

Electrohydrodynamics of diffuse porous colloids in aquatic microenvironment

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Supplementary Material

S.1 Fluid collection efficiency for diffuse porous particles

In [Fig. S.1.1](#) we have further presented the numerical results for fluid collection efficiency H as a function of scaled decay length for various choices of bulk pH. The results are presented as for $\beta (= \lambda a = 1)$ ([Fig. S.1.1a](#)) and $\beta = 20$ ([Fig. S.1.1b](#)). We observed a significant effect of softness parameter and scaled decay length on the fluid collection efficiency, however, the impact of pH is almost negligible. Readers are further referred to the main text for additional details regarding the influence of pertinent parameters on fluid collection efficiency.

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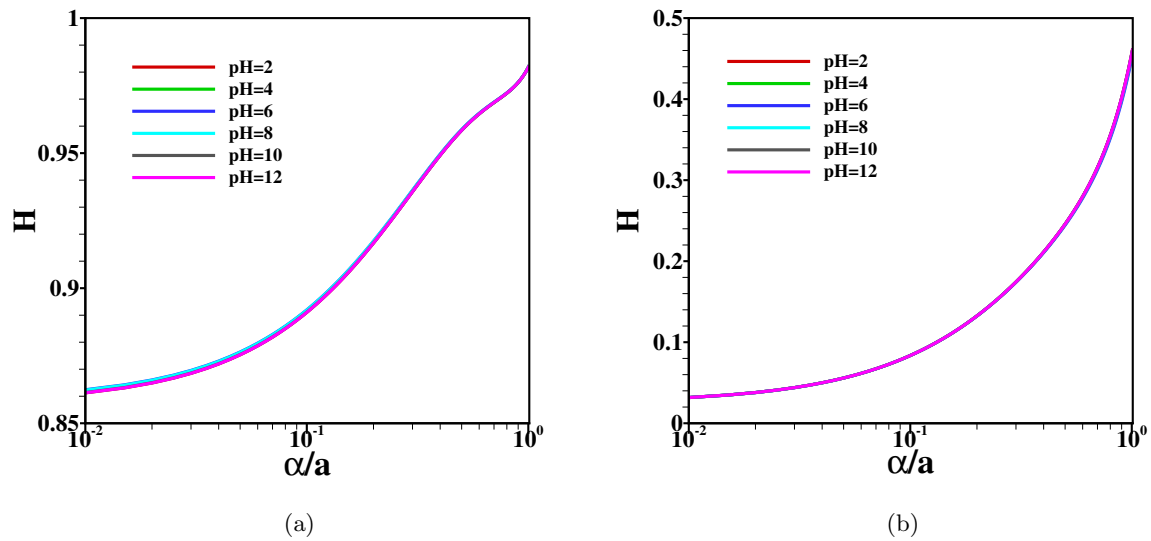


Figure S.1.1: The results for fluid collection efficiency H is presented as a function of scaled decay length α/a for various choices of pH ($=2, 4, 6, 8, 10, 12$) with fixed $N_a=1$ mM, $N_b=1$ mM, $\kappa a = 1$ for (a) $\beta = 1$ (b) $\beta = 20$.