinger, M. L. Schlossman, R. Radhakrishnan, E. James Petersson, M. Olvera de la Cruz, W. Bu, M. Bera, B. Lin, R. Tu, K. Stebe, C. Maldarelli "**Lanthanide binding peptide surfactants at air-aqueous interfaces for interfacial separation of rare earth elements**" *PNAS* 121 (52), e2411763121 (2024); https://doi.org/10.1073/pnas.2411763121

41. J. Xia and M. Olvera de la Cruz, "**Effect of molecular structure on the dynamics and viscoelasticity of vitrimers**" *Polymer* 308, 127371 (2024); https://doi.org/10.1016/j.polymer.2024.127371
42. S. D. Cezan, C. Li, J. Kupferberg, L. Đorđević, A. Aggarwal, L. C. Palmer, M. Olvera de la Cruz, S. I. Stupp, "**Fast Photoactuation Driven by Supramolecular Polymers Integrated into Covalent Networks**" *Advanced Functional Materials* 34 (49), 2400386 (2024); https://doi.org/10.1002/adfm.202400386
43. S. Mahapatra, D. Qian, R. Zhang, S. Yang, P. Li, Y. Feng, L. Zhang, H. Wu, J. S. W. Seale, P. J. Das, P. K. Jha, K. L. Kohlstedt, M. Olvera de la Cruz, J. F. Stoddart "**Hydrogen-Bonded Fibrous Nanotubes Assembled from Trigonal Prismatic Building Blocks**" *Journal of the American Chemical Society* 146 (31), 21689-21699 (2024); https://doi.org/10.1021/jacs.4c05804
44. M. Girard, M. Olvera de la Cruz, J. F. Marko, A. Erbaş, "**Heterogeneous flexibility can contribute to chromatin segregation in the cell nucleus**" *Physical Review E* 110 (1), 014403 (2024); https://doi.org/10.1103/PhysRevE.110.014403
45. M. M. Wang, M-R. Choi, C. Battistella, B. Gattis, B. Qiao, M. Evangelopoulos, C. A. Mirkin, M. Olvera de la Cruz, B. Zhang, N. C. Gianneschi, "**Proteomimetic Polymers Trigger Potent Antigen-Specific T Cell Responses to Limit Tumor Growth**" *Journal of the American Chemical Society* 146 (22), 14959-14971 (2024); https://doi.org/10.1021/jacs.3c05340
46. S. A. Crane, F. Jimenez-Angeles, Y. Wang, L. E. Ortuno Macias, J. G. Marmorstein, J. Deng, M. Molaei, E. James Petersson, R. Radhakrishnan, C. de la Fuente-Nunez, M. Olvera de la Cruz, R. S. Tu, C. Maldarelli, I. J. Dmochowski, K. J. Stebe, "**Interfacial rheology of lanthanide binding peptide surfactants at the air-water interface**" *Soft Matter* 20, 9161-9173 (2024); https://doi.org/10.1039/D4SM00493K
47. J. Xia and M. Olvera de la Cruz, "**Dynamics and structure of unentangled associative polymers**" *Macromolecules* 57 (18), 8793-8802 (2024); https://doi.org/10.1021/acs.macromol.4c01235
48. T. Pial, Y. Li, M. Olvera de la Cruz, "**Microscopically segregated ligand distribution in co-assembled peptide-amphiphile nanofibers**" *Soft Matter* 20, 4640-4647 (2024); https://doi.org/10.1039/D4SM00315B
49. N. Pogharian, A. P. dos Santos, A. Ehlen, M. Olvera de la Cruz, "**Electric fields near undulating dielectric membranes**" *J. Chem. Phys.* 160, 094704 (2024) https://doi.org/10.1063/5.0185570
50. S. Chen, H. Lopez-Rios, M. Olvera de la Cruz, M. Driscoll, "**Restructuring a passive colloidal suspension using a rotationally driven particle**" *Soft Matter*, 20, 2151-2161 (2024); DOI: 10.1039/D4SM00010B
51. R. J. Reinertsen, F. Jimenez-Angeles, S. Kewalramani, M. Bedzyk, M. Olvera de la Cruz, "**Transformations in crystals of DNA-functionalized nanoparticles by electrolytes**" *Faraday Discussions* 249, 408-423 (2024); https://doi.org/10.1039/D3FD00109A
52. R. J. Reinertsen, S. Kewalramani, F. Jimenez-Angeles, S. Weigand, M. Bedzyk, M. Olvera de la Cruz, "**Re-expansion of Charged Nanoparticle Assemblies in Concentrated Electrolytes**" *PNAS,* 121 (6) e2316537121 (2024); https://doi.org/10.1073/pnas.2316537121
53. K. P. Carrow, H. L. Hamilton, M. P. Hopps, Y. Li, B. Qiao, N. C. Payne, M. P. Thompson, X. Zhang, A. Magassa, M. Fattah, S. Agarwal, M. P. Vincent, M. Buyanova, P. A. Bertin, R. Mazitschek, M. Olvera de la Cruz, D. A. Johnson, J. A. Johnson, N. C. Gianneschi, "**Inhibiting the Keap1/Nrf2 Protein-Protein Interaction with Protein-Like Polymers**" *Advanced Materials* 36 (21) 2311467 (2024); https://doi.org/10.1002/adma.202311467
54. A. Shrestha, M. Olvera de la Cruz, "**Enhanced phoretic self-propulsion of active colloids through surface charge asymmetry**" *Physical Review E* 109, 014613 (2024); https://doi.org/10.1103/PhysRevE.109.014613
55. E. Kirkinis, A.V. Andreev, M. Olvera de la Cruz, **"Hydrodynamics of thermally driven chiral suspensions"** *Journal of Fluid Mechanics*, 977, A8 (2023); https://doi.org/10.1017/jfm.2023.941
56. D. A. Matoz-Fernandez, S. Li, M. Olvera de la Cruz, R. Sknepnek, "**PyMembrane: A flexible framework for efficient simulations of elastic and liquid membranes**" (submitted); https://arxiv.org/abs/2308.12754
57. L. Lopez-Flores and M. Olvera de la Cruz, "**Induced phase transformation in ionizable colloidal nanoparticles**" *European Physics Journal E* 46(12): 122 (2023); https://doi.org/10.1140/epje/s10189-023-00386-4
58. E. Kirkinis, M. Olvera de la Cruz, **"Taylor halos and Taylor spears in odd viscous liquids"** *Physics of Fluids* 35, 101702 (2023); https://doi.org/10.1063/5.0173525
59. Y. Li, M. Kim, T. Pial, Y. Lin, H. Cui, M. Olvera de la Cruz, "**Aggregation-Induced Asymmetric Charge States of Amino Acids in Supramolecular Nanofibers**" *J. Phys. Chem. B* 127 (38), 8176-8184 (2023); https://doi.org/10.1021/acs.jpcb.3c05598
60. J. Xia, J. Kalow, M. Olvera de la Cruz, "**Structure, Dynamics, and Rheology of Vitrimers**" *Macromolecules* 56 (19), 8080-8093 (2023); https://doi.org/10.1021/acs.macromol.3c01366
61. E. Kirkinis and M. Olvera de la Cruz, "**Taylor columns and inertial-like waves in a three-dimensional odd viscous liquid**" *Journal of Fluid Mechanics* 973, A30 (2023); DOI:10.1017/jfm.2023.769

62. Y. Xiong, H. Yuan, M. Olvera de la Cruz, "**Janus magnetoelastic membrane swimmers**" *Soft Matter* 19, 6721-6730 (2023); DOI: 10.1039/D3SM00788J
63. A. P. dos Santos, F. Jimenez-Angeles, A. Ehlen, M. Olvera de la Cruz, "**Modulation of ionic conduction using polarizable surfaces**" *Phys. Rev. Research* 5, 043174 (2023); DOI: 10.1103/PhysRevResearch.5.043174
64. C. Waltmann, N. W. Kennedy, C. E. Mills, E. W. Roth, S. P. Ikonomova, D. Tullman-Ercek, M. Olvera de la Cruz, "**Kinetic growth of multi-component microcompartment shells**" *ACS Nano* 17(16), 15751-15762 (2023); https://doi.org/10.1021/acsnano.3c03353
65. S. M. Morozova, L. Lopez-Flores, A. Gevorkian, H. Zhang, V. Adibnia, W. Shi, D. Nykypanchuk, T. G. Statsenko, G. C. Walker, O. Gang, M. Olvera de la Cruz and E. Kumacheva **"Colloidal Clusters and Networks Formed by Oppositely Charged Nanoparticles with Varying Stiffnesses"** *ACS Nano* 17 (15) 15012–15024 (2023); https://pubs.acs.org/doi/full/10.1021/acsnano.3c04064
66. D. Qian and M. Olvera de la Cruz, **"Field-driven cluster formation in two-dimensional colloidal binary mixtures**" *Physical Review E* 107, 044605 (2023); DOI: 10.1103/PhysRevE.107.044605
67. H. Lopez-Rios and M. Olvera de la Cruz, "**Ink that mimics the colour of incoming light**" *Nature* 617, 467-468 (2023); https://doi.org/10.1038/d41586-023-01582-0
68. J. Wang, C. Waltmann, C. Harms, S. Hu, J. Hegarty, B. Shindel, Q. Wang, V. Dravid, K. Shull, J. Torkelson, M. Olvera de la Cruz, "**Tailoring interactions of random copolymer polyelectrolyte complexes to remove nanoplastic contaminants from water**" *Langmuir* 39 (21), 7514-7523 (2023); DOI: 10.1021/acs.langmuir.3c01028
69. A. Aggarwal, E. Kirkinis, M. Olvera de la Cruz, "**Thermocapillary migrating odd viscous droplets**" *Phys. Rev. Lett.* 131, 198201 (2023); https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.131.198201
70. E. Kirkinis, A. V. Andreev, M. Olvera de la Cruz, "**Hydrodynamics of thermally-driven chiral propulsion and separations**" *Journal of Fluid Mechanics* 977: A8 (2023); https://doi.org/10.1017/jfm.2023.941
71. F. Jimenez-Angeles, A. Ehlen, and Monica Olvera de la Cruz, "**Surface polarization enhances ionic transport and correlations in electrolyte solutions nanoconfined by conductors**" *Faraday Discuss.* 246, 576-591 (2023); https://doi.org/10.1039/D3FD00028A
72. Y. Lin, M. Olvera de la Cruz, "**Colloidal superionic conductors**" *PNAS* 120 (15) e2300257120 (2023); www.pnas.org/doi/10.1073/pnas.2300257120
73. J. Wang, T. B. Kouznetsova, J. Xia, F. J. Ángeles, M. Olvera de la Cruz, S. L. Craig, "**A Polyelectrolyte handle for single-molecule force spectroscopy**" *J. Polym. Sci.,* 62, 1277-1286 (2023); https://doi.org/10.1002/pol.20230051
74. A. Aggarwal, E. Kirkinis, M. Olvera de la Cruz, "**Activity-induced migration of viscous droplets on a solid substrate**" *Journal of Fluid Mechanics*, 955, A10 (2023); https://doi.org/10.1017/jfm.2022.1051
75. C. A. Brisbois and M. Olvera de la Cruz, "**Positional Ordering Induced by Dynamic Steric Interactions in Superparamagnetic Rods**" *Soft Matter,* 19, 851-857 (2022); https://doi.org/10.1039/D2SM01519F
76. E. Kirkinis and Olvera de la Cruz, **"Activity-induced propulsion and separation of passive chiral particles in liquids**" *Phys. Rev. Fluids*, 8, 023302 (2023); https://link.aps.org/doi/10.1103/PhysRevFluids.8.023302
77. H. Yuan, M. Olvera de la Cruz, "**Stokesian dynamics with odd viscosity**" *Physical Review Fluids*, 8, 054101 (2023); https://doi.org/10.48550/arXiv.2210.14412
78. D. Olaya-Munoz, J. Hernandez-Ortiz, and M. Olvera de la Cruz, "**Geometrically driven aggregation of unsymmetrical dielectric particles**" *Journal of Chemical Physics* 157, 20 (2022); https://doi.org/10.1063/5.0127112
79. E. Kirkinis, J. Mason, and M. Olvera de la Cruz, "**Odd viscosity-induced passivation of Moffatt vortices**" *Journal of Fluid Mechanics* 950, A19 (2022); DOI: 10.1017/jfm.2022.820
80. D. P. Erdosy, M. B. Wenny, J. Cho, C. DelRe, M. V. Walter, F. Jimenez-Angeles, B. Qiao, R. Sanchez, Y. Peng, B. D. Polizzotti, M. Olvera de la Cruz, J. A. Mason, **"Microporous Water with High Gas Solubilities**" *Nature* 608, 712-718 (2022); DOI:10.1038/s41586-022-05029-w.
81. Y. Lin and M. Olvera de la Cruz, "**Superionic Colloidal Crystals: Ionic to Metallic Bonding Transitions**" *J. Phys. Chem. B* 126, 35, 6740–6749 (2022); DOI: 10.1021/acs.jpcb.2c04041
82. I. Coropceanu, E.M. Janke, J. Portner, D. Haubold, T. D. Nguyen, A. Das, C. P.N. Tanner, J. K. Utterback, S. W. Teitelbaum, M. Hudson, N. Sarma, A. M. Hinkle, C. J. Tassone, A. Eychmuller, D. T. Limmer, M. Olvera de la Cruz, N. S. Ginsberg, D. V. Talapin, "**Self-assembly of nanocrystals into strongly electronically coupled all-inorganic supercrystals**" *Science* 375 (6587), 1422-1426 (2022); DOI: 10.1126/science.abm6753
83. J. McCourt, S. Kewalramani, C. Gao, E. W. Roth, S. Weigand, M. Olvera de la Cruz, and M. J. Bedzyk, "**Electrostatic Control of Shape Selection and Nanoscale Structure in Chiral Molecular Assemblies**" ACS Central Science 8(8), 1169-1181(2022); doi.org/10.1021/acscentsci.2c00447

84. H. Kossio-Umana, T. D. Nguyen, J. Wang, M. Olvera de la Cruz, and J. M. Torkelson, "**Unusual Glass Transition Breadths of Ionomers: Effects of Thermal Treatment and Charge-Carrying Side Chains**" *Macromolecules* 55(15), 6536-6546 (2022); doi.org/10.1021/acs.macromol.2c00180
85. C. E. Mills, C. Waltmann, A. G. Archer, N. W. Kennedy, C. H. Abrahamson, A. D. Jackson, E. W. Roth, S. Shirman, M. C. Jewett, N. M. Mangan, M. Olvera de la Cruz, D. Tullman-Ercek "**Vertex protein PduN tunes encapsulated pathway performance by dictating bacterial metabolosome morphology**" *Nature Communications* 13, 3746 (2022) DOI: 10.1038/s41467-022-31279-3 (bioRxiv 2021.10.31.466680)
86. C. A. Brisbois and M. Olvera de la Cruz **"Locomotion of magnetoelastic membranes in viscous fluids"** *Phys. Rev. Research* 4**,** 023166 (2022) DOI**:** 10.1103/PhysRevResearch.4.023166
87. S. Yoo, B. Qiao, T. Douglas, W. Bu, M. Olvera de la Cruz, P. Dutta "**Specific Ion Effects in Lanthanide Amphiphile Structures at the Air Water Interface and Their Implications for Selective Separation**" *ACS Applied Materials & Interfaces* 14, 7504-7512 (2022); DOI: 10.1021/acsami.1c24008
88. R.J. Nap, B. Qiao, L.C. Palmer, S. I. Stupp, M. Olvera de la Cruz, and I. Szleifer, "**Acid-Base Equilibrium and Dielectric Environment Regulate Charge in Supramolecular Nanofibers**" *Front. Chem.* 10, 852164 (2022); DOI: 10.3389/fchem.2022.852164
89. A. Aggarwal, C. Li S. I Stupp and M. Olvera de la Cruz "**Controlling the Shape Morphology of Origami-Inspired Photoresponsive Hydrogels**" *Soft Matter* 18, 2193 (2022); DOI: 10.1039/D1SM01751A
90. C. Waltmann, C. E. Mills, J. Wang, B. Qiao, J. M. Torkelson, D. Tullman-Ercek, and M. Olvera de la Cruz "**Functional Enzyme-Polymer Complexes**" *PNAS* 119 (13), e2119509119 (2022); DOI: | 10.1073/pnas.2119509119
91. B. Zhang, H. Yuan, A. Sokolov, M. Olvera de la Cruz, A. Snezhko "**Polar state reversal in active fluids**" *Nature Physics* 18, 154-159 (2022); DOI: 10.1038/s41567-021-01442-6
92. T. D. Nguyen, F. Jimenez-Angeles and M. Olvera de la Cruz "**Probing the Size-Dependent Polarizability of Mesoscopic Ionic Clusters and Their Induced-Dipole Interactions***" J. Chem. Phys*. 155, 194901 (2021); DOI: 10.1063/5.0064267
93. H. Sun, B. Qiao, W. Choi, N. Hampu, N. C. McCallum, M. P. Thompson, J. Oktawiec, S. Weigand, O. M. Ebrahim, M. Olvera de la Cruz, and N. C. Gianneschi "**Origin of Proteolytic Stability of Peptide-Brush Polymers as Globular Proteomimetics**" *ACS Central Science* 7, 12, 2063-2072 (2021); DOI: 10.1021/acscentsci.1c01149
94. A. Cardellini, F. Jimenez-Angeles, P. Asinari, and M. Olvera de la Cruz "**A Modeling-Based Design to Engineering Protein Hydrogels with Random Copolymers**" *ACS Nano* 15, 16139–16148 (2021); DOI: 10.1021/acsnano.1c04955
95. A. Ehlen, H. Lopez-Rios, M. Olvera de la Cruz, "**Metallization of Colloidal Crystals**" *Phys. Rev. Mater*. 5 (11), 115601 (2021); DOI: 10.1103/PhysRevMaterials.5.115601
96. W. Li and M. Olvera de la Cruz **"Glass transition of ion-containing polymer melts in bulk and thin films"** *Soft Matter* 17, 8420-8433 (2021); DOI: 10.1039/d1sm01098k
97. F. J. Solis and M. Olvera de la Cruz "**Pimples reduce and dimples enhance flat dielectric surface image repulsion**" *Journal of Chemical Physics* 155, 104703 (2021); DOI: 10.1063/5/005881
98. S. Li, D. A. Matoz-Fernandez, and M. Olvera de la Cruz "**Effect of Mechanical Properties on Multicomponent Shell Patterning**" *ACS Nano*, 15, 14804–14812 (2021); DOI: 10.1021/acsnano.1c04795
99. Z. Zhang, H. Yuang, Y. Dou, M. Olvera de la Cruz and K. J. M. Bishop "**Quincke Oscillations of Colloids at Planar Electrodes**" *Physical Review Letters* 126, 258001 (2021); DOI: 10.1103/PhysRevLett.126.258001
100. Y. Liang, B. Ma, and M. Olvera de la Cruz "**Reverse order-disorder transition of Janus particles confined in two dimensions**" *Physical Review E* 103, 062607 (2021); DOI: 10.1103/PhysRevE.103.062607
101. J. Wang, Curt Waltmann, H. Kossio-Umana, M. Olvera de la Cruz and J. M. Torkelson, "**Heterogeneous Charged Complexes of Random Copolymers for the Segregation of Organic Molecules**" *ACS Central Science* 7, 882-891 (2021); DOI: 10.1021/acscentsci.1c00119
102. Y. Li, N.W. Kennedy, S. Li, C.E. Mills, D. Tullman-Ercek, M. Olvera de la Cruz, "**Computational and experimental approaches to controlling bacterial microcompartment assembly**" *ACS Central Science* 7, 4, 658–670 (2021); doi.org/10.1021/acscentsci.0c01699
103. B. Ma and M. Olvera de la Cruz, "**A Perspective on the Design of Ion-containing Polymers for Polymer Electrolyte Applications**" *Journal of Physical Chemistry B* 125, 3015-3022 (2021); DOI: 10.1021/acs.jpcb.0c08707
104. S. Li, D. A. Matoz-Fernandez, A. Aggarwal, and M. Olvera de la Cruz "**Chemically controlled pattern formation in self-oscillating elastic shells"** *PNAS* 118 (10), e2025717118 (2021); DOI: 10.1073/pnas.2025717118 PMID: 33649242

105. J. L. Fenton, D. W. Burke, D. Qian, M. Olvera de la Cruz, W. R. Dichtel, "**Polycrystalline Covalent Organic Framework Films Act as Adsorbents, Not Membranes**" *JACS* 143, 1466–1473 (2021); DOI: 10.1021/jacs.0c11159
106. H. Lopez-Rios, A. Ehlen, and M. Olvera de la Cruz, "**Delocalization Transition in Colloidal Crystals**" *Journal of Physical Chemistry C* 125, 1, 1096–1106 (2021); DOI: 10.1021/acs.jpcc.0c09730
107. C. Li, G.C. Lau, H. Yuan, A. Aggarwal, V. Lopez Dominguez, S. Liu, H. Sai, L.C. Palmer, N.A. Sather, T.J. Pearson, D.E. Freedman, P. Khalili Amiri, M. Olvera de la Cruz, S.I. Stupp, "**Fast and programmable locomotion of hydrogel-metal hybrids under light and magnetic fields**" *Science Robotics* 5, eabb9822 (2020); DOI: 10.1126/scirobotics.abb9822
108. F. Jimenez-Angeles, K. Harmon, T.D. Nguyen, P. Fenter, and M. Olvera de la Cruz, "**Non-Reciprocal Interactions Induced by Water in Confinement**" *Physical Review Research* 2, 043244 (2020); DOI: 10.1103/PhysRevResearch.2.043244
109. D. Bagchi, M. Olvera de la Cruz, "**Dynamics of a driven confined polyelectrolyte solution**" *Journal of Chemical Physics*, 153, 184904 (2020); DOI: 10.1063/5.0027049
110. Y. Chen, F. Jimenez-Angeles, B. Qiao, M. Krzyaniak, F. Sha, S. Kato, X. Gong, C. Buru, Z. Chen, X. Zhang, N. Gianneschi, M. Wasielewski, M. Olvera de la Cruz, O. Farha, "**Insights into the Enhanced Catalytic Activity of Cytochrome c When Encapsulated in a Metal–Organic Framework**" *J. Amer. Chem. Soc* 142, 18576–18582 (2020); DOI: 10.1021/jacs.0c07870
111. Y. Li, B. Qiao, and M. Olvera de la Cruz, "**Protein surface printer for exploring protein domains**" *Journal of Chemical Information and Modeling* 60, 5255–5264 (2020); DOI: 10.1021/acs.jcim.0c00582
112. D. Prusty, R. Nap, I. Szleifer and M. Olvera de la Cruz, "**Charge regulation mechanism in end-tethered weak polyampholytes**" *Soft Matter* 16, 8832-8847 (2020); DOI: 10.1039/D0SM01323D
113. F. Du, B. Qiao, T.D. Nguyen, M.P. Vincent, S. Bobbala, S. Yi, C. Lescott, V.P. Dravid, M. Olvera de la Cruz, E.A. Scott, "**Homopolymer self-assembly of poly(propylene sulfone) hydrogels via dynamic noncovalent sulfone-sulfone bonding**" *Nature Communications* 11, 4896 (2020); DOI: 10.1038/s41467-020-18657-5
114. B. Qiao and M. Olvera de la Cruz, "**Enhanced Binding of SARS-CoV-2 Spike Protein to Receptor by Distal Polybasic Cleavage Sites**" *ACS Nano* 14, 10616–10623 (2020); DOI: 10.1021/acsnano.0c04798
115. D. Bagchi, T. D. Nguyen, M. Olvera de la Cruz "**Surface polarization effects in confined polyelectrolyte solutions**" *PNAS* 117, 19677-19684 (2020); DOI: 10.1073/pnas.2007545117
116. Y. Dahal, M. Olvera de la Cruz, "**Controlling protein adsorption modes electrostatically**" *Soft Matter* 16, 5224-5232 (2020); DOI: 10.1039/D0SM00632G
117. C. Waltmann, R. Asor, U. Raviv, M. Olvera de la Cruz, "**Assembly and Stability of Simian Virus 40 Polymorphs**" *ACS Nano* 14, 4430–4443 (2020); DOI: 10.1021/acsnano.9b10004
118. Y. Lin, M. Olvera de la Cruz "**Sublattice Melting in Binary Superionic Colloidal Crystals**" *Physical Review E* 101, 032603 (2020); DOI: 10.1103/PhysRevE.101.032603
119. G. Vernizzi, T.D. Nguyen, H. Orland and M. Olvera de la Cruz, "**Multicanonical Monte Carlo Ensemble Growth Algorithm**" *Physical Review E* 101, 021301 (2020); DOI: 10.1103/PhysRevE.101.021301
120. A. Shakya, M. Girard, J. King, John, M. Olvera de la Cruz "**Role of Chain Flexibility in Asymmetric Polyelectrolyte Complexation in Salt Solutions**" *Macromolecules* 53, 4, 1258-1269 (2020); DOI: 10.1021/acs.macromol.9b02355
121. Young-Ah Lucy Lee, Victor Pryamitsyn, Dongjoon Rhee, M. Olvera de la Cruz, Teri W. Odom, "**Strain-Dependent Nanowrinkle Confinement of Block Copolymers**" *Nano Letters* 20, 1433-1439 (2020); DOI: 10.1021/acs.nanolett.9b05189
122. T. Jiang, A. Hall, M. Eres, Z. Hemmatian, B. Qiao, Y. Zhou, Z. Ruan, A.D. Couse, W.T. Heller, H. Huang, M. Olvera de la Cruz, M. Rolandi and T. Xu, "**Single Chain Heteropolymers Transport Proton Selectively and Rapidly**" *Nature* 577, 216-220 (2020); DOI: 10.1038/s41586-019-1881-0.
123. H. Sai, A. Erbas, A. Dannenhoffer, D. X. Huang, A. Weingarten, E. Siismets, K. Jang, K. R. Qu, L. C. Palmer, M. Olvera de la Cruz, and S. I. Stupp **"Chromophore amphiphile-polyelectrolyte hybrid hydrogels for photocatalytic hydrogen production**" *J. of Materials Chemistry A* 8, 158-168 (2020); DOI: 10.1039/c9ta08974h
124. B. Ma, T. D. Nguyen, and M. Olvera de la Cruz, "**Control of Ionic Mobility via Charge Size Asymmetry in Random Ionomers**" *NanoLetters* 20, 43-49 (2020); DOI: 10.1021/acs.nanolett.9b02743
125. S. S. Park, Z. J. Urbach, C. A. Brisbois, K. A. Parker, B. E. Partridge, T. Oh, V. P. Dravid M. Olvera de la Cruz and C. A. Mirkin, "**DNA- and Field-Mediated Assembly of Magnetic Nanoparticles into High-Aspect Ratio Crystals**" *Advanced Materials* 32, 1906626 (2020); DOI: 10.1002/adma.201906626

126. A. Dannenhoffer, H. Sai, D. Huang, B. Nagasing, B. Harutyunyan, D. J. Fairfield, T. Aytun, S. M. Chin, M. J. Bedzyk, M. Olvera de la Cruz and S. I. Stupp, "**Impact of charge switching stimuli on supramolecular perylene monoimide assemblies**" *Chem. Sci.* 10, 5779-5786 (2019); DOI: 10.1039/C8SC05595E.
127. K. Krishnamoorthy, S. Kewalramani, A. Ehlen, L. M. Moreau, C. A. Mirkin, M. Olvera de la Cruz and M. J. Bedzyk, "**Enzymatic Degradation of DNA Probed by In Situ X-ray Scattering**" *ACS Nano* 13, 10, 11382-11391 (2019); DOI: 10.1021/acsnano.9b04752.
128. C. Gao, S. Kewalramani, D. M. Valencia, H. Li, J. M. McCourt, M. Olvera de la Cruz, and M. J. Bedzyk "**Electrostatic shape control of a charged molecular membrane from ribbon to scroll**" *PNAS* 116 (44) 22030-22036 (2019); DOI: 10.1073/pnas.1913632116.
129. B. Qiao, F. Jimenez-Angeles, T.D.Nguyen, and M. Olvera de la Cruz, "**Water follows polar and nonpolar protein surface domains**" *PNAS*, 116, 19274-19281 (2019); DOI: 10.1073/pnas.1910225116.
130. T.D.Nguyen, M. Olvera de la Cruz, "**Manipulation of confined polyelectrolyte conformations through dielectric mismatch**" *ACS Nano*, 138, 9298-9305 (2019); DOI: 10.1021/acsnano.9b03900.
131. H. Yuan and M. Olvera de la Cruz, "**Crystalline membrane morphology beyond polyhedral**" *Phys. Rev. E,* 100, 012610 (2019); DOI: 10.1103/PhysRevE.100.012610.
132. M. Girard, A. Ehlen, A. Shakya, T. Bereau, M. Olvera de la Cruz, "**Hoobas: A highly object-oriented builder for molecular dynamics**" *Computational Materials Science* 167, 25-33 (2019); DOI: 10.1016/j.commatsci.2019.05.003
133. M. Girard, S. Wang, J. S. Du, A. Das, Z. Huang, V. P. Dravid, B. Lee, C. A. Mirkin, and M. Olvera de la Cruz, "**Particle analogs of electrons in colloidal crystals**" *Science* 364, 1174-1178 (2019); DOI: 10.1126/science.aaw8237.
134. T.D.Nguyen, H. Li, D. Bagchi, F. J. Solis and M. Olvera de la Cruz, "**Incorporating surface polarization effects into large-scale coarse-grained Molecular Dynamics simulation**" *Computer Physics Communications* 241, 80-91 (2019); DOI: 10.1016/j.cpc.2019.03.006.
135. A. Dannenhoffer, H. Sai, D. Huang, B. Nagasing, B. Harutyunyan, D. J. Fairfield, T. Aytun, S. M. Chin, M. J. Bedzyk, M. Olvera de la Cruz and S. I. Stupp, "**Impact of charge switching stimuli on supramolecular perylene monoimide assemblies**" *Chem. Sci.* 10, 5779-5786 (2019); DOI: 10.1039/C8SC05595E
136. B. Qiao, Luis Lopez and M. Olvera de la Cruz, "**"Mirror"-Like Protein Dimers Stabilized by Local Heterogeneity at Protein Surfaces**" *J. Phys. Chem. B.* 123, 3907-3915 (2019); DOI: 10.1021/acs.jpcb.9b01394.
137. A. Erbas, M. Olvera de la Cruz and J. Marko "**Receptor-ligand rebinding kinetics in confinement**" *Biophysical Journal* 1609-1624 (2019); DOI: 10.1016/j.bpj.2019.02.033.
138. Y. Raj Dahal and M. Olvera de la Cruz, "**Crystallizing protein assemblies via free and grafted linkers**" Soft Matter (2019), *Soft Matter* 15, 4311 (2019); DOI: 10.1039/c9sm00693a.
139. F. Jimenez-Angeles, H.Kwon, K. Sadman, T. Wu, K. R. Shull, and M. Olvera de la Cruz, "**Self-assembly of Charge-Containing Copolymers at the liquid-liquid Interface**" *ACS Central Science* 5, 688-699 (2019); DOI: 10.1021/acscentsci.9b00084.
140. C. Austyn Brisbois, M. Tasinkevych, P. Vázquez-Montejo, and M. Olvera de la Cruz, "**Actuation of magnetoelastic membranes in precessing magnetic fields**" *PNAS* 116, 2500-2505 (2019); DOI: 10.1073/pnas.1816731116.
141. M. Miller, Y. Liang, H. Li, M. Chu, S. Yoo, W. Bu, M. Olvera de la Cruz, and P. Dutta, "**Electrostatic origin of element selectivity during rare earth adsorption**" *Physical Review Letters* 122, 058001 (2019); DOI: 10.1103/PhysRevLett.122.058001.
142. H. Kwon, B. Ma, and M. Olvera de la Cruz, "**Determining the Regimes of Dielectric Mismatch and Ionic Correlation Effects in Ionomer Blends**" *Macromolecules* 52, 535-546 (2019); DOI: 10.1021/acs.macromol.8b02376.
143. S. E. Seo, M. Girard, M. Olvera de la Cruz, and C. A. Mirkin, "**The Importance of Salt-Enhanced Electrostatic Repulsion in Colloidal Crystal Engineering with DNA**" *ACS Central Science* 5, 186–191 (2019); DOI: 10.1021/acscentsci.8b00826.
144. C. R. Laramy, H. Lopez-Rios, M. N. O'Brien, M. Girard, R. J. Stawicki, B. Lee, M. Olvera de la Cruz, and C. A. Mirkin, "**Controlled Symmetry Breaking in Colloidal Crystal Engineering with DNA**" *ACS Nano* 13, 1412-1420 (2019); DOI: 10.1021/acsnano.8b07027.
145. H. Wu, H. Li, F. J. Solis, M. Olvera de la Cruz, and E. Luijten, "**Asymmetric electrolytes near structured dielectric interfaces**" *J. Chem. Phys.* 149, 164701 (2018); DOI: 10.1063/1.5047550.
146. S. E. Seo, M. Girard, M. Olvera de la Cruz and C. A. Mirkin, "**Non-equilibrium anisotropic colloidal single crystal growth with DNA**" *Nature Communications* 9, 4558 (2018); DOI: 10.1038/s41467-018-06982-9.

