MONICA OLVERA de la CRUZ
Department of Materials Science & Engineering
Department of Chemistry
Departments of Physics and Astronomy and Chemical & Biological Engineering (by courtesy)
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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, Evanston IL, 60208
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, Evanston, IL, 60208
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, Evanston, IL 60208
2006-13	**Director**- Materials Research Center, Northwestern University, Evanston IL, 60208
1998-09	**Professor**- Department of Materials Science & Engineering, Northwestern University, Evanston, IL 60208
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, Evanston, IL 60208
1986-91	**Assistant Professor**- Department of Materials Science and Engineering, Northwestern University, Evanston, IL 60208
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. 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* (in press, 2026)
2. B. N. Onusaitis, E. Krucker-Velasquez, M. Olvera de la Cruz, "**Crystalline Ordering of Ionic Liquids Under Confinement**" (in review)
3. C. Deng, S. W. Fitz, M. Olvera de la Cruz, "**Solvent-Dependent Mechanical Response of De Novo Helix Repeat Proteins**" (accepted)
4. 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**" (submitted); https://doi.org/10.64898/2026.01.29.702620
5. 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

6. 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
7. 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
8. 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
9. 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
10. 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
11. S. Leyva, A. Shrestha, M. Olvera de la Cruz, "**Active Ionic Fluxes Induce Symmetry Breaking in Charge-Patterned Nanochannels**" (submitted); https://arxiv.org/pdf/2510.15092
12. 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
13. 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
14. 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
15. 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
16. 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; https://doi.org/10.1021/acs.macromol.5c01258
17. 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
18. 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
19. 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
20. 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
21. 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

22. 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
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. 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
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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
39. 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
40. 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

41. 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
42. 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
43. 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
44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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
52. 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
53. Y. Xiong, H. Yuan, M. Olvera de la Cruz, "**Janus magnetoelastic membrane swimmers**" *Soft Matter* 19, 6721-6730 (2023); DOI: 10.1039/D3SM00788J
54. 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
55. 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
56. 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
57. 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
58. 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
59. 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
60. 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
61. 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
62. 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

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Book Chapters and Selected Publications in Conference Proceedings

406. 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.
407. 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).
408. 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.
409. 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).
410. 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.
411. 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.
412. 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).
413. D. Gersappe and M. Olvera de la Cruz, "**Dynamics of Gel Electrophoresis**" in "Computer Simulation of Polymers," Ed. R. J. Roe, Prentice Hall, (1991).

414. 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).
415. 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).
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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).

CURRENT GRADUATE STUDENTS

Tracy Wan PhD, expected 2030	**"Colloids and polymers"**
Angel Ivan Rodriguez Leon PhD, expected 2029 (co-advised with Dr. Maria Chan, Argonne National Laboratory)	**"Iontronics"**
Sullivan Fitz PhD, expected 2027	**"Membranes"**
Isaac Smith PhD, expected 2027	**"Iontronics"**
Antara Sen PhD, expected 2027	**"Soft Robotics"**
Matthew Farnese PhD, expected 2027	**"Active Matter"**
Annie Gomez PhD, expected 2027 (co-advised with Prof. Danielle Tullman-Ercek)	**"Bacterial Microcompartments"**
Brandon Onusaitis PhD, expected 2027	**"Iontronics"**

Nicholas Pogharian PhD, expected 2026	**"Electric Fields in Soft Materials"**
Han Umana Kossio PhD, expected 2026 (co-advised with Prof. Nathan Gianneschi)	**"Protein-Like Polymers for Therapeutics"**

CURRENT RESEARCH ASSOCIATE PROFESSORS

Dr. Felipe Jimenez Angeles January 2018-Present	**Polyelectrolyte Interfaces**

CURRENT POSTDOCS:

Dr. Emmit Pert Jan 2026-Present	**Iontronics and Microfluidics**
Dr. Emily Krucker-Velasquez Jan 2025-Present	**Iontronics and Microfluids**
Dr. Sergi Granados Leyva Jun 2024-Present	**Active Matter and Living Crystals**
Dr. Ahis Shrestha Jul 2022-Present	**Continuum Membrane Models**

