Electronic Supplementary Information

for

Evaluation of Affinity of Molecules with Carbon Nanotubes

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Fig. S1 Photograph of NMP solutions of the SWNTs before (left) and after (right) the addition of the NH_2-silica.

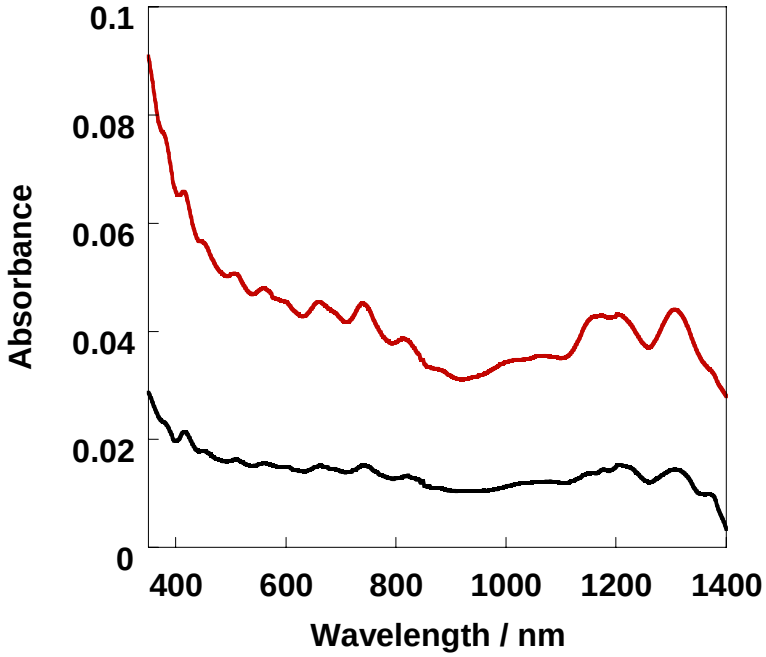


Fig. S2 Absorption spectra of NMP solutions of the SWNTs before (red line) and after (black line) the addition of the NH_2-silica. Optical cell length:1 mm.