147. Shuangping Liu, Samuel I. Stupp and Monica Olvera de la Cruz, "**Anisotropic contraction of fiber-reinforced hydrogels**" Soft Matter 14, 7731-7739 (2018); DOI: 10.1039/C8SM01251B
148. P. Vázquez-Montejo and M. Olvera de la Cruz, "**Flexible paramagnetic membranes in fast precessing fields**" *Phys. Rev. E* 98, 032603 (2018); DOI: 10.1103/PhysRevE.98.032603.
149. C. Sun, M. Shen, A. D. Chavez, A. M. Evans, X. Liu, B. Harutyunyan, N. C. Flanders, M. C. Hersam, M. J. Bedzyk, M. Olvera de la Cruz, and W. R. Dichtel, "**High aspect ratio nanotubes assembled from macrocyclic iminium salts**" *PNAS* 115, 8883-8888 (2018); DOI: 10.1073/pnas.1809383115.
150. D. Prusty, V. Pryamitsyn, & M. Olvera de la Cruz, "**Thermodynamics of Associative Polymer Blends**" *Macromolecules* 51, 5918-5932 (2018); DOI: 10.1021/acs.macromol.8b00661.
151. T. J. Deming, H-A. Klok, S. P. Armes, M. L. Becker, J. A. Champion, E. Y.-X. Chen, S. C. Heilshorn, J. C. M. van Hest, D. J. Irvine, J. A. Johnson, L. L. Kiessling, H. D. Maynard, M. Olvera de la Cruz, M. O. Sullivan, M. V. Tirrell, K. S. Anseth, S. Lecommandoux, S. Percec, Z. Zhong, & A.-C. Albertsson, "**Polymers at the Interface with Biology**" *Biomacromolecules* 19, 3151-3162 (2018); DOI: 10.1021/acs.biomac.8b01029.
152. T. D. Nguyen, B. Qiao, & M. Olvera de la Cruz, "**Efficient encapsulation of proteins with random copolymers**" *PNAS* 26, 6578-6583 (2018); DOI: 10.1073/pnas.1806207115.
153. S.M. Chin, C.V. Synatschke, S. Liu, R.J. Nap, N.A. Sather, Q. Wang, Z. Álvarez, A.N. Edelbrock, T. Fyrner, L.C. Palmer, I. Szleifer, M. Olvera de la Cruz, S.I. Stupp "**Covalent-supramolecular hybrid polymers as muscle-inspired anisotropic actuators**" *Nature Communications* 9, 2395 (2018); DOI: 10.1038/s41467-018-04800-w.
154. A. Erbaş, M. Olvera de la Cruz, & J. F. Marko, "**Effects of electrostatic interactions on ligand dissociation kinetics"** *Physical Review E* 97: 022405 (2018); DOI: 10.1103/PhysRevE.97.022405.
155. B. Panganiban, B. Qiao, T. Jiang, C. DelRe, M. M. Obadia, T. D. Nguyen, A. A. A. Smith, A. Hall, I. Sit, M. G. Crosby, P. B. Dennis, E. Drockenmuller, M. Olvera de la Cruz & T. Xu "**Random Heteropolymers Preserve Protein Function in Foreign Environments"** *Science* 359: 1239-1243 (2018); DOI: 10.1126/science.aao0335.
156. S. Sabrina, M. Tasinkevych, S. Ahmed, A.M. Brooks, M. Olvera de la Cruz, T.E. Mallouk, & K.J. M. Bishop, "**Shape-directed microspinners powered by ultrasound**" *ACS Nano* 12: 2939-2947 (2018); DOI: 10.1021/acsnano.8b00525 .
157. K. Krishnamoorthy, K. Hoffmann, S. Kewalramani, J.D. Brodin, L.M. Moreau, C.A. Mirkin, M. Olvera de la Cruz, & M.J. Bedzyk, "**Defining the structure of a protein–spherical nucleic acid conjugate and its counterionic cloud"** *ACS Central Science* 4: 378-386 (2018); DOI: 10.1021/acscentsci.7b00577.
158. B. Ma, T. D. Nguyen, V. A. Pryamitsyn, & M. Olvera de la Cruz. "**Ionic correlations in random ionomers"** *ACS Nano* 12, 2311–2318 (2018); DOI: 10.1021/acsnano.7b07432.
159. S. Liu & M. Olvera de la Cruz, "**Deformation of elastomeric pyramid pen arrays in cantilever-free scanning probe lithography**" *Journal of Polymer Science Part B: Polymer Physics* 56, 731-738 (2018); DOI: 10.1002/polb.24585.
160. G. Wang, N. D. Eastham, T. J. Aldrich, B. Ma, E. F. Manley, Z. Chen, L. X. Chen, M. Olvera de la Cruz, R. P. H. Chang, Ferdinand S. Melkonyan, Antonio Facchetti, & Tobin J. Marks, "**Photoactive blend morphology engineering through systematically tuning aggregation in all-polymer solar cells**" *Advanced Energy Materials*: 1702173 (2018); DOI: 10.1002/aenm.201702173.
161. Z. L. Yu, A. Erbas, F. Tantakitti, L. C. Palmer, J. A. Jackman, M. Olvera de la Cruz, N. J. Cho, & S. I. Stupp, "**Co-assembly of peptide amphiphiles and lipids into supramolecular nanostructures driven by anion-pi interactions**" *Journal of the American Chemical Society* 139: 7823-7830 (2017); DOI: 10.1021/jacs.7b02058.
162. M. X. Wang, J. D. Brodin, J. A. Millan, S. E. Seo, M. Girard, M. Olvera de la Cruz, B. Lee, & C. A. Mirkin, "**Altering DNA-programmable colloidal crystallization paths by modulating particle repulsion**" *Nano Letters* 17: 5126-5132 (2017); DOI: 10.1021/acs.nanolett.7b02502.
163. P. Vazquez-Montejo, J. M. Dempster, & M. Olvera de la Cruz, "**Paramagnetic filaments in a fast precessing field: Planar versus helical conformations**" *Physical Review Materials* 1: 20 (2017); DOI: 10.1103/PhysRevMaterials.1.064402.
164. M. Shen, H. H. Li, & M. Olvera de la Cruz, "**Surface polarization effects on ion-containing emulsions**" *Physical Review Letters* 119: 5 (2017); DOI: 10.1103/PhysRevLett.119.138002.
165. A. Ramirez-Hernandez, S. M. Hur, J. C. Armas-Perez, M. Olvera de la Cruz, & J. J. de Pablo, "**Demixing by a nematic mean field: Coarse-grained simulations of liquid crystalline polymers**" *Polymers* 9: 11 (2017); DOI: 10.3390/polym9030088.
166. B. F. Qiao, J. V. Muntean, M. Olvera de la Cruz, & R. J. Ellis, "**Ion transport mechanisms in liquid-liquid interface**" *Langmuir* 33: 6135-6142 (2017); DOI: 10.1021/acs.langmuir.7b01230.

167. V. A. Pryamitsyn, H. K. Kwon, J. W. Zwanikken, & M. Olvera de la Cruz, "**Anomalous phase behavior of ionic polymer blends and ionic copolymers**" *Macromolecules* 50: 5194-5207 (2017); DOI: 10.1021/acs.macromol.7b00523.
168. J. H. Ortony, B. F. Qiao, C. J. Newcomb, T. J. Keller, L. C. Palmer, E. Deiss-Yehiely, M. Olvera de la Cruz, S. Han, & S. I. Stupp, "**Water dynamics from the surface to the interior of a supramolecular nanostructure**" *Journal of the American Chemical Society* 139: 8915-8921 (2017); DOI: 10.1021/jacs.7b02969.
169. J. R. McMillan, J. D. Brodin, J. A. Millan, B. Lee, M. Olvera de la Cruz, & C. A. Mirkin, "**Modulating nanoparticle superlattice structure using proteins with tunable bond distributions**" *Journal of the American Chemical Society* 139: 1754-1757 (2017); DOI: 10.1021/jacs.6b11893.
170. Y. Li, M. Girard, M. Shen, J. A. Millan, & M. Olvera de la Cruz, "**Strong attractions and repulsions mediated by monovalent salts**" *Proceedings of the National Academy of Sciences of the United States of America* 114: 11838-11843 (2017); DOI: 10.1073/pnas.1713168114.
171. H. K. Kwon, V. A. Pryamitsyn, J. W. Zwanikken, K. R. Shull, & M. Olvera de la Cruz, "**Solubility and interfacial segregation of salts in ternary polyelectrolyte blends**" *Soft Matter* 13: 4830-4840 (2017); DOI: 10.1039/c7sm00570a.
172. R. I. Kamar, E. J. Banigan, A. Erbas, R. D. Giuntoli, M. Olvera de la Cruz, R. C. Johnson, & J. F. Marko, "**Facilitated dissociation of transcription factors from single DNA binding sites**" *Proceedings of the National Academy of Sciences of the United States of America* 114: E3251-E3257 (2017); DOI: 10.1073/pnas.1701884114.
173. C. He, T. D. Nguyen, K. Edme, M. Olvera de la Cruz, & E. A. Weiss, "**Noncovalent control of the electrostatic potential of quantum dots through the formation of interfacial ion pairs**" *Journal of the American Chemical Society* 139: 10126-10132 (2017); DOI: 10.1021/jacs.7b05501.
174. M. Girard, T. D. Nguyen, & M. Olvera de la Cruz, "**Orbitals for classical arbitrary anisotropic colloidal potentials**" *Physical Review E* 96: 11 (2017); DOI: 10.1103/PhysRevE.96.053309
175. M. Girard, J. A. Millan, & M. Olvera de la Cruz, "**DNA-driven assembly: From polyhedral nanoparticles to proteins**" *Annual review of materials research, vol 47,* Annual review of materials research, ed Clarke DR (Annual Reviews, Palo Alto), Vol 47, pp 33-49 (2017).
176. C. R. Gao, H. H. Li, Y. Li, S. Kewalramani, L. C. Palmer, V. P. Dravid, S. I. Stupp, M. Olvera de la Cruz, & M. J. Bedzyk, "**Electrostatic control of polymorphism in charged amphiphile assemblies**" *Journal of Physical Chemistry B* 121: 1623-1628 (2017); DOI: 10.1021/acs.jpcb.6b11602.
177. J. M. Dempster, P. Vazquez-Montejo, & M. Olvera de la Cruz, "**Contractile actuation and dynamical gel assembly of paramagnetic filaments in fast precessing fields**" *Physical Review E* 95: 8 (2017); DOI: 10.1103/PhysRevE.95.052606.
178. C. Delre, B. Panganiban, T. Li, C. Huang, M. Olvera de la Cruz, P. Dennis, & T. Xu, "**Rational design of a synthetic peg-like polymer for protein stabilization**" *Biophysical Journal* 112: 59a-59a (2017); DOI: 10.1016/j.bpj.2016.11.355.
179. E. Deiss-Yehiely, J. H. Ortony, B. F. Qiao, S. I. Stupp, & M. Olvera de la Cruz, "**Ion condensation onto self-assembled nanofibers**" *Journal of Polymer Science Part B-Polymer Physics* 55: 901-906 (2017); DOI: 10.1002/polb.24353.
180. N. J. Zhou, A. S. Dudnik, Ting Li, E. F. Manley, T. J. Aldrich, P. J. Guo, H. C. Liao, Z. H. Chen, L. X. Chen, R. P. H. Chang, A. Facchetti, M. Olvera de la Cruz*, et al.,* "**All-polymer solar cell performance optimized via systematic molecular weight tuning of both donor and acceptor polymers**" *Journal of the American Chemical Society* 138: 1240-1251 (2016); DOI: 10.1021/jacs.5b10735.
181. Z. W. Yao & M. Olvera de la Cruz, "**Ordered self-similar patterns in anisotropic stochastic growth**" *Journal of Physical Chemistry B* 120: 5960-5965 (2016); DOI: 10.1021/acs.jpcb.6b01789.
182. Z. W. Yao & M. Olvera de la Cruz, "**Electrostatics-driven hierarchical buckling of charged flexible ribbons**" *Physical Review Letters* 116: 148101 (2016); DOI: 10.1103/PhysRevLett.116.148101.
183. F. Tantakitti, J. Boekhoven, X. Wang, R. V. Kazantsev, T. Yu, J. H. Li, E. Zhuang, R. Zandi, J. H. Ortony, C. J. Newcomb, L. C. Palmer, G. S. Shekhawat*, et al.*, "**Energy landscapes and functions of supramolecular systems**" *Nature Materials* 15: 469-476 (2016); DOI: 10.1038/nmat4538.
184. J. Y. Su, Z. W. Yao, & M. Olvera de la Cruz, "**Vesicle geometries enabled by dynamically trapped states**" *ACS Nano* 10: 2287-2294 (2016); DOI: 10.1021/acsnano.5b06991.
185. S. J. Pan, N. Boon, & M. Olvera de la Cruz, "**Liquid crystal phase transition in epitaxial monolayers of DNA-functionalized nanoparticle superlattices**" *ACS Nano* 10: 9948-9956 (2016); DOI: 10.1021/acsnano.6b04115.
186. S. Pan, Ting Li, & M. Olvera de la Cruz, "**Molecular dynamics simulation of DNA-directed assembly of nanoparticle superlattices using patterned templates**" *Journal of Polymer Science Part B-Polymer Physics* 54: 1687-1692 (2016); DOI: 10.1002/polb.24073.

187. M. N. O'Brien, H. X. Lin, M. Girard, M. Olvera de la Cruz, & C. A. Mirkin, "**Programming colloidal crystal habit with anisotropic nanoparticle building blocks and DNA bonds**" *Journal of the American Chemical Society* 138: 14562-14565 (2016); DOI: 10.1021/jacs.6b09704.
188. M. N. O'Brien, M. Girard, H. X. Lin, J. A. Millan, M. Olvera de la Cruz, B. Lee, & C. A. Mirkin, "**Exploring the zone of anisotropy and broken symmetries in DNA-mediated nanoparticle crystallization**" *Proceedings of the National Academy of Sciences of the United States of America* 113: 10485-10490 (2016); DOI: 10.1073/pnas.1611808113.
189. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Controlling swelling/deswelling of stimuli-responsive hydrogel nanofilms in electric fields**" *Soft Matter* 12: 8359-8366 (2016); DOI: 10.1039/c6sm01172a.
190. S. P. Liu, Z. W. Yao, K. Chiou, S. I. Stupp, & M. Olvera de la Cruz, "**Emergent perversions in the buckling of heterogeneous elastic strips**" *Proceedings of the National Academy of Sciences of the United States of America* 113: 7100-7105 (2016); DOI: 10.1073/pnas.1605621113.
191. H. H. Li, A. Erbas, J. Zwanikken, & M. Olvera de la Cruz, "**Ionic conductivity in polyelectrolyte hydrogels**" *Macromolecules* 49: 9239-9246 (2016); DOI: 10.1021/acs.macromol.6b01276.
192. S. Kewalramani, G. I. Guerrero-Garcia, L. M. Moreau, J. W. Zwanikken, C. A. Mirkin, M. Olvera de la Cruz, & M. J. Bedzyk, "**Electrolyte-mediated assembly of charged nanoparticles**" *ACS Central Science* 2: 219-224 (2016); DOI: 10.1021/acscentsci.6b00023.
193. G. I. Guerrero-Garcia, F. J. Solis, K. Raidongia, A. R. Koltonow, J. X. Huang, & M. Olvera de la Cruz, "**Control of selective ion transfer across liquid-liquid interfaces: A rectifying heterojunction based on immiscible electrolytes**" *ACS Central Science* 2: 857-866 (2016); DOI: 10.1021/acscentsci.6b00266.
194. G. Ferru, B. Reinhart, M. K. Bera, M. Olvera de la Cruz, B. Qiao, & R. J. Ellis, "**The lanthanide contraction beyond coordination chemistry**" *Chemistry-a European Journal* 22: 6899-6904 (2016); DOI: 10.1002/chem.201601032.
195. A. Erbasa & M. Olvera de la Cruz, "**Morphology-enhanced conductivity in dry ionic liquids**" *Physical Chemistry Chemical Physics* 18: 6441-6450 (2016); DOI: 10.1039/c5cp07090b.
196. A. Erbas & M. Olvera de la Cruz, "**Interactions between polyelectrolyte gel surfaces**" *Macromolecules* 49: 9026-9034 (2016); DOI: 10.1021/acs.macromol.6b01416.
197. J. M. Dempster & M. Olvera de la Cruz, "**Aggregation of heterogeneously charged colloids**" *ACS Nano* 10: 5909-5915 (2016); DOI: 10.1021/acsnano.6b01218.
198. M. Olvera de la Cruz, "**Mesoscale studies of ionic closed membranes with polyhedral geometries**" *Apl Materials* 4: 061102 (2016); DOI: 10.1063/1.4953570.
199. C. R. Bertozzi, C. J. Chang, B. G. Davis, M. Olvera de la Cruz, D. A. Tirrell, & D. Y. Zhao, "**Grand challenges in chemistry for 2016 and beyond**" *ACS Central Science* 2: 1-3 (2016); DOI: 10.1021/acscentsci.6b00010.
200. M. K. Bera, B. F. Qiao, S. Seifert, B. P. Burton-Pye, M. Olvera de la Cruz, & M. R. Antonio, "**Aggregation of heteropolyanions in aqueous solutions exhibiting short-range attractions and long-range repulsions**" *Journal of Physical Chemistry C* 120: 1317-1327 (2016); DOI: 10.1021/acs.jpcc.5b10609.
201. T. Aytun, P. J. Santos, C. J. Bruns, D. X. Huang, A. R. Koltonow, M. Olvera de la Cruz, & S. I. Stupp, "**Self-assembling tripodal small-molecule donors for bulk heterojunction solar cells**" *Journal of Physical Chemistry C* 120: 3602-3611 (2016); DOI: 10.1021/acs.jpcc.5b10064.
202. R. V. Thaner, Y. Kim, Ting Li, R. J. Macfarlane, S. T. Nguyen, M. Olvera de la Cruz, & C. A. Mirkin, "**Entropy-driven crystallization behavior in DNA-mediated nanoparticle assembly**" *Nano Letters* 15: 5545-5551 (2015); DOI: 10.1021/acs.nanolett.5b02129.
203. C. E. Sing, J. W. Zwanikken, & M. Olvera de la Cruz, "**Theory of melt polyelectrolyte blends and block copolymers: Phase behavior, surface tension, and microphase periodicity**" *Journal of Chemical Physics* 142, 034902 (2015); DOI: 10.1063/1.4905830.
204. P. S. Randeria, M. R. Jones, K. L. Kohlstedt, R. J. Banga, M. Olvera de la Cruz, G. C. Schatz, & C. A. Mirkin, "**What controls the hybridization thermodynamics of spherical nucleic acids?**" *Journal of the American Chemical Society* 137: 3486-3489 (2015); DOI: 10.1021/jacs.5b00670.
205. B. F. Qiao, G. Ferru, M. Olvera de la Cruz, & R. J. Ellis, "**Molecular origins of mesoscale ordering in a metalloamphiphile phase**" *ACS Central Science* 1: 493-503 (2015); DOI: 10.1021/acscentsci.5b00306.
206. A. J. Liu, G. S. Grest, M. C. Marchetti, G. M. Grason, M. O. Robbins, G. H. Fredrickson, M. Rubinstein, & M. Olvera de la Cruz, "**Opportunities in theoretical and computational polymeric materials and soft matter**" *Soft Matter* 11: 2326-2332 (2015); DOI: 10.1039/c4sm02344g.
207. T.I. N.G. Li & M. Olvera de la Cruz, "**Surface energy fluctuation effects in single crystals of DNA-functionalized nanoparticles**" *Journal of Chemical Physics* 143, 243156 (2015); DOI: 10.1063/1.4938533.

208. H. K. Kwon, J. W. Zwanikken, K. R. Shull, & M. Olvera de la Cruz, "**Theoretical analysis of multiple phase coexistence in polyelectrolyte blends**" *Macromolecules* 48: 6008-6015 (2015); DOI: 10.1021/acs.macromol.5b00901.
209. Y. F. Jing, V. Jadhao, J. W. Zwanikken, & M. Olvera de la Cruz, "**Ionic structure in liquids confined by dielectric interfaces**" *Journal of Chemical Physics* 143, 194508 (2015); DOI: 10.1063/1.4935704.
210. V. Jadhao, Z. W. Yao, C. K. Thomas, & M. Olvera de la Cruz, "**Coulomb energy of uniformly charged spheroidal shell systems**" *Physical Review E* 91, 032305 (2015); DOI: 10.1103/PhysRevE.91.032305.
211. N. E. Jackson, K. L. Kohlstedt, B. M. Savoie, M. Olvera de la Cruz, G. C. Schatz, L. X. Chen, & M. A. Ratner, "**Conformational order in aggregates of conjugated polymers**" *Journal of the American Chemical Society* 137: 6254-6262 (2015); DOI: 10.1021/jacs.5b00493.
212. R. D. Giuntoli, N. B. Linzer, E. J. Banigan, C. E. Sing, M. Olvera de la Cruz, J. S. Graham, R. C. Johnson, & J. F. Marko, "**DNA-segment-facilitated dissociation of fis and nhp6a from DNA detected via single-molecule mechanical response**" *Journal of Molecular Biology* 427: 3123-3136 (2015); DOI: 10.1016/j.jmb.2015.07.015.
213. A. Erbas & M. Olvera de la Cruz, "**Energy conversion in polyelectrolyte hydrogels**" *ACS Macro Letters* 4: 857-861 (2015); DOI: 10.1021/acsmacrolett.5b00363.
214. J. M. Dempster, R. Zhang, & M. Olvera de la Cruz, "**Self-replication with magnetic dipolar colloids**" *Physical Review E* 92, 042305 (2015); DOI: 10.1103/PhysRevE.92.042305.
215. N. Boon, G. I. Guerrero-Garcia, R. van Roij, & M. Olvera de la Cruz, "**Effective charges and virial pressure of concentrated macroion solutions**" *Proceedings of the National Academy of Sciences of the United States of America* 112: 9242-9246 (2015); DOI: 10.1073/pnas.1511798112.
216. N. Boon & M. Olvera de la Cruz, "**'Soft' amplifier circuits based on field-effect ionic transistors**" *Soft Matter* 11: 4793-4798 (2015); DOI: 10.1039/c5sm00573f.
217. R. Zhang, D. A. Walker, B. A. Grzybowski, & M. Olvera de la Cruz, "**Accelerated self-replication under non-equilibrium, periodic energy delivery**" *Angewandte Chemie-International Edition* 53: 173-177 (2014); DOI: 10.1002/anie.201307339.
218. R. Zhang, J. M. Dempster, & M. Olvera de la Cruz, "**Self-replication in colloids with asymmetric interactions**" *Soft Matter* 10: 1315-1319 (2014); DOI: 10.1039/c3sm52501e.
219. Z. W. Yao & M. Olvera de la Cruz, "**Dynamics of vacancies in two-dimensional Lennard-Jones crystals**" *Physical Review E* 90: 062318 (2014); DOI: 10.1103/PhysRevE.90.062318.
220. Z. W. Yao & M. Olvera de la Cruz, "**Polydispersity-driven topological defects as order-restoring excitations**" *Proceedings of the National Academy of Sciences of the United States of America* 111: 5094-5099 (2014); DOI: 10.1073/pnas.1403679111.
221. M. Tagliazucchi, X. Li, M. Olvera de la Cruz, & I. Szleifer, "**Self-organized polyelectrolyte end-grafted layers under nano confinement**" *ACS Nano* 8: 9998-10008 (2014); DOI: 10.1021/nn502008x.
222. C. E. Sing, J. W. Zwanikken, & M. Olvera de la Cruz, "**Electrostatic control of block copolymer morphology**" *Nature Materials* 13: 694-698 (2014); DOI: 10.1038/nmat4001.
223. C. E. Sing, M. Olvera de la Cruz, & J. F. Marko, "**Multiple-binding-site mechanism explains concentration-dependent unbinding rates of DNA-binding proteins**" *Nucleic Acids Research* 42: 3783-3791 (2014); DOI: 10.1093/nar/gkt1327.
224. C. E. Sing & M. Olvera de la Cruz, "**Polyelectrolyte blends and nontrivial behavior in effective flory-huggins parameters**" *ACS Macro Letters* 3: 698-702 (2014); DOI: 10.1021/mz500202n.
225. B. M. Savoie, K. L. Kohlstedt, N. E. Jackson, L. X. Chen, M. Olvera de la Cruz, G. C. Schatz, T. J. Marks, & M. A. Ratner, "**Mesoscale molecular network formation in amorphous organic materials**" *Proceedings of the National Academy of Sciences of the United States of America* 111: 10055-10060 (2014); DOI: 10.1073/pnas.1409514111.
226. B. Qiao, T. Demars, M. Olvera de la Cruz, & R. J. Ellis, "**How hydrogen bonds affect the growth of reverse micelles around coordinating metal ions**" *Journal of Physical Chemistry Letters* 5: 1440-1444 (2014); DOI: 10.1021/jz500495p.
227. L. C. Palmer, C. Y. Leung, S. Kewalramani, R. Kumthekar, C. J. Newcomb, M. Olvera de la Cruz, M. J. Bedzyk, & S. I. Stupp, "**Long-range ordering of highly charged self-assembled nanofilaments**" *Journal of the American Chemical Society* 136: 14377-14380 (2014); DOI: 10.1021/ja5082519.
228. Z. Ovanesyan, B. Medasani, M. O. Fenley, G. I. Guerrero-Garcia, M. Olvera de la Cruz, & M. Marucho, "**Excluded volume and ion-ion correlation effects on the ionic atmosphere around b-DNA: Theory, simulations, and experiments**" *Journal of Chemical Physics* 141: 17 (2014); DOI: 10.1063/1.4902407.
229. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Equilibrium adsorption of hexahistidine on ph-responsive hydrogel nanofilms**" *Langmuir* 30: 15335-15344 (2014); DOI: 10.1021/la5040382.

230. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Non-monotonic swelling of surface grafted hydrogels induced by ph and/or salt concentration**" *Journal of Chemical Physics* 141: 124909 (2014); DOI: 10.1063/1.4896562.
231. V. Jadhao, C. K. Thomas, & M. Olvera de la Cruz, "**Electrostatics-driven shape transitions in soft shells**" *Proceedings of the National Academy of Sciences of the United States of America* 111: 12673-12678 (2014); DOI: 10.1073/pnas.1413986111.
232. F. Hidalgo, C. Noguez, & M. Olvera de la Cruz, "**Metallic influence on the atomic structure and optical activity of ligand-protected nanoparticles: A comparison between ag and au**" *Nanoscale* 6: 3325-3334 (2014); DOI: 10.1039/c3nr06202c.
233. G. I. Guerrero-Garcia & M. Olvera de la Cruz, "**Polarization effects of dielectric nanoparticles in aqueous charge-asymmetric electrolytes**" *Journal of Physical Chemistry B* 118: 8854-8862 (2014); DOI: 10.1021/jp5045173.
234. E. Auyeung, Ting Li, A. J. Senesi, A. L. Schmucker, B. C. Pals, M. Olvera de la Cruz, & C. A. Mirkin, "**DNA-mediated nanoparticle crystallization into wulff polyhedral**" *Nature* 505: 73-77 (2014); DOI: 10.1038/nature12739.
235. J. W. Zwanikken & M. Olvera de la Cruz, "**Tunable soft structure in charged fluids confined by dielectric interfaces**" *Proceedings of the National Academy of Sciences of the United States of America* 110: 5301-5308 (2013); DOI: 10.1073/pnas.1302406110.
236. R. Zhang, P. K. Jha, & M. Olvera de la Cruz, "**Non-equilibrium ionic assemblies of oppositely charged nanoparticles**" *Soft Matter* 9: 5042-5051 (2013); DOI: 10.1039/c3sm27529a.
237. Z. W. Yao, B. F. Qiao, & M. Olvera de la Cruz, "**Potassium ions in the cavity of a kcsa channel model**" *Physical Review E* 88: 6 (2013); DOI: 10.1103/PhysRevE.88.062712.
238. Z. W. Yao & M. Olvera de la Cruz, "**Topological defects in flat geometry: The role of density inhomogeneity**" *Physical Review Letters* 111: 115503 (2013); DOI: 10.1103/PhysRevLett.111.115503.
239. Z. W. Yao & M. Olvera de la Cruz, "**Electrostatic repulsion-driven crystallization model arising from filament networks**" *Physical Review E* 87: 042605 (2013); DOI: 10.1103/PhysRevE.87.042605.
240. Z. W. Yao & M. Olvera de la Cruz, "**Packing of charged chains on toroidal geometries**" *Physical Review E* 87: 012603 (2013); DOI: 10.1103/PhysRevE.87.012603.
241. C. K. Thomas & M. Olvera de la Cruz, "**Theory and simulations of crystalline control via salinity and ph in ionizable membranes**" *Soft Matter* 9: 429-434 (2013); DOI: 10.1039/c2sm26960k.
242. F. J. Solis, V. Jadhao, & M. Olvera de la Cruz, "**Generating true minima in constrained variational formulations via modified lagrange multipliers**" *Physical Review E* 88: 053306 (2013); DOI: 10.1103/PhysRevE.88.053306.
243. C. E. Sing, J. W. Zwanilden, & M. Olvera de la Cruz, "**Ion correlation-induced phase separation in polyelectrolyte blends**" *ACS Macro Letters* 2: 1042-1046 (2013); DOI: 10.1021/mz400511r.
244. C. E. Sing, J. W. Zwanikken, & M. Olvera de la Cruz, "**Interfacial behavior in polyelectrolyte blends: Hybrid liquid-state integral equation and self-consistent field theory study**" *Physical Review Letters* 111: 168303 (2013); DOI: 10.1103/PhysRevLett.111.168303.
245. C. E. Sing, J. W. Zwanikken, & M. Olvera de la Cruz, "**Effect of ion-ion correlations on polyelectrolyte gel collapse and reentrant swelling**" *Macromolecules* 46: 5053-5065 (2013); DOI: 10.1021/ma400372p.
246. B. F. Qiao & M. Olvera de la Cruz, "**Driving force for water permeation across lipid membranes**" *Journal of Physical Chemistry Letters* 4: 3233-3237 (2013); DOI: 10.1021/jz401730s.
247. B. F. Qiao & M. Olvera de la Cruz, "**Driving force for crystallization of anionic lipid membranes revealed by atomistic simulations**" *Journal of Physical Chemistry B* 117: 5073-5080 (2013); DOI: 10.1021/jp401767c.
248. S. Patala, L. D. Marks, & M. Olvera de la Cruz, "**Thermodynamic analysis of multiply twinned particles: Surface stress effects**" *Journal of Physical Chemistry Letters* 4: 3089-3094 (2013); DOI: 10.1021/jz401496d.
249. S. Patala, L. D. Marks, & M. Olvera de la Cruz, "**Elastic strain energy effects in faceted decahedral nanoparticles**" *Journal of Physical Chemistry C* 117: 1485-1494 (2013); DOI: 10.1021/jp310045g.
250. A. Parsaeian, M. Olvera de la Cruz, & J. F. Marko, "**Binding-rebinding dynamics of proteins interacting nonspecifically with a long DNA molecule**" *Physical Review E* 88: 040703 (2013); DOI: 10.1103/PhysRevE.88.040703.
251. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Ph-controlled nanoaggregation in amphiphilic polymer co-networks**" *ACS Nano* 7: 2693-2704 (2013); DOI: 10.1021/nn400130c.
252. Ting Li, R. Sknepnek, & M. Olvera de la Cruz, "**Thermally active hybridization drives the crystallization of DNA-functionalized nanoparticles**" *Journal of the American Chemical Society* 135: 8535-8541 (2013); DOI: 10.1021/ja312644h.

253. C. Y. Leung, L. C. Palmer, S. Kewalramani, B. F. Qiao, S. I. Stupp, M. Olvera de la Cruz, & M. J. Bedzyk, "**Crystalline polymorphism induced by charge regulation in ionic membranes**" *Proceedings of the National Academy of Sciences of the United States of America* 110: 16309-16314 (2013); DOI: 10.1073/pnas.1316150110.
254. K. L. Kohlstedt, M. Olvera de la Cruz, & G. C. Schatz, "**Controlling orientational order in 1-d assemblies of multivalent triangular prisms**" *Journal of Physical Chemistry Letters* 4: 203-208 (2013); DOI: 10.1021/jz301953k.
255. S. Kewalramani, J. W. Zwanikken, R. J. Macfarlane, C. Y. Leung, M. Olvera de la Cruz, C. A. Mirkin, & M. J. Bedzyk, "**Counterion distribution surrounding spherical nucleic acid-au nanoparticle conjugates probed by small-angle x-ray scattering**" *ACS Nano* 7: 11301-11309 (2013); DOI: 10.1021/nn405109z.
256. V. Jadhao, F. J. Solis, & M. Olvera de la Cruz, "**Free-energy functionals of the electrostatic potential for poisson-boltzmann theory**" *Physical Review E* 88: 022305 (2013); DOI: 10.1103/PhysRevE.88.022305.
257. V. Jadhao, F. J. Solis, & M. Olvera de la Cruz, "**A variational formulation of electrostatics in a medium with spatially varying dielectric permittivity**" *Journal of Chemical Physics* 138: 054119 (2013); DOI: 10.1063/1.4789955.
258. N. E. Jackson, B. M. Savoie, K. L. Kohlstedt, M. Olvera de la Cruz, G. C. Schatz, L. X. Chen, & M. A. Ratner, "**Controlling conformations of conjugated polymers and small molecules: The role of nonbonding interactions**" *Journal of the American Chemical Society* 135: 10475-10483 (2013); DOI: 10.1021/ja403667s.
259. G. I. Guerrero-Garcia, Y. F. Jing, & M. Olvera de la Cruz, "**Enhancing and reversing the electric field at the oil-water interface with size-asymmetric monovalent ions**" *Soft Matter* 9: 6046-6052 (2013); DOI: 10.1039/c3sm50753j.
260. G. I. Guerrero-Garcia, P. Gonzalez-Mozuelos, & M. Olvera de la Cruz, "**Large counterions boost the solubility and renormalized charge of suspended nanoparticles**" *ACS Nano* 7: 9714-9723 (2013); DOI: 10.1021/nn404477b.
261. G. I. Guerrero-Garcia & M. Olvera de la Cruz, "**Inversion of the electric field at the electrified liquid-liquid interface**" *Journal of Chemical Theory and Computation* 9: 1-7 (2013); DOI: 10.1021/ct300673m.
262. P. Gonzalez-Mozuelos, G. I. Guerrero-Garcia, & M. Olvera de la Cruz, "**An exact method to obtain effective electrostatic interactions from computer simulations: The case of effective charge amplification**" *Journal of Chemical Physics* 139: 064709 (2013); DOI: 10.1063/1.4817776.
263. C. M. Funkhouser, R. Sknepnek, T. Shimi, A. E. Goldman, R. D. Goldman, & M. Olvera de la Cruz, "**Mechanical model of blebbing in nuclear lamin meshworks**" *Proceedings of the National Academy of Sciences of the United States of America* 110: 3248-3253 (2013); DOI: 10.1073/pnas.1300215110.
264. C. M. Funkhouser, R. Sknepnek, & M. Olvera de la Cruz, "**Topological defects in the buckling of elastic membranes**" *Soft Matter* 9: 60-68 (2013); DOI: 10.1039/c2sm26607e.
265. S. Dhakal, K. L. Kohlstedt, G. C. Schatz, C. A. Mirkin, & M. Olvera de la Cruz, "**Growth dynamics for DNA-guided nanoparticle crystallization**" *ACS Nano* 7: 10948-10959 (2013); DOI: 10.1021/nn404476f.
266. Z. W. Yao, R. Sknepnek, C. K. Thomas, & M. Olvera de la Cruz, "**Shapes of pored membranes**" *Soft Matter* 8: 11613-11619 (2012); DOI: 10.1039/c2sm26608c.
267. K. A. Wu, P. K. Jha, & M. Olvera de la Cruz, "**Pattern selection in polyelectrolyte gels by nonlinear elasticity**" *Macromolecules* 45: 6652-6657 (2012); DOI: 10.1021/ma301549q.
268. J. Y. Su, M. Olvera de la Cruz, & H. X. Guo, "**Solubility and transport of cationic and anionic patterned nanoparticles**" *Physical Review E* 85: 011504 (2012); DOI: 10.1103/PhysRevE.85.011504.
269. R. Sknepnek, G. Vernizzi, & M. Olvera de la Cruz, "**Charge renormalization of bilayer elastic properties**" *Journal of Chemical Physics* 137: 104905 (2012); DOI: 10.1063/1.4751481.
270. R. Sknepnek, G. Vernizzi, & M. Olvera de la Cruz, "**Buckling of multicomponent elastic shells with line tension**" *Soft Matter* 8: 636-644 (2012); DOI: 10.1039/c1sm06325a.
271. R. Sknepnek & M. Olvera de la Cruz, "**Nonlinear elastic model for faceting of vesicles with soft grain boundaries**" *Physical Review E* 85: 050501 (2012); DOI: 10.1103/PhysRevE.85.050501.
272. K. I. Popov, R. J. Nap, I. Szleifer, & M. Olvera de la Cruz, "**Interacting nanoparticles with functional surface groups**" *Journal of Polymer Science Part B-Polymer Physics* 50: 852-862 (2012); DOI: 10.1002/polb.23077.
273. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Molecular theory of weak polyelectrolyte thin films**" *Soft Matter* 8: 1344-1354 (2012); DOI: 10.1039/c1sm06708g.
274. T.I.N.G. Li, R. Sknepnek, R. J. Macfarlane, C. A. Mirkin, & M. Olvera de la Cruz, "**Modeling the crystallization of spherical nucleic acid nanoparticle conjugates with molecular dynamics simulations**" *Nano Letters* 12: 2509-2514 (2012); DOI: 10.1021/nl300679e.

