

# Superhydrophobic surfaces and flows over heterogeneous solids

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The discussion will address, but not be limited to, the following:

- Equilibrium Wenzel and Cassie states and the thermodynamic transitions between them as determined by the size and type of substrate texture, i.e., the distribution of features and the feature size.
- Dynamic Wenzel to Cassie transition, including contact line pinning, as determined the substrate texture.
- Dynamics of the precursor film and its dependence on the substrate geometry and chemistry.
- Liquid flow over uniformly textured substrates with inhomogeneous chemical composition (gradients): transverse velocity components or anisotropic effective slip?