

# **Sedimentation of colloidal dispersions and colloid/polymer mixtures**

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We first give a brief historical overview of sedimentation equilibria of concentrated suspensions of uncharged spherical, lamellar or rod-like colloidal particles. We show that the inversion of coarse-grained concentration profiles, as measured experimentally, or by simulation, allows an accurate determination of the osmotic e.o.s. of homogeneous suspensions. We consider next binary systems of large and small colloidal particles, or of colloids and non-adsorbing polymer coils. In both cases unexpected gravity-driven segregation is predicted by DFT and simulations. This raises interesting conceptual questions regarding phase transitions in external fields.