275. C. Y. Leung, L. C. Palmer, B. F. Qiao, S. Kewalramani, R. Sknepnek, C. J. Newcomb, M. A. Greenfield, G. Vernizzi, S. I. Stupp, M. J. Bedzyk, & M. Olvera de la Cruz, "**Molecular crystallization controlled by ph regulates mesoscopic membrane morphology**" *ACS Nano* 6: 10901-10909 (2012); DOI: 10.1021/nn304321w.
276. P. K. Jha, J. W. Zwanikken, & M. Olvera de la Cruz, "**Understanding swollen-collapsed and re-entrant transitions in polyelectrolyte nanogels by a modified donnan theory**" *Soft Matter* 8: 9519-9522 (2012); DOI: 10.1039/c2sm26341f.
277. P. K. Jha, V. Kuzovkov, B. A. Grzybowski, & M. Olvera de la Cruz, "**Dynamic self-assembly of photo-switchable nanoparticles**" *Soft Matter* 8: 227-234 (2012); DOI: 10.1039/c1sm06662e.
278. P. K. Jha, V. Kuzovkov, & M. Olvera de la Cruz, "**Kinetic monte carlo simulations of flow-assisted polymerization**" *ACS Macro Letters* 1: 1393-1397 (2012); DOI: 10.1021/mz300601b.
279. V. Jadhao, F. J. Solis, & M. Olvera de la Cruz, "**Simulation of charged systems in heterogeneous dielectric media via a true energy functional**" *Physical Review Letters* 109: 223905 (2012); DOI: 10.1103/PhysRevLett.109.223905.
280. S. Dhakal, F. J. Solis, & M. Olvera de la Cruz, "**Nematic liquid crystals on spherical surfaces: Control of defect configurations by temperature, density, and rod shape**" *Physical Review E* 86: 011709 (2012); DOI: 10.1103/PhysRevE.86.011709.
281. M. F. Demers, R. Sknepnek, & M. Olvera de la Cruz, "**Curvature-driven effective attraction in multicomponent membranes**" *Physical Review E* 86: 021504 (2012); DOI: 10.1103/PhysRevE.86.021504.
282. J. W. Zwanikken, P. K. Jha, & M. Olvera de la Cruz, "**A practical integral equation for the structure and thermodynamics of hard sphere coulomb fluids**. *Journal of Chemical Physics* 135: 064106 (2011); DOI: 10.1063/1.3624809.
283. J. W. Zwanikken, P. J. Guo, C. A. Mirkin, & M. Olvera de la Cruz, "**Local ionic environment around polyvalent nucleic acid-functionalized nanoparticles**" *Journal of Physical Chemistry C* 115: 16368-16373 (2011); DOI: 10.1021/jp205583j.
284. D. A. Walker, B. Kowalczyk, M. Olvera de la Cruz, & B. A. Grzybowski, "**Electrostatics at the nanoscale**. *Nanoscale* 3: 1316-1344 (2011); DOI: 10.1039/c0nr00698j.
285. G. Vernizzi, D. S. Zhang, & M. Olvera de la Cruz, "**Structural phase transitions and mechanical properties of binary ionic colloidal crystals at interfaces**" *Soft Matter* 7: 6285-6293 (2011); DOI: 10.1039/c0sm01554g.
286. G. Vernizzi, R. Sknepnek, & M. Olvera de la Cruz, "**Platonic and archimedean geometries in multicomponent elastic membranes**" *Proceedings of the National Academy of Sciences of the United States of America* 108: 4292-4296 (2011); DOI: 10.1073/pnas.1012872108.
287. G. Vernizzi, G. I. Guerrero-Garcia, & M. Olvera de la Cruz, "**Coulomb interactions in charged fluids**" *Physical Review E* 84: 016707 (2011); DOI: 10.1103/PhysRevE.84.016707.
288. S. Swaminathan, F. J. Solis, & M. Olvera de la Cruz, "**Conformation and mechanical properties of closed diblock fibers**" *Physical Review E* 83: 061912 (2011); DOI: 10.1103/PhysRevE.83.061912.
289. F. J. Solis, G. Vernizzi, & M. Olvera de la Cruz, "**Electrostatic-driven pattern formation in fibers, nanotubes and pores**" *Soft Matter* 7: 1456-1466 (2011); DOI: 10.1039/c0sm00706d.
290. R. Sknepnek, G. Vernizzi, & M. Olvera de la Cruz, "**Shape change of nanocontainers via a reversible ionic buckling**" *Physical Review Letters* 106: 215504 (2011); DOI: 10.1103/PhysRevLett.106.215504.
291. G. S. Longo, M. Olvera de la Cruz, & I. Szleifer, "**Molecular theory of weak polyelectrolyte gels: The role of ph and salt concentration**" *Macromolecules* 44: 147-158 (2011); DOI: 10.1021/ma102312y.
292. V. N. Kuzovkov, E. A. Kotomin, & M. Olvera de la Cruz, "**The non-equilibrium charge screening effects in diffusion-driven systems with pattern formation**" *Journal of Chemical Physics* 135: 034702 (2011); DOI: 10.1063/1.3613622.
293. W. Kung, F. J. Solis, & M. Olvera de la Cruz, "**Adsorption profiles and solvation of ions at liquid-liquid interfaces and membranes**" *Application of Thermodynamic to Biological and Materials Science,* 355-370 (2011) (Intech Europe, Rijeka).
294. P. K. Jha, J. W. Zwanikken, F. A. Detcheverry, J. J. de Pablo, & M. Olvera de la Cruz, "**Study of volume phase transitions in polymeric nanogels by theoretically informed coarse-grained simulations**" *Soft Matter* 7: 5965-5975 (2011); DOI: 10.1039/c1sm05264k.
295. P. K. Jha, J. W. Zwanikken, J. J. de Pablo, & M. Olvera de la Cruz, "**Electrostatic control of nanoscale phase behavior of polyelectrolyte networks**" *Current Opinion in Solid State & Materials Science* 15: 271-276 (2011); DOI: 10.1016/j.cossms.2011.06.002.
296. P. J. Guo, R. Sknepnek, & M. Olvera de la Cruz, "**Electrostatic-driven ridge formation on nanoparticles coated with charged end-group ligands**" *Journal of Physical Chemistry C* 115: 6484-6490 (2011); DOI: 10.1021/jp201598k.

297. G. I. Guerrero-Garcia, E. Gonzalez-Tovar, & M. Olvera de la Cruz, "**Entropic effects in the electric double layer of model colloids with size-asymmetric monovalent ions**" *Journal of Chemical Physics* 135: 054701 (2011); DOI: 10.1063/1.3622046.
298. G. I. Guerrero-Garcia, P. Gonzalez-Mozuelos, & M. Olvera de la Cruz, "**Potential of mean force between identical charged nanoparticles immersed in a size-asymmetric monovalent electrolyte**" *Journal of Chemical Physics* 135: 164705 (2011); DOI: 10.1063/1.3656763.
299. D. Grillo, M. Olvera de la Cruz, & I. Szleifer, "**Theoretical studies of the phase behavior of dppc bilayers in the presence of macroions**" *Soft Matter* 7: 4672-4679 (2011); DOI: 10.1039/c1sm05061c.
300. J. M. Deutsch & M. Olvera de la Cruz, "**Density fluctuations of polymers in disordered media**" *Physical Review E* 83: 031801 (2011); DOI: 10.1103/PhysRevE.83.031801.
301. J. W. Zwanikken & M. Olvera de la Cruz, "**Correlated electrolyte solutions and ion-induced attractions between nanoparticles**" *Physical Review E* 82: 4 (2010); DOI: 10.1103/PhysRevE.82.050401.
302. S. M. Zhang, M. A. Greenfield, A. Mata, L. C. Palmer, R. Bitton, J. R. Mantei, C. Aparicio, M. Olvera de la Cruz, & S. I. Stupp, "**A self-assembly pathway to aligned monodomain gels**" *Nature Materials* 9: 594-601 (2010); DOI: 10.1038/nmat2778.
303. D. Zhang, P. Gonzalez-Mozuelos, & M. Olvera de la Cruz, "**Cluster formation by charged nanoparticles on a surface in aqueous solution**" *Journal of Physical Chemistry C* 114: 3754-3762 (2010); DOI: 10.1021/jp9085238.
304. K. A. Wu, P. K. Jha, & M. Olvera de la Cruz, "**Control of nanophases in polyelectrolyte gels by salt addition**" *Macromolecules* 43: 9160-9167 (2010); DOI: 10.1021/ma101726v.
305. M. Tagliazucchi, M. Olvera de la Cruz, & I. Szleifer, "**Self-organization of grafted polyelectrolyte layers via the coupling of chemical equilibrium and physical interactions**" *Proceedings of the National Academy of Sciences of the United States of America* 107: 5300-5305 (2010); DOI: 10.1073/pnas.0913340107.
306. V. N. Kuzovkov, G. Zvejnieks, E. A. Kotomin, & M. Olvera de la Cruz, "**Microscopic approach to the kinetics of pattern formation of charged molecules on surfaces**" *Physical Review E* 82: 021602 (2010); DOI: 10.1103/PhysRevE.82.021602.
307. W. Kung, P. Gonzalez-Mozuelos, & M. Olvera de la Cruz, "**A minimal model of nanoparticle crystallization in polar solvents via steric effects**" *Journal of Chemical Physics* 133: 074704 (2010); DOI: 10.1063/1.3469863.
308. W. Kung, P. Gonzalez-Mozuelos, & M. Olvera de la Cruz, "**Nanoparticles in aqueous media: Crystallization and solvation charge asymmetry**" *Soft Matter* 6: 331-341 (2010); DOI: 10.1039/b908331f.
309. P. K. Jha, R. Sknepnek, G. I. Guerrero-Garcia, & M. Olvera de la Cruz, "**A graphics processing unit implementation of coulomb interaction in molecular dynamics**" *Journal of Chemical Theory and Computation* 6: 3058-3065 (2010); DOI: 10.1021/ct100365c.
310. H. X. Guo & M. Olvera de la Cruz, "**Compartmentalization and delivery via asymmetric copolymer monolayers with swollen or inverse swollen micelles**" *Journal of Chemical Physics* 132: 094902 (2010); DOI: 10.1063/1.3340403.
311. G. I. Guerrero-Garcia, E. Gonzalez-Tovar, & M. Olvera de la Cruz, "**Effects of the ionic size-asymmetry around a charged nanoparticle: Unequal charge neutralization and electrostatic screening**" *Soft Matter* 6: 2056-2065 (2010); DOI: 10.1039/b924438g.
312. M. A. Greenfield, J. R. Hoffman, M. Olvera de la Cruz, & S. I. Stupp, "**Tunable mechanics of peptide nanofiber gels**" *Langmuir* 26: 3641-3647 (2010); DOI: 10.1021/la9030969.
313. M. D. Donakowski, J. M. Godbe, R. Sknepnek, K. E. Knowles, M. Olvera de la Cruz, & E. A. Weiss, "**A quantitative description of the binding equilibria of para-substituted aniline ligands and cdse quantum dots**" *Journal of Physical Chemistry C* 114: 22526-22534 (2010); DOI: 10.1021/jp109381r.
314. D. W. Yin, M. Olvera de la Cruz, & J. J. de Pablo, "**Swelling and collapse of polyelectrolyte gels in equilibrium with monovalent and divalent electrolyte solutions**" *Journal of Chemical Physics* 131: 194907 (2009); DOI: 10.1063/1.3264950.
315. G. Vernizzi, K. L. Kohlstedt, & M. Olvera de la Cruz, "**The electrostatic origin of chiral patterns on nanofibers**" *Soft Matter* 5: 736-739 (2009); DOI: 10.1039/b814583k.
316. W. Kung, F. J. Solis, & M. Olvera de la Cruz, "**Thermodynamics of ternary electrolytes: Enhanced adsorption of macroions as minority component to liquid interfaces**" *Journal of Chemical Physics* 130: 044502 (2009); DOI: 10.1063/1.3065071.
317. K. L. Kohlstedt, G. Vernizzi, & M. Olvera de la Cruz, "**Electrostatics and optimal arrangement of ionic triangular lattices confined to cylindrical fibers**" *Physical Review E* 80: 051503 (2009); DOI: 10.1103/PhysRevE.80.051503.

318. K. L. Kohlstedt, G. Vernizzi, & M. Olvera de la Cruz, "**Surface patterning of low-dimensional systems: The chirality of charged fibres**" *Journal of Physics-Condensed Matter* 21: 434114 (2009); DOI: 10.1088/0953-8984/21/42/424114.
319. P. K. Jha, F. J. Solis, J. J. de Pablo, & M. Olvera de la Cruz, "**Nonlinear effects in the nanophase segregation of polyelectrolyte gels**" *Macromolecules* 42: 6284-6289 (2009); DOI: 10.1021/ma901035e.
320. M. A. Greenfield, L. C. Palmer, G. Vernizzi, M. Olvera de la Cruz, & S. I. Stupp, "**Buckled membranes in mixed-valence ionic amphiphile vesicles**" *Journal of the American Chemical Society* 131: 12030-12031 (2009); DOI: 10.1021/ja903546y.
321. P. Gonzalez-Mozuelos & M. Olvera de la Cruz, "**Asymmetric charge renormalization for nanoparticles in aqueous media**" *Physical Review E* 79: 031901 (2009); DOI: 10.1103/PhysRevE.79.031901.
322. M. Olvera de la Cruz, A. V. Ermoshkin, M. A. Carignano, & I. Szleifer, "**Analytical theory and monte carlo simulations of gel formation of charged chains**" *Soft Matter* 5: 629-636 (2009); DOI: 10.1039/b804693j.
323. D. S. Zhang & M. Olvera de la Cruz, "**Nanopatterns in tethered membranes of weakly charged chains with hydrophobic backbones**" *Macromolecules* 41: 6612-6614 (2008); DOI: 10.1021/ma8011619.
324. Y. S. Velichko, S. I. Stupp, & M. Olvera de la Cruz, "**Molecular simulation study of peptide amphiphile self-assembly**" *Journal of Physical Chemistry B* 112: 2326-2334 (2008); DOI: 10.1021/jp074420n.
325. Y. S. Velichko, F. J. Solis, & M. Olvera de la Cruz, "**On condensation on charged patterned surfaces**" *Journal of Chemical Physics* 128: 144706 (2008); DOI: 10.1063/1.2888980.
326. M. M. D. Lim, Y. S. Velichko, M. Olvera de la Cruz, & G. Vernizzi, "**Low-radii transitions in co-assembled cationic-anionic cylindrical aggregates**" *Journal of Physical Chemistry B* 112: 5423-5427 (2008); DOI: 10.1021/jp7105132.
327. P. Gonzalez-Mozuelos & M. Olvera de la Cruz, "**Solvent and nonlinear effects on the charge renormalization of nanoparticles within a molecular electrolyte model**" *Physica a-Statistical Mechanics and Its Applications* 387: 5362-5370 (2008); DOI: 10.1016/j.physa.2008.06.003.
328. G. Vernizzi & M. Olvera de la Cruz, "**Faceting ionic shells into icosahedra via electrostatics**" *Proceedings of the National Academy of Sciences of the United States of America* 104: 18382-18386 (2007); DOI: 10.1073/pnas.0703431104.
329. L. C. Palmer, Y. S. Velichko, M. Olvera de la Cruz, & S. I. Stupp, "**Supramolecular self-assembly codes for functional structures**" *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences* 365: 1417-1433 (2007); DOI: 10.1098//rsta.2007.2024.
330. M. L. Nunalee, H. X. Guo, M. Olvera de la Cruz, & K. R. Shull, "**An interfacial curvature map for homopolymer interfaces in the presence of diblock copolymers**" *Macromolecules* 40: 4721-4723 (2007); DOI: 10.1021/ma070722b.
331. S. M. Loverde, F. J. Solis, & M. Olvera de la Cruz, "**Charged particles on surfaces: Coexistence of dilute phases and periodic structures at interfaces**" *Physical Review Letters* 98: 237802 (2007); DOI: 10.1103/PhysRevLett.98.237802.
332. S. M. Loverde & M. Olvera de la Cruz, "**Asymmetric charge patterning on surfaces and interfaces: Formation of hexagonal domains**" *Journal of Chemical Physics* 127: 164706 (2007); DOI: 10.1063/1.2793038.
333. W. Kung & M. Olvera de la Cruz, "**Mediation of long-range attraction selectively between negatively charged colloids on surfaces by solvation**" *Journal of Chemical Physics* 127: 244907 (2007); DOI: 10.1063/1.2822277.
334. A. Kudlay, J. M. Gibbs, G. C. Schatz, S. T. Nguyen, & M. Olvera de la Cruz, "**Sharp melting of polymer-DNA hybrids: An associative phase separation approach**" *Journal of Physical Chemistry B* 111: 1610-1619 (2007); DOI: 10.1021/jp0664667.
335. K. L. Kohlstedt, F. J. Solis, G. Vernizzi, & M. Olvera de la Cruz, "**Spontaneous chirality via long-range electrostatic forces**" *Physical Review Letters* 99: 030602 (2007); DOI: 10.1103/PhysRevLett.99.030602.
336. I. Erukhimovich & M. Olvera de la Cruz, "**Phase equilibrium and charge fractionation in polyelectrolyte solutions**" *Journal of Polymer Science Part B-Polymer Physics* 45: 3003-3009 (2007); DOI: 10.1002/polb.21300.
337. Y. S. Velichko & M. Olvera de la Cruz, "**Electrostatic attraction between cationic-anionic assemblies with surface compositional heterogeneities**" *Journal of Chemical Physics* 124: 214705-11N (2006); DOI: 10.1063/1.2205854.
338. S. M. Loverde, Y. S. Velichko, & M. Olvera de la Cruz, "**Competing interactions in two dimensional coulomb systems: Surface charge heterogeneities in coassembled cationic-anionic incompatible mixtures**" *Journal of Chemical Physics* 124: 144702 (2006); DOI: 10.1063/1.2181573.
339. P. Gonzalez-Mozuelos & M. Olvera de la Cruz, "**Correlations in dilute solutions of charged linear chains**" *Advanced Summer School in Physics 2005: Frontiers in Contemporary Physics,* AIP Conference Proceedings,

eds RosasOrtiz O, Carbajal M, & Miranda O (Amer Inst Physics, Melville), Vol 809, 205-220 (2006); DOI: 10.1063/1.2160986
340. H. Cheng, K. Zhang, J. A. Libera, M. Olvera de la Cruz, & M. J. Bedzyk, "**Polynucleotide adsorption to negatively charged surfaces in divalent salt solutions**" *Biophysical Journal* 90: 1164-1174 (2006); DOI: 10.1529/biophysj.105.070649.
341. H. Cheng & M. Olvera de la Cruz, "**Hydrophobic-charged block copolymer micelles induced by oppositely charged surfaces: Salt and ph dependence**" *Macromolecules* 39: 1961-1970 (2006); DOI: 10.1021/ma051965b.
342. Y. S. Velichko & M. Olvera de la Cruz, "**Pattern formation on the surface of cationic-anionic cylindrical aggregates**" *Physical Review E* 72: 041920 (2005); DOI: 10.1103/PhysRevE.72.041920.
343. F. J. Solis, S. I. Stupp, & M. Olvera de la Cruz, "**Charge induced pattern formation on surfaces: Segregation in cylindrical micelles of cationic-anionic peptide-amphiphiles**" *Journal of Chemical Physics* 122: 054905 (2005); DOI: 10.1063/1.1836732.
344. S. M. Loverde, A. V. Ermoshkin, & M. Olvera de la Cruz, "**Thermodynamics of reversibly associating ideal chains**" *Journal of Polymer Science Part B-Polymer Physics* 43: 796-804 (2005); DOI: 10.1002/polb.20372.
345. J. A. Libera, H. Cheng, M. Olvera de la Cruz, & M. J. Bedzyk, "**Direct observation of cations and polynucleotides explains polyion adsorption to like-charged surfaces**" *Journal of Physical Chemistry B* 109: 23001-23007 (2005); DOI: 10.1021/jp0534941.
346. H. X. Guo & M. Olvera de la Cruz, "**A computer simulation study of the segregation of amphiphiles in binary immiscible matrices: Short asymmetric copolymers in short homopolymers**" *Journal of Chemical Physics* 123: 174903-10 (2005); DOI: 10.1063/1.2084947.
347. P. Gonzalez-Mozuelos, M. S. Yeom, & M. Olvera de la Cruz, "**Molecular multivalent electrolytes: Microstructure and screening lengths**" *European Physical Journal E* 16: 167-178 (2005); DOI: 10.1140/epje/e2005-00018-9.
348. K. A. Smith, J. M. Ottino, & M. Olvera de la Cruz, "**Encapsulated drop breakup in shear flow**" *Physical Review Letters* 93: 204501 (2004); DOI: 10.1103/PhysRevLett.93.204501.
349. K. A. Smith, J. M. Ottino, & M. Olvera de la Cruz, "**Dynamics of a drop at a fluid interface under shear**" *Physical Review E* 69, 4: 046302 (2004); DOI: 10.1103/PhysRevE.69.046302.
350. M. D. Lefebvre, M. Olvera de la Cruz, & K. R. Shull, "**Phase segregation in gradient copolymer melts**" *Macromolecules* 37: 1118-1123 (2004); DOI: 10.1021/ma035141a.
351. A. Kudlay, A. V. Ermoshkin, & M. Olvera de la Cruz, "**Complexation of oppositely charged polyelectrolytes: Effect of ion pair formation**" *Macromolecules* 37: 9231-9241 (2004); DOI: 10.1021/ma048519t.
352. A. Kudlay, A. V. Ermoshkin, & M. Olvera de la Cruz, "**Phase diagram of charged dumbbells: A random phase approximation approach**" *Physical Review E* 70: 021504 (2004); DOI: 10.1103/PhysRevE.70.021504.
353. A. Kudlay & M. Olvera de la Cruz, "**Precipitation of oppositely charged polyelectrolytes in salt solutions**" *Journal of Chemical Physics* 120: 404-412 (2004); DOI: 10.1063/1.1629271.
354. A. V. Ermoshkin, A. N. Kudlay, & M. Olvera de la Cruz, "**Thermoreversible crosslinking of polyelectrolyte chains**" *Journal of Chemical Physics* 120: 11930-11940 (2004); DOI: 10.1063/1.1753573.
355. A. V. Ermoshkin & M. Olvera de la Cruz, "**Gelation in strongly charged polyelectrolytes**" *Journal of Polymer Science Part B-Polymer Physics* 42: 766-776 (2004); DOI: 10.1002/polb.10752.
356. H. Cheng & M. Olvera de la Cruz, "**Rod-like polyelectrolyte adsorption onto charged surfaces in monovalent and divalent salt solutions**" *Journal of Polymer Science Part B-Polymer Physics* 42: 3642-3653 (2004); DOI: 10.1002/polb.20206.
357. M. S. Yeom, A. V. Ermoshkin, & M. Olvera de la Cruz, "**Structure and thermodynamics of associating rods solutions**" *European Physical Journal E* 12: 565-572 (2003); DOI: 10.1140/epje/e2004-00028-1.
358. M. Sayar, M. Olvera de la Cruz, & S. I. Stupp, "**Polar order in nanostructured organic materials**" *Europhysics Letters* 61: 334-340 (2003); DOI: 10.1209/epl/i2003-00179-4.
359. P. Gonzalez-Mozuelos & M. Olvera de la Cruz, "**Association in electrolyte solutions: Rodlike polyelectrolytes in multivalent salts**" *Journal of Chemical Physics* 118: 4684-4691 (2003); DOI: 10.1063/1.1543138.
360. A. V. Ermoshkin & M. Olvera de la Cruz, "**A modified random phase approximation of polyelectrolyte solutions**" *Macromolecules* 36: 7824-7832 (2003); DOI: 10.1021/ma034148p.
361. A. V. Ermoshkin & M. Olvera de la Cruz, "**Polyelectrolytes in the presence of multivalent ions: Gelation versus segregation**" *Physical Review Letters* 90: 125502 (2003); DOI: 10.1103/PhysRevLett.90.125504.
362. H. Cheng & M. Olvera de la Cruz, "**Adsorption of rod-like polyelectrolytes onto weakly charged surfaces**" *Journal of Chemical Physics* 119: 12635-12644 (2003); DOI: 10.1063/1.1626630.
363. C. I. Huang & M. Olvera de la Cruz, "**Polyelectrolytes in multivalent salt solutions: Monomolecular versus multimolecular aggregation**" *Macromolecules* 35: 976-986 (2002); DOI: 10.1021/ma010717m.

364. F. J. Solis & M. Olvera de la Cruz, "**Flexible polymers also counterattract**" *Physics Today* 54: 71-72 (2001); DOI: Doi 10.1063/1.1349627.
365. F. J. Solis & M. Olvera de la Cruz, "**Flexible linear polyelectrolytes in multivalent salt solutions: Solubility conditions**" *EPJ Direct*, Volume 2, 1-18 (2000); DOI:10.1007/s1010500e0001
366. F. J. Solis, M. Olvera de la Cruz, & K. A. Smith, "**Comment on "hydrodynamic coarsening of binary fluids" - solis, olvera de la cruz, and smith reply**" *Physical Review Letters* 85: 4408-4408 (2002); DOI: 10.1103/PhysRevLett.85.4408.
367. F. J. Solis & M. Olvera de la Cruz, "**Hydrodynamic coarsening of binary fluids**" *Physical Review Letters* 84: 3350-3353 (2000); DOI: 10.1103/PhysRevLett.84.3350.
368. F. J. Solis & M. Olvera de la Cruz, "**Collapse of flexible polyelectrolytes in multivalent salt solutions**" *Journal of Chemical Physics* 112: 2030-2035 (2000); DOI: 10.1063/1.480763.
369. K. A. Smith, F. J. Solis, L. Tao, K. Thornton, & M. Olvera de la Cruz, "**Domain growth in ternary fluids: A level set approach**" *Physical Review Letters* 84: 91-94 (2000); DOI: 10.1103/PhysRevLett.84.91.
370. M. Sayar, F. J. Solis, M. Olvera de la Cruz, & S. I. Stupp, "**Competing interactions among supramolecular structures on surfaces**" *Macromolecules* 33: 7226-7228 (2000); DOI: 10.1021/ma000734w.
371. K. K. Mahdi & M. Olvera de la Cruz, "**Phase diagrams of salt-free polyelectrolyte semidilute solutions**" *Macromolecules* 33: 7649-7654 (2000); DOI: 10.1021/ma000141d.
372. F. J. Solis & M. Olvera de la Cruz, "**Attractive interactions between rodlike polyelectrolytes: Polarization, crystallization, and packing**" *Physical Review E* 60: 4496-4499 (1999); DOI: 10.1103/PhysRevE.60.4496.
373. F. J. Solis & M. Olvera de la Cruz, "**Surface-induced layer formation in polyelectrolytes**" *Journal of Chemical Physics* 110: 11517-11522 (1999); DOI: 10.1063/1.479093.
374. C. Huang, M. Olvera de la Cruz, & P. W. Voorhees, "**Interfacial adsorption in ternary alloys**" *Acta Materialia* 47: 4449-4459 (1999); DOI: 10.1016/s1359-6454(99)00229-3.
375. F. J. Solis & M. Olvera de la Cruz, "**Variational approach to necklace formation in polyelectrolytes**" *Macromolecules* 31: 5502-5506 (1998); DOI: 10.1021/ma971767n.
376. E. Raspaud, M. Olvera de la Cruz, J. L. Sikorav, & F. Livolant, "**Precipitation of DNA by polyamines: A polyelectrolyte behavior**" *Biophysical Journal* 74: 381-393 (1998); DOI: 10.1016/s0006-3495(98)77795-1.
377. C. Huang, M. Olvera de la Cruz, M. Delsanti, & P. Guenoun, "**Charged micelles in salt-free dilute solutions**" *Macromolecules* 30: 8019-8026 (1997); DOI: 10.1021/ma9615157.
378. B. W. Swift & M. Olvera de la Cruz, "**Random copolymers in concentrated solutions**" *Europhysics Letters* 35: 487-492 (1996); DOI: 10.1209/epl/i1996-00140-7.
379. C. Huang & M. Olvera de la Cruz, "**Scaling of interfacial properties in ternary polymer blends**" *Europhysics Letters* 34: 171-175 (1996); DOI: 10.1209/epl/i1996-00434-8.
380. C. Huang & M. Olvera de la Cruz, "**Adsorption of a minority component in polymer blend interfaces**" *Physical Review E* 53: 812-819 (1996); DOI: 10.1103/PhysRevE.53.812.
381. C. Huang & M. delaCruz, "**Analytic interface profile approximation for ternary polymer blends**" *Macromolecules* 29: 6068-6070 (1996); DOI: DOI 10.1021/ma960088u.
382. C. Huang, M. Olvera de la Cruz, & B. W. Swift, "**Phase-separation of ternary mixtures - symmetrical polymer blends**" *Macromolecules* 28: 7996-8005 (1995); DOI: 10.1021/ma00128a005.
383. P. Gonzalezmozuelos & M. Olvera de la Cruz, "**Ion condensation in salt-free dilute polyelectrolyte solutions**" *Journal of Chemical Physics* 103: 3145-3157 (1995); DOI: 10.1063/1.470248.
384. M. Olvera de la Cruz, L. Belloni, M. Delsanti, J. P. Dalbiez, O. Spalla, & M. Drifford, "**Precipitation of highly-charged polyelectrolyte solutions in the presence of multivalent salts**" *Journal of Chemical Physics* 103: 5781-5791 (1995); DOI: 10.1063/1.470459.
385. B. W. Swift & M. Olvera de la Cruz, "**Study of random copolymers in dilute-solution**" *Journal of Chemical Physics* 100: 7744-7748 (1994); DOI: 10.1063/1.466817.
386. A. S. Mendelsohn, J. M. Torkelson, & M. Olvera de la Cruz, "**Fluorescence nonradiative energy-transfer in bulk polymer and miscible and phase-separated polymer blends - a quantitative-analysis including correlation-effects**" *Journal of Polymer Science Part B-Polymer Physics* 32: 2667-2681 (1994); DOI: 10.1002/polb.1994.090321613.
387. J. L. Jones & M. Olvera de la Cruz, "**Transitions to periodic structures - higher harmonic corrections with concentration fluctuations**" *Journal of Chemical Physics* 100: 5272-5279 (1994); DOI: 10.1063/1.467191.
388. C. Huang & M. Olvera de la Cruz, "**The early stages of the phase-separation dynamics in polydisperse polymer blends**" *Macromolecules* 27: 4231-4241 (1994); DOI: 10.1021/ma00093a026.

