Wetting at the Nanoscale

Abstract: This talk will discuss recent efforts from our group to understand and control wettability of nanomaterials. In the first half of the talk, I will show how DNA nanostructures can be used to modulate reaction kinetics with high spatial resolution, by controlling local wetting properties of the substrate. In the second half of the talk, I will discuss the intrinsic wettability of graphitic materials. Specifically, I will show that graphitic materials (e.g., graphene and graphite), although commonly believed to be hydrophobic, are in fact mildly hydrophilic.