

Chemical self-propulsion of isotropic particles: from forced to spontaneous motion

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Phoretic self-propulsion of micron-size particles is a vibrant research area which has attracted significant attention in the physics, chemistry, and engineering communities. The underlying mechanism is a catalytic reaction at the particle boundary, converting chemical energy into mechanical motion in a viscous liquid solution. When the chemical reaction is nonuniform, this may result in particle motion. Due to the obvious underlying symmetries, one would expect that an isotropic particle would not move anywhere. In this talk I will describe recent result on the phoretic motion of such particles.