389. P. Gonzalezmozuelos & M. Olvera de la Cruz, "**Random-phase-approximation for complex charged systems - application to copolyelectrolytes (polyampholytes)**" *Journal of Chemical Physics* 100: 507-517 (1994); DOI: 10.1063/1.466965.
390. D. Gersappe & M. Olvera de la Cruz, "**A monte-carlo study of ring polymers in disordered-systems**" *Molecular Simulation* 13: 267-283 (1994); DOI: 10.1080/08927029408021993.
391. L. Belloni, M. Olvera de la Cruz, M. Delsanti, J. P. Dalbiez, O. Spalla, & M. Drifford, "**Polyelectrolyte solutions + multivalent salts = phase separation**" *Il Nuovo Cimento D* 16: 727-736 (1994); DOI: 10.1007/bf02456718.
392. A. Nesarikar, M. Olvera de la Cruz, & B. Crist, "**Phase-transitions in random copolymers**" *Journal of Chemical Physics* 98: 7385-7397 (1993); DOI: 10.1063/1.464729.
393. A. S. Mendelsohn, M. Olvera de la Cruz, & J. M. Torkelson, "**Correlations in polymer melts and solutions as investigated by fluorescence nonradiative energy-transfer - a novel comparison of theory to experiment by fluorescence intensity decay measurements**" *Macromolecules* 26: 6789-6799 (1993); DOI: 10.1021/ma00077a015.
394. A. M. Mayes, M. Olvera de la Cruz, & W. E. McMullen, "**Asymptotic properties of higher-order random-phase approximation vertex functions for block copolymer melts**" *Macromolecules* 26: 4050-4051 (1993); DOI: 10.1021/ma00067a050.
395. D. Gersappe & M. Olvera de la Cruz, "**Ring macromolecules in topologically restricted environments**" *Physical Review Letters* 70: 461-464 (1993); DOI: 10.1103/PhysRevLett.70.461.
396. K. E. Bassler & M. Olvera de la Cruz, "**Monte-carlo study of diblock copolymers in dilute-solution**" *Journal De Physique I* 3: 2387-2395 (1993); DOI: 101051/jp1:1993251.
397. M. Olvera de la Cruz, A. M. Mayes, & B. W. Swift, "**Transition to lamellar catenoid structure in block-copolymer melts**" *Macromolecules* 25: 944-948 (1992); DOI: 10.1021/ma00028a067.
398. M. Olvera de la Cruz, "**Nearly continuous transitions to periodic structures in block copolymer melts**" *Revista Mexicana De Fisica* 38: 205-211 (1992).
399. A. M. Mayes & M. Olvera de la Cruz, "**Equilibrium domain spacing in weakly segregated block copolymers**" *Macromolecules* 24: 3975-3976 (1991); DOI: 10.1021/ma00013a038.
400. A. M. Mayes & M. Olvera de la Cruz, "**Concentration fluctuation effects on disorder-order transitions in block copolymer melts**" *Journal of Chemical Physics* 95: 4670-4677 (1991); DOI: Doi 10.1063/1.461736.
401. D. Gersappe, J. M. Deutsch, & M. Olvera de la Cruz, "**Density-fluctuations of self-avoiding walks in random-systems**" *Physical Review Letters* 66: 731-734 (1991); DOI: 10.1103/PhysRevLett.66.731.
402. M. Olvera de la Cruz, "**Transitions to periodic structures in block copolymer melts**" *Physical Review Letters* 67: 85-88 (1991); DOI: 10.1103/PhysRevLett.67.85.
403. C. H. R. Kao & M. Olvera de la Cruz, "**Model for micelle formation in copolymer homopolymer blends**" *Journal of Chemical Physics* 93: 8284-8293 (1990); DOI: 10.1063/1.459310.
404. M. Olvera de la Cruz, D. Gersappe, & E. O. Shaffer, "**Dynamics of DNA during pulsed-field gel-electrophoresis**" *Physical Review Letters* 64: 2324-2327 (1990); DOI: 10.1103/PhysRevLett.64.2324.
405. E. O. Shaffer & M. Olvera de la Cruz, "**Dynamics of gel-electrophoresis**" *Macromolecules* 22: 1351-1355 (1989); DOI: 10.1021/ma00193a057.
406. A. M. Mayes & M. Olvera de la Cruz, "**Microphase separation in multiblock copolymer melts**" *Journal of Chemical Physics* 91: 7228-7235 (1989); DOI: 10.1063/1.457290.
407. A. M. Mayes & M. Olvera de la Cruz, "**Strain effects on the thermal-stability of rod eutectics**" *Acta Metallurgica* 37: 615-620 (1989); DOI: 10.1016/0001-6160(89)90245-9.
408. M. Olvera de la Cruz, "**Theory of microphase separation in block copolymer solutions**" *Journal of Chemical Physics* 90: 1995-2002 (1989); DOI: 10.1063/1.456042.
409. A. M. Mayes & M. Olvera de la Cruz, "**Cylindrical versus spherical micelle formation in block copolymer homopolymer blends**" *Macromolecules* 21: 2543-2547 (1988); DOI: 10.1021/ma00186a038.
410. M. Olvera de la Cruz, S. F. Edwards, & I. C. Sanchez, "**Concentration fluctuations in polymer blend thermodynamics**" *Journal of Chemical Physics* 89: 1704-1708 (1988); DOI: 10.1063/1.455116.
411. M. Olvera de la Cruz & Isaac C. Sanchez, "**Microphase separation in block copolymer/homopolymer blends**" *Macromolecules* 20: 440-443 (1987); DOI: 10.1021/ma00168a040.
412. S. F. Edwards & M. Olvera de la Cruz, "**Quantum field theory methods in polymer blends**" *Quantum Field Theory and Quantum Statistics*, Eds. I. A. Batalin, C. J. Isham, and G. A. Vilkovisky; Taylor & Francis, Vol 1: 371, (1987).
413. M. Olvera de la Cruz & I. C. Sanchez, "**Theory of microphase separation in graft and star copolymers**" *Macromolecules* 19: 2501-2508 (1986); DOI: 10.1021/ma00164a008.

414. M. Olvera de la Cruz, J. M. Deutsch, & S. F. Edwards, "**Electrophoresis in strong fields**" *Physical Review A* 33: 2047-2055 (1986); DOI: 10.1103/PhysRevA.33.2047.

Book Chapters and Selected Publications in Conference Proceedings

415. T.I.N.G. Li, R. J McMurray and M. Olvera de la Cruz, "**Multiscale Modeling and Simulation of DNA-Programmable Nanoparticle Assembly**" *Self-Assembly: From Surfactants to Nanoparticles,* Wiley (2019), ISBN 978-1-119-00136-2.
416. M. Olvera de la Cruz, "**Paradigms for Emergence of Shape and Function in Biomolecular Electrolytes for the Design of Biomimetic Materials**" Final report of grant AFRL-AFOSR-VA-TR-2016-0023, (2015).
417. W. Kung, M. Olvera de la Cruz and F. J. Solis "**Adsorption Profiles and Solvation of Ions at Liquid-Liquid Interfaces and Membranes**" *Application of Thermodynamics to Biological and Materials Science,* In Tech (2011), ISBN 978-953-307-980-6.
418. P. K. Jha, F. J. Solis, J. J. de Pablo and M.O. de la Cruz, **"Nanoscale Pattern Formation in Polyelectrolyte Gels"** Mat. Res. Soc. Proc., (2009).
419. K.L. Kohlstedt, G. Vernizzi, and M.O. de la Cruz, **"Patterning Cylindrical Fibers with Long-Range Electrostatic Forces"** Mat. Res. Soc. Proc., (2007), 1062-NN05-17.
420. M. D. Lefebvre, H. Guo, K. R. Shull H. Guo and M. Olvera de la Cruz "**Formation of Swollen Micelles and Inverse Swollen Micelles Using a Block Copolymer with Favorable Interactions**" Abstracts of Papers, 2006 Fall ACS National Meeting, San Francisco, CA, Sept. 10-14, 2006, Vol. 95, PMSE.
421. M. Olvera de la Cruz, "**Phase Segregation in Copolymer and Homopolymer Multi-Component Mixtures**" in "Structure and Properties of Multi-Phase Polymeric Materials" Eds. T. Araki, Q. Tran-Cong and M. Shibayama, Marcel Dekker, Inc., (1998).
422. D. Gersappe and M. Olvera de la Cruz, "**Dynamics of Gel Electrophoresis**" in "Computer Simulation of Polymers," Ed. R. J. Roe, Prentice Hall, (1991).
423. M. Olvera de la Cruz, "**Transitions to Periodic Structures in Block Copolymer Melts: Do the Chains Stretch or Contract?**" in "Lectures on Thermodynamics and Statistical Mechanics" Eds. M. Lopez de Haro and C. Varea World Scientific Press (1991).
424. A. M. Mayes and M. Olvera de la Cruz, "**Microphase Separation in Triblock Copolymer Melts**" Proceedings of the Materials Research Society Symposium, Vol. 175, "Multi-Functional Materials," Eds. A. Buckley, G. Gallagher-Daggitt, F. E. Karasz, and D. R. Ulrich (1990).
425. M. Olvera de la Cruz, "**Aggregation in Block Copolymer Solutions**" Proceedings of the Materials Research Society Symposium, Vol. 177, "Macromolecular Liquids," Eds. C. R. Safinya, S. Safran, and P. A. Pincus (1990).

Patents

1. Jeremy Wang, Monica Olvera de la Cruz, John M Torkelson. "Assembly of random copolymer polyelectrolyte complexes for removal of contaminants from water," U.S. Patent #12312262B2 (2025).
2. Evan A Scott, Fanfan Du, Baofu Qiao, Monica Olvera de la Cruz. "Molecular entrapment via homopolymer self-assembly," U.S. Patent #12472152B2 (2025).
3. Kathleen J. Stebe, Daeyeon Lee, Ravi Radhakrishnan, César de la Fuente-Nunez, Ivan Julian Dmochowski, E. James Petersson, Jason G. Marmorstein, Stephen Crane, Eshe Jael Hummingbird, Yiming Wang, Elizabeth J. Biddinger, Charles Maldarelli, Robert J. Messinger, Raymond S. Tu, Luis Ortuno Macias, Surabh S. KT, Mark L. Schlossman, Bikash Sapkota, Pan Sun, Monica Olvera de la Cruz, Felipe Jiménez-Ángeles, Baofu Qiao. "Peptide Sequences And Compositions At Air-Aqueous Interfaces For Lanthanide Recovery," U.S. Patent #20240228532A1 (2024).

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Anne M. Mayes
"**A Study of Transition to Periodic Structures in Block Copolymer Melts**" Ph.D., February 1991. (Professor, Dept. Materials Science, M.I.T., MA; deceased)

PREVIOUS POSTDOCS, RESEARCH ASSOCIATES, AND RESEARCH PROFESSORS

Dr. Chuting Deng
Dec 2023-Mar 2026
Soft Materials (Materials Engineer, Apple)

Dr. Behzad Mehrafrooz
Aug 2024-Feb 2026
Biophysics and Iontronics

Dr. Vipin Agrawal
Jan 2024-Dec 2025
Membranes and Vesicles (Lead Scientist, Kimberly-Clark)

Dr. Leticia Lopez-Flores
Nov 2020-Oct 2025
Complex Electrolytes

Dr. Yao Xiong
Sep 2022-Mar 2025
Covalent Adaptable Networks and Elasticity (Postdoctoral Researcher, University of California, Santa Barbara)
Dr. Aaveg Aggarwal
Sep 2022-May 2024
Active Matter (Quantitative Modeler at BlackRock, New York City Metropolitan Area)

Prof. Jianshe Xia
Dec 2021-April 2024
Polymer Coarse-Grained Models (Assistant Professor, Southwest Jiaotong University, China)

Dr. Turash Haque Pial
Aug 2022-Feb 2024
Polyelectrolytes Assembly and Ionics (Postdoctoral Scholar, Johns Hopkins University)

Dr. Eleftherios Kirkinis
Oct 2021-Oct 2023
Soft Matter Physics and Fluid Dynamics

Prof. Baofu Qiao
Sept 2011-2014 &
Dec 2017-Aug 2022
Solvent Extraction (Assistant Professor, Baruch College, CUNY)

Dr. Abhiram Reddy
Nov 2021-Aug 2022
Gels and Membranes (Software Research Scientist, Intel Corporation)

Prof. Alejandro Olaya
Nov 2021-May 2022

Continuum Electrostatics (Assistant Professor, Universidad EIA, Medellin)

Dr. Trung Nguyen
Aug 2016-Dec 2021
Optimization of Simulations for Charged Systems (Computational Scientist, Pritzker School of Molecular Engineering, University of Chicago)

Dr. Dulce Maria Valencia
Oct 2018-Oct 2021
Membranes

Dr. Siyu Li
Oct 2019-June 2021
Protein Membranes (Assistant Professor, Cal Poly Pomona)

Dr. Yihao Liang
Aug 2018-May 2021
Membranes and Electrostatics (Research Engineer, Huawei Technologies, China)

Prof. Daniel Matoz-Fernandez
Oct 2019-Feb 2021
Active Matter (Assistant Professor, Warsaw University, Poland)

Dr. Debarshee Bagchi
Jan 2018-Oct 2020
Polymer Electrolytes (Postdoctoral Fellow, ICTS-TIFR, Bangalore, India)

Dr. Wei Li
Sept 2018-Aug 2019
Polyelectrolytes (Postdoctoral Fellow, University of Tennesse, Knoxville)

Dr. Yuba Dahal
Sept 2017-Oct 2019
Protein Dispersion (Postdoctoral Fellow, National Institute of Standards and Technology)

Dr. Luis Gonzalo Lopez
Jan 2018-Dec 2018
Protein Assembly (Researcher, Germany)

Dr. Jaime Millan
Aug 2015-Nov 2018
Functionalized Nanoparticles and Proteins (Data Scientist, Thrive Market)

Dr. Victor Pryamitsyn
Dec 2015-Nov 2018
Polymer Electrolytes (Scientist at Global Science & Technology, Inc.)

Prof. Aykut Erbas
Feb 2014-Aug 2018
Polymeric Charged Liquids (Assistant Professor at Bilkent University, Ankara, Turkey)

Prof. Meng Shen
Nov 2015-July 2018
Emulsions (Assistant Professor, Physics, California State University, Fullerton)

Dr. Kyle Hoffman

Nov 2015-Dec 2017
DNA-Functionalized Proteins (DuPont)

Prof. Mykola Tasinkevych
Sept 2016-Aug 2017
Functional Materials (Assistant Professor, Center for Theoretical and Computational Physics at the University of Lisbon, Portugal)

Prof. Pablo Vazquez
Jan 2016-Mar 2017
Magnetoelastic membranes (Professor, Faculty of Mathematics at the Autonomous University of Yucatan, Mexico)

Prof. Zhenwei Yao
June 2012-Dec 2015
Membranes (Associate Professor, Institute of Natural Sciences and Dept. of Physics and Astronomy, Shanghai Jiao Tong University, China)

Prof. Johannes Willem Zwanikken
Aug 2009-Aug 2015
Charged Macro-ions at Liquid Interfaces (Assistant Professor of Physics, Technical University Delft, The Netherlands)

Dr. Nicholaas Boon
Aug 2013- July 2015
Heterogeneous Charged Systems (Postdoctoral Fellow, Lund University)

Prof. Jiaye Su
Jan 2014- April 2015
Ionic Transport (Professor, Nanjing University of Science and Technology, Nanjing, China)

Prof. Charles Sing
Sept 2012-Aug 2014
Charged Polymer Systems (Associate Professor, University of Illinois, Urbana Champaign)

Prof. Kevin Kohlstedt
Nov 2011-2014
Properties of polyvalent nucleic acid nanostructures (Research Associate Professor, Northwestern University)

Prof. Vikram Jadhao
Aug 2010-2014
Self-assembly of charge systems in media with dielectric heterogeneities (Associate Professor, Indiana University)

Prof. Guillermo Ivan Guerrero
Nov 2009-2014
Molecular Electrolytes (Associate Professor of Physics, University of San Luis Potosí, México)

Prof. Rui Zhang
Oct 2011-Oct 2013
Dynamics of Charged Colloids (Assistant Professor, Advanced Institute for Soft Matter Science and Technology (AISMST), South China University of Technology (SCUT), Guangzhou)

Prof. Gabriel Longo
Nov 2009-Sept 2013

Self-regulated ionic gels (Assist. Professor, Inst. of Theoretical and Applied Physical Chemistry Research, La Plata, Argentina)

Dr. Creighton Thomas
Oct 2011-Aug 2013
Ionic Membranes (Google)

Prof. Srikanth Patala
Sept 2011-Aug 2013
Metallic Nanoparticles (Assist. Prof. Mat. Sci. North Carolina State University)

Dr. Subas Dhakal
July 2010-March 2013
Liquid Crystalline Shells (Postdoctoral Fellow, Syracuse University)

Dr. Chloe Funkhouser
July 2011-Jan 2013
Lamin Meshworks (Principal Engineer, Baxter, Round Lake, IL)

Prof. Rastko Sknepnek
June 2009-Aug 2012
Nanoparticles and Membranes (Lecturer, University of Dundee, Scotland)

Dr. Azita Parsaeian
May 2010-Aug 2012
Bacterial Chromosomes (Senior Analyst)

Dr. Sumanth Swaminthan
Oct 2009-Feb 2012
Non-Equilibrium Self-Assembly (WL Gore & Associates)

Prof. Kuo-An Wu
March 2010-Dec 2010
Functional Materials (Associate Professor, Physics, National Tsing Hua University, Taiwan)

Prof. Kostantin Popov
Dec 2009-Nov 2010
Non-Equilibrium Self-Assembly (Research Associate Professor, in the Division of Chemical Biology and Medicinal Chemistry, and Director of Computational Biophysics, University of North Carolina Chapel Hill)

Dr. William Kung
Sept 2006-Nov 2010
Ionic Liquid Interfaces (Director of Operations, Material Research Center, Northwestern)

Prof. Graziano Vernizzi
Sept 2005 -Aug 2010
Cationic-Anionic Vesicles and RNA Folding (Professor, Physics Dept., Siena College)

Dr. Dongsheng Zhang
April 2007-May 2010
Simulations of Charged Networks (Postdoctoral Fellow, University of Colorado, Boulder)

Dr. Yuri Velichko
Oct 2003-July 2007
Peptide Amphiphiles (Research Associate Professor, Medicine, Northwestern)

Prof. Hongxia Guo
March 2004-Dec 2005
Micelles and Interfaces (Professor, Institute of Chem., Chinese Academy of Sciences, Beijing, China)

Dr. Alexander Kudlay
Oct 2002-April 2005
Gelation of Charged Systems (Senior Programmer Engineer, Bloomberg)

Dr. Alexander Ermoshkin
Nov 2001-Dec 2003
Charged Gels (CTO and co-founder of Carbon (http://www.carbon3d.com/about/alex-ermoshkin/)

Dr. Min Sum Yeom
Aug 2001-July 2003
Simulations of Complex Macromolecules (National Center for Supercomputers, Korea)

Prof. Francisco Solis
Oct 1996-Aug 2000
Colloids and Polymer Mixtures (Professor, State University of Arizona West)

Prof. Katsuyo Thorton
Dec 1997-March 1998
Phase Separation in Multicomponent Fluids (Professor, Mats. Scie., University of Michigan)

Prof. Pedro Gonzalez-Mozuelos
Sep 1992-Nov 1994
Polyelectrolytes (Professor, Physics Department, CINVESTAV, Mexico)

Prof. Kevin Bassler
Dec 1990-Aug 1992
Copolymers (Professor, Physics Department, University of Houston)

Dr. Janette Jones
Nov 1990-Dec 1991
Weak Crystallization (Manager, Unilever, UK)

COURSES TAUGHT

Statistical Mechanics
Thermodynamics
Polymers (lecture and lab course)
Solis State Physics/Physics of Solids
Principles of the Properties of Materials (lecture and lab course)
Phase Transformations
Senior Project
High Polymers in Solid State (Polymer Physics; Polymer Blends and Copolymers)
Special Topics in High Polymer Sciences (Polymer Solutions, Melts and Blends; Polymer Statistics and Dynamics; Polyelectrolyte Solutions, Brushes and Gels; Networks and Membranes)
Fundamentals of Soft Matter
Special Topics in Advanced Polymer Science

RECENT SELECTED NAMED AND PLENARY LECTURES & INTERNATIONAL SCHOOLS/WORKSHOPS (2000-present):

2026

- **Lecturer**, "Polymers as neuromorphic materials", Polymer Physics Gordon Research Conference, South Hadley, MA, Jul 26-31, 2026
- **Keynote Speaker**, "Design and Control of Catalytic Shells", 4th Global Summit on Catalysis & Chemical Engineering, Rome, Italy, Jul 16-17, 2026
- **Lecturer**, "Control of functional Soft Materials", 3rd International Workshop on New Advances in Theoretical and Computational Molecular Sciences for Complex and Quantum Processes, Korea Institute for Advanced Study, Seoul, Korea, Jun 15-19, 2026
- **Lecturer**, "Flow Patterns in Confined Electrolytes", Oscillations and Dynamic Instabilities in Chemical Systems Gordon Research Conference, Les Diablerets, Switzerland, May 3-8, 2026
- **Lecturer**, "Design and Control of Biomimetic Materials", XVI National Congress of Physics and Mathematics: Noether, Universidad de las Américas Puebla, Puebla, Mexico, Mar 25-27, 2026
- **Lecturer**, Materials Science and Engineering Seminar Series Spring 2026, University of California, Berkeley, Berkeley, CA, Feb 26, 2026
- **Lecturer**, Physics Colloquium, Georgetown University, Washington, D.C., Feb 24, 2026
- **Keynote Lecture**, Department of Chemical and Biological Engineering 2026 Spring Seminar Series, University of New Mexico, Albuquerque, NM, Feb 18, 2026
- Discussion Leader, Gordon Research Conference on Colloidal, Macromolecular, and Polyelectrolyte Solutions "Science of Soft Building Blocks for Functional Materials", Ventura, CA, Feb 1-6, 2026

2025

- **Plenary Speaker**, International Union of Pure & Applied Chemistry "Chemistry for Sustainable Future", Kuala Lumpur, Malaysia, Jul 12-19, 2025 (declined)
- **Keynote Lecture**, Diffusion Fundamentals XI "Spreading in Nature, Technology, and Society", Evanston, IL, Jun 30-Jul 2, 2025
- **Keynote Speaker**, WWSC International Conference, Stockholm, Sweden, Jun 15-18, 2025
- **Plenary Speaker**, Annual International Conference on Chemical Engineering and Catalysis, Paris, France, Jun 5-7, 2025
- **Keynote Speaker**, Gordon Research Conference on Self-Assembly and Supramolecular Chemistry, Les Diablerets, Switzerland, May 11-16, 2025
- **Lecturer**, Peptide Materials Gordon Research Conference, Pomona, CA, Jan 19-24, 2025

2024

- **G. N. Lewis Memorial Lecture**, Berkeley, CA, October 15, 2024
- **Plenary Speaker**, 12th Liquid Matter Conference, Mainz, Germany, Sep 22-27, 2024
- **Keynote Talk**, 8th International Soft Matter Conference, Raleigh, NC, July 29-Aug 2, 2024
- **Plenary Speaker**, 98th ACS Colloid and Surface Science Symposium, Seattle, WA, Jun 23-26, 2024
- Discussion Leader, Gordon Research Conference on Bioinspired Materials, Les Diablerets, Switzerland, Jun 16-21, 2024
- **Plenary Speaker**, 13th International Colloids Conference, Barcelona, Spain, Jun 9-12, 2024
- **William H. Schwarz Lecture**, John Hopkins University, Baltimore, MD, Mar 14, 2024

2023

- **Mulliken Lecture**, University of Chicago, Chicago, IL, Oct 23, 2023
- **Plenary Speaker**, 12th International Colloids Conference, Palma, Mallorca, Spain, Jun 11-14, 2023

2022

- **Lecturer**, International Summer School: "The Physics of Bio-inspired and Biological Systems: From Emergent Behaviors to Functional Materials," Madrid, September 2-7, 2022

2021

- **Plenary Speaker**, 10th Australian Colloid and Interface Symposium, Feb 8-11, 2021

2020

- Introductory Keynote Presentation, Systems Chemistry Gordon Conference, MA (postponed)
- **Keynote Presentation**, "Theory and Principals of Self-Assembly" session, Foundations of Nanoscience 2020, UT

2019

- **Lecturer**, "Control of Soft Matter" 3rd International Workshop on Matter Out of Equilibrium, San Luis Potosi, Mexico, Nov 25-27th, 2019
- **Keynote Address**, AIChE Thermophysical Properties and Phase Behavior, FL, Nov 12, 2019
- **Keynote Speaker**, 29th Annual Midwest Thermodynamics and Statistical Mechanics (MTSM) Conference, University of Illinois, Urbana-Champaign, IL, Jun 4, 2019
- **Lecturer**, "Molecular Electrolytes" Optimal Design of Soft Matter Workshop, Isaac Newton Institute for Mathematical Sciences, Cambridge University, UK, May 13-17, 2019
- **Keynote Talk**, NanoDay 2019, National Nanotechnology Research Center, Bilkent University UNAM, Ankara, Turkey, Mar 21, 2019
- **Keynote Presentation**, Molecular Foundry User Meeting, CA
- **Distinguished Lecture**, Polymer Science and Engineering Department, University of Massachusetts, Amherst, MA

2018

- **Lecturer**, Surface Polarization Effects in Confinement, CECAM Workshop, Collective behavior of soft and active matter under confinement, Mainz, Germany, Sept 24-26, 2018
- **PAM Lecture**: Controlling Nanoparticle Assembly, Akron University, OH, Mar 2, 2018
- **BOSE-125 Distinguished Lecture**, S. N. Bose National Center for Basic Sciences, Kolkata, India, Jan 3, 2018

2017

- **Lecturer**, Mainz Materials Simulation Days 2017, CECAM-DE-SMSM, Max Planck Institute for Polymer Research, Mainz, Germany, June 12-14, 2017
- **Lecturer**, Larson Lectures in Chemistry, University of St. Thomas, St Paul, MN

2015

- **Lecturer**, ARO Meeting, NC, Sept 24-25, 2015
- **ISTeC Distinguished Lecturer**, Colorado State University, Sep 14, 2015
- **Lecturer** - McGavock Lecture, Department of Chemistry, Trinity University

2014

- **Lecturer** - "Ion absorption at solid-electrolyte interfaces" Lorentz Center, Leiden (NL) March 10- 14, 2014

2013

- **Plenary Lecture** - The 13th International conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD), Iguaza Falls, Argentina, May 26-30, 2013
- **Lecturer, Discussion Leader** - lf-assembly and supramolecular chemistry, Gordon Research Conference, Les Diablerets, Switzerland, May 5-10, 2013
- **Derieux Lecture**, Department of Physics, North Carolina State University
- **NSF Distinguished Lecturer**, Mathematical Physical Sciences Directorate

2012

- **Plenary Lecture** - XXI International Materials Research Congress (IMRC), Cancun, Mexico, August 13-17, 2012
- **Lecturer** - Procter and Gamble Lecture Series**,** University of California, Los Angeles

2011

- **Plenary Lecture** - First Workshop on Advances in Colloidal Materials, Granada, Spain
- Fay Ajzenberg-Selove Colloquium, Physics Department, University of Wisconsin, Madison, Feb 18, 2011

2010

- **Plenary Lecture** - 2nd International Soft Matter Conference (ISMC 2010), Granada, Spain, July 5-8, 2010
- **Plenary Lecture** - Society of Industrial and Applied Mathematics (SIAM) meeting on Mathematical Aspects of Materials Science, Philadelphia, PA, May 23-26, 2010
- **Plenary Talk** - 4th PENN-UPRH PREM Symposium on Soft Matters in Materials Science, Humacao, Puerto Rico, May 7, 2010
- Discussion Leader - Polymer Physics, Gordon Research Conference, Mount Holyoke College, South Hadley, MA, June 27-July 2, 2010
- **Lecturer** - Colloidal, Macromolecular & Polyelectrolyte Solutions, Gordon Research Conference, Ventura, CA, February 21-25, 2010

2009

- **Lecturer** - Lecture Series, in Science and Technology of Complex Fluids, San Luis Potosi, Mexico, August 21-30, 2009
- **Lecturer** - Polymer Phys. Workshop, Telluride Science Research Center, Telluride, CO, July 6 -10, 2009
- **Lecturer** - 6th International Discussion Meeting on Relaxations in Complex Systems, Rome, Italy, August 30-September 6, 2009
- **Lecturer** - Chemistry of Supramolecules and Assemblies, Gordon Research Conference, Waterville, Maine, June 28-July 3, 2009
- **Lecturer** - Macromolecular Materials Gordon Research Conference, Ventura, CA, January 11-15, 2009
- **Lecturer** - 10th Berkeley Mini Stat. Mech. Meeting, Berkeley Uni., CA, January 9-11, 2009

2008

- **Speaker -** McCormick's PhD Hooding Ceremony, Northwestern University, June 20, 2008
- **Plenary Lecture** - International Conference on Molecular Electronic Devices, Korea, May 29-30, 2008
- **Dow Distinguished Lecturer** - University of California Santa Barbara, October 3, 2008

2007

- Interdisciplinary, Globally Leading Polymer Science and Engineering NSF Workshop, Aug 15-16, 2007
- **Lecturer** - Polymer Physics, Gordon Research Conference, Salve Regina University Newport, RI, June 29-July 4, 2007

- **Lecturer** - Polymer Physics Workshop, Telluride Science Research Center, Telluride, CO, Aug. 6-10, 2007

2006

- **Lecturer** - Micro and Nano Devices with Applications to Biology and Nanoelectronics, NSF Summer Institute on Nano Mechanics and Materials, Evanston IL, USA, Aug. 7-11, 2006
- **Lecturer** - School in Physics and Mathematics, The International Center for Theoretical Physics, ICTP, Trieste, and Brazilian National Research Council, CNPq, Sao Pablo, Brazil, Feb. 20-24, 2006
- **Lecturer** - Pan-American Advanced Studies Institute Program (PASI) on Nano and Biotechnology, Bariloche, Argentina, November 13-22, 2006

2005

- **Lecturer** - Polymer Physics Lecture Series, Advanced Summer School 2005, Physics Department, Centro de Investigaciones y Estudios Avanzados (Cinvestav), Mexico D. F., July 18-August 2, 2005
- **Lecturer** - Polymer Physics Workshop, Telluride Science Research Center, Telluride, CO, August 27-29, 2005
- **Lecturer** - Ion-Containing Polymers, Gordon Research Conference, Il Ciocco, Itally, April 2-6, 2005 (elected co-vice chair with Paula Hammond)
- **Lecturer** - North American Lectures in Chemical Engineering and Materials Science, NSF and Universidades de San Luis Potosi and Guanajuato, Mexico, November 23-25, 2005
- **Lecturer** - Baetjer Lecture Series, Princeton University, March 3-4, 2005

2004

- **Lecturer** - US-South America Workshop "Mechanics and Advanced Materials: Research and Education", Rio de Janeiro, Brazil, August 2-6, 2004
- **Lecturer** - Biophysics Workshop, Theoretical Physics Institute, University of Minnesota, April 30-May 2, 2004
- **Co-Organizer & Plenary Speaker** - Role of Theory in Biological Physics and Materials workshop, National Science Foundation, Tempe, Arizona, May 17-18, 2004

2003

- **Lecturer** - Second International Conference on Applied Statistical Physics: Molecular Engineering (ASTATPHYS-MEX-2003)", Puerto Vallarta, Mexico, August 24-29, 2003
- **Lecturer** - Nano Training Bootcamp, ASME Nanotechnology Institute, Evanston IL, July 8-11, 2003
- **Lecturer** - Telluride Workshop "Polymers: Theory vs. Experiment", Telluride, Colorado, July 20-27, 2003
- **Lecturer** - The 43rd High Polymer Research Group Conference, Moretonhampstead, Devon, England, April 28-30, 2003

2002

- NSF Workshop "Theoretical Science in the Mathematical and Physical Sciences Directorate." Oct 28-29, 2002
- **Lecturer** - Coulomb Effects in Soft Condensed Matter and Biomolecular Science workshop, Aspen Center for Physics (Aspen, CO), May 23-June 21, 2002

2001

- **Lecturer** - Gordon Research Conference on Condensed Matter Physics, Connecticut College, June, 2001
- **Lecturer** - Electrostatic Interactions in Polymers, Colloids, and Biophysics, Theoretical Physics Institute, Minneapolis, MN, May 11-13, 2001

2000

- **Lecturer** - NSF workshop on opportunities in materials theory, Oct. 4-6, 2000

OTHER SELECTED ACTIVITIES (2005-2020):

2019

- **Scientific Committee,** Optimal Design of Soft Matter Workshop, Isaac Newton Institute for Mathematical Sciences, Cambridge University, UK, May 13-17, 2019
- **Review Panel,** SFB TRR 102 Transregional Collaborative Research Centre, Leipzig on "Polymers Under Multiple Constraints: Restricted and Controlled Molecular Order And Mobility," March 12-13, 2019

2018

- **International Scientific Advisory Board,** CIC biomaGUNE, Donostia-San Sebastián, Spain, September 10-12, 2018
- Commemorating the 40th Anniversary of Basic Energy Sciences, Department of Energy, Subcommittee of the Basic Energy Sciences Advisory Committee (BESAC), Rockville, MD, Jul 12-13, 2018
- **"A Remarkable Return on Investment in Fundamental Research"** briefing the report on 40 years of DOE Basic Energy Science research to Mr. Paul Dabbar, DOE Under Secretary of Science, and to Congressional staffers, Capitol Hill, June 12, 2018
- **Chair**, Polymer Physics Prize, American Physical Society

2017

- Program Review, MSE, University of California, Berkeley, Oct 23-25, 2017

2016

- **Co-Leader,** "Transformational experimental tools through integration of instrumentation with theory and computation", Basic Research Needs (BRN) for Innovation and Discovery of Transformative Experimental Tools: Solving Grand Challenges in the Energy Sciences, Washington DC, June 1-3, 2016
- **Panelist,** BES workshop on Basic Research Needs for synthesis Science of Energy Relevant Technology, Maryland, MD May 2-4, 2016

2015

- **Board of Visitors,** ARO Biennial Review of Life Sciences, NC, 6-8 May
- (2015-2018) **Editorial Board**, *Journal of Chemical Physics*
- (2015-2018) **Editorial Board**, *Journal of Chemical Theory and Computation*
- **Review Committee,** Deutsche Forschungsgemeinschaft (DFG), Transregional Collaborative Research Centre, Leipzig, Germany, January 21-22, 2015

2014

- **Scientific Advisory Committee,** National Science Foundation Advisory Committee for International Science and Engineering, Nov 6, 2014
- **External Review,** Materials Science, University of Drexel, Philadelphia, PA, May 19, 2014
- Scientific Grand Challenges in Soft Condensed Matter Workshop, Santa Barbara, CA, May 17-18, 2014
- US-EU Workshop on Computational Materials Science, San Francisco, CA, April 2-25, 2014

2013

- (2013-2015) Basic Energy Sciences Advisory Committee, Department of Energy
- **Organizer,** Evolution of Colloidal Matter, New York City, NY, June 27-29, 2013
- **Co-Chair,** NSF Workshop on Opportunities in Theoretical and Computational Polymeric Materials and Soft Matter, Santa Barbara, CA, October 20-22
- **Co-Chair,** Fifth Biennial Principal Investigators' Meeting in "Biomolecular Materials", Materials Sciences and Engineering Division (MSED) in the DOE Office of Basic Energy Sciences (DOE-BES), Gaithersburg, MD, August 19-21, 2013
- **Organizer,** Evolution of Colloidal Matter, New York City, NY, June 27-29, 2013

2011

- (2011-2015*)* **Editorial Committee,** *Annual Review of Materials Research*
- **"High Magnetic Field Sciences",** briefing the Board of Physics and Astronomy, National Research Council, Beckman Center, UC Irvine, Nov 7, 2011
- **"Condensed Matter and Materials Research Committee – New Activities",** Board of Physics and Astronomy, National Research Council, Beckman Center, UC Irvine, Nov 6, 2011
- (2011-Present) **Advisory Committee**, NSF Harvard MRSEC (PI: David Weiz)

2010

- (2010-Present) **Scientific Advisory Committee,** Materials Science Division, Argonne National Laboratory
- (2010-13) **Editorial Board,** *Current Opinion in Solid State and Materials Science*
- **"Current Activities of the Condensed Matter and Materials Research Committee",** briefing the Board of Physics and Astronomy, National Research Council, Beckman Center, UC Irvine, Nov 6, 2010
- **Search Committee** for the Director of the Advance Photon Source at Argonne

