Abstract Submitted
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Active particles in viscosity gradients GWYNN ELFRING, CHARU DATT, University of British Columbia — Microswimmers in nature often experience spatial gradients of viscosity. In this work we develop theoretical results for the dynamics of active particles, biological or otherwise, swimming through viscosity gradients. We model the active particles (or microswimmers) using the squirmer model, and show how the effects of viscosity gradients depend on the swimming gait of the swimmers and how viscosity gradients lead to viscotaxis for squirmers. We also show how such gradients in viscosity may be used to sort and control swimmers based on their swimming style.

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