Supporting information for

Driving knots on DNA with AC/DC electric fields: topological friction and memory effects

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Fig. 1 Time dependence of the mean-square displacement of the knot along the chain. The panel refers to a model polyelectrolyte chain of \( L_c = 375 \) nm subject to a stretching force \( F_s = 10 \) pN. The chain is surrounded by a charge-screening cloud of explicit counterions at 1.4 mM concentration. The dashed line indicates the linear best fitting curve of the data.
Fig. 2 Effect of a DC electric field on a trefoil knotted tensioned polyelectrolyte chain. At time $t=0$, a DC field producing a total dragging force of 20pN is switched on. The knotted region slides along the chain contour in the direction of the applied force.