2009

- (2009-13) **Advisory Committee**, Center for Interdisciplinary Exploration and Research in Astrophysics CIERA, Northwestern University (Directors Vicky Kalogera, Fred Rasio and Dave Meyer)
- (2009-Present) **Advisory Board,** Materials Research Laboratory (MRL), University of Illinois at Urbana-Champaign, IL
- **External Reviewer**, U.S. Department of Energy Center for Nanophase Materials Science (CNMS) Operations Review, Oak Ridge National Laboratory, Oak Ridge, TN, Dec 9-11, 2009
- **External Review**, Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, IL, Mar 29-31, 2009
- (2009-Present) **External Advisory Committee** (EAB), NSF Wisconsin - Puerto Rico Partnership for Research and Education in Materials" (PI: Carlos Rinaldi)
- (2009-Present) Northwestern University Shared Facilities Advisory Board
- **Search Committee** for the Director of the Division of Materials Research Mathematical Physical Science Directorate, National Science Foundation Search Committee
- **Search Committee** for the Assistant Director of the Mathematical Physical Science Directorate, National Science Foundation Search Committee
- "**Research at the Intersection of the Physical and Life Science**", National Research Council Committee on Forefronts of Science at the Interface of Physical and Life Sciences, National Academies, briefing to the Office of Science and Technology Policy (OSTP), Washington DC, Nov 12, 2009
- "**Research at the Intersection of the Physical and Life Science**", National Research Council Committee on Forefronts of Science at the Interface of Physical and Life Sciences, National Academies, briefing to the funding agencies, Keck Center, Washington DC, Nov 12, 2009

- "**Research at the Intersection of the Physical and Life Science**", National Research Council Committee on Forefronts of Science at the Interface of Physical and Life Sciences, briefing to the Board of Physics and Astronomy, Beckman Center, Irvine, CA, Nov 7, 2009

2008

- **External Review**, Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, IL, Mar 29-31, 2008
- (2008-10) **Vice-Chair,** Solid State Science Committee, National Research Council, National Research Council, The National Academy of Sciences
- (2008-11) **Advisory Committee**, NSF University PENN-University of Puerto Rico Partnership for Research and Education in Materials (PI: Idalia Ramos)
- (2008-11) **Advisory Committee**, NSF University New Mexico / Harvard Partnership for Research and Education in Materials (PI: Gabriel P. Lopez)
- **Panelist**, Productive Affinities: Successful Collaborations between Museums and Academia Symposium, Art Institute of Chicago, Chicago, IL, Oct 29-31, 2008
- **Panelist Coordinator,** play Copenhagen by Michael Frayn, "Engineering Transdisciplinary Outreach Project in the Arts", Northwestern University, Evanston, IL, Sep 27, 2008
- (2008-09) **Chair**, Executive NSF-MRSEC Directors Committee

2007

- (2007- Present) **Editorial Board**, Macromolecules
- (2007-09) Research at the Interface of Physical and Life Sciences Committee**,** National Research Council, the National Academy of Sciences
- (2007-08) NSF Advisory Panel on Light Source Facilities
- **Organizer**, Anne M. Mayes Carl S. Marvel Creative Polymer Chemistry Award Symposium", American Chemical Society March Meeting, Chicago, Mar 25, 2007
- (2007-09) **Chair, Advisory Committee,** NSF Division of Materials Research

2006

- (2006-07) **Program Review Council**, Northwestern University
- (2006-09) Solid State Science Committee, National Research Council, National Research Council, the National Academy of Sciences
- **Chair**, Internal Review of Dept. of Surgery, Northwestern University
- **Search Committee** for the Director of the Division of Materials Research Mathematical Physical Science Directorate, National Science Foundation Search Committee

2005

- NSF site visit UPR-Humacao University, Humacao, Oct 18-19, 2005
- (2005-09) **Advisory Committee**, NSF Mathematical and Physical Sciences Directorate
- (2005-11) **External Advisory Board**, Nanoscale Science and Engineering Center (NSEC) Materials on Templated Synthesis and Assembly at the Nanoscale, University of Wisconsin-Madison

TALKS, SHORT COURSES AND PARTICIPATION IN INTERNATIONAL CONFERENCES

(* invited presentations)

Giuseppe Amato, Felipe Jimenez Angeles, Monica Olvera de la Cruz, "Polyamine Transport in Carbon Nanotube Arrays as a Path Toward Solid-State Sequencing", 2026 MRS Fall Meeting, Boston, MA, November 29-December 4, 2026

*Monica Olvera de la Cruz, "Designing and Controlling Responsive Polymer Networks", Max Planck Institute for Polymer Research Handover Symposium, Mainz, Germany, September 18, 2026

*Felipe Jimenez-Angeles, Monica Olvera de la Cruz, "Sequestering ions by peptides", [Plenary talk] ACS Fall Meeting 2026, Chicago IL, August 23-27, 2026

Felipe Jimenez-Angeles, Monica Olvera de la Cruz, "Ion adsorption at the interfaces of charged macromolecules" [Poster], Argonne National Laboratory 18th International Conference on Surface X-ray and Neutron Scattering, Lemont, IL, Jul 20-23, 2026

Isaac Smith, Nicholas Pogharian, Trung D Nguyen, Francisco J Solis, Monica Olvera de la Cruz, "Polarization effects on electrolytes near rough surfaces by GPU accelerated code" [Poster], Argonne National Laboratory 18th International Conference on Surface X-ray and Neutron Scattering, Lemont, IL, Jul 20-21, 2026

*Monica Olvera de la Cruz, "Design and Control of Biomimetic Materials", Northwestern University Paideia Energy-Matter Interaction Workshop, Evanston, IL, May 11-15, 2026

*Emily Krucker-Velasquez, Vijay Balasubramanian, Alfredo Alexander-Katz, Monica Olvera de la Cruz, "Learning the Wiring from the Ringing by Spectral Inference", Oscillations and Dynamic Instabilities in Chemical Systems Gordon Research Conference [Poster], Les Diablerets, Switzerland, May 3-8, 2026

Giuseppe Mattia Amato, Monica Olvera de la Cruz, "Polyamine Transport in Carbon Nanotube Arrays as a Path Toward Solid-State Sequencing" [Poster], ACS Spring 2026 National Meeting & Exposition, Division of Polymeric Materials: Science and Engineering (PMSE) – Advances in Polymer Electrolytes Symposium, Atlanta, GA, Mar 22, 2026

Matthew Farnese, Monica Olvera de la Cruz, "Chemotactic Phase Separation in Size-Asymmetric Microcompartments", APS Global Physics Summit, Denver, CO and online, Mar 19, 2026

Sergi Leyva, Ahis Shrestha, Monica Olvera de la Cruz, "Active Ionic Fluxes Induce Symmetry Breaking in Charge-Patterned Nanochannels" [Poster], APS Global Physics Summit, Denver, CO and online, Mar 18, 2026

Sergi Leyva, Zhengyan Zhang, Monica Olvera de la Cruz, Kyle Bishop, "Self-oscillating synchronematic colloids", APS Global Physics Summit, Denver, CO and online, Mar 17, 2026

Devonsmita Sen, Chuting Deng, Heecheol Jang, Beck Miller, Heather Kulik, Monica Olvera de la Cruz, Bradley Olsen, "Polymer properties and activity coefficients for mechanistically informed AI for polymer networks" [Poster], APS Global Physics Summit, Denver, CO and online, Mar 17, 2026

*Monica Olvera de la Cruz, Sullivan Fitz, Chuting Deng, "Post-Synthesis Topological Editing in Polymer Networks", APS Global Physics Summit, Denver, CO and online, Mar 16, 2026

Chuting Deng, Siwei Yu, Ann Carr, Yang Hsia, Ryan Kibler, Abdul Moeez, Naroa Sadaba, Jimin Jung, Lilo Pozzo, Lucas Meza, David Baker, Alshakim Nelson, Monica Olvera de la Cruz, "De Novo Designed Proteins as Mechanoresponsive Elements in 3D Printed Polymer Networks", Colloidal, Macromolecular and Polyelectrolyte Solutions Gordon Research Conference, Ventura, CA, Feb 1-6, 2026

*Monica Olvera de la Cruz, "Design and Control of Responsive Soft Materials", Winter Meeting on Statistical Physics, Monterrey, Mexico, Jan 7-9, 2026

*Monica Olvera de la Cruz, "Connecting Design and Control of Responsive Soft Materials", 105th New England Workshop on Complex Fluids, Cambridge, MA, Dec 5, 2025

*Monica Olvera de la Cruz, "Design and Control of Responsive Soft Materials", Department of Physics, Sapienza University, Rome, Italy, Nov 25, 2025

Yao Xiong, Monica Olvera de la Cruz, "Elasticity by Design: Controlling Mechanical Response in Covalent Adaptable Networks", AIChE Annual Meeting, Boston, MA, Nov 1-6, 2025

Chuting Deng, Monica Olvera de la Cruz, “Pulling Response of De Novo Protein Mechanophores in Synthetic Medium”, AIChE Annual Meeting, Boston, MA, Nov 1-6, 2025

Stephen Crane, Monica Olvera de la Cruz, “Interfacial rheology of lanthanide binding peptide surfactants”, The Society of Rheology 96th Annual Meeting, Santa Fe, NM, Oct 22, 2025

Sergi G. Leyva, Monica Olvera de la Cruz, “Spontaneous symmetry breaking in active nanochannels”, 9th Edwards Symposium, Cambridge, England, Sep 10-12, 2025

Giuseppe Mattia Amato, Felipe Jimenez-Angeles, Monica Olvera de la Cruz, “Electrolyte-Tunable Confined Polyamine Transport in Carbon Nanotube Arrays” [Poster; Awarded 2nd best poster], Intelligent Signal Processing for Frontier Research and Industry (INFIERI) 8th Edition, Pisa, Italy, Sep 1-13, 2025

Felipe Jimenez-Angeles, Monica Olvera de la Cruz, “Liquid-state-hydrodynamic modeling of ionic transport in confinement”, Connecting Molecular Structure and Dynamics to Collective Properties in the Liquid State Gordon Research Conference, Holderness, NH, Aug 3-5, 2025

Sergi G. Leyva, Ahis Shrestha, Monica Olvera de la Cruz, “Spontaneous symmetry breaking in active nanochannels” National Institute for Theory and Mathematics in Biology: Mathematical Modeling, Computational Methods, and Biological Fluid Dynamics: Research and Training workshop, Chicago, IL, Jul 21-25, 2025

*Monica Olvera de la Cruz, “Design and Control of Responsive Complex Electrolytes”, Delft University of Technology Bionanoscience Seminar series, Delft, Netherlands, Jun 13, 2025

Sullivan Fitz, Anna Davis, Jeremiah A. Johnson, Monica Olvera de la Cruz, "Mesoscale Modeling of Asymmetric Enzyme-Polymer Interactions," Self Assembly and Supramolecular Chemistry Gordon Research Conference, Les Diablerets, Switzerland, May 13, 2025

*Monica Olvera de la Cruz, “Ion Conduction in Nanoconfinement”, ACS Spring Meeting, San Diego, CA, Mar 23-27, 2025

*Monica Olvera de la Cruz, “Structure and Function of Responsive Electrolytes”, Princeton University Spring 2025 Chemical and Biological Engineering Departmental Seminar series, Princeton, NJ, Feb 5, 2025

Sergi G. Leyva, Zhengyan Zhang, Monica Olvera de la Cruz, Kyle J.M. Bishop, “Synchronization and assembly of self-oscillating colloids within living crystals” [Poster], Complex Active and Adaptive Materials Systems Gordon Research Conference, Ventura, CA, Jan 26-31, 2025

Nicholas Pogharian, Monica Olvera de la Cruz, “Creating Memory with Confined Ions” [Poster], Complex Active and Adaptive Materials Systems Gordon Research Conference, Ventura, CA, January 26-31, 2025

Chuting Deng, Monica Olvera de la Cruz, “Unfolding of De Novo Proteins in Organic-Aqueous Solvents Under External Force”, Peptide Materials Gordon Research Conference, Pomona, CA, Jan 19-24, 2025

*Monica Olvera de la Cruz, “Electrostatic Driven Self-Assembly Design of Functional Nanostructures”, Peptide Materials Gordon Research Conference, Pomona, CA, Jan 19-24, 2025

Nicholas Pogharian, Monica Olvera de la Cruz, “Creating Memory with Confined Ions” [Poster], Biological Systems that Learn Workshop, National Institute for Theory and Mathematics in Biology, Chicago, IL, January 6-10, 2025

Monica Olvera de la Cruz, Biological Systems that Learn Workshop, National Institute for Theory and Mathematics in Biology, Chicago, IL, January 6-8, 2025

*Monica Olvera de la Cruz, “Dynamics of Ions in Confinement”, 8th Edwards Symposium, Cambridge, England, September 11-13, 2024

*Monica Olvera de la Cruz, “Ion transport in confinement”, ACS Fall Meeting, Denver, CO, August 18-22, 2024

Monica Olvera de la Cruz, “Electrostatic Driven Self-Assembly Design of Functional Nanostructures”. DOE BES Biomolecular Materials Principal Investigators’ Meeting, Rockville, MD, July 30-31, 2024

Ahis Shrestha, Monica Olvera de la Cruz, “Self-propulsion of active particles through surface charge asymmetry” [Poster], International Soft Matter Conference and Young Investigator Workshop, Raleigh, NC, July 26-28, 2024

*Monica Olvera de la Cruz, “Electrolytes in Confinement”, Water and Aqueous Solutions Gordon Research Conference, Holderness, NH, July 21-24, 2024

*Monica Olvera de la Cruz, “Structure and Function of Polyelectrolytes”, Polymer Women Empowerment and Research (PoWER) Conference, Evanston, IL, July 11-12, 2024

*Monica Olvera de la Cruz, “Controlling Biomimetic Soft Robots”, 2024 Vigo Thinking Institute, Vigo, Spain, June 5-7, 2024

*Monica Olvera de la Cruz, “Controlling Biomimetic Soft Robots”, NU-TAU Workshop, Northwestern University, Evanston, IL, May 20-23, 2024

*Monica Olvera de la Cruz, Princeton Theoretical Chemistry Seminar, New Jersey, NY, April 23, 2024

*Monica Olvera de la Cruz, “Ionic transport in nanoconfined electrolyte solutions”, ACS Spring Meeting, New Orleans, LA, March 17-21, 2024

*Monica Olvera de la Cruz, “Structural transitions in charged nanoparticles”, ACS Spring Meeting, New Orleans, LA, March 17-21, 2024

*Monica Olvera de la Cruz, “Design and control of functional microcompartments”, William Schwarz Lecture, John Hopkins University, Mar 14, 2024

Hector Manuel Lopez-Rios, Edward P. Esposito, Heinrich M. Jaeger, Monica Olvera de la Cruz, "Training Deflected States in 2D Magnetoelastic Sheets", APS March Meeting, Minneapolis, MN, Mar 4-8, 2024

*Monica Olvera de la Cruz, “Responsive Biomimicking Materials”, APS March Meeting, Minneapolis, MN, Mar 4-8, 2024

*Monica Olvera de la Cruz, “Control of Functionalized Hydrogels and Microcompartments”, 2023 9th International Conference on Mechanics of Biomaterials and Tissues, Hawaii, USA, Dec 16-20, 2023

*Monica Olvera de la Cruz, “Control of Functional Macromolecular Systems”, 18th Pacific Polymer Conference, Puerto Vallarta, Mexico, Dec 3-7, 2023

*Monica Olvera de la Cruz, “Control of Soft Robots”, 2023 MRS Fall Meeting & Exhibit, Boston, MA, Nov 26-Dec 1, 2023

*Monica Olvera de la Cruz, “Electrolytes in Hetereogenous Media”, Mulliken Lecture, University of Chicago Chemistry Department, Chicago, IL, Oct 23, 2023

*Monica Olvera de la Cruz, “Transformations in crystals of DNA-functionalized nanoparticles by electrolytes”, Water at interfaces: Faraday Discussion, London, England, Sep 20-22, 2023

*Monica Olvera de la Cruz, “Structure and Function of Nanocontainers”, Michigan State University Annual Chemical Engineering and Materials Science Research Forum, Michigan, Aug 25, 2023

*Monica Olvera de la Cruz, “Structure and Function of Nanocontainers”, International Materials Research Congress, Cancun, Mexico, Aug 13-18, 2023

Felipe Jimenez-Angeles, Luis Ortuno Macias, Yiming Wang, Stephen Crane, Raymond Tu, Charles Maldarelli, Kathleen Stebe, Monica Olvera de la Cruz, “Molecular dynamics study of the interfacial adsorption of peptide surfactants for lanthanide ions recovery”, ACS Fall Meeting, San Francisco, CA, Aug 13-17, 2023

Ali Ehlen, Alexandre dos Santos, Felipe Jimenez-Angeles, Monica Olvera de la Cruz, "Ion transport in strong confinement: Material-dependent conduction via polarization charge and image plane” (Poster), The Physics and Chemistry of Liquids GRC, July 30-Aug 4, 2023

Yao Xiong, Hang Yuan and Monica Olvera de la Cruz, “Magnetically Driven Propulsion of Janus Magnetoelastic Membrane Swimmers”, 2023 Physics Symposium of CUHK-Shenzhen, July 8-9, 2023, online

*Monica Olvera de la Cruz, “Biomimetic Robots”, Isaac Newton Workshop 2023, Cambridge, UK, July 13, 2023

*Monica Olvera de la Cruz, “Active Elastic Membranes”, Isaac Newton Workshop 2023, Cambridge, UK, July 7, 2023

*Monica Olvera de la Cruz, “Structure and Function of Enzymatic Membranes”, Physics-Biology Interface Seminar, Université Paris-Saclay Orsay, June 30, 2023

*Monica Olvera de la Cruz, “Molecular charge transport mechanisms”, Physical Organic Chemistry Gordon Research Conference, Holderness, NH, June 25-30, 2023 (canceled attendance)

Ali Ehlen, Alexandre dos Santos, Felipe Jimenez-Angeles, Monica Olvera de la Cruz, "Ion transport in strong confinement: Material-dependent conduction via polarization charge and image plane," Iontronics: From Fundamentals to Ion-Controlled Devices Faraday Discussion, Edinburgh, UK, June 21-23, 2023

Felipe Jimenez-Angeles, Ali Ehlen, Monica Olvera de la Cruz, “Surface polarization enhances ionic transport and correlations in electrolyte solutions nanoconfined by conductors”, Iontronics: From Fundamentals to Ion-Controlled Devices Faraday Discussion, Edinburgh, UK, June 21-23, 2023

*Monica Olvera de la Cruz, “Functional Nanoparticles”, 2023 Vigo Thinking Institute, Vigo, Spain, June 7-9, 2023

*Monica Olvera de la Cruz, “Functional Enzymatic Membranes”, Mainz Materials Simulation Days, Mainz, Germany, June 5-7, 2023

Nicholas Pogharian, Hammad Ali Faizi, Petia Vlahovska, and Monica Olvera de la Cruz, “Effects of Electric Fields on Membrane Morphology and Tension” (Poster), Self-Assembly and Supramolecular Chemistry GRC, Les Diablerets, VD, Switzerland, May 14-19, 2023

*Monica Olvera de la Cruz, “A Perspective on Functional Nanoparticles”, 2023 KITP Nanoparticle Assemblies: A New Form of Matter with Classical Structure and Quantum Function, Santa Barbara, CA, May 1-5, 2023

Joseph McCourt, Sumit Kewalramani, Leticia Lopez-Flores, Michael Bedzyk and Monica Olvera De La Cruz, "The Coupling of Charge Regulation and Geometry in Soft Ionizable Molecular Assemblies", ACS Spring Meeting, Indianapolis, IN, March 26-30, 2023

Joseph McCourt, Sumit Kewalramani, Monica Olvera De La Cruz and Michael Bedzyk, "A Zoo of Chiral Structures: Electrostatic Directed Assembly of Charged, Chiral Amphiphiles", APS March Meeting, Las Vegas, NV, March 5-10, 2023

Joseph McCourt, Sumit Kewalramani, Leticia Lopez-Flores, Michael Bedzyk and Monica Olvera De La Cruz, "The Coupling of Charge Regulation and Geometry in Soft Ionizable Molecular Assemblies", APS March Meeting, Las Vegas, NV, March 5-10, 2023

Jianshe Xia and Monica Olvera de la Cruz, “Influence of Topological Defects on the Rheology and Dynamics of Vitrimers”, APS March Meeting, Las Vegas, NV, March 5-10, 2023

Roger J Reinertsen, Sumit Kewalramani, Felipe Jimenez-Angeles, Monica Olvera De La Cruz and Michael J Bedzyk, “Assembly of DNA-Functionalized Nanoparticles in Concentrated Electrolytes”, APS March Meeting, Las Vegas, NV, March 5-10, 2023

Yao Xiong, Hang Yuan, and Monica Olvera de la Cruz, “Janus Magnetoelastic Membrane Swimmers”, APS March Meeting, Las Vegas, NV, March 5-10, 2023

*Monica Olvera de la Cruz, “Colloidal Superionics”, 2023 Lorentz Center Workshop, Netherlands, Jan 30-Feb 3, 2023

Hector Manuel Lopez-Rios, Shih-Yuan Chen, Michelle M. Driscoll, Monica Olvera de la Cruz, "Material restructuring through hydrodynamic interactions" (Poster), Complex Active and Adaptive Material Systems GRC, Ventura, CA, Jan 29-Feb 3, 2023

Curt Waltmann, Carolyn E. Mills, Nolan W. Kennedy, Ahis Shretha, Danielle Tullman-Ercek, and Monica Olvera de la Cruz, “Bacterial Microcompartments: Broken Symmetries, Assembly Pathways, and Protein Engineering” (Poster), Complex Active and Adaptive Materials Systems GRC, Ventura, CA, Jan 29-Feb 3, 2023

*Ali Ehlen, Hector Lopez-Rios, and Monica Olvera de la Cruz, "Metal-like behavior in nanoparticle assemblies", APS Conference for Undergraduate Women in Physics, Argonne National Laboratory, Jan 20-22, 2023

*Monica Olvera de la Cruz, Berkeley Statistical Mechanics Meeting, Berkeley, CA, January 13-15, 2023 (canceled attendance)

Leticia Lopez-Flores and Monica Olvera de la Cruz, “Charge regulation in nanoparticle systems” (Poster Session), LI Winter Meeting on Statistical Physics, Guanajuato, México, Jan 11-14, 2023

*Monica Olvera de la Cruz, “Metallization of Colloid Crystals”, 2022 Materials Research Society Fall Meeting, Boston, MA, November 28, 2022

*Monica Olvera de la Cruz, “Control of Enzymatic Membranes”, 2022 Materials Research Society Fall Meeting, Boston, MA, November 28, 2022

*Monica Olvera de la Cruz, “Control of soft matter”, Stanford University, CA, November 15, 2022

*Monica Olvera de la Cruz, “Catalytic Hydrogels”, Colloidal, Macromolecular and Polyelectrolyte Solutions Gordon Research Conference, Ventura, CA, Nov 6-11, 2022

*Monica Olvera de la Cruz, “Magnetoelastic Matter,” Summer School on Physics of Bioinspired Systems, Madrid, Spain, September 5, 2022

*Monica Olvera de la Cruz, “Functional Membranes,” Summer School on Physics of Bioinspired Systems, Madrid, Spain, September 6, 2022

*Monica Olvera de la Cruz, “Functional Molecular Electrolytes,” ACS Fall Meeting, Chicago, IL, August 21, 2022

Boran Ma, Monica Olvera de la Cruz, and Cate Brinson “Multiscale simulations for rational design of nanostructured polymers,” ACS Fall Meeting, Chicago, IL, August 22, 2022

Felipe Jimenez-Angeles and Monica Olvera de la Cruz, “Electrokinetic properties of electrolytes confined between conductive electrodes,” ACS Fall Meeting, Chicago, IL, August 22, 2022

*Monica Olvera de la Cruz, “Control of Functional Soft-Matter”, XXX International Materials Research Congress, Cancun, Mexico, August 14-19, 2022 (web talk)

Monica Olvera de la Cruz, “Controlling Interactions in Colloidal Assemblies,” The Thinking Institute Conference, Vigo, Spain, July 4-5, 2022 (web talk)

Monica Olvera de la Cruz, **“**Metalization of Colloids**”,** Mol Sim ’22, Erice, Italy, June 25-29, 2022

Monica Olvera de la Cruz, “Control of Magnoelastic Matter,” Tel Aviv University-Northwestern University Workshop, Tel Aviv, Israel, June 20-23, 2022

Monica Olvera de la Cruz, “Control of Polymer Electrolytes Organization and Functions,” Tosoh Polymer Conference 2022, Los Angeles, CA, June 7-9, 2022

Monica Olvera de la Cruz, “Polymer Electrolytes in Heterogenous Media,” APS March Meeting, Chicago, IL, March 15-19, 2022

Monica Olvera de La Cruz, Trung Nguyen, Felipe Jimenez-Angeles, "Polymer electrolytes in heterogeneous media", APS March Meeting, Chicago, IL, March 15-19, 2022

Chase Brisbois and Monica Olvera de la Cruz, “Locomotion of Magnetoelastic Membranes,” APS March Meeting, Chicago, IL, March 15-19, 2022

Chase Brisbois and Monica Olvera de la Cruz, “Phase Transitions in Colloidal Liquid Crystals Driven by Dynamic Magnetic Fields,” (Poster) APS March Meeting, Chicago, IL, March 15-19, 2022

Felipe Jimenez-Angeles and Monica Olvera de la Cruz, “Electrolytes in Confinement by Conductive Surfaces,” APS March Meeting, Chicago, IL, March 15-19, 2022

Hector Lopez-Rios, Ali Ehlen, and Monica Olvera de la Cruz, “Metallization of Colloidal Crystals,” APS March Meeting, Chicago, IL, March 15-19, 2022

Leticia Lopez-Flores and Monica Olvera de la Cruz, “Charge Regulation in Colloidal System,” APS March Meeting, Chicago, IL, March 15-19, 2022

Jeremy Wang, Curt Waltman, Han Umana-Kossio, Carolyn E. Mills, Danielle Tullman-Ercek, John M. Torkelson, and Monica Olvera de la Cruz, "Charged Complexes of Random Copolymers for Applications in Environmental Sustainability," APS March Meeting, Chicago, IL, March 15-19, 2022

Hang Yuan and Monica Olvera de la Cruz, "Dynamic Simulation of a Population of Quincke Particles," APS March Meeting, Chicago, IL, March 15-19, 2022

Trung Nguyen, Felipe Jimenez-Angeles, and Monica Olvera de la Cruz, "Size-Dependent Polarizability of Mesoscopic Ionic Clusters During Assembly," APS March Meeting, Chicago, IL, March 15-19, 2022

Han Umana-Kossio, Trung Dac Nguyen, Jeremy Wang, Monica Olvera de la Cruz, and John M. Torkelson, "Anomalous Glass Transition Breadths of Random Ionomers," APS March Meeting, Chicago, IL, March 15-19, 2022

Curt Waltman, Carolyn E. Mills, Nolan W. Kennedy, Danielle Tullman-Ercek, and Monica Olvera de la Cruz, "Shells Protein Roles in Bacterial Microcompartment Assembly," APS March Meeting, Chicago, IL, March 15-19, 2022

Dingwen Qian and Monica Olvera de la Cruz, "Nonlinear Transport and Pattern Formation in Two-Dimensional Binary Systems," APS March Meeting, Chicago, IL, March 15-19, 2022

Joseph McCourt, Changrui Gao, Sumit Kewalramani, Erik Roth, Steven Weigand, Monica Olvera de La Cruz, Michael Bedzyk, "Electrostatic and Van der Waal Control of Charged Chiral Assemblies," APS March Meeting, Chicago, IL, March 15-19, 2022

*Monica Olvera de la Cruz, "Metallization of Colloidal Crystals," ACS Spring Meeting, San Diego, CA, March 20-24, 2022

Felipe Jimenez-Angeles, Kenneth Han, Akif Tezcan and Monica Olvera de la Cruz, "Elucidating protein-polymer interfaces in flexible protein lattices," ACS Spring Meeting, San Diego, CA, March 20-24, 2022

Jeremy Wang, Curt Waltmann, Han Umana-Kossio, Carolyn Mills, Danielle Tullman-Ercek, John Torkelson and Monica Olvera de la Cruz "Charged Complexes of Random Copolymers for Applications in Environmental Sustainability," ACS Spring Meeting, San Diego, CA, March 20-24, 2022

*Monica Olvera de la Cruz, "Responsive Supramolecular Hydrogel," ACS Spring Meeting, San Diego, CA, March 20-24, 2022

Curt Waltmann, Carolyn Mills, Nolan Kennedy, Danielle Tullman-Ercek, Monica Olvera de la Cruz, "Shell proteins roles in bacterial microcompartment assembly," ACS Spring Meeting, San Diego, CA, March 20-24, 2022

*Monica Olvera de la Cruz, "Interactions and Properties of Binary Colloidal Crystals," Dow's Discussion Group on Interface Science (DDGIS), DOW, Auburn, MI, March 8, 2022

*Monica Olvera de la Cruz, "Responsive Soft Matter," The Mathematics of Soft Matter: Structure and Dynamics, Chicago, IL, March 2, 2022

*Monica Olvera de la Cruz, "Control of Magnetoelastic Matter," Department of Materials Science and Engineering, University of Illinois, Urbana, IL, February 28, 2022

*Monica Olvera de la Cruz, "Molecular Electrolytes," Chemistry Department Colloquium, University of Toronto, Canada, February 25, 2022

*Monica Olvera de la Cruz, "Control of Magnetoelastic Matter," Department of Materials Science and Engineering, University of California, Irvine, CA, February 24, 2022

*Monica Olvera de la Cruz, "Control of Functional Soft Materials," Plenary talk, VI International Conference on Catalysis and Chemical Engineering, San Francsico, CA, February 22, 2022

*Monica Olvera de la Cruz, "Colloidal Crystals Metallicity," Pacifichem 2021 (virtual) December 18, 2021

*Monica Olvera de la Cruz, "Functional Electrolytes," Chemical and Biomolecular Engineering Fall 2021 Seminar Series, Cornell University, Ithaca, NY, November 22, 2021 (web talk)

*Monica Olvera de la Cruz, "Polymer Electrolytes in Heterogenous Media," AIChE Annual Meeting, Boston, MA, November 10, 2021

*Monica Olvera de la Cruz, “Self-Assembly Design of Functional Nanostructures,” Breaking Barriers Through Chemistry (Virtual) Conference, August 6, 2021 (web talk)

*Monica Olvera de la Cruz, “Electrostatics and Elasticity in Self-Assembled Nanostructures,” Biomolecular Principal Investigators’ Meeting, August 5, 2021 (web talk)

*Monica Olvera de la Cruz, “Actuating Magnetoelastic Matter,” Systems Chemistry Virtual Symposium Program, July 7-9, 2021

*Monica Olvera de la Cruz, “Control of Soft Matter with Magnetic Fields,” IFUASLP Medina Fest, July 8, 2021 (web talk)

*Monica Olvera de la Cruz, “Structure and Dynamics of Charged Polymers,” APS March Meeting 2021, March 16, 2021 (web talk)

*Monica Olvera de la Cruz, “Control of Magnetoelastic Matter,” Special Zoom Colloquium James Franck Institute, University of Chicago, Chicago, IL, March 12, 2021 (web talk)

*Monica Olvera de la Cruz, “Control of Soft Matter with Magnetic Fields,” Chemical Physics Seminar, Caltech, CA, March 9, 2021 (web talk)

*Monica Olvera de la Cruz, “Driving Soft Materials with Magnetic Fields,” NYU Talks, February 24, 2021 (web talk)

*Monica Olvera de la Cruz, "Control of Soft Materials with Magnetic Fields,” Chemical and Biomolecular Engineering Fall 2020 Seminar Series, Bethlehem, PA, September 30, 2020 (web talk)

*Monica Olvera de la Cruz, “Physical Chemistry of DNA,” APS DSOFT short course presentation, May 29, 2020 (web talk)

*Monica Olvera de la Cruz, Introductory Keynote Presentation, Systems Chemistry Gordon Research Conference, Newry, MA, June 28 - July 3, 2020 (postponed until 2022)

*Monica Olvera de la Cruz, Keynote Principles and Theory FNANO 2020 “Colloidal crystal metallicity” Snowbird, UT, April 7, 2020 (cancelled)

*Monica Olvera de la Cruz, “Polyelectrolytes in confinement” ACS National Meeting, Philadelphia, PA, March 22nd, 2020 (cancelled)

*Monica Olvera de la Cruz, “Control of Soft Matter with Magnetic Fields” Chemical Physics Seminar, Caltech, CA, March 10th, 2020 (postponed)

*Monica Olvera de la Cruz, “Physical Chemistry of DNA”, Short Course on DNA, APS March Meeting, Denver, CO, March 2-6th, 2020 (cancelled)

Yaohua Li, Felipe Jimenez-Angeles and Monica Olvera de la Cruz, “Interaction of highly charged rigid polymer in monovalent salt” APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Trung Nguyen and Monica Olvera de la Cruz, “Nontrivial effects of dielectric mismatch on the conformational behavior of confined polyelectrolytes” APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Yange Lin and Monica Olvera de la Cruz, “Sublattice Melting in Binary Superionic Colloidal Crystals” APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Katherine Harmon, Felipe Jimenez-Angeles, Sang Soo Lee, Michael J Bedzyk, Monica Olvera de la Cruz and Paul Fenter, “Atomic Scale Characterization of the Voltage-Dependent Electrical Double Layer Structure” APS March Meeting, Denver, CO, March 2-6th, 2020 (cancelled)

Siyu Li, Yaohua Li, Taylor Nichols, Nolan Kennedy, Danielle Tullman-Ercek and Monica Olvera de la Cruz, “Multi-component assembly of microcompartments” APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Ali Ehlen, Hector Manuel Lopez Rios and Monica Olvera de la Cruz, “Binary colloidal compounds with depletants” APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Jeremy Wang, Baofu Qiao, Trung Nguyen, John Torkelson and Monica Olvera de la Cruz, "Random Copolymer Complexation with Proteins and Possible Applications" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Hector Manuel Lopez Rios, Ali Ehlen and Monica Olvera de la Cruz, "Localization to delocalization transitions in size asymmetric mixtures of colloidal particles with grafted chains" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Yihao Liang, Boran Ma and Monica Olvera de la Cruz, "Electrostatic Effects on Charged Block Copolymer Melts" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Curt Waltmann, Monica Olvera de la Cruz, Roi Asor and Uri Raviv, "Role of C-Terminal "Arms" in the Assembly and Stability of SV40 Polymorphs" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Aaveg Aggarwal, Hang Yuan and Monica Olvera de la Cruz, "Control of a Hydrogel Based Soft Robot Using Light" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Debarshee Bagchi and Monica Olvera de la Cruz, "Confined polyelectrolyte solution driven by an external electric field" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Chase Brisbois, Mykola Tasinkevych and Monica Olvera de la Cruz, "Non-reciprocal motion in superparamagnetic magnetoelastic membrane patches" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

Felipe Jimenez-Angeles, Katherine Harmon, Trung Nguyen, Paul Fenter and Monica Olvera de la Cruz, "The structure and polarization of the water-graphene interface from molecular dynamics simulations and X-ray reflectivity experiments" APS March Meeting, Denver, CO, March 2-6th, 2020 (web talk)

