

Supporting information for  
Exploring the non-monotonic DNA capture behavior in a charged  
graphene nanopore

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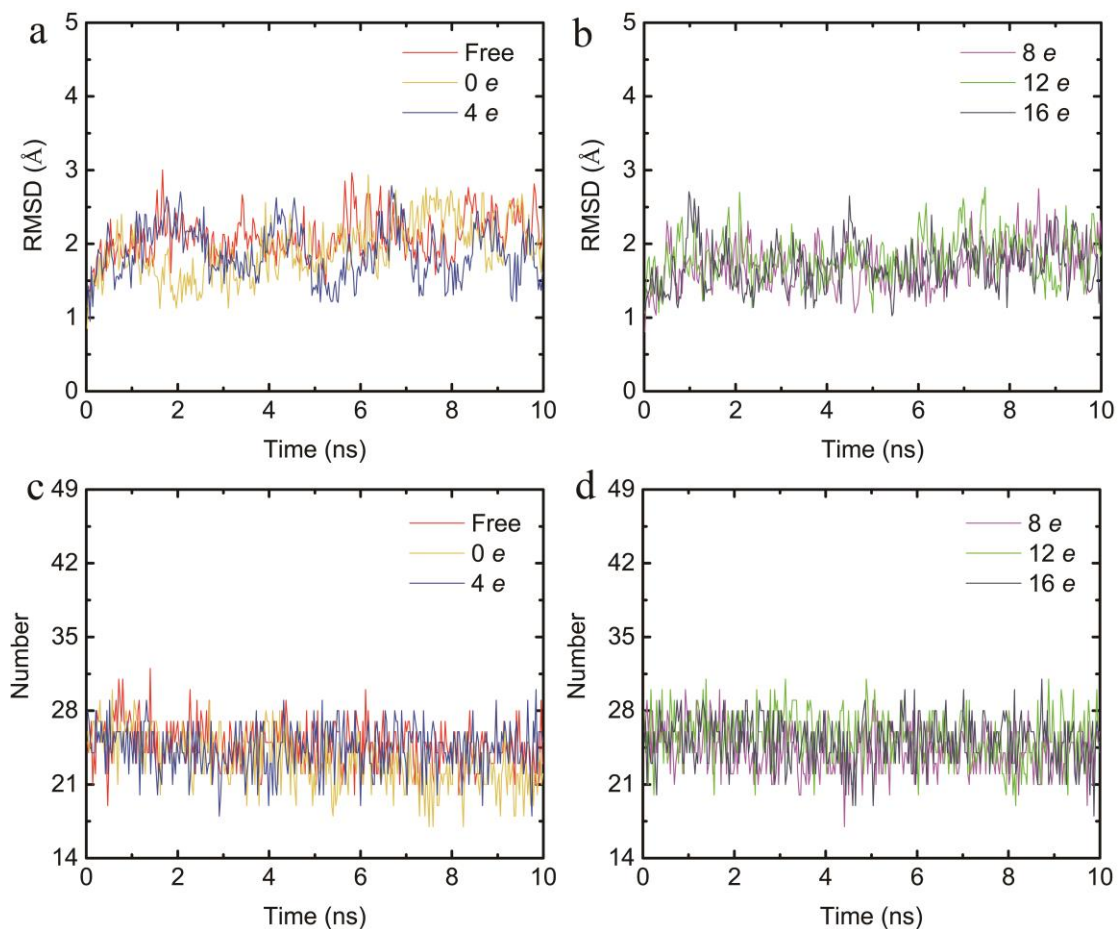
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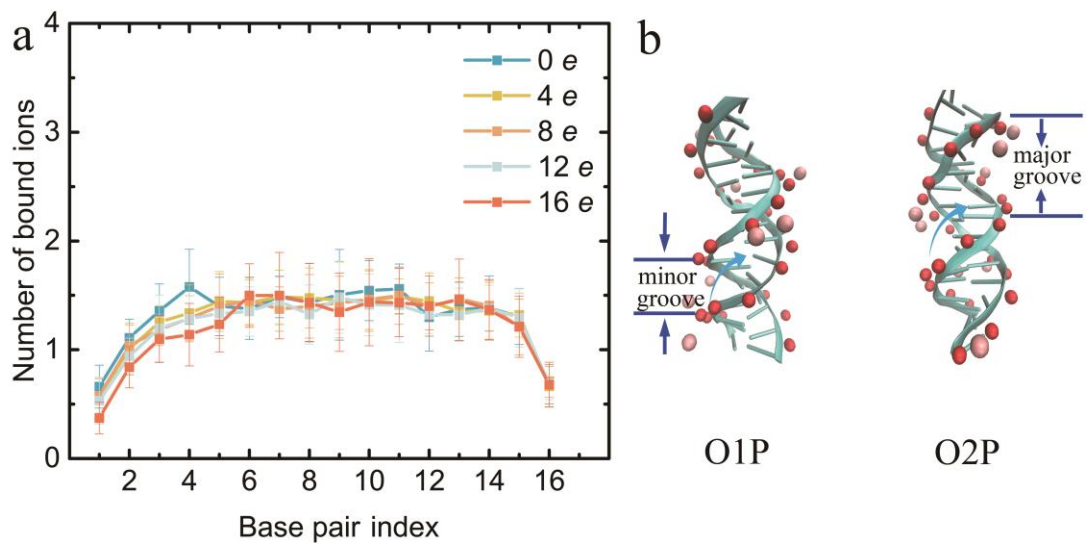
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**Fig. S1.** The RMSD (a, b) and the number of hydrogen bonds (c, d) between two stands of DNA as functions of time in the simulations.



**Fig. S2.** (a) The number of  $K^+$  ions binding to each base pair. (b) Typical snapshots illustrating the binding of  $K^+$  ions to O1P and O2P atoms, where the red vdW sphere is the oxygen atom in the phosphate group and the pink one is  $K^+$  ion.