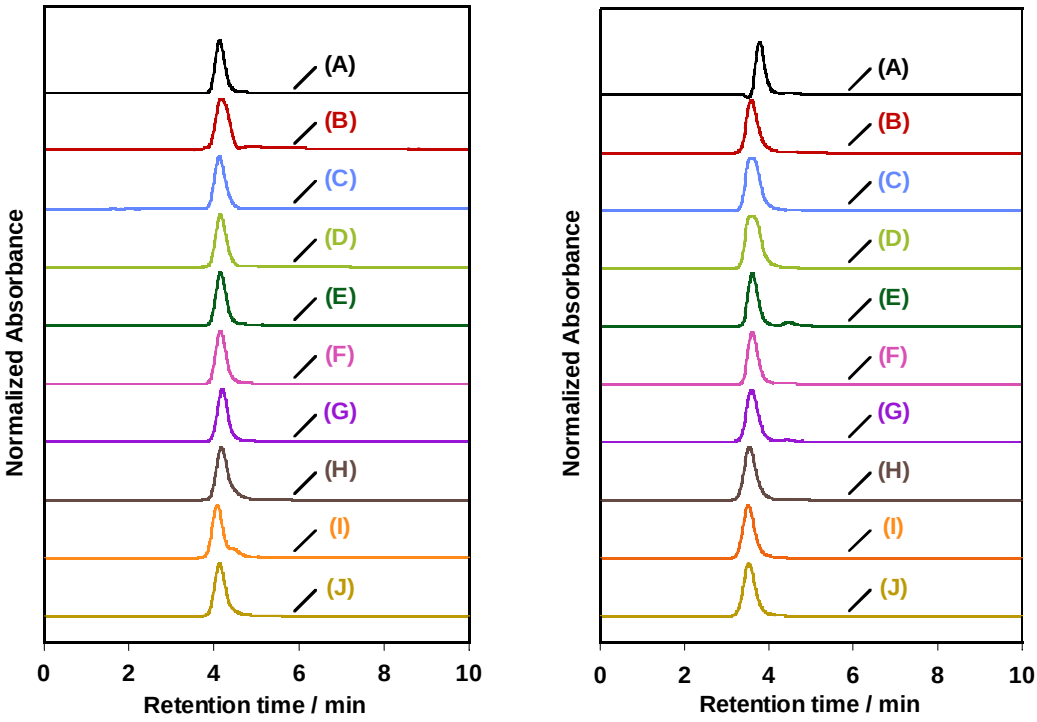


Fig. S3 Chromatograms of (A) benzene, (B) naphthalene, (C) biphenyl, (D) fluorene, (E) phenanthrene, (F) anthracene, (G) pyrene, (H) triphenylene, (I) *p*-terphenyl, and (J) tetraphene obtained from NH_2-column (left) and ODS-column (right). Eluent: THF, flow rate: 0.1 mL/min.

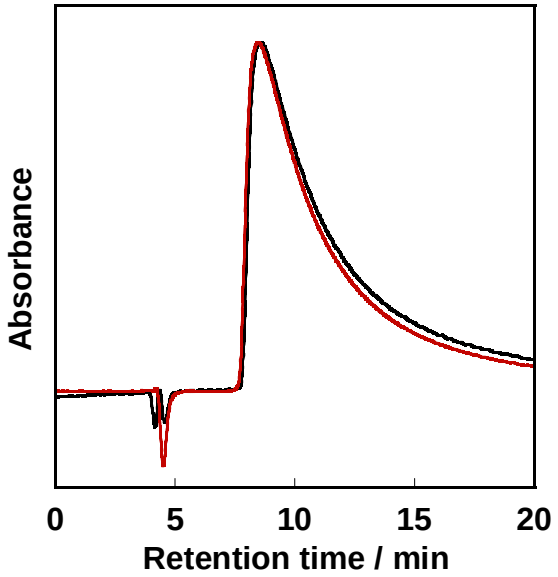


Fig. S4 The chromatograms of phenanthrene obtained from SWNT-column. Eluent: THF, flow rate: 0.1 mL/min. The same eluent time shows excellent reproducibility of the method.

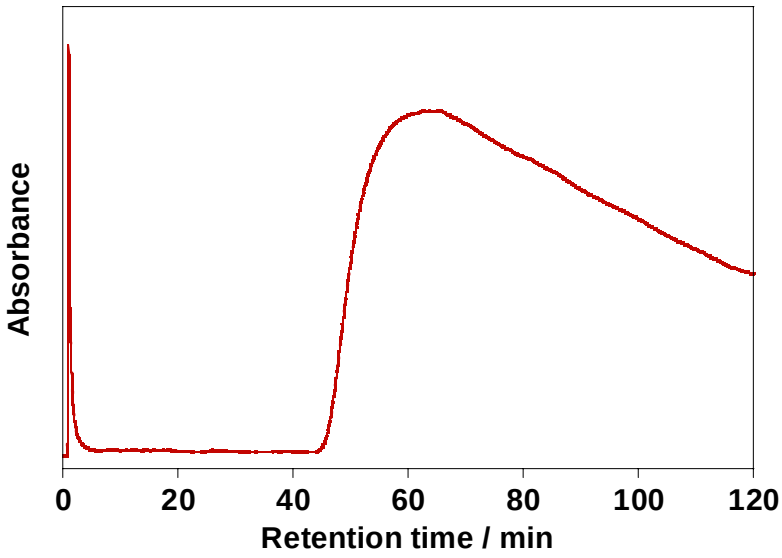


Fig. S5 A chromatogram of tetracene obtained from SWNT-column. Eluent: THF, flow rate: 0.5 mL/min.