PREVIOUS GRADUATE STUDENTS/DEGREES AWARDED

Eden Taddese	MS 2025, Materials Science (co-advised with Prof. Songi Han)
Hector Manuel Lopez de la Cerda Rios	**"Colloidal Matter and the Road to Trainable Materials"** Ph.D., Oct 2024 (Postdoc, MRSEC Postdoctoral Fellowship, University of Chicago)
Yang Li	**"Polymeric Material Self Assembly for Biological Applications"** Ph.D., Sep 2024 (co-advised with Prof. Evan Scott) (Computational Chemist, Pacagen, Inc.)
Zehao Song	MS 2024, Chemotaxy (Graduate student, Duke University)
Dingwen Qian	**"Dynamics in Dielectric Confinement"** Ph.D., June 2024 (Postdoctoral Researcher, The University of Texas at Austin)
Ali Ehlen	**"Charged Proteins and Assembly"** Ph.D., March 2024 (Energy Markets Modeler, Pattern Energy)
Yange Lin	**"Colloidal Superionics"** Ph.D., July 2023 (Research Engineer, Huawei Technologies Co., Ltd)
Joseph McCourt	**"Electrostatic Mechanisms for Shape Selection in Charged Chiral Molecular Assemblies"** Ph.D., June 2023 (Postdoctoral Fellow, Argonne National Laboratory)
Curt Waltmann	**"Structure and Assembly of Macromolecular Compartments"** Ph.D., May 2023 (CCTCh Postdoctoral Research Fellowship)
Jeremy Wang	**"Polyelectrolyte Complexes of Random Copolymers and their Applications in Environmental Remediation"** Ph.D., March 2023 (NRC Research Associateship Program)

Chase Brisbois	**"Phases and Actuation of Superparamagnetic Soft Matter"** Ph.D., Nov 2022 (Senior Modeling and Simulation Scientist, Sci Tec Inc.)
Debadutta Prusty	**"Non-van derWaals interactions in soft matter thermodynamics: From bulk phase behavior to absorption in Brushes"** Ph.D., Sept 2022 (Postdoctoral Fellow, University of California Riverside)
Aaveg Aggarwal	**"Control of Soft Active Materials"** Ph.D., Aug 2022 (Postdoctoral Fellow, Northwestern University)
Hang Yuan	"**Engineering Responses of Soft Materials**" Ph.D., May 2022 (Huawei Technologies Co.)
Brian Damerau	**"Polyelectrolyte Complexes"** M.S., March 2022 (Cuberg, CA)
Yaohua Li	"**Ion Mediated Interactions**" Ph.D., Feb 2021 (Huawei Technologies Co., Shanghai)
Boran Ma	**"Assembly of polymers for energy applications"** Ph.D., Dec 2019 (Assistant Professor, University of Southern Mississippi)
Honghao Li	**"Ion transfer in heterogeneous media"** Ph.D., Aug 2018 (Google)
Martin Girard	**"DNA functionalized nanoparticles"** Ph.D., July 2018 (Group Leader, Polymer Max Planck, Mainz, Germany)
Ha-Kyung Kwon	**"Charged-neutral copolymers"** Ph.D., May 2018 (Toyota Research Institute)
Saijie Pan	**"Charged membranes and electrostatics"** Ph.D., April 2018 (Teacher, Shanghai Soong Ching Ling School)
Shuangping Liu	**"Elasticity of heterogeneous gels"** Ph.D., November 2017 (Google)
Yufei Jing	**"Dynamics of charged nanoparticles at interfaces"** Ph.D., November 2016 (Citibank)
Joshua Dempster	**"Self-Replication"** Ph.D., September 2016 (Data Scientist, Broad Institute, Boston)
Ting Li	**"Simulations of polyvalent nucleic acid-functionalized nanoparticles"** Ph.D., June 2015 (Data Engineer, Jump Trading LLC)
Doris M. Grillo	**"Protein Adsorption Studies".** Co-supervised with I. Szleifer (Analytical Consultant, JPMorgan Chase)
Matthew Demers	"**Curvature-driven Pattern Formation in Multicomponent Membranes**" Ph.D., August 2012 (Preceptor, Harvard University)
Prateek Kumar Jha	**"Mesoscopic simulations of gels, nanogels, and nanoparticle Assemblies: Competing interactions and dynamics"** Ph.D., May 2012 (Associate Professor, IIT Roorkee, India)
Peijun Guo	**"Self-Assembly of pH responsive nano-particles"** M.S., April 2011 (Assistant Professor, Yale University)
Mark Anderson	**"Gel formation in charged telechelics in poor solvent studied by replica exchange Monte Carlo simulations"** M.A., June 2010. Co-supervised with M. Ratner and I. Szleifer
Megan A. Greenfield	"**Modulating the forces between self-assembling molecules to control the shape of vesicles and the mechanics and alignment of nanofiber networks**" Ph.D., June 2009. Co-advised with S. I. Stupp (January 2010, McKenzie Consulting Partner)
Kevin L. Kohlstedt	"**The Formation of Chiral Nanopatterns on Low-Dimensional Ionic Assemblies Via Electrostatic Interactions**" Ph.D., June 2009 (Research Assistant Professor, Northwestern University, Advisors: George Schatz and Monica Olvera de la Cruz)
Sharon M. Loverde	"**Theory and Simulation of Polymer and Polyelectrolyte Self-Assembly**" Ph.D., June 2007 (Professor, City College New York)
Michelle D. Lefebvre	"**Effects of Sequence Distribution and Specific Interactions on the Ordering and Interfacial Behavior of Copolymers**" Ph.D., June 2006 Co-Advised with K. R. Shull

