

Abstract Submitted
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Locomotion of Paramecium in patterned environments EUN-JIK PARK, AJA EDDINS, Engineering Science and Mechanics, Virginia Tech, US, JUNIL KIM, SUNG YANG, Department of Nanobio Materials and Electronics, GIST, Republic of Korea, SAIKAT JANA, SUNGHWAN JUNG, Engineering Science and Mechanics, Virginia Tech, US — Ciliary organisms like Paramecium Multicellulose vacuole locomote by synchronized beating of cilia that produce metachronal waves over their body. In their natural environments they navigate through a variety of environments especially surfaces with different topology. We study the effects of wavy surfaces patterned on the PDMS channels on the locomotive abilities of Paramecium by characterizing different quantities like velocity amplitude and wavelength of the trajectories traced. We compare this result with the swimming characteristics in straight channels and draw conclusions about the effects of various patterned surfaces.

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