



DIP-COATING OF BIDISPERSE SUSPENSIONS

Deok-Hoon Jeong, Michael Ka Ho Lee, Virgile Thiévenaz, Martin Bazant & Alban Sauret

UC Santa Barbara & MIT

Dip-coating consists in entraining a thin layer of fluid by withdrawing a solid object from a liquid bath. The thickness of the film is set by the withdrawal speed. Particles introduce a new length scale: their diameter. The ratio of the film thickness and the particle diameter controls the coating.

Polydisperse particles yield complex coating patterns. The composition of the coating film may differ from that of the bath, depending on the film thickness. This approach also provides a new method to filter particles by size in polydisperse suspensions.