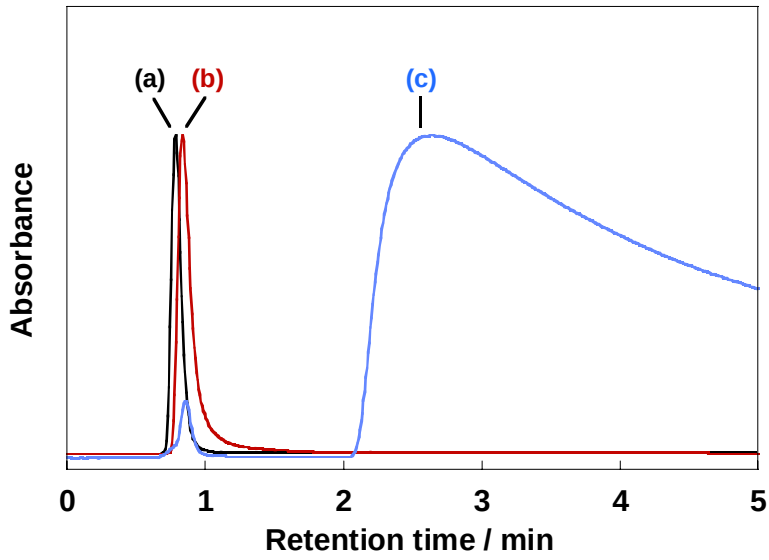


Fig. S6 Chromatograms of (a) *o*-terphenyl, (b) *m*-terphenyl, and (c) *p*-terphenyl obtained from SWNT-column ; Eluent : THF, flow rate: 0.5 mL/min.

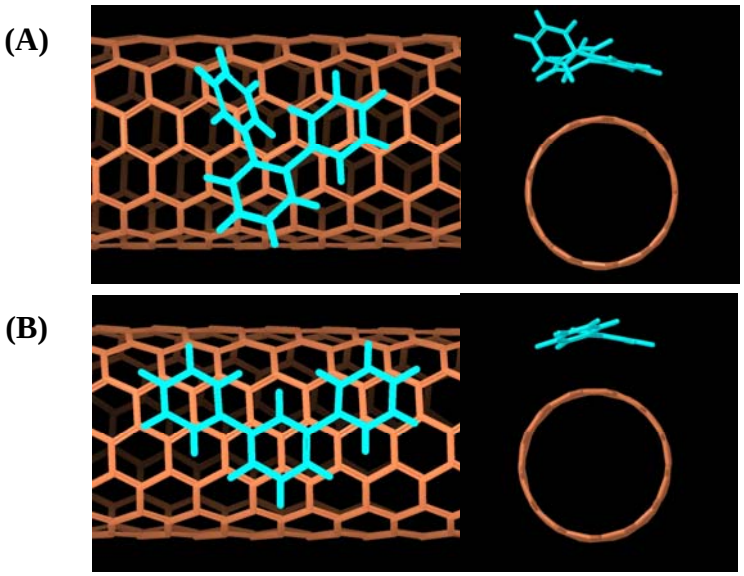
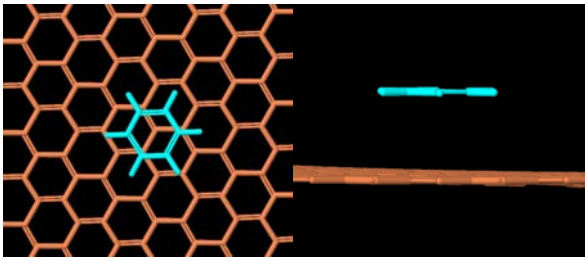
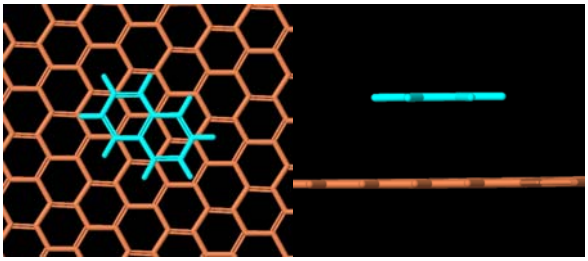


Fig. S7 Calculated conformations of (A) *o*-terphenyl, and (B) *m*-terphenyl on the (7,6)SWNT surface viewed from (left) the side and (right) top.

