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Electric-field driven translocation of colloidal wild-type and mutant fd viruses through a solid-state nanopore WANG MIAO, Brown University, LIPING LIU, Brown University and Southeast University, China, ANNA LU, Brown University and Deerfield Academy, MA, PRERNA SHARMA, ZVONIMIR DOGIC, Brandeis University, CHUONG HUYNH, LARRY SCIPIONI, Carl Zeiss Microscopy LLC, Peabody MA, XINSHENG LING, Brown University — Colloidal suspensions of fd viruses are useful model systems for condensed matter physics. Here we explore the transport processes of fd particles in solid-state nanopores. Recently we have observed a nonlinear behavior in the electrophoretic mobility of wild-type fd particles. Here we carried out a comparative study of wild-type and mutant Y21M in their translocation dynamics through a nanopore. This work was supported by NSF-DMR and NSF-MRSEC.

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