

Supporting Information

Pd Nanocube Decoration onto Flexible Nanofibrous Mats of Core-Shell Polymer-ZnO Nanofibers for Visible Light Photocatalysis

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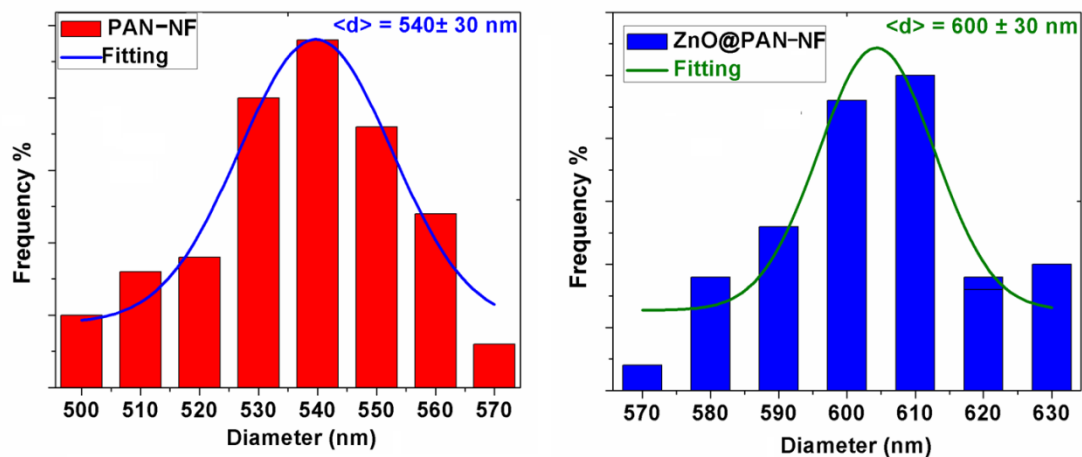


Figure S1 : Average fiber diameter distribution of a) PAN-NF b) ZnO@PAN-NF.

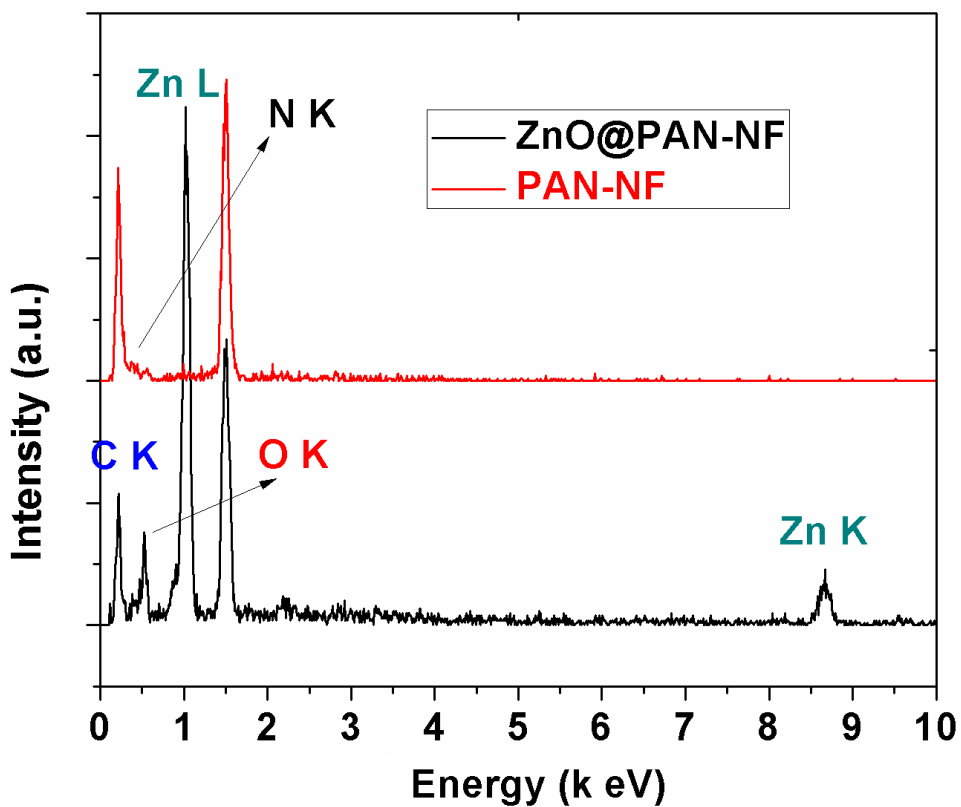


Figure S2 : EDX analysis of the a) PAN and b) ZnO@PAN nanofibers.

