

A Model for the Impact of a Superhydrophobic Sphere onto a Bath and Application to Bouncing Droplets

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¹ Bath

We present a fully predictive model for the non-wetting impact of a sphere onto the free surface of a bath. We impose natural kinematic compatibility conditions for the motion of both the sphere and the fluid. The resulting system yields the pressure field on the surface as the impact generates surface waves. We present an application to bouncing droplets on a vibrating bath.