

GRK 2516 Soft Matter Seminar

May 12, 2022 at 3:45 p.m.
Minkowski Room, 05-119, Staudingerweg 7

Research seminar of the DFG Research Training Group GRK 2516 (<https://grk2516.uni-mainz.de>).

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Charged weak hydrogels from a computational perspective — the complexity of Coulomb interactions and how to reduce them

In my talk I will present our research on how to study the pH response of weak hydrogels. I will introduce our Grand Reaction ensemble method to realistically model the pH-response, and also several abstractions on the methodological level on how to treat charged networks in a reasonable time. I will give several example studies on strong as well as weak gels, on polyelectrolyte stars, and also present a solution to the recently observed giant pKa shift in weak polyelectrolyte brushes.