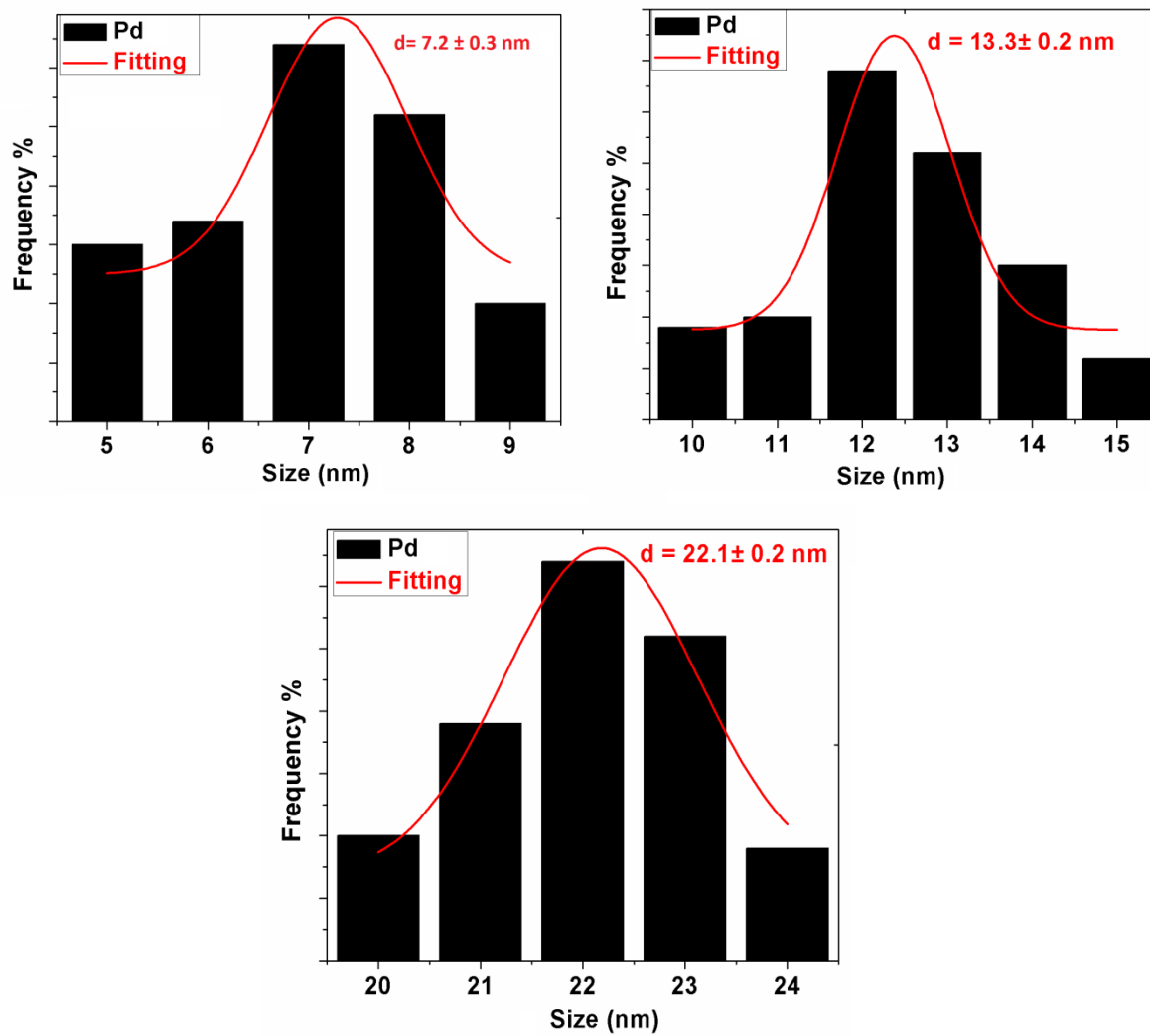


Figure S3 : Average particle size analysis of the as-synthesized Pd nanocubes.