*Monica Olvera de la Cruz, "Colloidal Crystal Metallicity", Materials Science Colloquium, Lehigh University, PA, Feb 26th, 2020 (postponed)

*Monica Olvera de la Cruz, "Control of Magnetic Matter", University of Toronto, Toronto, Canada, February 20th, 2020

*Monica Olvera de la Cruz, "Colloidal Crystal Metallicity", The George & Dot Bishop Advanced Materials Colloquium Series, Clemson University, SC, Jan 30th, 2020

*Monica Olvera de la Cruz, "Polymer Electrolytes" Chemical Engineering Colloquium, University of North Carolina, Chapel Hill, NC, Jan 14th, 2020

*Monica Olvera de la Cruz, "Control of Magnetoelastic Filaments and Membranes via Dynamic Magnetic Fields" Physics Colloquium, Northwestern University, January 10, 2020

*Monica Olvera de la Cruz, AIChE Thermophysical Properties and Phase Behavior Keynote Address, Orlando, FL, Nov 12, 2019

*Monica Olvera de la Cruz, "Design of Functional Protein Membranes" Duke University, October 23, 2019

*Monica Olvera de la Cruz, Distinguished Lecture, Polymer Science and Engineering Department, University of Massachusetts Amherst, MA, Oct 4, 2019

*Monica Olvera de la Cruz, ""Design of Functional Protein Membranes" Indiana University, August 30, 2019

*Monica Olvera de la Cruz, "Design of Functional Protein Membranes" ACS Fall Meeting, San Diego, CA, August 25-29, 2019

*Monica Olvera de la Cruz, "Polymer Electrolytes Statistics and Thermodynamics" ACS Fall Meeting, San Diego, CA, August 25-29, 2019

*Monica Olvera de la Cruz, "Functional Membranes and Polymer Electrolytes" Isaac C. Sanchez Retirement Celebration, UT Austin, August 8, 2019

*Monica Olvera de la Cruz, "Self-assembly surprises in functionalized nanoparticles/colloids" Nano Assembly 2040, Shanghai, China, August 2-4, 2019

*Monica Olvera de la Cruz, "Functional polymer electrolytes" Department of Applied Physics, Nanjing University of Science and Technology, Nanjing, China, August 1, 2019

*Monica Olvera de la Cruz, Plenary Speaker "Design of Bio-Inspired Membranes" 10th Triennial Congress of the International Society for Theoretical Chemical Physics, Tromsø, Norway, July 11-17, 2019

*(Keynote) Monica Olvera de la Cruz, "Polymer-Protein Assemblies" 29th Annual Midwest Thermodynamics and Statistical Mechanics (MTSM) conference, Beckman Institute, University of Illinois at Urbana-Champaign, IL, June 2-4, 2019

*Monica Olvera de la Cruz, "Control of Colloidal Metallicity by Tuning Bonds" Self-Assembly and Supramolecular Chemistry Gordon Research Conference, Les Diablerets, CH, May 19-24, 2019

*Monica Olvera de la Cruz, "Molecular Electrolytes" Optimal Design of Soft Matter Workshop, Isaac Newton Institute for Mathematical Sciences, Cambridge University, UK, May 13-17, 2019

*Monica Olvera de la Cruz, "Polymer Electrolytes" Stanford University, CA, April 26, 2019

*Monica Olvera d ela Cruz, "Puzzles in Molecular Electrolytes" Northwestern Institute on Complex Systems (NICO), Northwestern University, IL, April 24, 2019

*Monica Olvera de la Cruz, "Design of Functional Protein Membranes" Chemical and Biological Engineering, Princeton University, NJ, April 10, 2019

*Monica Olvera de la Cruz, "Polymer Electrolytes" School of Molecular Science, Arizona State University, AZ, April 4, 2019

Boran Ma and Monica Olvera de la Cruz "Effect of size asymmetry on morphology and dynamics of ionomers" ACS Spring Meeting 2019, Orlando, FL, March 31- April 4, 2019

*(Keynote) Monica Olvera de la Cruz, "Biomolecular Assembly" Nanoday 2019, National Nanotechnology Research Center, Bilkent University UNAM, Ankara, Turkey, March 21, 2019

Hang Yuan and Monica Olvera de la Cruz, "Membrane morphology beyond polyhedral" APS March Meeting, Boston, MA, March 4-8, 2019

Aykut Erbas, John Marko and Monica Olvera de la Cruz, "Relaxation spectrum of a concentration quench of Brownian particles" APS March Meeting, Boston, MA, March 4-8, 2019

Yihao Liang, Xiangjun Xing and Monica Olvera de la Cruz, "Morphology of toroidal vesicles" APS March Meeting, Boston, MA, March 4-8, 2019

Sumit Kewalramani, Changrui Gao, Honghao Li, Monica Olvera de la Cruz and Michael J. Bedzyk, "Electrostatic shape control of a charged molecular membrane from ribbon to scroll" APS March Meeting, Boston, MA, March 4-8, 2019

Sebastian Russell, Alan C West, Oleg Gang, Monica Olvera de la Cruz, Luis M. Campos and Sanat Kumar, "Compositionally Asymmetric Block Polyelectrolyte Morphologies" APS March Meeting, Boston, MA, March 4-8, 2019

Felipe Jimenez, Ha-Kyung Kwon and Monica Olvera de la Cruz, "Configurable Self-Assembly of Block Copolymers at the Liquid-Liquid Interface" APS March Meeting, Boston, MA, March 4-8, 2019

*Monica Olvera de la Cruz, B. Qiao and Trung Nguyen, "Design of Functional Protein Membranes" APS March Meeting, Boston, MA, March 4-8, 2019

Trung Nguyen and Monica Olvera de la Cruz, "Polyelectrolytes under spatial and dielectric confinement" APS March Meeting, Boston, MA, March 4-8, 2019

Graziano Vernizzi, Trung Nguyen, Henri Orland and Monica Olvera de la Cruz, "Ensemble Monte Carlo Growth simulations of polymers in confined environments" APS March Meeting, Boston, MA, March 4-8, 2019

Ali Ehlen, Kurinji Krisnamoorthy, Sumit Kewalramani, Michael J. Bedzyk and Monica Olvera de la Cruz, "Characterizing the counterionic cloud of DNA-functionalized nanoparticles with molecular dynamics simulations" APS March Meeting, Boston, MA, March 4-8, 2019

Yuba Dahal and Monica Olvera de la Cruz, "Protein crystallizing assembly via free and grafted linkers" APS March Meeting, Boston, MA, March 4-8, 2019

Debarshee Bagchi, Trung Nguyen and Monica Olvera de la Cruz, “Polyelectrolyte solution confined between oppositely charged dielectric surfaces” APS March Meeting, Boston, MA, March 4-8, 2019

Katherine Harmon, Felipe Jimenez, Sang Soo Lee, Michael J. Bedzyk, Monica Olvera de la Cruz and Paul Fenter, “Mapping the Atomistic Structure of the Electrical Double Layer with X-ray Reflectivity and Molecular Dynamics” APS March Meeting, Boston, MA, March 4-8, 2019

*Monica Olvera de la Cruz, “"Electrostatic Effects in Viral Assembly" Physical Virology Gordon Research Conference, Ventura, CA Jan 20-25, 2019

*Monica Olvera de la cruz, “Polymer Electrolytes” American Physical Society Conference For Undergraduate Women in Physics, Chicago, IL, January 19, 2019

*Monica Olvera de la Cruz, “Encapsulation of Proteins with Random Copolymers” MRS Fall Meeting, Boston, MA, November 26-29, 2018

*Monica Olvera de la Cruz, Frontiers of Molecular Engineering Symposium, Chicago, United States, September 27-28 2018

*Monica Olvera de la Cruz, “Surface Polarization Effects in Confinement” Collective Behavior of Soft and Active Matter Under Confinement, CECAM-DE-SMSM, Mainz, Germany, September 24-26, 2018

*Monica Olvera de la Cruz, “Correlations in polymer electrolytes”, 256th ACS National Meeting in Boston, MA, August 19-23rd, 2018

*Baofu Qiao (presented on behalf of Monica Olvera de la Cruz.) “Protein surface patches drive the stability in non-aqueous solution”, 256th ACS National Meeting in Boston, MA, August 19-23rd, 2018

*Monica Olvera de la Cruz, “Attractions and Repulsions Mediated by Monovalent Salts”, 30th International Conference on Science and Technology of Complex Fluids, San Luis Potosi, Mexico, June 18-22nd, 2018.

*Monica Olvera de la Cruz, “Control of Functionalized Nanoparticle Assembly”, Massachusetts Institute of Technology, MA, May 3rd, 2018

*Monica Olvera de la Cruz, “Attractions and Repulsions Mediated by Monovalent Salts" State University of New York at Stony Brook, NY, April 3rd, 2018

Boran Ma, Trung Dac Nguyen, Victor A. Pryamitsyn and Monica Olvera de la Cruz, “Electrostatic effect on nanostructure and dynamics in random ionomers” Materials Research Society, Phoenix, Arizona, April 2-6, 2018

*Monica Olvera de la Cruz, “Attractions and Repulsions Mediated by Monovalent Salts” Electrostatics in Concentrated Electrolytes Workshop, CECAM, Switzerland, March 21st, 2018

*B. Qiao (presented on behalf of Monica Olvera de la Cruz), “Stabilizing Proteins in Non-Aqueous Solution” ACS March Meeting, New Orleans, LA, March 18-22, 2018

B. Qiao, “Altering protein crystallization by modulating salt concentration” ACS March Meeting, New Orleans, LA, March 18-22nd, 2018

Anton Chavez, Chao Sun, Meng Shen, Monica Olvera De La Cruz, William R. Dichtel, “Designed nanotubes formed by the dynamic assembly of imine-linked macrocycles” ACS March Meeting, New Orleans, LA, March 18-22nd, 2018

*Monica Olvera de la Cruz, “Biomimetic functions of hydrophobic-hydrophilic random copolymers” German Physical Society, Berlin, Germany, March 15th, 2018

Victor Pryamitsyn, Monica Olvera de la Cruz “Physical origin and the architectural pathway to the “inverted” phases of the micro-segregated diblock copolymers” APS March Meeting, Los Angeles, California March 5–9, 2018

Ha-Kyung Kwon, Kenneth Shull, Monica Olvera de la Cruz “Effect of Charge on Interfacial Activity and Micelle Formation of Ion-containing Block Copolymers at the Oil-Water Interface” APS March Meeting, March 5–9, 2018; Los Angeles, California

Graziano Vernizzi, Trung Nguyen, Henri Orland, Monica Olvera de la Cruz, “A Multicanonical Monte Carlo Ensemble Growth method” APS March Meeting, March 5–9, 2018; Los Angeles, California

Martin Girard, Trung Nguyen, Monica Olvera de la Cruz, “Coarse-grained multibody interactions in colloids” APS March Meeting, March 5–9, 2018; Los Angeles, California

Debadutta Prusty, Victor Pryamitsyn, Monica Olvera de la Cruz, “Modeling hydrogen bonding in polymer blends using association models” APS March Meeting, March 5–9, 2018; Los Angeles, California

Jaime Millan, Mary Wang, Martin Girard, Byeongdu Lee, Chad Mirkin, Monica Olvera de la Cruz, “The Role of Repulsion in Colloidal Crystal Engineering with DNA” APS March Meeting, March 5–9, 2018; Los Angeles, California

Trung Nguyen, Ting Xu, Monica Olvera de la Cruz, “Adsorption of random copolymers onto heterogeneous nanostructures” APS March Meeting, March 5–9, 2018; Los Angeles, California

Aykut Erbas, Monica Olvera de la Cruz, John Marko, “Electrostatic effects on facilitated dissociation of molecular ligands” APS March Meeting, March 5–9, 2018; Los Angeles, California

Christopher DelRe, Brian Panganiban, B. Qiao, Tim Li, Charley Huang, Patrick Dennis, Monica Olvera De La Cruz, Ting Xu, “Noncovalent Interactions with a Synthetic Random Heteropolymer Allow for Protein Stabilization in Nonnatural Environments” APS March Meeting, March 5–9, 2018; Los Angeles, California

Ramsey Kumar, Edward Banigan, Aykut Erbas, Rebecca Giuntoli, Monica Olvera de la cruz, Reid Johnson, John Marko, “Facilitated Dissociation Kinetics of Transcription Factor Proteins from Single DNA Binding Sites” APS March Meeting, March 5–9, 2018; Los Angeles, California

Christopher DelRe, Brian Panganiban, B. Qiao, Charley Huang, Tim Li, Patrick Dennis, Monica Olvera de la Cruz, Ting Xu, “Development of Catalytic Materials Based on the Stabilization of Organophosphorus Hydrolase in Organic Solvents” APS March Meeting, March 5–9, 2018; Los Angeles, California

B. Qiao, Brian Panganiban, Ting Xu, Monica Olvera de la Cruz, “Local Heterogeneous Domains Drive Stability of Proteins in Non-Aqueous Solution” APS March Meeting, March 5–9, 2018; Los Angeles, California

Tao Jiang, B. Qiao, Monica Olvera de la Cruz, Ting Xu, “Nature-Inspired Polymer Design with Protein-Like Functionality” APS March Meeting, March 5–9, 2018; Los Angeles, California

*Monica Olvera de la Cruz, PAM Lecture: Controlling Nanoparticle Assembly, Akron University, OH, March 2nd, 2018

*Monica Olvera de la Cruz, Physics Colloquium & Visiting Women & Minority Lecturer Series, Surface Polarization Effects on Metal-Amphiphile Emulsions, Michigan Technological University, MI, Feb 15th, 2018

*Monica Olvera de la Cruz, “Polymer Electrolytes”, Materials Science and Engineering Colloquium, Texas A&M University, TX, Feb 12th, 2018

*Monica Olvera de la Cruz, “Self-assembly of heterogeneous molecules”, Chemistry Department Colloquium, University of Oxford, United Kingdom, Jan 29th, 2018

*Monica Olvera de la Cruz, “Controlling Nanoparticle Assembly”, BOSE-125 Distinguished Lecture, S. N. Bose National Center for Basic Sciences, Kolkata, India, Jan 3rd, 2018

*Monica Olvera de la Cruz, “Surface Polarization Effects on Metal-Amphiphile Emulsions”, Saha Institute of Nuclear Physics, Kolkata, India, Jan 2nd, 2018

*Monica Olvera de la Cruz, “Polymer Electrolytes”, Symposium on Structure and Behavior of Polymers from Equilibrium to Far-From-Equilibrium, Kyoto Institute of Technology, Kyoto, Japan, Nov 18th, 2017

*Monica Olvera de la Cruz, 7th CCS-PD/ACS-PMSE Joint Symposium on Frontiers in Polymer Science and Engineering, Chengdu, China, October 2017

*Monica Olvera de la Cruz, 2017 Larson Lectures in Chemistry, University of St. Thomas, St Paul, MN, Oct 4-6th, 2017

*Monica Olvera de la Cruz, “Nanoparticle Assembly in Electrolytes”, Chemistry and Physics of Liquids Gordon Research Conference, Holderness, NH, Aug 6-11th, 2017

*Monica Olvera de la Cruz, “Polymer Electrolytes Thermodynamics and Microstructures”, American Conference on Theoretical Chemistry (ACTC), Boston, MA, July 16–21st, 2017

*Monica Olvera de la Cruz, “Mesoscale Studies of Ionic Vesicles with Polyhedral Geometries” MRS Spring Meeting 2017, Phoenix, AZ, April 17-21st, 2017.

*Monica Olvera de la Cruz, “Control of DNA-functionalized nanoparticle assembly” ACS Award in Colloid Chemistry: Symposium in honor of Nicholas A. Kotov, ACS Spring Meeting 2017, San Francisco, CA, April 2-8th, 2017.

Monica Olvera de la Cruz, “Electrolyte-Mediated Assembly of Charged Nanoparticles” ACS Spring Meeting 2017, San Francisco, CA, April 2-8th, 2017.

Shuangping Liu, Monica Olvera de la Cruz, “Anisotropic contraction of hydrogel reinforced by aligned fibers” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Boran Ma, Trung Nguyen, Victor Pryamitsyn, Monica Olvera de la Cruz, “Electrostatic Effects on Clustering and Ion Dynamics in Ionomer Melts” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Elad Deiss-Yehiely, Julia Ortony, Baofu Qiao, Samuel Stupp, Monica Olvera de la Cruz, “Ion Condensation onto Self-Assembled Nanofibers” (Poster) APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Pablo Vazquez-Montejo, Joshua Dempster, Mykola Tasinkevych, Monica Olvera de la Cruz, “Flexible Magnetic Membranes” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Ha-Kyung Kwon, Kenneth R. Shull, Jos W. Zwanikken, Monica Olvera de la Cruz, “Effects of ion size and charge asymmetry on the salt distribution in polyelectrolyte blends and block copolymers” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Victor Pryamitsyn, Ha-Kyung Kwon, Johannes Zwanikken, Monica Olvera de la Cruz, “Anomalous phase behavior of ionic polymer blends and ionic copolymers” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Martin Girard, Soyoung Seo, Yaohua Li, Chad Mirkin, Monica Olvera De La Cruz, “Potential of Mean Force of DNA Guided Assemblies Past Debye-Hückel Regime” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Trung Nguyen, Baofu Qiao, Brian Panganiban, Christopher Delre, Ting Xu, Monica Olvera De La Cruz, “Strong Adsorption of Random Heteropolymers on Protein Surfaces” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Aykut Erbas, Monica Olvera de la Cruz, “Repulsive Interactions Between Two Polyelectrolyte Networks” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Meng Shen, Honghao Li, Monica Olvera de la Cruz, “The Effects of Interfacial Polarization on Long-Range Interaction Between Aqueous Phases in Oil” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Jaime Millan, Janet McMillan, Jeff Brodin, Byeongdu Lee, Chad Mirkin, Monica Olvera de la Cruz, “Modelling of DNA-Mediated of Two- and --Three dimensional Protein-Protein and Protein-Nanoparticle Self-Assembly” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Yaohua Li, Jaime A. Millan, Meng Shen, Trung Nguyen, M. Olvera de la Cruz, “Strong Ion-Driven Nanoparticle Assembly: A Multi-Scale Molecular Dynamics Study” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

Kyle Hoffmann, Kurinji Krishnamoorthy, Sumit Kewalramani, Michael Bedzyk, Monica Olvera De La Cruz, “Electrostatics of DNA-Functionalized Nanoparticles" APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

*Monica Olvera de la Cruz, “Control of DNA-Functionalized Nanoparticle Assembly” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

*Monica Olvera de la Cruz, “Polymer Physics Prize Talk” APS March Meeting 2017, New Orleans, LA, March 13-17th, 2017.

*Monica Olvera de la Cruz, “Molecular Electrolytes“ Princeton University, Department of Astrophysical Sciences, NJ, February 15th, 2017.

*Monica Olvera de la Cruz, "Using Computational Modeling to Probe and Design Biomimetic Behavior" Gordon Research Conference, Santa Barbara, California, Jan 29th- Feb 3rd, 2017

*Monica Olvera de la Cruz, "Biomimetic Materials Design by Computer Simulations" Conference for Undergraduate Women in Physics, UW-Madison, WI, Jan 15th, 2017.

*Monica Olvera de la Cruz, "Controlling the Geometry of Elastic Membranes" New York University, NY, Nov 4th, 2016.

*Monica Olvera de la Cruz, Perspectives of GPU Computing in Science, Sapienza Universita di Roma, Italy, Sept 26-28, 2016. (Not able to attend.)

*Monica Olvera de la Cruz, "Polymer Electrolytes" Soft Matter - Theoretical and Industrial Challenges Celebrating the Pioneering Work of Sir Sam Edwards, Isaac Newton Institute, Cambridge UK, Sept 7-9, 2016.

*Monica Olvera de la Cruz, "Phase Segregation in Polymer Electrolytes" Polymer Physics, Gordon Research Conference, south Hadley, MA, July 24-29, 2016

*Monica Olvera de la Cruz, "Multiple phase coexistence in polymer electrolytes" 11-th International Symposium on Polyelectrolytes - ISP 2016, Lomonosov Moscow State University, Russia, June 23-25, 2016.

*Monica Olvera de la Cruz, "Formation of ion clusters in the phase separated structures of neutral-charged polymer blends and copolymers" 28th International Conference on Science and Technology of Complex Fluids, Physic Department, Universidad Nacional Autonoma de San Luis Potosi, Mexico, June 20-24, 2016.

*Monica Olvera de la Cruz, "Assembly of anisotropic functionalized particles" 28th International Conference on Science and Technology of Complex Fluids, Physic Department, Universidad Nacional Autonoma de San Luis Potosi, Mexico, June 20-24, 2016.

*Monica Olvera de la Cruz, "Formation of ion clusters in the phase separated structures of neutral-charged polymer blends and copolymers" 28th International Conference on Science and Technology of Complex Fluids, San Luis Potosi, Mexico, June 20-24, 2016.

*Monica Olvera de la Cruz, "Polyhedral Crystalline Membranes" Physics Department, Tel Aviv University, Israel, May 22, 2016.

*Monica Olvera de la Cruz, "The Shape of Single Soft Crystals" Computations in Science Seminar, University of Chicago, IL, April 13, 2016

F. Solis, G.I. Guerrero, and M. Olvera de la Cruz, "Low frequency ionic conduction across liquid interfaces", APS Meeting, Baltimore, MD, March 14-18, 2016

H. Li, A. Erbas, J. Zwanikken and M. Olvera de la Cruz, "Ion transferring in polyelectrolyte networks in electric fields." APS Meeting, Baltimore, MD, March 14-18, 2016

J. Zwanikken, Y. Jing, V. Jadhao and M. Olvera de la Cruz, "Electrolyte-mediated adsorption to neutral and dielectric interfaces" APS Meeting, Baltimore, MD, March 14-18, 2016

M. Olvera de la Cruz and A. Erbas "Energy conversion in polyelectrolyte hydrogels" APS Meeting, Baltimore, MD, March 14-18, 2016

M. Girard and M. Olvera de la Cruz, "Colloidal models for anisotropic particles" APS Meeting, Baltimore, MD, March 14-18, 2016

S. Pan, N. Boon and M. Olvera de la Cruz, "Novel liquid crystal phase transition of linear defects in an epitaxial layer of DNA-nanoparticle superlattices" APS Meeting, Baltimore, MD, March 14-18, 2016

A. Erbas and M. Olvera de la Cruz, "Morphology-induced low temperature conductivity in ionic liquids." APS Meeting, Baltimore, MD, March 14-18, 2016

H. Kwon and M. Olvera de la Cruz, "The effect of ionic correlations on the distribution of ions across polyelectrolyte blend interfaces" APS Meeting, Baltimore, MD, March 14-18, 2016

J. Dempster, M. Olvera de la Cruz "Driving magnetic colloidal polymers" APS Meeting, Baltimore, MD, March 14-18, 2016

J. Millan, M. Girard, J. Brodin, M. O'Brien, C. Mirkin, M. Olvera de la Cruz, "Modeling of DNA-Mediated Self-Assembly from Anisotropic Nanoparticles: A Molecular Dynamics Study" APS Meeting, Baltimore, MD, March 14-18, 2016

S. Kewalramani, M. Bedzyk, L. Moreau, J. Zwanikken, C. Mirkin, M. Olvera de la Cruz, "Electrolyte-Mediated Assembly of Charged Nanoparticles" APS Meeting, Baltimore, MD, March 14-18, 2016

Y. Jing, V. Jadhao, J.W. Zwanikken, M. Olvera de la Cruz, "Ionic structure in electrolyte confined by dielectric interfaces" APS Meeting, Baltimore, MD, March 14-18, 2016

B. Qiao, G. Ferru, M. Olvera de la Cruz and R. Ellis, "Integrated toolkit of synchrotron X-ray and atomistic simulations for rare earth element refinery" ACS National Meeting, San Diego, CA, March 13-17, 2016

* M. Olvera de la Cruz, J. Zwanikken and H. Kwon, "Multiple phase coexistence in polymer electrolytes" ACS National Meeting, San Diego, CA, March 13-17, 2016

*M. Olvera de la Cruz, "DNA-functionalized anisotropic particle assembly" ACS National Meeting, San Diego, CA, March 13-17, 2016

*B. Qiao, Geoffroy Ferru, Monica Olvera de La Cruz, Ross Ellis "Integrated toolkit of synchrotron X-ray and atomistic simulations for rare earth element refinery" ACS National Meeting, San Diego, March 13-17, 2016

*Monica Olvera de la Cruz "Assembly of anisotropic functionalized particles" Physics Colloquium, University of California, Santa Cruz, CA, March 3, 2016

*M. Olvera de la Cruz, "DNA-functionalized nanoparticle assembly" MRSEC-UC Santa Barbara, Santa Barbara, CA February 25, 2016

*Monica Olvera de la Cruz "DNA-Functionalized Nanoparticle Assembly" Materials Science Colloquium, Caltech, CA, February 24, 2016

*Monica Olvera de la Cruz ""DNA-Functionalized Nanoparticle Assembly"" Materials Science Seminar Series, U. C. Berkeley, Berkeley, CA, February 18, 2016

*M. Olvera de la Cruz, "DNA-functionalized nanoparticle assembly" Chemical Engineering Colloquium, Penn State University, Oct 7, 2015

*M. Olvera de la Cruz, "DNA-functionalized Nanoparticle Assembly" Rutgers University, Sept 22, 2015

*M. Olvera de la Cruz, "Polyhedral Crystalline Membranes" ISTeC Lecture, Colorado State, Sept 14-16, 2015

*M. Olvera de la Cruz, "Polyhedral Crystalline Membranes" MaGavock Lecture, Trinity University, Sept 17-18, 2015

*M. Olvera de la Cruz, "Ion clusters in neutral-charged polymer blends and copolymers" ACS National Meeting, Boston, MA, Aug 16-18, 2015

*M. Olvera de la Cruz, "DNA-functionalized nanoparticle assembly and crystallization" Frontiers of Polymer Science, Chinese Academy of Sciences, China, Aug 8-10, 2015.

*M. Olvera de la Cruz "Ion clusters in neutral-charged polymer blends and copolymers" Beijing Institute of Technology, Beijing, China, Aug 5-7, 2015

*M. Olvera de la Cruz "Electrostatic Driven Self Assembly Design of Functional Nanostructures" Biomolecular Materials Principal Investigators' Meeting, Gaithersburg, MD August 3-5, 2015

*M. Olvera de la Cruz "Self-Assembly of Biomolecules" Gordon Research Conference, Mount Holyoke College, MD, July 26-31, 2015

*M. Olvera de la Cruz "Ion Clusters in Neutral-Charged Polymer Blends and Copolymers" 1st US-Japan Materials Genome Workshop, Ibaraki, Japan, June 22-25, 2015

*M. Olvera de la Cruz "Ion Clusters in Neutral-Charged Polymer Blends and Copolymers" Penn State University, PA, April 21, 2015.

* M. Olvera de la Cruz "DNA-functionalized Nanoparticle Assembly" NU Computational Research Day, April 14, 2015.

*M. Olvera de la Cruz “DNA-functionalized Nanoparticle Assembly” Rutgers University, Jamestown, MI, April 1, 2015

* M. Olvera de la Cruz “DNA-functionalized nanoparticle assembly” ACS National Meeting, Denver, CO, March 22-27, 2015.

* M. Olvera de la Cruz “DNA-functionalized Nanoparticle Assembly and Crystallization” SIAM Conference on Computational Science and Engineering, Salt Lake City, UT, March 14-18, 2015.

* M. Olvera de la Cruz “Electrostatic Self-Assembly of Biomolecules,” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Jos Zwanikken and Monica Olvera de la Cruz, Tuning the phase diagram of polyelectrolyte blends with a pinch of salt" APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Charles Sing and Monica Olvera de la Cruz, “Surface tension and lamellar spacing in polyelectrolyte blends and block copolymers” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Huanxin Wu, Yufei Jing, Francisco Solis, Monica Olvera de l Cruz, Erik Luijten, “Electrolytes near structured dielectric interfaces” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Sumit Kewalramani, Liane Moreau, Guillermo Guerrero-Garcia, Monica Olvera de la Cruz and Michael Bedzyk, “Counterion-mediated assembly of spherical nucleic acid-Au nanoparticle conjugates (SNA-AuNPs)” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Niels Boon and Monica Olvera de la Cruz, “’Soft’ amplifier circuits based on field-effect ionic transistors” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Brian Panganiban, B. Qiao, Mona Obadia, Monica Olvera de la Cruz, Eric Drockenmuller, Ting Xu, “Rationally Designed random heteropolymer surfactants for encapsulation and stabilization of proteins in organic solvents” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Francisco Solis, Vikram Jadhao, Kaushik Mitra, Monica Olvera de la Cruz, “A variational free-energy functional approach to Schrodinger-Poisson theory” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Saijie Pan, Ting Li, Monica Olvera de la Cruz, “Simulation of epitaxial growth of dNA-nanoparticle superlattices on pre-patterned substrates” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Zhenwei Yao and Monica Olvera de la Cruz, Dynamics of vacancies in two-dimensional Lennard-jones crystals” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Ha-Kyung Kwon and Monica Olvera de la Cruz, “ Formation of ion clusters in the phase separated structures of neutral-charged polymer blends” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Yufei Jing, Vikram Jadhao, Jos W. Zwanikken, Monica Olvera de la Cruz “Electrostatic effects of dielectric interfaces on confined electrolyte” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Shuangping Liu, Zhenwei Yao, Monica Olvera de la Cruz, “Perversions driven spontaneous symmetry breaking in heterogeneous elastic ribbons” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Ting Li, Monica Olvera de la Cruz, “DNA-programmable Nanoparticle Self-Assembly and Crystallization via Multi-Scale Modelling & Simulation” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

Aykut Erbas, Jos Zwanikken, Monica Olvera de la Cruz, “Electrostatics effects on normal load capacity of two like-charge hydrogels” APS Spring Meeting, San Antonio, TX, March 2-6, 2015.

* M. Olvera de la Cruz “Electrostatic Self-Assembly of Biomolecules”, Advanced Workshop on Out-of-Equilibrium Matter, San Luis Potosi, Mexico, December 8-12, 2014.

*M. Olvera de la Cruz, “DNA-Functionalized Nanoparticle Assembly and Crystallization,” Dept. of Materials Science and Eng. Colloquium, University of Illinois Urbana, November 17, 2014.

*M. Olvera de la Cruz, “Polyhedral Crystalline Membrane”, Department of Chem. Eng. Colloquium, Stanford University, October 27, 2014.

*M. Olvera de la Cruz, “Electrostatic Self-assembly of Biomolecules”, First “self-assembly of biomolecules” International Symposium, Montpellier, October 12-14, 2014.

*M. Olvera de la Cruz, “Ionic Membranes”, Department of Mechanical Eng. Colloquium, University of Illinois Urbana, September 2, 2014.

*M. Olvera de la Cruz, “Ionic Bilayers, Tail Packing and Mesoscale Geometry”, Workshop on Coarse-Grained Modeling of Polymers and Soft Materials for Genome Initiative, National Institute of Standards and Technology, August 6-7, 2014.

*M. Olvera de la Cruz, “Polyhedral Crystalline Membranes”, APS Colloquium, Argonne National Laboratory, Chicago, July 16, 2014.

*M. Olvera de la Cruz, “Crystalline Membranes’, Frontiers in Materials Sciences Seminar Series, Pacific Northwest National Laboratory, Richland, Washington, June 2, 2014.

*M. Olvera De La Cruz, “Electrostatic Driven Assembly”, Grand Challenges in Soft Matter Workshop, University of California, Santa Barbara, May 17-18, 2014

T. Li, E. Auyeung, C.A. Mirkin, M. Olvera de la Cruz, “Self-Assembly and Crystallization of DNA-Functionalized Nanoparticle into Wulff Polydedra”, MRS Spring Meeting, San Francisco, California, April 21-25, 2014.

J. Zwanikken, Y. Jing, V. Jadhao, C.E. Sing, N. Boon and M. Olvera de la Cruz, “Theoretical analysis on ion transport through polymer networks in electrochemical capacitors”, MRS Spring Meeting, San Francisco, California, April 21-25, 2014.

C.E. Sing, J.W. Zwanikken^{+} and M. Olvera de la Cruz, “Electrostatic Control of Block Copolymer Morphology”, MRS Spring Meeting, San Francisco, California, April 21-25, 2014.

* M. Olvera de la Cruz, “DNA-Functionalized Nanoparticle Assembly and Crystallization,” Dept. of Chemical Engineering, University of Texas at Austin, Austin TX, March 27, 2014.

*M. Olvera de la Cruz, “Ion adsorption at solid-electrolyte interfaces” Lorentz Center, Leiden (NL) March 10-14, 2014.

Y. Jing, J.W. Zwanikken, V. Jadhao, M. Olvera de la Cruz, “Ion distributions in electrolyte confined by multiple dielectric interfaces”, ACS National Meeting, Dallas, Texas, March 16-20, 2014.

*C. Mirkin, R.J. Macfarlane, E. Auyeung, M. Olvera de la Cruz, “Nucleic acid-modified nanostructures as programmable atom equivalents: Forging a new “Table of Elements”, ACS National Meeting, Dallas, Texas, March 16-20, 2014.

F.J. Solis, V. Jadhao, M. Olvera de la Cruz, “Variational formulations for electrostatic systems: Applications to molecular dynamics simulations”, ACS National Meeting, Dallas, Texas, March 16-20, 2014.

F.J. Solis, G.I. Guerrero-Garcia, M. Olvera de la Cruz, “Ion partitioning in confined oil/water interfaces”, ACS National Meeting, Dallas, Texas, March 16-20, 2014.

G.I. Guerrero-Garcia, N. Boon, M. Olvera de la Cruz, “Giant charge reversal and charge amplification with monovalent ions in highly size-asymmetric colloidal suspensions”, ACS National Meeting, Dallas, Texas, March 16-20, 2014.

V. Jadhao, C.K. Thomas and M. Olvera de la Cruz, “Electrostatics-driven shape transitions in charged elastic membranes” ACS Spring Meeting, Dallas, Texas, March 16-20, 2014.

J. Zwanikken, Y. Jing, V. Jadhao, C.E. Sing, N. Boon and M. Olvera de la Cruz, “Theoretical analysis on ion transport through polymer networks in electrochemical capacitors”, APS March meeting, Denver, CO, March 3-7, 2014.

Y. Jing, J.W. Zwanikken, V. Jadhao, M. Olvera de la Cruz, “Ion distributions in electrolyte confined by multiple dielectric interfaces”, APS March Meeting, Dallas, Texas, March 16-20, 2014.

G. Guerrero Garcia, F. Solis, M. Olvera de la Cruz, “Inversion of the electric field driven by ionic solvation energy”, APS March meeting, Denver, CO, March 3-7, 2014.