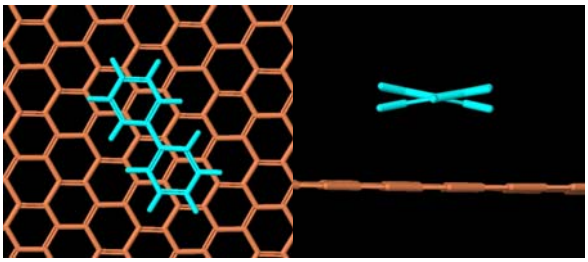
(A)



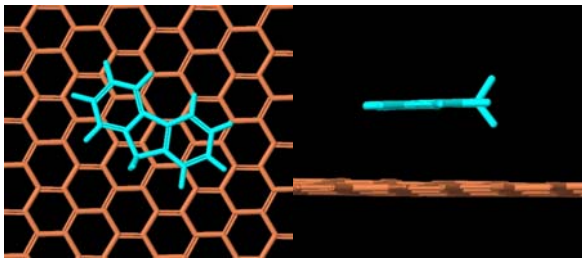
(B)



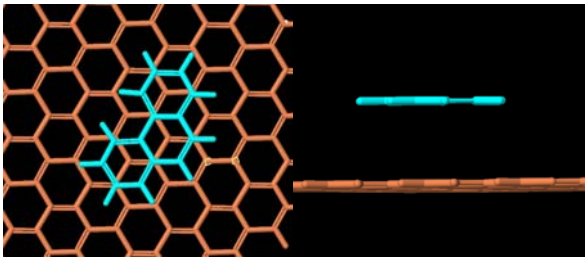
(C)



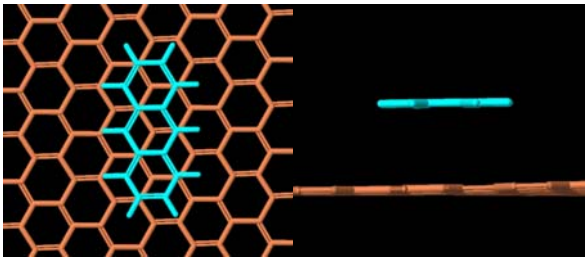
(D)



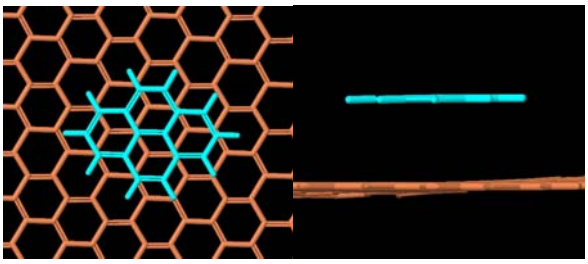
(E)



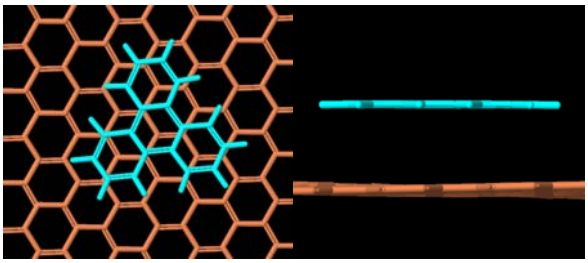
(F)



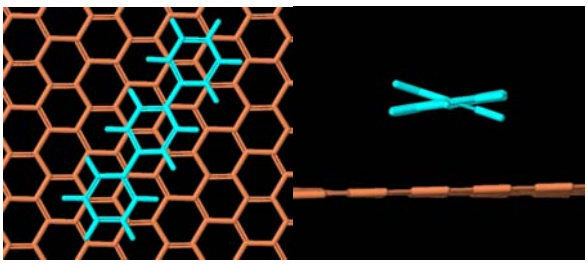
(G)



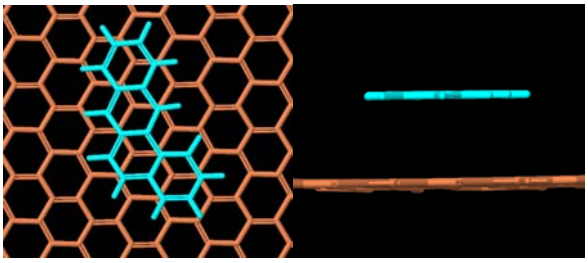
(H)



