

A Molecular View of the Water Interface

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Water surfaces and interfaces are ubiquitous, not just in nature, but also in many technological applications. Water is a rather unique liquid, owing to its strong intermolecular interactions: strong hydrogen bonds hold water molecules together. At the surface of water, the water hydrogen-bonded network is abruptly interrupted, conferring distinct properties on the interface, compared to bulk.

I will present some challenges (“how can we study the ~1 monolayer of water molecules that is in direct contact with the other phase, and distinguish this ~Angstrom-thin layer from the bulk?; Can the interface be described as a modified dielectric continuum, or do we need to consider molecular structure?”) and progress in the study of interfacial water.