

# Supporting Material for “Electrokinetic Particle Transport through a Nanopore”

Ye Ai<sup>a</sup> and Shizhi Qian<sup>a,b</sup>

<sup>a</sup>Department of Mechanical and Aerospace Engineering, Old Dominion University  
Norfolk, VA 23529, USA

<sup>b</sup>School of Mechanical Engineering, Yeungnam University  
Gyongsan 712-749, South Korea

## Description of Movies

The color levels in these movies represent the magnitude of the fluid velocity. The applied electric field is directed from top to bottom. The nanopore is uncharged.

Table 1 Simulation conditions of the movies files

Movie Number	Initial $x$ -position	Initial angle	Electric field	$\kappa a$
S1	$x_{p0}^* = 0$ $y_{p0}^* = -15$	$\theta_0^* = 60^\circ$	$E^* = 7.7 \times 10^{-4}$	$\kappa a = 1.03$
S2	$x_{p0}^* = 0$ $y_{p0}^* = -15$	$\theta_0^* = 60^\circ$	$E^* = 7.7 \times 10^{-2}$	$\kappa a = 1.03$
S3	$x_{p0}^* = 2.5$ $y_{p0}^* = -15$	$\theta_0^* = 0$	$E^* = 7.7 \times 10^{-4}$	$\kappa a = 1.03$
S4	$x_{p0}^* = 2.5$ $y_{p0}^* = -15$	$\theta_0^* = 0$	$E^* = 7.7 \times 10^{-2}$	$\kappa a = 1.03$
S5	$x_{p0}^* = 2.5$ $y_{p0}^* = -15$	$\theta_0^* = 60^\circ$	$E^* = 7.7 \times 10^{-4}$	$\kappa a = 1.03$
S6	$x_{p0}^* = 2.5$ $y_{p0}^* = -15$	$\theta_0^* = 60^\circ$	$E^* = 7.7 \times 10^{-2}$	$\kappa a = 1.03$