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DNA Size Segragation at a Convergent Stagnation Point JAMES BOULGER, JENNIFER KREFT PEARCE, The University of Texas at Tyler — We investigate using counter-rotating vortices and a convergent stagnation point to segregate different sizes of DNA using a lattice Boltzmann based simulation with a bead-spring model for the polymer. We find that longer DNA molecules are left rotating in the fluid while shorter molecules aggregate at the stagnation point. The separation of the polymers depends on the fluid flow rate and a non-specific attractive force with the channel walls. We report on the robustness of this technique.

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