Hao Cheng	"**Polyelectrolyte Adsorption and Self-Assembly on Charged Surfaces**" Ph.D., December 2005 (Professor, Drexel University).
Kurt A. Smith	"**Dynamics of Drops and Fluid Interfaces-A Level set Study**" Ph.D., February 2003. Co-Advised with J. M. Ottino (Senior Programmer, Doordash Engineering)
Khaled Mahdi	"**Phase Diagrams of Polyelectrolyte Solutions**" Ph.D., December 2000. (Associate Professor, Kuwait University.)
Ching-I Huang	"**Studies of Phase Separation Dynamics and Interfaces in Ternary Systems**" Ph.D., June 1996. (Professor, National Taiwan University of Science and Technology, Taiwan.)
Brian W. Swift	"**Statistics and Dynamics of Random Copolymers in Solutions by Monte Carlo Simulation**" Ph.D., December 1995. (Developer, Matlock Capital, Chicago IL.)
Avi Nesarikar	"**Thermodynamics and Kinetics of Liquid-liquid Phase Separation in Random Copolymers**" Ph.D., (Chemical Eng.) September 1994. Co-Advised with B. Crist. (Mobil E&P Technical Center, Dallas TX.)
Alice S. Mendelsohn	"**Investigation of Correlations in Polymer Melts, Blends, and Semi-dilute Solutions by Fluorescence Nonradiative Energy Transfer Techniques**" (currently known as **FRET**) Ph.D., July 1994. Co-Advised with J. M. Torkelson (Robins, Kaplan, Miller & Ciresi L.L.P., Minneapolis).
Cheng-heng Kao	"**Micelle Formation in Copolymer-Homopolymer Blends**" M.S., June 1990. (Professor, Dept. of Chemical Engineering, National Central Taiwan University.)
Edward O. Shaffer	"**The Dynamics of Gel Electrophoresis**" M.S. June 1988. (CEO & Founder, Advanced Battery Concepts)
Dilip Gersappe	"**Statistics and Dynamics of Polymers in Topologically Restricted Environments**" Ph.D., April 1992. (Professor, Dept. Materials Science, SUNY at Stony Brook, NY.)
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	**Emulsion**s (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
- **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 IIlinois 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)

*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", ACS Spring 2026 National Meeting & Exposition, Division of Polymeric Materials: Science and Engineering (PMSE) – Advances in Polymer Electrolytes Symposium [Poster], 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", Istituto Nazionale di Fisica Nucleare, 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)