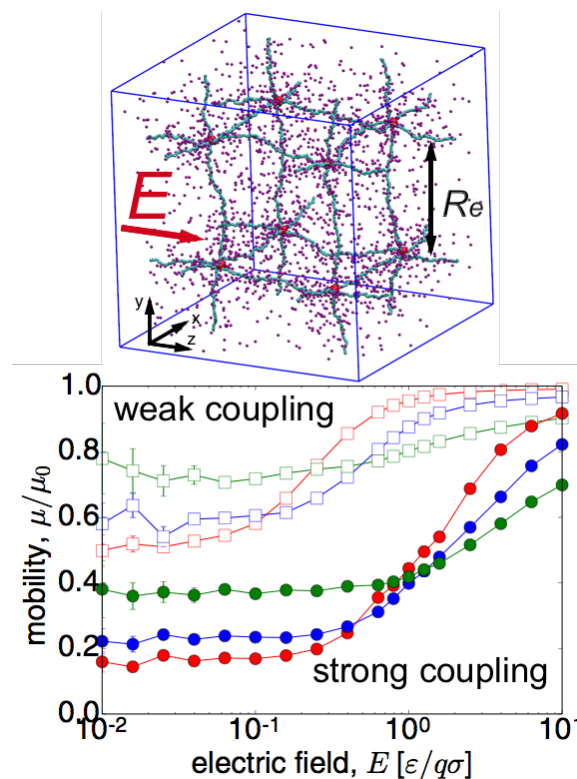


Ionic Conductivity in Polyelectrolyte Hydrogels

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DOI: [10.1021/acs.macromol.6b01276](https://doi.org/10.1021/acs.macromol.6b01276)

We study ion dynamics in polyelectrolyte gels under external electric fields by using coarse-grained molecular dynamics simulations and theoretical models. We find a nonlinear response of the conductivity to an applied electric field for field strengths that are comparable to the ionic coupling strength. This work provides more insights into the electric response of polyelectrolyte gels to support the development of applications that combine electric and mechanical properties of polyelectrolyte gels for energy storage, sensing, selective transport, and signal transfer.



Top: Schematic of the polyelectrolyte network structure in the simulations;
Bottom: Mobility of counterions for various gels under external electric fields.

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Write a paragraph about what you achieved NOT what you did (that is who cares and why?)

Write it for the GENERAL PUBLIC.

Figure Legend