Supporting Information For

Planar Graphene/h-BN/Graphene Heterostructure for Protein Stretch and Confinement

Zhi He[1,2], and Ruhong Zhou[1,3*]

[1]Institute of Quantitative Biology, Zhejiang University, Hangzhou 310027, China

[2]College of Optical Science and Engineering, Zhejiang University, Hangzhou 310027, China

[3]Department of Chemistry, Columbia University, New York, NY 10027, USA

Context:

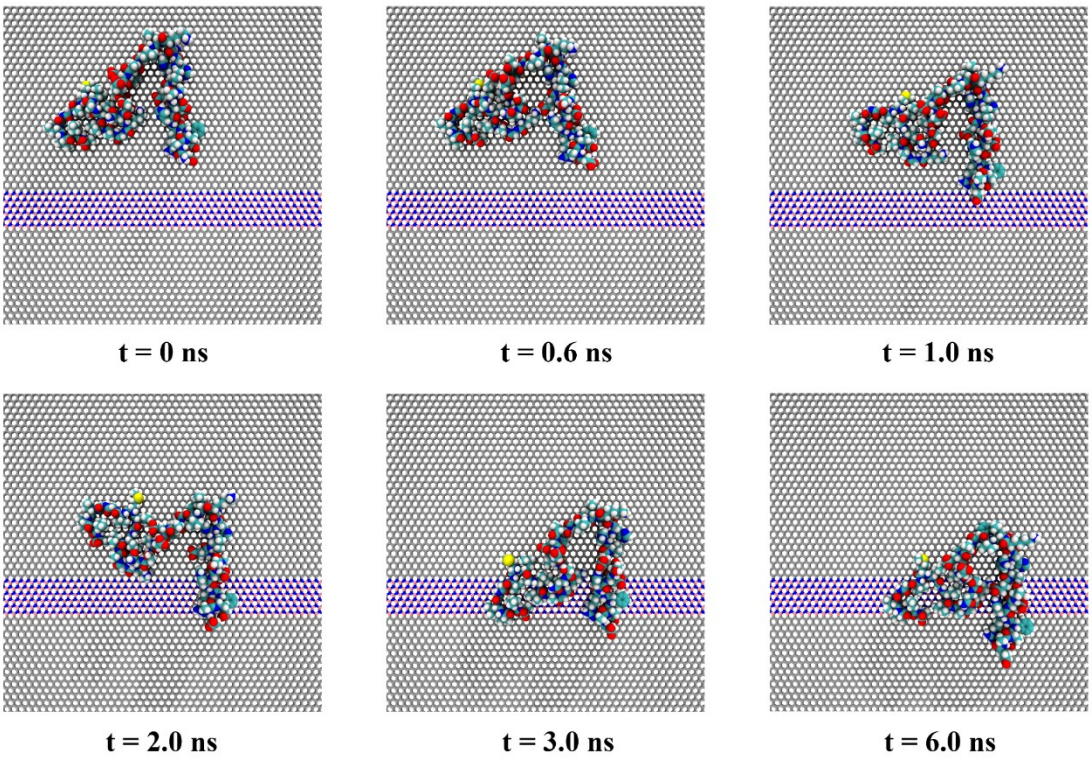

Fig. S1. Representative snapshots of the diffusion process of $A\beta_{1\text{-}42}$ from the graphene surface to the h-BN stripe.

