Abstract Submitted
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Polyelectrolyte translocation through a spherical cavity with tunable charge ALEXANDER ELISEEV, MURUGAPPAN MUTHUKUMAR, University of Massachusetts, Amherst — We will present theoretical results on the free energy barrier for a translocating polyelectrolyte through a charge-decorated hole from a confining spherical cavity. Our results are based on self-consistent-field theory for the combined system of polyelectrolyte chain, counterions, electrolyte ions, and the dielectric mismatch between the cavity and the enclosing space. The effects of degree of ionization of the polymer and the net charge of the hole on the translocation barrier will be presented.

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