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Polymer translocation through a nanopore in presence of attractive binding particles ANIKET BHATTACHARYA, University of Central Florida, KAIFU LUO, TAPIO ALA-NISSILA, Helsinki University of Technology, SEE-CHEN YING, Brown University — We use Brownian dynamics simulation to study the translocation of a flexible linear polymer chain through a nanopore into a cell containing particles those bind reversibly to the chain. We study the role of these binding particles [1] by monitoring the mean first passage time, the diffusion of the center of mass, and the net force on the translocating chain as a function of the density of these particles and the strength of the attractive interaction.

[1] Roya Zandi, David Reguera, Joseph Rudnick and William M. Gelbart, Proc. Natl. Acad. Sci. USA **100** 8649 (2003). aniket@bhattacharya: /aps/aps08

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