

Abstract Submitted  
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**Sedimentation of a flexible fiber in a weak vertical fluid flow**

DEWEI QI, Western Michigan University, GUOWEI HE, Institute of Mechanics Chinese Academy of Sciences — Lattice Boltzmann and lattice spring model is used to simulate the lateral migration of a flexible fiber in a weak vertical fluid flow. Fiber aspect ratio, rigidity, sediment Reynolds number, and shear Reynolds number are varied. At a low Reynolds number, the fiber migrates to a lower fiber density area. In contrary, at a higher Reynolds number, the fiber migrates to a higher fiber density area. Effect of rigidity on lateral migration is studied.

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