S. Liu, Z. Yao and M. Olvera de la Cruz, “Spontaneous formation and evolution of kinks in elastic helical structures”, APS March meeting, Denver, CO, March 3-7, 2014.

K. Kohlstedt, N. Jackson, B. Savoie, L. Chen, M. Olvera de la Cruz, G. Schatz, M. Ratner, " Controlling conformations of conjugated polymers and small molecules: The role of nonbonded interactions", APS March meeting, Denver, CO, March 3-7, 2014.

R. Zhang and M. Olvera de la Cruz, "Accelerated Self-Replication under Non-equilibrium, Periodic Energy Delivery", APS March meeting, Denver, CO, March 3-7, 2014.

J. Dempster, R. Zhang and M. Olvera de la Cruz, "Self-replicating devices with dipolar colloids", APS March meeting, Denver, CO, March 3-7, 2014.

T. Li, E. Auyeung, C.A. Mirkin and M. Olvera de la Cruz, "Multi-scale modeling for the self-assembly of DNA-functionalized nanoparticle into supperlattice and Wulff polydedra", APS March meeting, Denver, CO, March 3-7, 2014.

C.E. Sing, J.W. Zwanikken and M. Olvera de la Cruz, "Dramatic changes in Polyelectrolyte Blend Phase Behavior due to Charge Correlations" APS March Meeting, Denver, Colorado, March 3-7, 2014.

C.E. Sing, J.W. Zwanikken, M. Olvera de la Cruz, "Highly-correlated Charges in Block Copolyelectrolytes: Charge as a Tool for Morphology Manipulation", APS March Meeting, Denver, Colorado, March 3-7 2014.

V. Jadhao, C.K. Thomas and M. Olvera de la Cruz, "Changing shape of elastic shells via electrostatic interactions", APS March Meeting, Denver, Colorado, March 3-7, 2014.

N. Boon, G.I. Guerrero, R. van Roij and M. Olvera de la Cruz, "Improving the accuracy of DLVO theory for dense systems of macroions", APS March Meeting, Denver, Colorado, March 3-7, 2014.

Z. Yao and M. Olvera de la Cruz, "Topological Defects by Size Polydispersity", APS March Meeting, Denver, Colorado, March 3-7, 2014.

B. Qiao and M. Olvera de la Cruz, "Why Hydrophilic Water can Permeate Hydrophobic Interior of Lipid Membranes", APS March Meeting, Denver, Colorado, March 3-7, 2014.

M. Olvera de la Cruz, "Report on NSF Workshop on Challenges and Opportunities of Polymer and Soft Matter Theory and Simulation", APS March meeting, Denver, CO, March 3-7, 2014

*M. Olvera de la Cruz, Condensed Matter Seminar, James Franck Institute, Departments of Chemistry and Physics & Astronomy, University of Chicago, Feb.18, 2014.

* M. Olvera de la Cruz, "DNA-Functionalized Nanoparticle Assembly and Crystallization," Dept. of Materials Science and Engineering, University of California, Berkeley, February 11, 2014.

* M. Olvera de la Cruz, "Molecular Crystallization and Mesoscale Geometry of Functionalized Nanoparticles", Telluride Conference, Telluride, Colorado, February 2-5, 2014

*M. Olvera de la Cruz, International Symposium on Polyelectrolytes, Ein Gedi, Israel, Jan.20-23, 2014.

* M. Olvera de la Cruz, "Blebbing of Nuclear Lamin Networks", American Society for Cell Biology Annual Meeting, Dec 14, 2013, New Orleans, LA.

*M. Olvera de la Cruz, "Spherical Nucleic Acid-Au Nanoparticle Assemblies", Materials Research Society Fall Meeting, Dec 1-6, 2013, Boston, MA.

*M. Olvera de la Cruz, "Molecular Crystallization and Mesoscale Geometry of Multicomponent Ionic Membranes", Materials Research Society Fall Meeting, Dec 1-6, 2013, Boston, MA.

*M. Olvera de la Cruz, Department of Physics Colloquium, UNAM, Mexico City, Nov. 21, 2013.

* M. Olvera de la Cruz, "Derieux Lecture", Department of Physics at North Carolina State University, Nov 11, 2013.

* M. Olvera de la Cruz, Condensed Matter Seminar, Dept. of Physics & Astronomy, University of Pennsylvania, Oct 16, 2013.

C. Sing and M. Olvera de la Cruz, "Effects of Ion Correlations on the Thermodynamics of Polymer Interfaces" ACS Fall Meeting (Indianapolis IN), Sept. 12, 2013.

* M. Olvera de la Cruz, "Electrostatics in Spherical Nucleic Acid-Au Nanoparticle Assemblies" Programmable Self-Assembly of Matter workshop (June 30-July 2, NYC), 2013.

*C. Sing and M. Olvera de la Cruz, "Highly-correlated Charges in Polymer Gels and Blends", Telluride Polymer Physics Workshop, June 17, 2013.

* M. Olvera de la Cruz, "Platonic and Archimedean geometries in elastic membranes" The 13th International conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD), May 26-30, Iguaza Falls, Argentina.

*M. Olvera de la Cruz, "The Role of Electrolytes in the Assembly of Colloids" Gordon Research Conference: Self-Assembly & Supramolecular Chemistry, Les Diablerets, May 5-10, 2013, Switzerland

* M. Olvera de la Cruz, "Charge and Composition Patterns in Ionic Fibers, Gels and Membranes" High Polymer Research Group Conference, April 28-May 3, 2013, UK.

* C.E Sing, J. Zwanikken, and M. Olvera de la Cruz, "Highly-correlated charges in polyelectrolyte gels: Reentrant swelling and ion-ion correlations" in Celebrating 50 Years of Polymers at Case Western, ACS National Meeting & Exposition, April 9, 2013, New Orleans, Louisiana.

G.I. Guerrero-Garcia, and M. Olvera de la Cruz "Inversion of the electric field at the electrified liquid-liquid interface", ACS National Meeting & Exposition, April 7-11, 2013, New Orleans, Louisiana.

B. Qiao and M. Olvera de la Cruz "Crystallization of ionic lipid membranes, elucidated by atomistic simulation", ACS National Meeting & Exposition, April 7-11, 2013, New Orleans, Louisiana.

* M. Olvera de la Cruz, "Polyhedral Geometries in the Living World," Dept. of Chemical Engineering, University of Texas at Austin, Austin TX, April 4, 2013.

R. Zhang, P. Jha, and M. Olvera de la Cruz, "Non-equilibrium Ionic Assemblies of Oppositely Charged Colloids," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

Y. Jing, G.I. Guerrero Garcia, and M. Olvera de la Cruz, "Enhancing and reversing the electric field at liquid/liquid interfaces," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

F. Solis, V. Jadhao, and M. Olvera de la Cruz, "A variational formulation of electrostatics for heterogeneous dielectric media," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

B. Qiao, R.J. Ellis, and M. Olvera de la Cruz, "For a Safe Diamide Extraction Process, Elucidated by Atomistic Simulations," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

C.K. Thomas, and M. Olvera de la Cruz, "Why square lattices are not seen on curved ionic membranes," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

C-Y. Leung, M. Greenfield, S. Kewalramani, L. Palmer, R. Sknepnek, B. Qiao, C. Newcomb, G. Vernizzi, M. Bedzyk, S. Stupp, and M. Olvera de la Cruz, "Mesoscopic Membrane Morphology Regulated by Molecular Crystallization," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

G.I. Guerrero Garcia, P. Gonzalez-Mozuelos, and M. Olvera de la Cruz, "Colloidal stability in concentrated electrolyte solutions using large counterions," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

K.L. Kohlstedt, M. Olvera de la Cruz, and G.C. Schatz, "Controlling orientational order of multivalent prisms in superlattice assemblies," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

A. Osorio-Vivanco, M. Olvera de la Cruz, and S. Glotzer, "Optimized assembly and steady-state length-scale control in dissipative systems of photo-switchable colloids," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

T.I.N.G. Li, R. Sknepnek, and M. Olvera de la Cruz, "Hybridization dynamics to DNA guided crystallization," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

S. Kewalramani, C-Y. Leung, J. Zwanikken, R. Macfarlane, M. Olvera de la Cruz, C. Mirkin, and M. Bedzyk, "Determination of counterion distribution around DNA coated nanoparticles (DNA-AuNP) by small angle X-ray scattering (SAXS)," American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

J. Zwanikken, and M. Olvera de la Cruz, “Tunable Soft Structure in Charged Fluids confined by Dielectric Interfaces,” American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

Z. Yao, and M. Olvera de la Cruz, “Packing of charged chains on toroidal geometries,” American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

C. Sing, J. Zwanikken, and M. Olvera de la Cruz, “Highly-correlated charges in polyelectrolyte gels,” American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

V. Jadhao, F. Solis, and M. Olvera de la Cruz, “Ion distributions near dielectric interfaces from Car-Parrinello molecular dynamics,” American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

C. Funkhouser, R. Sknepnek, T. Shimi, A. Goldman, R. Goldman, and M. Olvera de la Cruz, “An Elastic Model of Blebbing in Nuclear Lamin Meshworks,” American Physical Society March Meeting, Baltimore, MD, March 18-22, 2013.

*M. Olvera de la Cruz, “Polyhedral geometries in crystalline membranes”, XLII Winter meeting on Statistical Physics, January 8-11, 2012, Taxco, Mexico.

*M. Olvera de la Cruz, “Platonic and Archimedean Geometries in Elastic Membranes”, Materials Research Society Fall Meeting, Nov 27, 2012, Boston, MA.

S. Patala, L. Marks, and M. Olvera de la Cruz, “Stability Analysis for Faceted Pentagonal Nanoparticles”, Materials Research Society Fall Meeting, Nov 30, 2012, Boston, MA.

*M. Olvera de la Cruz, “Modeling mesoscale phenomena in crystalline membranes”, SACNAS National Conference, October 11-14, 2012, Seattle WA.

*M. Olvera de la Cruz, “Polyhedral Geometries in the Living World”, Condensed Matter Seminar, Dept. of Physics, University of Illinois at Urbana-Champaign, September 21, 2012, Urbana IL.

* M. Olvera de la Cruz, “Computational efforts in Polymer Science”, 244th ACS National Meeting, August 19-23, 2012, Philadelphia, PA.

* M. Olvera de la Cruz, “Computational modeling of polyelectrolyte gels: Charge regulation and nanoscale phase behavior”, 244th ACS National Meeting, August 19-23, 2012, Philadelphia, PA.

* M. Olvera de la Cruz, “Platonic and Archimedean Geometries in Multicomponent Elastic Membranes” XXI International Materials Research Congress (IMRC), August 13-17, 2012, Cancun, Mexico.

* M. Olvera de la Cruz, “The stability of polyvalent nanoparticles and effective interactions in molecular electrolytes” XXI International Materials Research Congress (IMRC), August 13-17, 2012, Cancun, Mexico.

* M. Olvera de la Cruz, “Surprises in ionic driven assembly of membranes” Argonne National Laboratory, August 7, 2012, Argonne, IL.

* M. Olvera de la Cruz, “Charge and Composition Patterns in Ionic Membranes” Recent Progresses on Coulomb Many-body Systems Workshop, Shanghai Jiao Tong University, June 9-16, 2012, Shanghai, China.

* M. Olvera de la Cruz, “Polyelectrolyte Gels” International Symposium on Polymer Physics, June 4-8, 2012, Chengdu, China.

*M. Olvera de la Cruz, “Ionic driven assembly of membranes: Surprising findings in shell shape and composition”, May 3, 2012, Dept. of Physics, North Dakota State University.

* M. Olvera de la Cruz, “Modeling heterogeneous fibers and membranes” (in "Computational Materials Design In Heterogeneous Systems") MRS Spring meeting, April 9-13, 2012, San Francisco, CA.

* M. Olvera de la Cruz, “Physical Properties of Heterogeneous Microcompartments”, Procter and Gamble Lecture Series, Spring 2012, Department of Chemistry and Biochemistry, University of California, April 16, 2012, Los Angeles, CA.

C. Thomas and M. Olvera de la Cruz, “Charge correlations in multicomponent ionic crystalline membranes”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

M. Olvera de la Cruz, J. Zwanikken and C.A. Mirkin, “Local ionic environment around polyvalent nucleic-acid functionalized gold nanoparticles”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

M. Demers, R. Sknepnek and M. Olvera de la Cruz, “Curvature driven domain formation in ternary lipid membranes”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

R. Sknepnek and M. Olvera de la Cruz, “Thin-shell model for faceting of multicomponent elastic vesicles”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

T. Li, R. Sknepnek, R.J. Macfarlane, C.A. Mirkin and M. Olvera de la Cruz, “Modeling of DNA-directed colloidal self-assembly and crystallization”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

C-Y. Leung, L. Palmer, S. Kewalramani, R. Sknepnek, G. Vernizzi, M. Greenfield, S. Stupp, M. Bedzyk and M. Olvera de la Cruz, “Electrostatics-driven assembly of uni-lamellar cationic facetted vesicles”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

J. Zwanikken and M. Olvera de la Cruz, “Ion-induced interactions between charged macroions and dielectric inhomogeneities”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

P. Jha, J. Zwanikken, F. Detcheverrry, J. de Pablo and M. Olvera de la Cruz, “Influence of charge and network inhomogeneities on the swollen-collapsed transition in polyelectrolyte nanogels”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

J. Su, H. Guo and M. Olvera de la Cruz, “Solubility and transport of cationic and anionic patterned nanoparticles”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

B. Grzybowski, M. Olvera de la Cruz, P. Jha and V. Kuzovkov, “A novel kinetic Monte Carlo algorithm for non-equilibrium simulations”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

G.I. Guerrero Garcia and M. Olvera de la Cruz, “Ion correlations in the electrical double layer near liquid/liquid interfaces”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

C. Funkhouser, R. Sknepnek and M. Olvera de la Cruz, “Morphologies of elastic membranes with fluctuating connectivity”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

B. Qiao and M. Olvera de la Cruz, “Effect of valence of counterions on the structure of charged membranes, a computer simulation study”, American Physical Society March Meeting, Boston, MA, February 27- March 2, 2012.

* M. Olvera de la Cruz, “Surpises in ionic driven assembly of membranes”, Caltech Chemical Physics Seminar Series, California Institute of Technology, January 31, 2012, Pasadena, CA.

* M. Olvera de la Cruz, “Surprises in electrostatic driven assembly of ionic crystalline shells”, Department of Materials Science, University of Michigan, November 18, 2011, Ann Arbor, MI.

* M. Olvera de la Cruz, J. W. Zwanikken and C. A. Mirkin “Ionic screening and ion-induced attractions in solutions of nanoparticles” First Workshop on Advances in Colloidal Materials- 25th Anniversary-Biocolloid and Fluid Physics Group (1986-2011), University of Granada, September 23, 2011, Granada, Spain.

* M. Olvera de la Cruz, “Ionic Crystalline Shells”, Colloquium, Dept. of Chemical & Biological Engineering, Rensselaer Polytechnic Institute, September 14, 2011, Troy, NY.

* M. Olvera de la Cruz, “Platonic and Archimedean Geometries in Elastic Membranes”, Colloquium, Applied Physics, Harvard University, September 9, 2011, Cambridge, MA.

* M. Olvera de la Cruz, “New Geometries of Elastic Closed Membranes and Crystalline Shells”, Laboratoire de Physique de Solides, University of Orsay, July 12, 2011, Orsay, France.

* M. Olvera de la Cruz, “Heterogeneous Elastic Membranes: New Shapes of Microcompartments”, Telluride Workshop on Polymer Physics, June 20-24, 2011, Telluride, CO.

*M. Olvera de la Cruz, J. W. Zwanikken, P. Guo, R. J. Macfarlane, and C. A. Mirkin, “Grafting density effect on ionic screening around functionalized Nanoparticles”, 241st ACS National Meeting & Exposition - March 27-31, 2011, Anaheim, California.

G. Ivan Guerrero-Garcıa, P. Gonzalez-Mozuelos, and M. Olvera de la Cruz, “On the interaction of equally charged nanoparticles in presence of a size-asymmetric salt”, 241st ACS National Meeting & Exposition - March 27-31, 2011, Anaheim, California.

J. W. Zwanikken and Monica Olvera de la Cruz, “Ions and charged macromolecules near the interface between two electrolyte solutions”, 241st ACS National Meeting & Exposition - March 27-31, 2011, Anaheim, California.

*M. Olvera de la Cruz, “Responsive Polyelectrolyte Gels and Tethered Membranes”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

F. J. Solis and M. Olvera de la Cruz, “Ionic conduction at liquid-liquid interfaces”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

P. Jha, J. Zwanikken, F. Detcheverry, J. de Pablo, M. Olvera de la Cruz, “Theoretically informed coarse-grained simulations of polymer nanogels”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

P. Guo, R. Sknepnek, M. Olvera de la Cruz, “Ridge formation of charged end group ligands grafted on faceted nanoparticle”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

V. Jadhao, F. J. Solis, G. Guerrero-Garcia, M. Olvera de la Cruz, “Towards simulation of charges in the presence of varying dielectric response”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

M. Demers, F. J. Solis, M. Olvera de la Cruz, “Pattern formation in ternary lipid membranes with composition-deformation coupling”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

S. Dhakal, F. J. Solis, M. Olvera de la Cruz, “Orientational order and defect structures on curved surfaces”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

J. Zwanikken, M. Olvera de la Cruz, “Correlated electrolyte solutions and ion-induced attractions between nanoparticles”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

C. Y. Leung, R. Sknepnek, L. Palmer, G. Vernizzi, M. Greenfield, S. Stupp, M. Bedzyk, M. Olvera de la Cruz, “Crystallization induced by electrostatic correlations in vesicles of mixed-valence ionic amphilphiles”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

S. Swaminathan, F. J. Solis, M. Olvera de la Cruz, “Conformation and mechanical properties of diblock fibers”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

R. Sknepnek, C. Leung, L. C. Palmer, G. Vernizzi, S. I. Stupp, M. J. Bedzyk, M. Olvera de la Cruz, “Faceting of multicomponent charged elastic shells”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

A. Parsaeian, J. F. Marko, M. Olvera de la Cruz, “ Binding-rebinding dynamics of proteins interacting non-specfically with a long DNA molecule”, American Physical Society March Meeting, Dallas, TX, March 21-25, 2011.

* M. Olvera de la Cruz “Regular and Irregular Polyhedra in Multi-Component Crystalline Shells", Fay Ajzenberg-Selove Colloquium, Physics Department, University of Wisconsin, Madison, Feb. 18, 2011.

* M. Olvera de la Cruz “Regular and Irregular Polyhedra in Multi-Component Elastic Membranes” Workshop on Self-Assembled Bio-Inspired Materials for Energy, Argonne, February 4, 2011.

*M. Olvera de la Cruz “Heterogeneous Membranes” Colloquium, Department of Chemical Engineering, University of Illinois at Chicago, January 13, 2011.

* M. Olvera de la Cruz, “Surprises in Heterogeneous Elastic Membranes” Colloquium, Department of Polymer Science and Eng., University of Massachusetts, Amherst Physics, September 24, 2010.

* M. Olvera de la Cruz, “Ionic Membranes and Gels” **Plenary Lecture**, 2nd International Soft Matter Conference (ISMC 2010), Granada Spain July 5-8, 2010.

* M. Olvera de la Cruz, “Heterogeneous Elastic Membranes” Self-assembly in Biology and Materials Science Workshop, Huatulco, Oaxaca, June 9-11, 2010.

* M. Olvera de la Cruz, “Symmetries Broken by Electrostatics in Nanoscale Ionic Assemblies”, **Plenary Speaker**, Society of Industrial and Applied Mathematics (SIAM) meeting on Mathematical Aspects of Materials Science, Philadelphia, PA, May 23-26, 2010.

* M. Olvera de la Cruz, "Self-Assembly in Molecular Electrolytes" **Plenary Talk**, The 4th PENN-UPRH PREM Symposium on Soft Matters in Materials Science, Humacao, Puerto Rico, May 7, 2010.

D. Zhang, P. González Mozuelos, and M. Olvera de la Cruz, "Cluster Formation by Charged Nanoparticles on a Surface in Aqueous Solution" American Chemical Society Spring Meeting, San Francisco, CA, March 21-25, 2010.

* M. Olvera de la Cruz and P. Gonzalez-Mozuelos, "Nanoparticles in aqueous media" American Chemical Society Spring Meeting, San Francisco, CA, March 21-25, 2010.

R. Sknepnek, A. J. Morris-Cohen, G. D. Lilly, M. Olvera de la Cruz and E. Weiss "Ligand exchange on CdSe quantum dots", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

F. J. Solis, G. Vernizzi, S. Swaminathan and M. Olvera de la Cruz "Semi-flexible polymer with heterogeneous bending rigidity adsorbed at interfaces" American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

D. Zhang, G. Vernizzi, and M. Olvera de la Cruz, "Simulation of structural phase transition in two dimensional ionic crystal", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

J. W. Zwanikken, R. Sknepnek, and M. Olvera de la Cruz, "Effective interactions between pH-responsive particles", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

G. Vernizzi, R. Sknepnek, an M. Olvera de la Cruz "The shapes of two-component crystalline shells", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

K. L. Kohlstedt, G. Vernizzi, F. J. Solis and M. Olvera de la Cruz, "Optimal arrangement of lamellar and triangular lattices confined to cylindrical fibers", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

M. Olvera de la Cruz, R. Sknepnek, G. Vernizzi "The buckling transition of ionic shells and electrostatics", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

M. J. Bedzyk, C. Leung, M. A. Greenfield, L. C. Palmer, G. Vernizzi, M. Olvera de la Cruz and S. I. Stupp "Buckled membranes in mixed-valence ionic amphiphile vesicles analyzed by x-ray scattering", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

P. K. Jha, J. W. Zwanikken, J. J. de Pablo, and M. Olvera de la Cruz "Effects of charge inhomogeneities on the phase behavior of polyelectrolyte gels", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

G. I. Guerrero-Garcıa, E. Gonzalez-Tovar, and M. Olvera de la Cruz "Effects of the Ionic-size Asymmetry around a Charged Colloid: Unequal Charge Neutralization and Electrostatic Screening", American Physical Society March Meeting, Portland, OR, March 15-19, 2010.

* M. Olvera de la Cruz "Ionic Driven Self-Assembly", Physics Department Colloquium, University of Texas, San Antonio, March 5, 2010.

* M. Olvera de la Cruz "Asymmetric Interactions and Assembly of Positive and Negative Charged Nanoparticles in Water" 2010 Colloidal, Macromolecular & Polyelectrolyte Solutions Gordon Research Conference, Ventura, CA, February 21-26, 2010.

* M. Olvera de la Cruz "Ionic Driven Self-Assembly", Physics Department Colloquium, Boston University, January 26, 2010.

* M. Olvera de la Cruz, 4th Africa Materials Research Society (Africa MRS Meeting), Abuja, Nigeria, 14th to 18th of December, 2009 (cancelled).

* M. Olvera de la Cruz "Ionic Membranes and Gels" Materials Science Division, Argonne, November 20, 2009.

* M. Olvera de la Cruz "Spontaneous Buckling of Ionic Membranes", Martin Weiner Lecture Series

Department of Physics Colloquium, Brandeis University, November 17, 2009.

Dorsi Grillo, M. Olvera de la Cruz, and I. Szleifer "Phase Behavior Calculations of DOPC Phospholipid Bilayers" AIChE Annual Meeting, Nashville, TN, November 8-13, 2009.

* M. Olvera de la Cruz "Spontaneous Buckling of Ionic Membranes", Polymer Science Lecture Series, Polymer Science Department, University of Akron, Akron, OH, October 8, 2009.

* M. Olvera de la Cruz “Current Status of Materials Research", Kyoto Institute of Technology, Kyoto, Japan, September 28, 2009.

* M. Olvera de la Cruz “Ionic self-Assemblies" Kyoto Institute of Technology, Kyoto, Japan, September 28, 2009.

* M. Olvera de la Cruz “Lectures on Critical Phenomena in Polymers" Lecture series at the Kyoto Institute of Technology, Kyoto, Japan, September 25, 2009.

* M. Olvera de la Cruz “Functional Ionic Membranes” 6th International Discussion Meeting on Relaxations in Complex Systems, Rome, Italy Aug 30-Sept 6, 2009.

* M. Olvera de la Cruz, Lecture Series on Molecular Electrolytes and Ionic Assemblies at the Nanoscale, "Meeting on the Science and Technology of Complex Fluids" San Luis Potosi, Mexico, August 17-21, 2009.

* M. Olvera de la Cruz “Polyelectrolyte Gels: Solvation versus Segregation” Polymer Physics Workshop, Telluride Science Research Center, Telluride, CO, July 6-10, 2009.

* M. Olvera de la Cruz “Self-Assembly via Electrostatics: Simple and Complex Shapes and Symmetries”, Chemistry of Supramolecules and Assemblies, Gordon Research Conference, Waterville, Maine, June 28 to July 3, 2009.

* M. Olvera de la Cruz "Buckled membranes and other surprises in the ionic driven self-organization of biomolecules", Molecular Biophysics, Northwestern University, April 15, 2009.

* M. Olvera de la Cruz “Asymmetric Charge Renormalization and Interactions of Nanoparticles in Aqueous Media”, American Chemical Society Meeting, Salt-Lake City, March 22-26, 2009.

M. Olvera de la Cruz, Megan Greenfield, Liam Palmer, Graziano Vernizzi and Samuel Stupp “Buckled Membranes in Mixed-Valence Ionic Amphiphiles” American Chemical Society Meeting, Salt-Lake City, March 22-26, 2009.

D. Zhang and M. Olvera de la Cruz “Nano-patterns in Tethered Membranes of Polyelectrolyte with Hydrophobic Backbones” American Chemical Society Meeting, Salt-Lake City, March 22-26, 2009.

D. Zhang, P. Gonzalez-Mozuelos and M. Olvera de la Cruz “Crystallization of charged nano-particles in solution” American Chemical Society Meeting, Salt-Lake City, March 22-26, 2009.

* Monica Olvera de la Cruz “Spontaneous Symmetry Breaking by Electrostatics in Helical Fibers and Buckled Membranes” Materials Science and Engineering Seminar Series, MIT, Cambridge, MA, February 6, 2009.

* M. Olvera de la Cruz “Nano-patterns in Gels of Charged Chains” Kent State University, January 28, 2009.

* M. Olvera de la Cruz “Self-Organization of Complex Molecular Electrolytes”, Macromolecular Materials Gordon Research Conference, Ventura, CA, January 11-15, 2009.

* M. Olvera de la Cruz “Ionic Assemblies: Symmetries and Functions”, 10th Berkeley Mini Stat. Mech. Meeting, Berkeley University, CA, January 09-11, 2009.

* G. Vernizzi and M. Olvera de la Cruz "Icosahedral Ionic Shells", Fall 2008 MRS Symposium, Boston, December 1-5, 2008.

* M. Olvera de la Cruz “Nanostructures in Molecular Electrolytes” 2008 Dow Foundation Distinguished Lecturer at UCSB, Graduate Students Diversity of Science, Materials Department Colloquium, University of California Santa Barbara, October 3, 2008.

* M. Olvera de la Cruz “Ionic Membranes and Gels" Institute of Materials Science Colloquium, University of Connecticut, September 19, 2008.

* M. Olvera de la Cruz “Functionalities driven by Symmetries Broken in Assemblies with Charge Heterogeneities” 2008 American Conference in Theoretical Chemistry (ACTC 2008), Northwestern University, July 19-24, 2008.

* M. Olvera de la Cruz, “Symmetries in Ionic Assemblies: Vesicles, Membranes and Gels" 2008 Polymer Physics, Gordon Research Conference**,** Salve Regina University Newport, RI, June 29 - July 4, 2008.

* M. Olvera de la Cruz “Patterns in Charged Gels: from Actuators to Chromosomes” 8th International Symposium of Polymer Physics, Xiamen, China, June 8-12, 2008 (Trip cancelled).

* M. Olvera de la Cruz "Organic and Inorganic Nanoelectronic Materials" **Plenary Lecture**, International Conference on Molecular Electronic Devices, Korea, May 29-30, 2008.

* M. Olvera de la Cruz "Novel Processing Methods for Nanostructured Materials and Supramolecular Structures", Ajou University, Korea, May 28, 2008.

* M. Olvera de la Cruz "Broken Symmetries in Ionic Nanopatterns: from Fibers to Gels" Department of Physics Colloquium, Northwestern University, April 25, 2008.

* M. Olvera de la Cruz "Educational outreach activities at the Northwestern University Materials Research Science; Engineering Center" American Chemical Society March Meeting, New Orleans, LA, April 6-10, 2008.

* M. Olvera de la Cruz "Microphase Segregation in Gels of Charged Chains with Hydrophobic Backbones" American Chemical Society Meeting, New Orleans, LA, April 6-10, 2008.

* M. Olvera de la Cruz "The Mutual Benefit of International Research Interactions" American Physical Society March Meeting, New Orleans, LA, March 10-14, 2008,

M. Olvera de la Cruz and J. J. de Pablo "Nano-patterns in gels of charged chains with self-attracting interactions" American Physical Society March Meeting, New Orleans, LA, March 10-14, 2008.

Megan Greenfield, Graziano Vernizzi, Liam Palmer, Samuel Stupp and Monica Olvera de la Cruz "Self-Assembly of Mixed-Valence Ionic Amphiphiles into Faceted Vesicles" American Physical Society March Meeting, New Orleans, LA, March 10-14, 2008.

William Kung and Monica Olvera de la Cruz "Mystery on Charge Asymmetry: Anionic Macroions in Periodic Lattices Held by Hydrated Cations and Not vice versa" American Physical Society March Meeting, New Orleans , LA, March 10-14, 2008.

* M. Olvera de la Cruz "Charged Molecule Co-Absorption at Liquid-Liquid Interfaces: Membrane Buckling and Nanopatterned Membranes" Physic Department Colloquium, University of Illinois, Chicago, March 5, 2008.

* M. Olvera de la Cruz "Ion Absorption at Liquid-Liquid Interfaces and Charged Patterned Membranes: Thermodynamics and Structure", Physics Department, Kyoto University, Kyoto, Japan, October 10, 2007

* M. Olvera de la Cruz "Charged Gels" Kyoto Institute of Technology, October 9, 2007.

* M. Olvera de la Cruz "Ionic Assemblies: Patterns and Symmetries", Department of Physics, Edinburgh University, September 24, 2007.

* M. Olvera de la Cruz "Structures and Symmetries in Self-Assembly" Polymer Physics Workshop, Telluride Science Research Center, Telluride, CO, August 06-10, 2007.

* M. Olvera de la Cruz "Symmetries in Ionic Assemblies" Colloquium, Service de Physique Théorique, CEA, Saclay, France, June 26, 2007.

* M. Olvera de la Cruz "Surface Assembly of Adsorbed Ionic Molecules", Department of Materials Science, ETH, Zurich, June 22, 2007.

* M. Olvera de la Cruz "Electrostatic Driven Self-Assembly" Department of Chemistry, Northwestern University, Evanston, Il, May 29, 2007.

* M. Olvera de la Cruz "Ionic Molecular Assemblies" Colloquium, Department of Physics, University of California Santa Cruz, May 17, 2007.

* G. Vernizzi and M. Olvera de la Cruz "Faceting of Ionic Shells into Icosahedra via Electrostatics" American Chemical Society, Chicago, IL, March 25-29, 2007.

K. Kohlstedt, G. Vernizzi F.J. Solis and M. Olvera de la Cruz, "The Breaking of Chiral Symmetry Using Long-Range Electrostatic Forces" American Chemical Society, Chicago Illinois, March 25, 2007.

* M. Olvera de la Cruz "Electrostatic Driven Self-Assembly" Department of Chemistry, Purdue University, March 21, 2007.

* M. Olvera de la Cruz "Theoretical and Numerical Modeling of Facetted Vesicles of Viral Size" American Physical Society, Denver, Colorado, March 5-9, 2007.

W. Kung, A.W.C. Lau and M. Olvera de la Cruz “Electrostatics of Planar Interfaces in Salt Solution" American Physical Society, Denver, Colorado, March 5-9, 2007.

K. L. Kohlstedt, F. J. Solis, G. Vernizzi and M. Olvera de la Cruz “The Breaking of Chiral Symmetry Using Long-Range Electrostatic Forces" American Physical Society, Denver, Colorado, March 5-9, 2007.

Y. Velichko, F. J. Solis, S. M. Loverde and M. Olvera de la Cruz “Ion Condensation near Patterned Surfaces" American Physical Society, Denver, Colorado, March 5-9, 2007.

M. Greenfield, Y. Velichko, S. I. Stupp and M. Olvera de la Cruz “Physical Properties of Anionic Peptide Amphiphile Fibers Grown in the Presence of Polyion Salt" American Physical Society, Denver, Colorado, March 5-9, 2007.

* M. Olvera de la Cruz "Theoretical and Numerical Modeling of Ionic Molecular Assemblies" ESPCI, Paris, February 19, 2007.

*M. Olvera de la Cruz, "Complexes of Oppositely Charged Molecules: Bulk and Surface Structures” Materials Research Society Meeting, Boston, November 27, 2006.

K. L. Kohlstedt, F. J. Solis, G. Vernizzi and M. Olvera de la Cruz “Charged Helical Patterns on the Surface Nanofibers and the Salt-induced Melting of the Nanopatterns**”,** Materials Research Society Meeting, Boston, November 27, 2006.

M. J. Bedzyk, J. A. Libera, H. Cheng, K. Zhang, and M. Olvera de la Cruz, “X-Ray Standing Wave Observation of Cations and Polynucleotides Explains Polyion Adsorption to Like-Charged Surfaces”, American Chemical Society Meeting, San Francisco. September 2006.

M. Lefebvre, H. Guo, K. Shull, and M. Olvera de la Cruz, “Formation of Swollen Micelles and Inverse Swollen Micelles Using a Block Copolymer with Favorable Interactions”, American Chemical Society Meeting, San Francisco. September 2006.

G. Vernizzi, and M. Olvera de la Cruz, “Electrostatic Effects on the Shape of Charged Lipid Membranes”, American Chemical Society Meeting, San Francisco. September 2006.

* M. Olvera de la Cruz “Mechanics of Biosystems” Pan-American Advanced Studies Institute Program (PASI) on Nano and Biotechnology – Barriloche, Argentina, Nov. 13-22, 2006

* M. Olvera de la Cruz “Modeling of Materials” workshop KISTI (Korea Institute of Science and Technology Information) Daejon, Korea, July 6, 2006.

* M. Olvera de la Cruz “Complexes of Oppositely Charged Molecules: Bulk Structures and Surface Pattern Formation” Seoul University, Seoul, Korea, July 5, 2006.

