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**Polymer translocation facilitated by Chaperones** ANIKET BHATTACHARYA, University of Central Florida, Orlando, TAPIO ALA-NISSILA, Aalto University School of Science, Finland, WOKYUNG SUNG, Pohang University of Science and Technology, South Korea — We study translocation of biopolymers through a nanopore in a membrane facilitated by attractive binding particles (Chaperones) using Langevin dynamics simulation. Specifically we study how the density and attractive strength of these bindings particles affect the chain conformations at the *trans* side and mean first passage time (MFPT). We also consider model larger chaperone that can bind reversibly on the multiple units of the translocating chain. Finally, we consider translocation of heteropolymers and how a specific sequence affect the translocation process. We discuss relevance of our studies in biological translocation processes.

<sup>1</sup>R. Zandi, D. Reguera, J. Rudnick and W. M. Gelbart, Proc. Natl. Acad. Sci. USA **100** 8649 (2003).

<sup>2</sup>W. Sung and P. J. Park, Phys. Rev. Lett. **77**, 783 (1996).

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