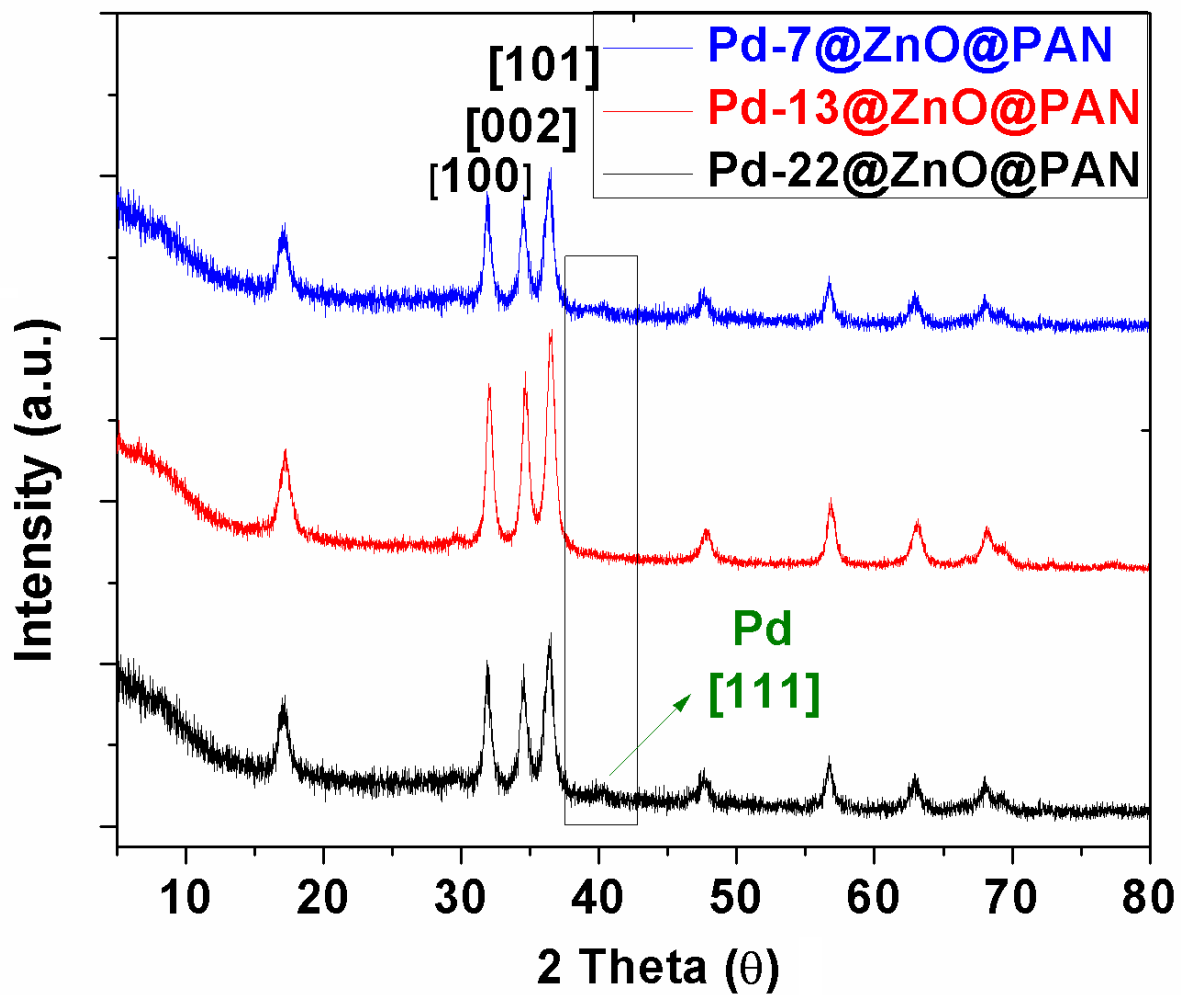


Figure S4: XRD patterns of the 3 different sized Pd nanocube decorated ZnO@PAN-NF

