

Abstract Submitted  
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**Steering artificial nanoscale swimmers using teardrop shaped posts**<sup>1</sup> MEGAN DAVIES WYKES, XIAO ZHONG, TAKIJI ADACHI, New York University, YANPENG LIU, Beijing University of Aeronautics and Astronautics, JIAJUN TONG, LEIF RISTROPH, MICHAEL WARD, New York University, JUN ZHANG, New York University/NYU-Shanghai, MICHAEL SHELLEY, New York University — Microorganisms use various strategies to bias their swimming to achieve long-time directed motion against a flow, against gravity, or up a chemical gradient. To make use of artificial swimmers for transporting cargo, to separate swimming particles from diffusing ones, or to concentrate a solution of motile particles, ways of steering such swimmers are required. We make use of the attraction of artificial bi-metallic swimmers to vertical walls to direct their long-time motion. We will describe how these swimmers are attracted to the surface of teardrop-shaped posts and leave preferentially at regions of higher curvature. We use this understanding to interpret their behavior when interacting with arrays of teardrop-shaped posts.

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