

Abstract Submitted  
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**Dipolar fluids near a dielectric surface** ZIWEI WANG, ERIK LUI-JTEN, Northwestern University — The behavior of dipolar fluids near an interface is of fundamental importance in a broad variety of fields, including colloid chemistry, electrochemistry, biochemistry and surface science. The structural properties of such a fluid are affected not only by the presence of surface charge, but also by a dielectric mismatch across the interface. Using large-scale Monte Carlo simulations that explicitly take into account dielectric effects, we investigate a prototypical dipolar fluid. In addition to the organization of the fluid, characterized through the dipolar orientations and spatial correlations, we also calculate the surface tension by employing simulations in the grand-canonical ensemble.

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