Supplementary Information

Helical Heterojuctions Originated from Helical Inversion of Conducting Polymers Nanofibers

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Experimental

D- or L-CSA is dissolved in 1.5 mL de-ionized water, followed by adding aniline and *N*-methyl aniline with different [*N*-An]/[An] ratio and then the mixture is stirred for 1 h. The same molar of ammonium persulfate as that of total monomer (aniline + *N*-methyl aniline) is dissolved in 1 mL de-ionized water and added in five portions at intervals of 1.5 h. After each addition, the mixed solution is stirred vigorously for 5 minutes for fully dispersion. The reaction mixture is left standing at 25 ^{o}C for 12 h to finish the polymerization. The as-synthesized helical polymers are characterized by using Jasco J810 and Perkin-Elmer Lambda 950 for spectrum recording of CD and UV-*vis*, respectively, and the morphology is examined by SEM (Hitachi S-48000) and TEM (Tecnai G^2 20 S-TWIN).

Additional Figures:

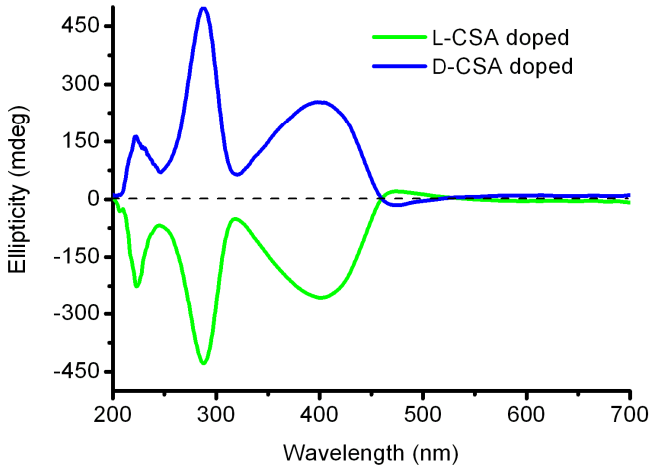

Fig. S1 CD spectra of of helical PNANI nanofibers obtained using D- and L-CSA as the dopant at the [*N*-An]/ [An] = 1:2.5 respectively. All experiments were carried out at 25 ^{o}C with total monomer and chiral CSA concentrations of 0.14 M and 2.8 M respectively.

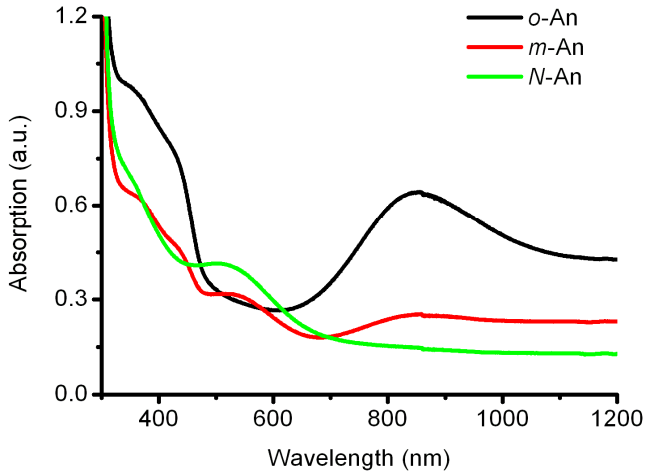

Fig. S2 UV-*vis* spectra of copolyaniline with [*s*-An]/[An] = 1:1. It shows that the difficulties for copolymerization increased in the sequence of *o*-An < *m*-An < *N*-An due to there is no peak beyond 800 nm for *N*-An copolymer. All experiments were carried out at 25 ^{o}C with total monomer and D-CSA concentrations of 0.14 M and 2.8 M respectively.