Electronic Supplementary Material (ESI) for RSC Advances.

In-Situ SeO_2 Promoted Synthesis of CdSe/PPy and Se/PPy Nanocomposites and their Utility in Optical Sensing for Detection of Hg^{2+} Ions

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Supporting Information

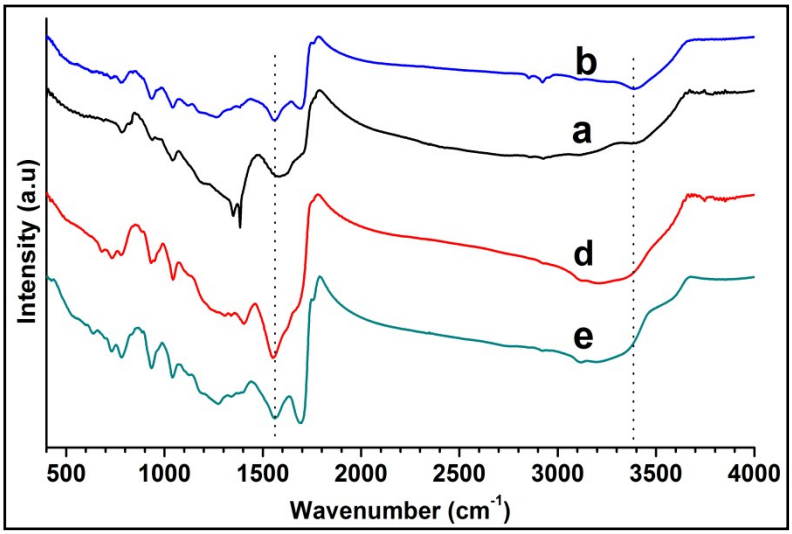

Fig.S1 FTIR of CdSe/PPy & Se/PPy synthesized by chemical (a, b) & microwave (d, e) methods

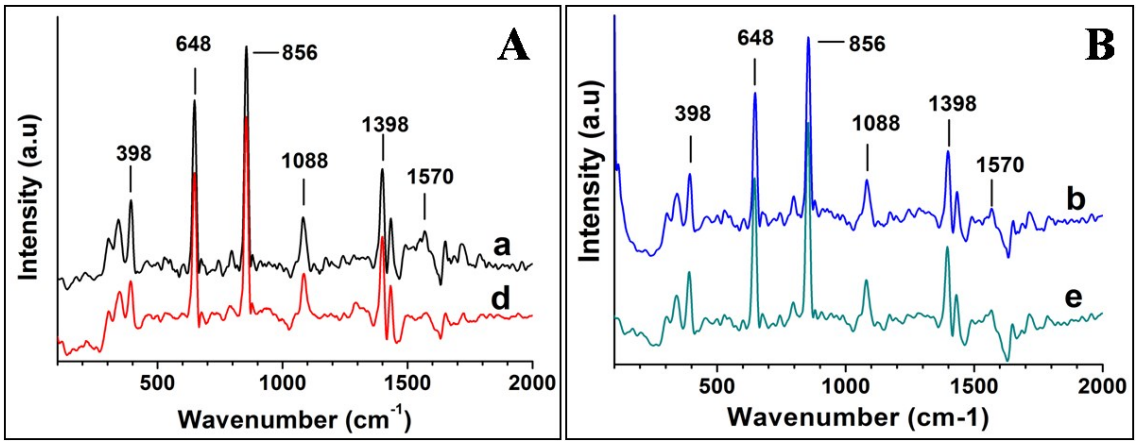

Fig. S2 Raman spectra of A) CdSe/PPy and B) Se/PPy synthesized by chemical (a, b) & microwave (d, e) methods

Table S1 FTIR and Raman values of CdSe/PPy and Se/PPy

Peak assignments	FTIR (cm^{-1})					Raman shifts (cm^{-1})	
	PPy[46,47]	CdSe/PPy	Se/PPy	CdSe/PPy MW	Se/PPy MW	PPy[48,49]	Se/PPy & CdSe/PPy*
N-H	3400	3373	3346	3328	3335	1146	1174
C-H stretching	3100	3058	3049	3060	3049	1083	1088
C=O stretching	1667	1702	1692	1681	1692	-	-
C=C	1562	1522	1527	1532	1527	1581	1570
PPy ring	1390	1382	1327	1345	1348	646 and 1370	648 and 1398
C-N	1297	1202	1270	1301	1269	-	-
C-H deformation	1045	1157	1210	1192	1212	868	856
$C\text{-}N^{+}\text{-}C$ bipolaron	937	935	936	939	940	-	-

**CdSe/PPy and Se/PPy synthesized by both methods shows same spectra with overlapping of peaks.*

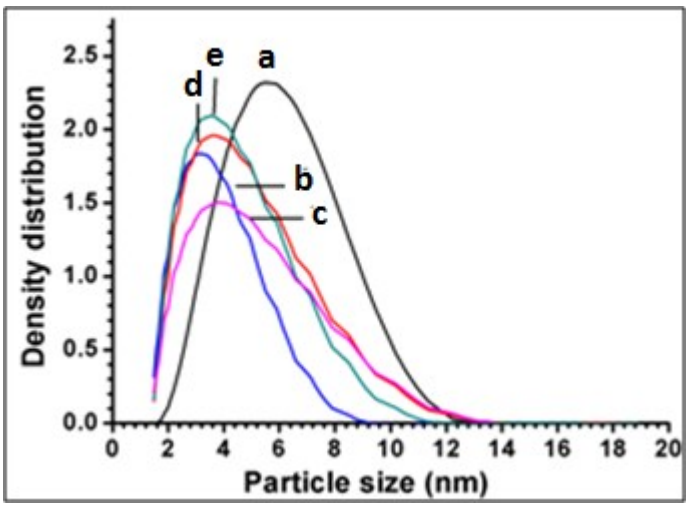

Fig. S3 Particle size of CdSe/PPy and Se/PPy synthesized by (a, b) chemical method, (c, d) microwave method and (e) CdSe/PPy synthesised by using Se/PPy as precursor.