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Mobile wedges in an active turbulent bath ANDREAS KAISER, ANDREY SOKOLOV, Argonne Natl Lab, HARTMUT LOWEN, Heinrich-Heine Universitat Dusseldorf, IGOR S. ARONSON, Argonne Natl Lab — The motion of micro-wedges in a turbulent bacterial bath is explored using computer simulations with explicit modeling of the bacteria and experiments. We demonstrate that collective turbulentlike motion in a bacterial bath can power and steer the directed transport of mesoscopic carriers through the suspension. We will show that both polar ordering and swirl shielding inside the wedge yield an optimal transport velocity. Finally, we show the behavior of several wedges exposed to a bacterial bath.

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