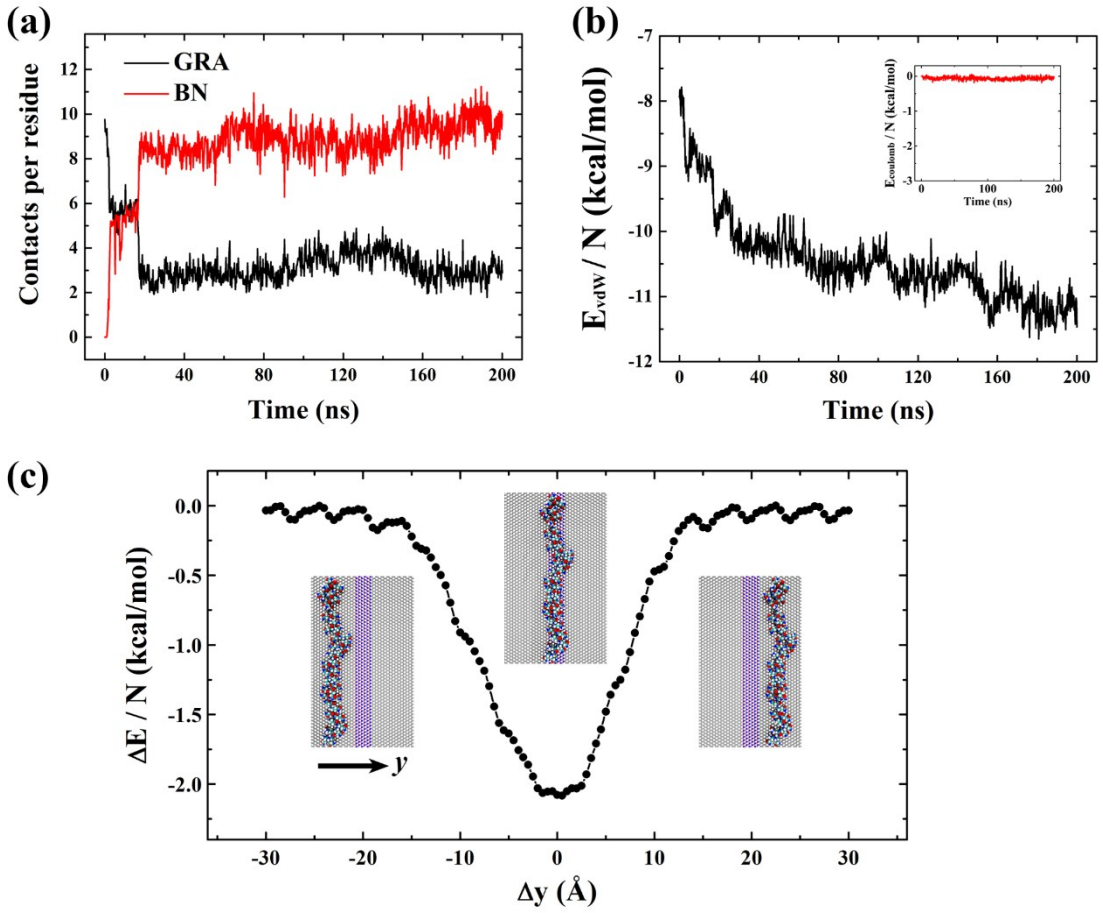

Fig. S2 (a) Number of atoms in GRA/BN/GRA that are within 4.0 Å of the polyQ peptide throughout the simulation. (b) The van der Waals interaction energy per residue between polyQ and GRA/BN/GRA. Inset: Coulomb interaction energy per residue between polyQ and GRA/BN/GRA. (c) Interaction energy between polyQ and GRA/BN/GRA when the elongated polyQ peptide moves in the y direction across the h-BN stripe.

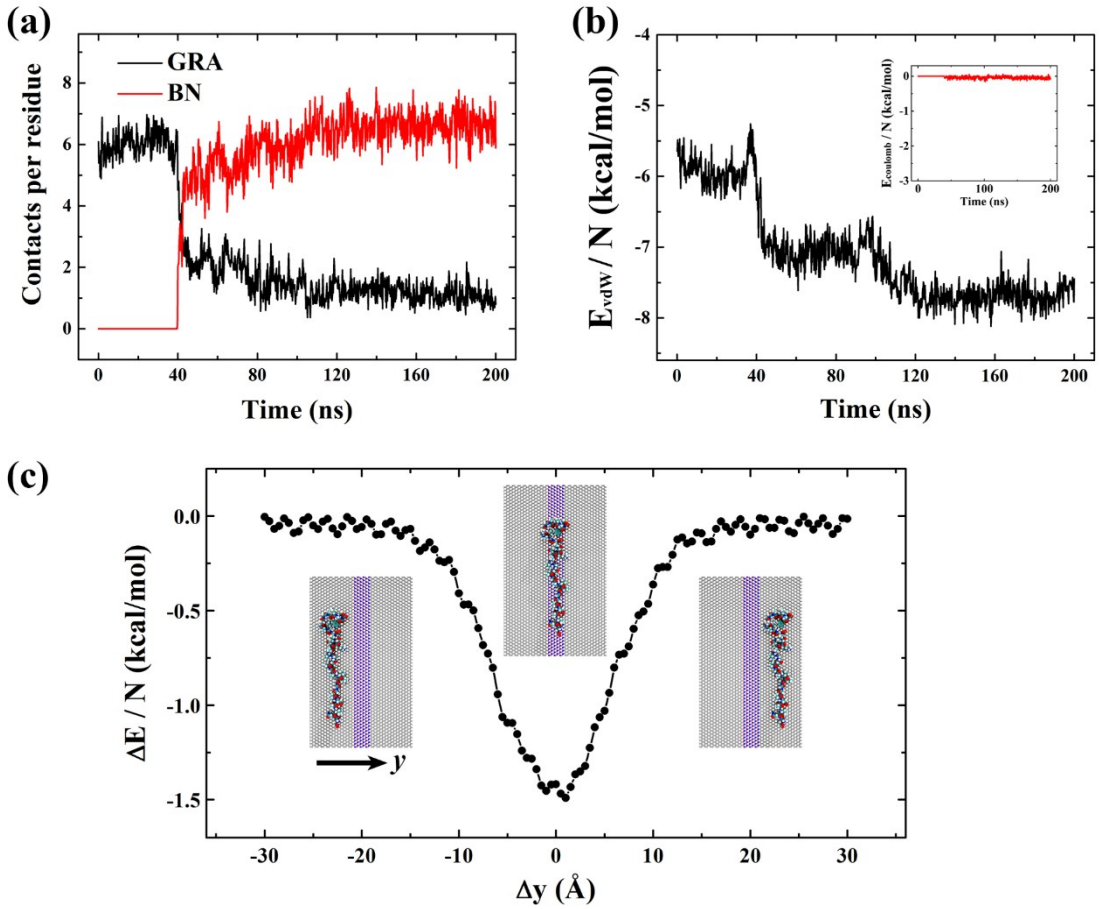

Fig. S3 (a) Number of atoms in GRA/BN/GRA that are within 4.0 Å of the α-Syn peptide during the simulation. (b) The van der Waals interaction energy per residue between α-Syn and GRA/BN/GRA. Inset: Coulomb interaction energy per residue between α-Syn and GRA/BN/GRA. (c) Interaction energy betweenα-Syn and GRA/BN/GRA when the elongated α-Syn peptide moves in the y direction across the h-BN stripe.