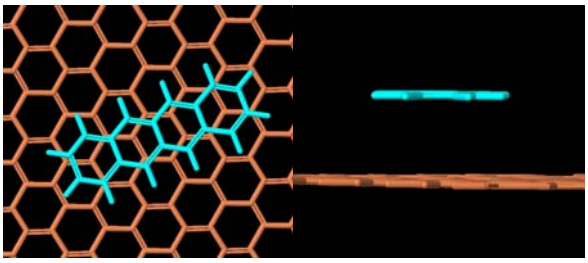
(I)



(J)



(K)



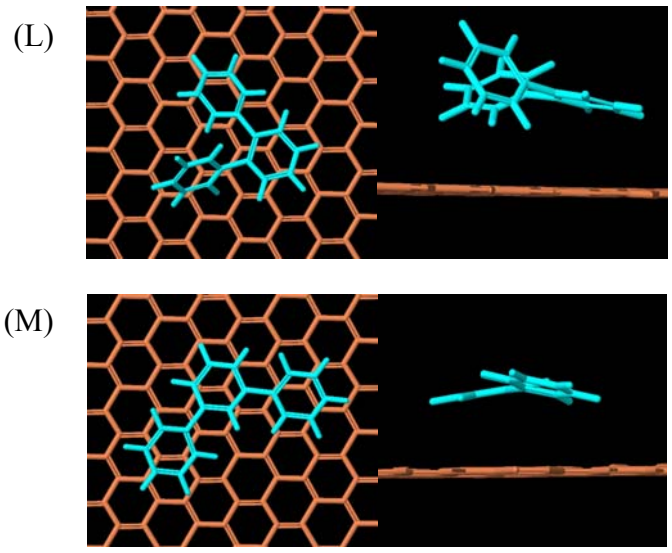


Fig. S8 Calculated conformations of (A) benzene, (B) naphthalene, (C) biphenyl, (D) fluorene, (E) phenanthrene, (F) anthracene, (G) pyrene, (H) triphenylene, (I) *p*-terphenyl, (J) tetraphene, (K) tetracene (L) *o*-terphenyl, and (M) *m*-terphenyl on the graphene surface viewed from (left) the side and (right) top.

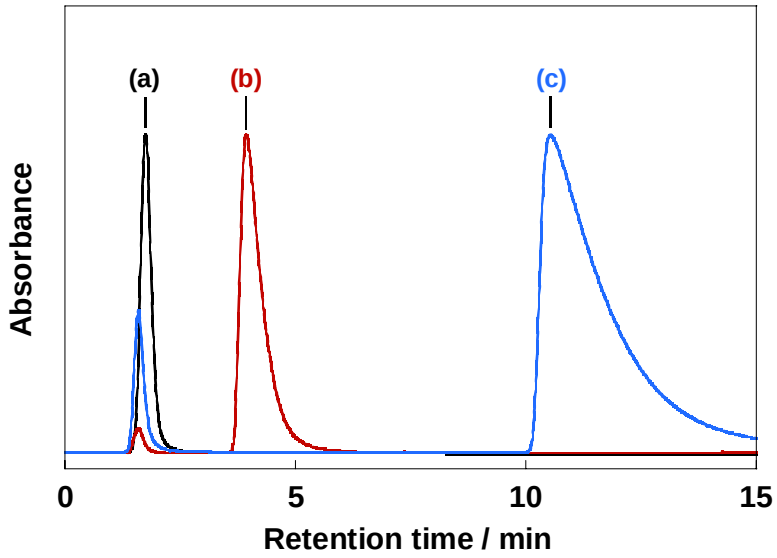


Fig. S9 Chromatograms of (a) *o*-terphenyl, (b) *m*-terphenyl, and (c) *p*-terphenyl obtained from the graphite-column. Eluent: THF; flow rate: 0.1 mL/min; φ=1.0 mm×30mm.