* M. Olvera de la Cruz “Electrostatics in Biomaterials” Kyoto University, Kyoto, Japan, July 11, 2006

* M. Olvera de la Cruz “Statistical Mechanics Applied to Bio-systems”, NSF Summer Institute: A Short Course on Micro and Nano Devices With Applications to Biology and Nanoelectronics, Northwestern University, Evanston, Il, August 7-11, 2006.

S. M. Loverde, F. J. Solis, M. Olvera de la Cruz "Phase Segregation and Patterning in Two Dimensional Systems: Competition between Van der Waals and Electrostatic interactions" American Physical Society, March Meeting, Marc 2006, Baltimore, MD.

Y. S. Velichko and M. Olvera de la Cruz, "Electrostatic Attraction Between Cationic-Anionic Assemblies with Surface Compositional Heterogeneities" American Physical Society, March Meeting, March 2006, Baltimore, MD.

K. L. Kohlstedt, F. J. Solis and M. Olvera de la Cruz "Surface Patterns on Co-Assembled Fibers from Charged, Amphiphilic Molecules" American Physical Society, March Meeting, March 2006, Baltimore, MD.

S. M. Loverde, Y. S. Velichko and M. Olvera de la Cruz "Competing Interactions in Two Dimensional Coulomb Systems: Surface Charge Heterogeneities in Co-Assembled Cationic-Anionic Incompatible Mixtures" American Physical Society, March Meeting, March 2006, Baltimore, MD.

M. Greenfield, M. Olvera de la Cruz and S. I. Stupp "Physical Properties of Anionic Peptide Amphiphile Fibers Grown in the Presence of Cationic Proteins" American Physical Society, March Meeting, March 2006, Baltimore, MD.

M. Lefebvre, M. Guvendiren, M. Olvera de la Cruz and K. Shull "Interfacial Segregation and Micellization of

Hydrogen Bonding Copolymers" American Physical Society, March Meeting, March 2006, Baltimore, MD.

* M. Olvera de la Cruz "Physical Properties of Polyelectrolytes of Biological Interest", Schools in Physics and Mathematics, The International Center for Theoretical Physics, ICTP, at Trieste, and the Brazilian National Research Council, CNPq, Sao Pablo, Brazil, Feb 20-24, 2006.

* M. Olvera de la Cruz " Electrostatic Interactions in Mixtures of Cationic and Anionic Biomolecules: Bulk Structures and Induced Surface Pattern Formation " as part of the "North American Lectures in Chemical Engineering and Materials Science", NSF and Universidades de San Luis Potosi and Guanajuato, Mexico, 11/23/05 and 11/25/05

* M. Olvera de la Cruz "Cationic and Anionic Assemblies: Bulk Ionic Structures and Surface Pattern Formation in Mixtures of Oppositely Charged Amphiphiles", Colloquium, Department of Materials science and Engineering, University of Illinois, Urbana-Champaign, IL, 08/29/05

*M. Olvera de la Cruz "Charged Induced Pattern Formation on Surfaces of Assemblies of Cationic-Anionic Amphiphiles", "Correlations in Polymer melts, blends and solutions", "Heterogeneous Macromolecule" and "Polyelectrolyte Solutions", Advanced Summer School 2005, Physics Department, Centro de Investigaciones y Estudios Avanzados (Cinvestav), Mexico D. F. Mexico from 07/18 to 07/22, 2005.

* M. Olvera de la Cruz "Co-assembly of Cationic and Anionic Heterogeneous Macromolecules: Bulk and Surface Nano-Pattern Formation" European Polymer Congress, Moscow at Moscow State University, Moscow (declined) June 27-July 1, 2005.

*M. Olvera de la Cruz, "Charged Induced Pattern Formation on Surfaces of Assemblies of Cationic-Anionic Amphiphiles", Polymer Physics Workshop, Telluride Science Research Center, Telluride, CO, 07/27-29, 2005.

*M. Olvera de la Cruz, "Pattern Formation in Mixtures of Oppositely Charged Biomolecules" Seminar general de Service de Physique Theorique, CEA-Saclay, Farnce, 06/28/05.

*M. Olvera de la Cruz, "Pattern Formation in Self-Assembled Heterogeneous Molecules: Co-Assembled Cationic and Anionic Amphiphiles" Laboratoire de Physique des Solides, University de Paris-Sud, Orsay, 07/24/2005.

*M. Olvera de la Cruz, "Charged Induced Pattern Formation on Surfaces of Cationic and Anionic Peptide Amphiphiles", Gordon Research Conference, Ion-Containing Polymers, Il Ciocco, Italy, 04/02/05.

Y. Velichko and M. Olvera de la Cruz, "Charged Binary Fluid Confined to Cylindrical Monolayer: Pattern Formation", American Physical Society, March Meeting, March 2005, Los Angeles, CA.

J. A. Libera, K. Zhang, M. J. Bedzyk and M. Olvera de la Cruz "Polynucleotide Adsorption onto Negatively Charged Surfaces", American Physical Society, March Meeting, March 2005, Los Angeles, CA.

S. M. Loverde, Y. Velichko and M. Olvera de la Cruz "Charge Induced Pattern Formation on Surfaces", American Physical Society, March Meeting, March 2005, Los Angeles, CA.

M. Olvera de la Cruz and H. Cheng "Charged Surface Induced Diblock Copolymer Micellization", American Physical Society, March Meeting, March 2005, Los Angeles, CA.

H. Guo and M. Olvera de la Cruz "Structure and Dynamics of Microemulsions/Micelles in the Presence of a Monolayer Interface in the Ternary Amphilphilic Systems: A Computer Simulation Study" American Physical Society, March Meeting, March 2005, Los Angeles, CA.

*M. Olvera de la Cruz, "Charge Induced Pattern Formation on Surfaces of Cylindrical Micelles of Cationic-Anionic Peptide-Amphiphiles", American Chemical Society Meeting, ACS Award In Polymer Chemistry, March 14, San Diego, CA.

*M. Olvera de la Cruz, "Charged Macromolecules: Solutions, Aggregates and Gels" and "Surface Pattern Formation in Self-Assembled Heterogeneous Molecules: Co-Assembled Cationic and Anionic Peptide Amphiphiles", Baetjer Colloquium Series, Department of Mechanical and Aerospace engineering, Princeton University, Princeton, NJ, March 3-4, 2005.

*M. Olvera de la Cruz, "Electrostatic Interactions in Mixtures of Cationic and Anionic Biomolecules: Bulk Structures and Surface Pattern Formation" Colloquium, Physics Department, University of Houston, TX,

02/15/05.

*M. Olvera de la Cruz, "Electrostatic Interactions in Mixtures of Cationic and Anionic Biomolecules: Bulk Structures and Induced Surface Pattern Formation", Chemical Engineering Department, University of Columbia, New York, October 19, 2004.

*M. Olvera de la Cruz, "Strongly Correlated Macro-Ionic Solutions: Charged Chains Complexes, Charged Telechelics and Charged Peptide-Amphiphiles Mixtures," XIII International Materials Research Congress, Cancun, Mexico. 22-26, August, 2004.

*M. Olvera de la Cruz, "Electrostatic Interactions in Mixtures of Cationic and Anionic Biomolecules: Bulk Structures and Induced Surface Pattern Formation", US-South America Workshop "Mechanics and Advanced Materials: research and Education", Rio de Janeiro, Brazil, August 2-6, 2004.

* M. Olvera de la Cruz, "Cell: Simple Structures," NSF Biophysics Workshop, Tempe, AZ, May 16-18, 2004.

* M. Olvera de la Cruz, "Charged Macromolecules," IGERT, Northwestern University, March 3, 2004.

* M. Olvera de la Cruz, "Self-Organization of Mixtures of Peptide-Amphiphiles of Opposite Charge," Biophysics Workshop, Theoretical Physics Institute, University of Minnesota, April 30-May 2, 2004.

A. Ermoshkin, A. Kudlay, and M. Olvera de la Cruz, "Thermoreversible Crosslinking of Polyelectrolyte Chains," Annual American Physical Society March Meeting 2004, Montreal, Quebec, March 22, 2004.

M. D. Lefebvre, M. Olvera de la Cruz, and K. R. Shull, "Homopolymer Volatilization in Diblock Copolymer Micelles," Annual American Physical Society March Meeting 2004, Montreal, Quebec, March 24, 2004.

S. Levered, A. Ermoshkin, M. Olvera de la Cruz, "Computer Simulation of Associating Ideal Chains," Annual American Physical Society March Meeting 2004, Montreal, Quebec, Canada, March 24, 2004.

A. Kudlay, A. Ermoshkin, M. Olvera de la Cruz, "Complication in Solutions of Oppositely Charged Polyelectrolytes," Annual American Physical Society March Meeting 2004, Montreal, Quebec, March 24, 2004.

M. D. Lefebvre, M. Olvera de la Cruz, K. R. Shull, "Homopolymer Volatilization in Diblock Copolymer Micelles," Annual American Physical Society March Meeting 2004, Montreal, Quebec, March 24, 2004.

F. J. Solis, M. Olvera de la Cruz, "Pattern Formation in Charged Micelles," Annual American Physical Society March Meeting 2004, Montreal, Quebec, March 25, 2004.

H. Cheng and M. Olvera de la Cruz, "Rod-like Polyelectrolyte Adsorption Onto Charged Surfaces in Monovalent and Divalent Salt Solutions," (Poster) Gordon Research Conferences Colloidal, Macromolecular & Polyelectrolyte Solutions Ventura, CA, February 1-6, 2004

A. Kudlay, A.V. Ermoshkin, and M. Olvera de la Cruz, "Phase Diagram of Charged Dumbbells," (Poster) Gordon Research Conferences, Colloidal, Macromolecular & Polyelectrolyte Solutions, Ventura CA, February 1-6, 2004.

A. V. Ermoshkin and M. Olvera de la Cruz, "Association of Charged Telephonic Chains," (Poster) Gordon Research Conferences. Colloidal, Macromolecular & Polyelectrolyte Solutions Ventura CA, February 1-6, 2004.

M. Olvera de la Cruz, "Association of Charged Chains," Chemistry department, University of Oregon, Eugene, OR, Jan 26, 2004.

M. Olvera de la Cruz, "Solutions of Charged Polymers," "Second International Conference on Applied Statistical Physics: Molecular Engineering (ASTATPHYS-MEX-2003)", Puerto Vallarta, Mexico, August 24-29, 2003.

M. Olvera de la Cruz, "Polyelectrolytes: Gelation and Adsorption," 2003 Telluride Workshop on "Polymer Theory vs. Polymer Experiment, Colorado, July 2003.

M. Olvera de la Cruz, "Statistical Mechanics," Nano Training Bootcamp, ASME Nanotechnology Institute, Northwestern University, Evanston IL, July 8-11, 2003.

M. Olvera de la Cruz, "Polyelectrolyte Solutions in Multivalent Salts," The 43rd High Polymer Research Group Conference, 2003, Moretonhampstead, Devon, England, April 2003.

M. Olvera de la Cruz and A. Ermoshkin, "Polyelectrolyte Solutions: Gelation and Segregation," American Physical Society March Meeting, Austin TX, March 2003.

H. Cheng and M. Olvera de la Cruz, "Adsorption of Polyelectrolytes onto Like-Charged and Oppositely Charged Chains," American Physical Society Meeting, Austin TX, March 2003.

A. Kudlay and M. Olvera de la Cruz, "Phase Behavior of Solutions of Flexible Oppositely Charged Polyelectrolytes," American Physical Society Meeting, Austin TX, March 2003.

A. Ermoshkin and M. Olvera de la Cruz, "Modified Random Phase Approximation of Polyelectrolyte Solutions," American Physical Society Meeting, Austin TX, March 2003.

M. S. Yeom and M. Olvera de la Cruz, "Monte Carlo Simulations of Solutions of Rod-Like Charged Chains," American Physical Society Meeting, Austin TX, March 2003.

M. Lefebvre, K. Shull and M. Olvera de la Cruz, "Phase Segregation in Gradient Copolymer Melts," American Physical Society March meeting in Austin, TX, 2003.

S. Loverde, M. S. Yeom, A. Ermoshkin and M. Olvera de la Cruz, "Computer Simulations of Physically Associating Ideal Chains," American Physical Society meeting in Austin, TX, March 2003.

* M. Olvera de la Cruz, "Polyelectrolyte Solutions," Colloquium Chemical Engineering Department, University of Texas, Austin, TX, January 2003.

A. Ermoshkin and M. Olvera de la Cruz, "Polyelectrolytes in the Presence of Multivalent Ions: Gelation versus Segregation," Physics Gordon Conference (as a poster), Salve Regina University, Newport, RI, Aug 11-16, 2002.

* M. Olvera de la Cruz, "Polyelectrolyte Solutions in Multivalent Salts," American Chemical Society, 34Th Central Regional Meeting, Ypsilanti, MI, June 27, 2002.

* M. Olvera de la Cruz "Polyelectrolytes in Multivalent Salts" Aspen Center for Physics, Aspen, CO, June 5, 2002.

A. Ermoshkin and M. Olvera de la Cruz, "Phase Behavior of Strongly Charged Polyelectrolytes in the Presence of Multivalent Ions," American Physical Society March Meeting, Indianapolis, IN, March 2002.

K. A. Smith, J. Ottino, and M. Olvera de la Cruz, "Breakup and Rupture of Encapsulated Droplets," American Physical Society March Meeting, Indianapolis, IN, March 2002.

M. Yeom, A. Ermoshkin, and M. Olvera de la Cruz, "Phase behavior of Rod-Like Biopolymers," American Physical Society March Meeting, Indianapolis, IN, March 2002.

K. A. Smith, J. Ottino, and M. Olvera de la Cruz, "Encapsulated Droplets in Shear Flow," with K. A. Smith, American Physical Society Fluid Dynamics Meeting, San Diego, CA, November 2001.

*M. Olvera de la Cruz, "Polyelectrolytes in Multivalent Salts," Colloquium Polymer Science and Engineering Department, University of Massachusetts, Amherst, MA, September 7, 2001.

*M. Olvera de la Cruz, F. J. Solis, and P. Gonzalez-Mozuelos, "Polyelectrolytes and Multivalent Salt Solutions," in Computer Modeling of Polymer, American Chemical Society Meeting, Chicago IL, August 26-30, 2001.

*M. Olvera de la Cruz, "Polyelectrolytes in Multivalent Salt Solutions," Gordon Research Conference on Condensed Matter Physics," Connecticut College, June 2001.

*F. J. Solis, M. Olvera de la Cruz, and P. Gonzalez-Mozuelos, "Competing Electrostatic Interactions in DNA Condensation," in "Electrostatic Interactions in Polymers, Colloids, and Biophysics," Theoretical Physics Institute, Minneapolis, MN, May 11-13, 2001.

M. Olvera de la Cruz, M. Sayar, F.J. Solis, and S. I Stupp, "Modeling Polar Self Assembly," American Physical Society March meeting, Seattle, WA, 2001.

F. J. Solis and M. Olvera de la Cruz, "Attractions Between Charged Colloidal Spheres Mediated by Correlated Distributions of Absorbed Mobile Ions," American Physical Society March meeting, Seattle, WA, 2001.

*M. Olvera de la Cruz, "Self-Organized Complex Polymers: From Condensed Polyelectrolytes to Non-Centrosymmetric Supramolecular Films of Rod-Coil Polymers," NSF Workshop on Opportunities in Materials Theory, Arlington, VA, October 5, 2000.

*M. Olvera de la Cruz "An Ionic Glass Approach to Polyelectrolyte Solutions," Colloquium Chemical Engineering Department, Georgia Tech, Atlanta, GA, September 13, 2000.

*M. Olvera de la Cruz, “Polyelectrolytes in Salt Solutions,” Air Force, Dayton, OH, June 12, 2000.

F. J. Solis and M. Olvera de la Cruz, “Collapse of Flexible Polyelectrolytes with Multivalent Salt,” American Physical Society March meeting. MN, 2000.

M. Olvera de la Cruz, F.J. Solis, and K. A. Smith, “Domain Growth During Phase Separation in Binary and Ternary Fluids” Dillon Symposium, American Physical Society March meeting, MN, 2000.

*F. J. Solis and M. Olvera de la Cruz, “Strong Coupling Approach to Polyelectrolyte Theory,” Gordon Research Conference on Colloidal, Macromolecular, and Polyelectrolyte, Ventura, CA, February 2000.

*M. Olvera de la Cruz, “Polyelectrolyte Solutions,” 20-20 Vision of Polymer Science in the Next Two Decades Symposium, Akron, OH, May, 1999.

F. J. Solis and M. Olvera de la Cruz, “Attractions Between Rod-like Polyelectrolytes with Multivalent Counterions,” APS Meeting, St. Louis, MO, March 1999.

M. Olvera de la Cruz and F. J. Solis, “Multilayer Polyelectrolyte Blend,” Dillon Symposium, APS Meeting, St. Louis, MO, March 1999.

K. Mahdi and M. Olvera de la Cruz, “Phase Diagrams of Salt Free Polyelectrolyte Semi-Dilute Solutions,” APS Meeting, St. Louis, MO, March 1999.

*M. Olvera de la Cruz and F. Solis, “Polyelectrolytes: Ion Condensation and Conformation,” Polymer Winter Gordon Conference, Ventura, CA, January 1999.

*M. Olvera de la Cruz, P. Gonzalez-Mozuelos, L. Belloni, and F. Solis, “Ion Condensation in Dilute Polyelectrolyte Solutions,” Electrostatics in Complex Systems Workshop, Institute of Theoretical Physics, Santa Barbara, CA, November, 1998.

*M. Olvera de la Cruz, C. Huang, F. Solis, and K. Thorton, “Phase Separation in Ternary Mixtures,” University of Wisconsin-Madison, Chemistry Department, October 19, 1998.

*M. Olvera de la Cruz and F. J. Solis, “Multilayer Polyelectrolyte Blend,” American Chemical Society Fall Meeting, Boston, MA, August, 1998.

*M. Olvera de la Cruz, C. Huang, F. Solis, and K. Thorton, “Phase Separation in Ternary Polymer Blends,” Computational Tools for Multiphase/Multicomponent Polymer Materials Workshop, NIST, Maryland, May, 20-211998.

*M. Olvera de la Cruz, P. Gonzalez-Mozuelos, and F. Solis, “Polyelectrolyte Solutions,” Statistical Mechanics Midwest Meeting, University of Notre Dame, May, 1998.

K. Thorton, L. Tao, F. Solis, and M. Olvera de la Cruz, “Hydrodynamical Effects in Ternary Mixtures Decomposition,” American Physical Society March Meeting, Los Angeles, CA, March 16-20, 1998.

F. Solis and M. Olvera de la Cruz, “Necklace Formation Polyelectrolytes,” American Physical Society March Meeting, Los Angeles, CA, March 16-20, 1998.

E. Raspand, M. Olvera de la Cruz, S.L. Sikorav, and F. Livolant, “Precipitation of DNA by Polyamines: Polyelectrolyte Behavior,” American Physical Society March Meeting, Los Angeles, CA., March 16-20, 1998.

M. Olvera de la Cruz, P. Gonzalez-Mozuelos, L. Bellon, and F. Solis, “Dilute Polyelectrolyte Aqueous Solution,” American Physical Society March Meeting, Los Angeles, CA, March 16-20, 1998.

*M. Olvera de la Cruz, C. Huang, F. Solis, and K. Thorton, “Phase Segregation in Multicomponent Polymer Blends,” Department of Materials Science & Engineering, Northwestern University, January 13, 1998.

*M. Olvera de la Cruz, “Polyelectrolyte Conformation in Dilute Solutions,” “Journee des Systemes Complexes Charges,” LLB, CE-Saclay, France, March, 1997.

F. J. Solis and M. Olvera de la Cruz, “Concentrated Solutions of Star Diblock Copolymers and Colloids with Grafted Polymers,” American Physical Society March Meeting, Kansas City, MO, March, 1997.

* M. Olvera de la Cruz, “Phase Separation of Ternary Mixtures,” SCM, CE-Saclay, France, December, 1996.

* M. Olvera de la Cruz, “Charged Block Copolymer Micelles in Salt Free Solutions,” Service de Chimie Moleculaire, CE-Saclay, France, May 23,1996.

* C. Huang and M. Olvera de la Cruz, “Interfacial Studies of Ternary Polymer Blends,” The American Physical Society March Meeting, St. Louis, MO. March 1996. (The paper was selected to be presented at the Padden award symposium for graduate students; C. Huang won the Padden award with this paper).

* M. Olvera de la Cruz, “Ion Condensation in Dilute Salt-Free Polyelectrolyte Solutions,” Service de Chimie Moleculaire, CE-Saclay, France, Jan. 18, 1996.

* M. Olvera de la Cruz, “Salt-free Polyelectrolyte Solutions,” Laboratoire Leon Langevin, CE-Saclay, France, December 15,1995.

* M. Olvera de la Cruz, “Phase Separation of Ternary Mixtures,” TMS Meeting, Cleveland, OH, October, 1995.

B. W. Swift and M. Olvera de la Cruz, “Random Copolymer Chain Statistics and Dynamics in Semi-Dilute and Concentrated Solutions,” The American Physical Society March Meeting, San Jose, CA, March, 1995.

M. Olvera de la Cruz and P. Gonzales-Mozuelos, “Ion Condensation in Dilute Salt-free Polyelectrolyte Solutions,” The American Physical Society March Meeting, San Jose, CA, March 1995.

* M. Olvera de la Cruz, “Polyelectrolytes,” 1994 David & Lucile Packard Fellows Meeting, Monterey Bay, CA, September, 1994.

A. S. Mendelsohn, M. Olvera de la Cruz, and J.M. Torkelson, “Investigation of Correlations and Phase Separation in Polymer Blends by Fluorescence Nonradiative Energy Transfer,” The American Physical Society March Meeting, Pittsburgh, PA, March, 1994.

L. Belloni, J. P. Dalbiez, M. Delsanti, M. Drifford, M. Olvera de la Cruz, and O. Spalla, “Thermodynamics of Highly Charged Polyelectrolytes,” The American Physical Society March Meeting, Pittsburgh, PA, March, 1994.

A. Nesarikar, B. Crist, and M. Olvera de la Cruz, “Coarsening Kinetics of Model Copolymer Blends,” The American Physical Society March Meeting, Pittsburgh, PA, March, 1994.

* M. Olvera de la Cruz, “Thermodynamics of Polyelectrolytes in Multi-Valent Salts,” University of Texas A&M, Department of Chemistry Coll., TX, March 31, 1994.

M. Olvera de la Cruz, “Can RPA describe Microphase Separation Transitions in Block Copolymers?” The American Physical Society March Meeting, Pittsburgh, PA, March, 1994.

* M. Olvera de la Cruz, “Polyelectrolytes: Correlations and Conformations,” First USA-Mexico Bilateral Symposium on the Physics of Complex Fluids, San Louis Potosi, Mexico, July, 1993.

* M. Olvera de la Cruz, “Aggregation in Copolymer Systems,” Akron Polymer Lecture Group, University of Akron, OH, April 12, 1993.

* M. Olvera de la Cruz “Aggregation in Copolymer Systems,” Research Center, The Glidden Company, Strongsville, OH, April 12, 1993.

A. S. Mendelsohn, M. Olvera de la Cruz, and J. M. Torkelson, “Investigation of Correlations in Polymer Blends and Semi-dilute Solution by Fluorescence Nonradiative Energy Transfer,” The American Physical Society March Meeting, Seattle, WA, March 1993.

B. Swift and M. Olvera de la Cruz, “Monte Carlo Simulation of Single Chain Random Copolymers,” The American Physical Society March Meeting, Seattle, WA, March, 1993.

* M. Olvera de la Cruz, “Aggregation in Block Copolymer Melts,” Dept. of Materials Science and Engineering, Pennsylvania State University, PA, February 17, 1993.

* M. Olvera de la Cruz, “ Transition to Periodic Structures in Block Copolymer Melts” Polymers West Gordon Conference, Los Angeles, CA. January 4-8, 1993.

A. S. Mendelsohn, M. Olvera de la Cruz, and J. M. Torkelson, “Correlations in Miscible Polymer Blends, Melts and Solutions: A Novel Comparison of Donor Fluorescence Intensity Decay Theory to Fluorescence Energy Transfer Experiments,” MRS Fall Meeting 1992, Boston, MA, November 30 - December 4, 1992.

* M. Olvera de la Cruz, “Polymers in Random Media,” 1992 David & Lucile Packard Fellows Meeting, Monterey Bay, CA, September 9-11, 1992.

* M. Olvera de la Cruz, “Polymers in Disordered Media,” Physics Department, Universidad Nacional Autonoma de Mexico, Mexico City, June 17, 1992.

* M. Olvera de la Cruz, “Aggregation in Copolymer Systems,” Physics Department, Universidad Nacional Autonoma de Mexico, Mexico City, June 12, 1992.

* M. Olvera de la Cruz “Transitions to Periodic Structures in Block Copolymers,” University of Pittsburgh, PA, June 5, 1992.

* M. Olvera de la Cruz, “Weakly Segregated Diblock Copolymer Melts,” the American Chemical Society Meeting, San Francisco, CA, April 1992.

D. Gersappe and M. Olvera de la Cruz, “Ring Polymers in Disordered Media,” The American Physical Society March Meeting, Indianapolis, IN, March, 1992.

A. Mendelsohn, M. Olvera de la Cruz and J.M. Torkelson, “Correlations in Polymer Blends Studied by Fluorescence Techniques,” The American Physical Society March Meeting, Indianapolis, IN, March, 1992.

K. E. Bassler and M. Olvera de la Cruz, “Simulations of Diblock Copolymer Solutions,” The American Physical Society March Meeting, Indianapolis, IN, March, 1992.

M. Olvera de la Cruz, A.M. Mayes, and B.W. Swift, “Transition to Lamellar-Catenoid Structure in Block Copolymer Melts,” The American Physical Society March Meeting, Indianapolis, IN, March, 1992.

A. Nesarikar, M. Olvera de la Cruz and B. Crist, “Phase Relations in Multicomponent Random Copolymer Mixtures,” The American Physical Society March Meeting, Indianapolis, IN, March, 1992.

M. Olvera de la Cruz, “Hexagonal Lattices in Nearly Continuous Transitions to Periodic Structures,” The Materials Research Society Fall Meeting, Boston, MA, December, 1991.

* M. Olvera de la Cruz, “Transitions to Periodic Structures in Block Copolymer Melts,” 1991 David & Lucile Packard Fellows Meeting, Monterey Bay, CA, September 4, 1991.

* M. Olvera de la Cruz, “Transitions to Periodic Structures in Block Copolymers,” Seminar to honor Prof. Mondragon, Instituto de Fisica, Mexico, August 15-16, 1991.

* M. Olvera de la Cruz, “Correlations and Phase Transitions in Polymers,” IV Meeting on the Science & Technology of Colloids and Complex Fluids, San Luis Potosi, Mexico, July 16-20, 1991.

* M. Olvera de la Cruz, “Transitions to Periodic Structures in Block Copolymers,” University of Texas at Austin, TX, June 11, 1991.

A. M. Mayes and M. Olvera de la Cruz, “Transitions to Periodic Structures in Block Copolymer Melts,” The Materials Research Society Spring Meeting 1991, Anaheim, CA, April, 1991.

M. Olvera de la Cruz and A.M. Mayes, “Transitions to Periodic Structures in Block Copolymer Melts,” The American Physical Society March Meeting, Cincinnati, OH, March, 1991.

* M. Olvera de la Cruz, “Dynamics of DNA during Pulsed-Field Gel Electrophoresis,” International Meeting of the Electrophoresis Societies, Washington, D.C., March, 1991.

* M. Olvera de la Cruz, “Gel Electrophoresis Dynamics,” XX Winter Symposium in Statistical Physics, Mexico, January, 1991.

*M. Olvera de la Cruz, “Effects of Concentration Fluctuations in Polymer Blends and Block Copolymer Melts,” The American Institute of Chemical Engineers’ Annual Meeting, Chicago, IL, November, 1990.

*M. Olvera de la Cruz, “Aggregation in Block Copolymers,” 1990 David & Lucile Packard Fellows Meeting, Monterey Bay, CA, September 6, 1990.

*M. Olvera de la Cruz, “Aggregation in Block Copolymer Systems,” Polymers Physics Gordon Conference (as a poster), Newport, RI, July, 1990.

* M. Olvera de la Cruz, “Pulsed Field Gel Electrophoresis,” The American Chemical Society, 22nd Central Regional Meeting, Midland, MI, June 6, 1990.

* M. Olvera de la Cruz, “Aggregation in Block Copolymer Systems,” DOW, Midland, MI, May 5, 1990.

* M. Olvera de la Cruz, “Local Segregation in Block Copolymers,” The American Chemical Society Meeting, Boston, MA, April, 1990.

A. M. Mayes and M. Olvera de la Cruz, “Microphase Separation in Block Copolymer Systems,” The American Physical Society Meeting 1990, Anaheim, CA, March, 1990.

D. Gersappe, J.M. Deutsch and M. Olvera de la Cruz, “Density Fluctuations of Self Avoiding Walks in Random Systems,” The American Physical Society March Meeting, 1990, Anaheim. CA, March, 1990.

M. Olvera de la Cruz and D. Gersappe, “Dynamics of Pulsed Field Gel Electrophoresis,” The American Physical Society March Meeting, Anaheim, CA, March, 1990.

M. Olvera de la Cruz, “Aggregation in Block Copolymer Solutions,” The Materials Research Society Fall Meeting, Boston, MA, November, 1989.

A. M. Mayes and M. Olvera de la Cruz, “Microphase Separation in Multiblock Copolymer Melts,” The Materials Research Society Fall Meeting, Boston, MA, November, 1989.

* M. Olvera de la Cruz “Aggregation in Block Copolymer Systems,” The James Frank Institute, University of Chicago, Chicago, IL, October 2, 1989.

* M. Olvera de la Cruz and D. Gersappe, “Dynamics of Gel Electrophoresis,” The American Chemical Society Meeting, Miami, FL, September, 1989.

* M. Olvera de la Cruz, “Weak Crystallization in Block Copolymer Systems,” Department of Physics, University of California, Santa Cruz, CA, May 18, 1989.

* M. Olvera de la Cruz, “Disorder-Order Transitions in Block Copolymer Systems,” Department of Physics, Northwestern University, Evanston, IL, April 6, 1989.

* M. Olvera de la Cruz, “Aggregation in Block Copolymer Systems,” Department of Physics, Universidad Nacional Autonoma de Mexico, Mexico D. F., March 7, 1989.

D. Gersappe, M. Olvera de la Cruz, and J. M. Deutsch, “Chain Statistics in Random Frozen Impurities,” The American Physical Society Meeting, St. Louis, MO, March, 1989.

* M. Olvera de la Cruz “Concentration Fluctuations in Polymer Blends,” Polymers West Gordon Conference, Ventura, CA, January, 1989.

* M. Olvera de la Cruz, “Aggregation in Block Copolymer Systems,” Allied Signal Inc., Morristown, NJ, November 18, 1988.

* M. Olvera de la Cruz, “Theory of Microphase Separation in Block Copolymer Solutions,” Polymer Division, National Bureau of Standards, Gaithersburg, MD, August 18, 1988.

* M. Olvera de la Cruz and I. C. Sanchez, “Microphase Separation in Block Copolymers and Related Systems,” The American Chemical Society Meeting, Dallas, TX, April 19-22, 1988.

E. O. Shaffer and M. Olvera de la Cruz, “Computer Simulation of Gel Electrophoresis,” The American Physical Society Meeting, New Orleans, LA, March 21-25, 1988.

* M. Olvera de la Cruz, “Segregation in Block Copolymers/Homopolymer Blends,” Department of Materials Science and Engineering, University of Illinois, Champaign Urbana, IL, October l, l987.

* M. Olvera de la Cruz, “Phase Separation in Polymer Blends,” Department of Physics, University of Wisconsin, Madison, WI, September 14, 1987.

* M. Olvera de la Cruz, “Micelle Formation in Block Copolymer/Homopolymer Blends,” Johnson Wax Company, Racine, Wisconsin, May 11, 1987.

* I. C. Sanchez and M. Olvera de la Cruz, "The Processing Window for Block, Graft and Star Copolymers," The Third Annual Meeting of the Polymer Processing Society, Stuttgart, West Germany, April 7-10, 1987.

A. M. Mayes and M. Olvera de la Cruz, "Micelle Formation in Diblock Copolymers-Homopolymers Blends," The American Physical Society Meeting, New York, NY, March 16-20, 1987.

* M. Olvera de la Cruz, "Polymer Diffusion in Topologically Restricted Environments," The James Frank Institute, University of Chicago, February 18, 1987.

* M. Olvera de la Cruz, "Polymer Diffusion in Topologically Restricted Environments," Department of Physics, University of California at Los Angeles (UCLA), March 13, 1986.

* M. Olvera de la Cruz, "Polymer Diffusion in Topologically Restricted Environments," Department of Physics, California State University, Los Angeles, CA. February 1986.

* M. Olvera de la Cruz, "Dynamics of a Polymer in an Electric Field," Department of Physics, State University of New York at Albany, February 21, 1986.

* M. Olvera de la Cruz and I. C. Sanchez, "Theory of Microphase Separation in Copolymer Stars," The Polymers Gordon Research Conference (as a poster), Santa Barbara, CA, January, 1986.

* M. Olvera de la Cruz, "Phase Separation in Block Copolymer Melts," Department of Chemical Engineering and Materials Science, University of Minnesota, November 26, 1985.

* M. Olvera de la Cruz, "Microphase Separation in Graft and Stars Block Copolymer Melts," Statistical Mechanics Meeting in the Washington D. C. area, National Bureau of Standards, March, 1985.

* M. Olvera de la Cruz, "Phase Separation in Polymer Blends," Polymer Division, National Bureau of Standards, January, 1985.

* M. Olvera de la Cruz, J. M. Deutsch, and S. F. Edwards, "Electrophoresis in Strong Fields," The Polymers Gordon Research Conference (as a poster), Santa Barbara, CA, January, 1985.

* M. Olvera de la Cruz, "Phase Separation in Polymer Blends," Department of Polymer Science and Engineering, University of Massachusetts, November, 1984.

* M. Olvera de la Cruz, "Equilibrium Properties of Polymer Blends," Department of Physics, Imperial College, London, U.K., March 1984.

* M. Olvera de la Cruz and S. F. Edwards, "Spinodal Decomposition in Protonated and Deuterated Polymer Mixtures," in "Recontre de Physique Statistique," Paris, France, February, 1984.

M. Olvera de la Cruz and S. F. Edwards, "Model of a Ground State of a Spin Glass," The "2nd Conference of the Condensed Matter Division of the European Physical Society," Manchester, U. K., March, 1982.

(* invited presentations)