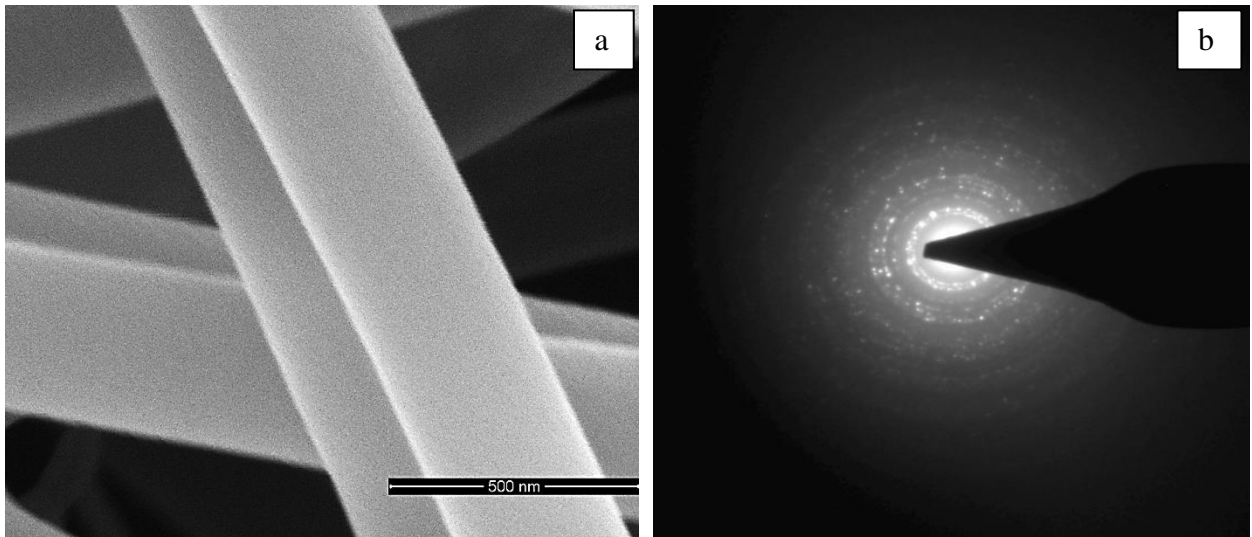


Figure S5 : a) High magnification SEM image of the ZnO@PAN-NF b) SAED pattern of the ZnO@PAN-NF.

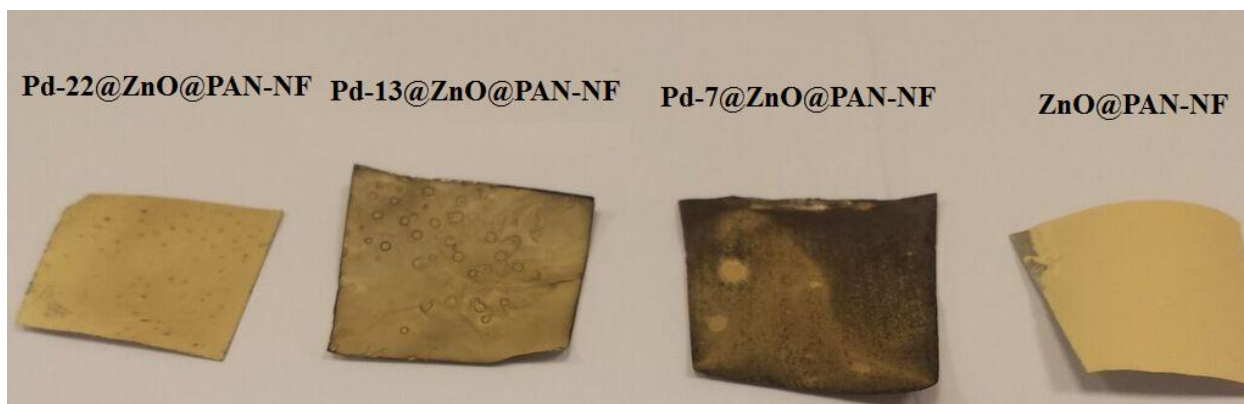


Figure S6: Visual observation of the Pd nanocube decoration onto the ZnO@PAN-NF.

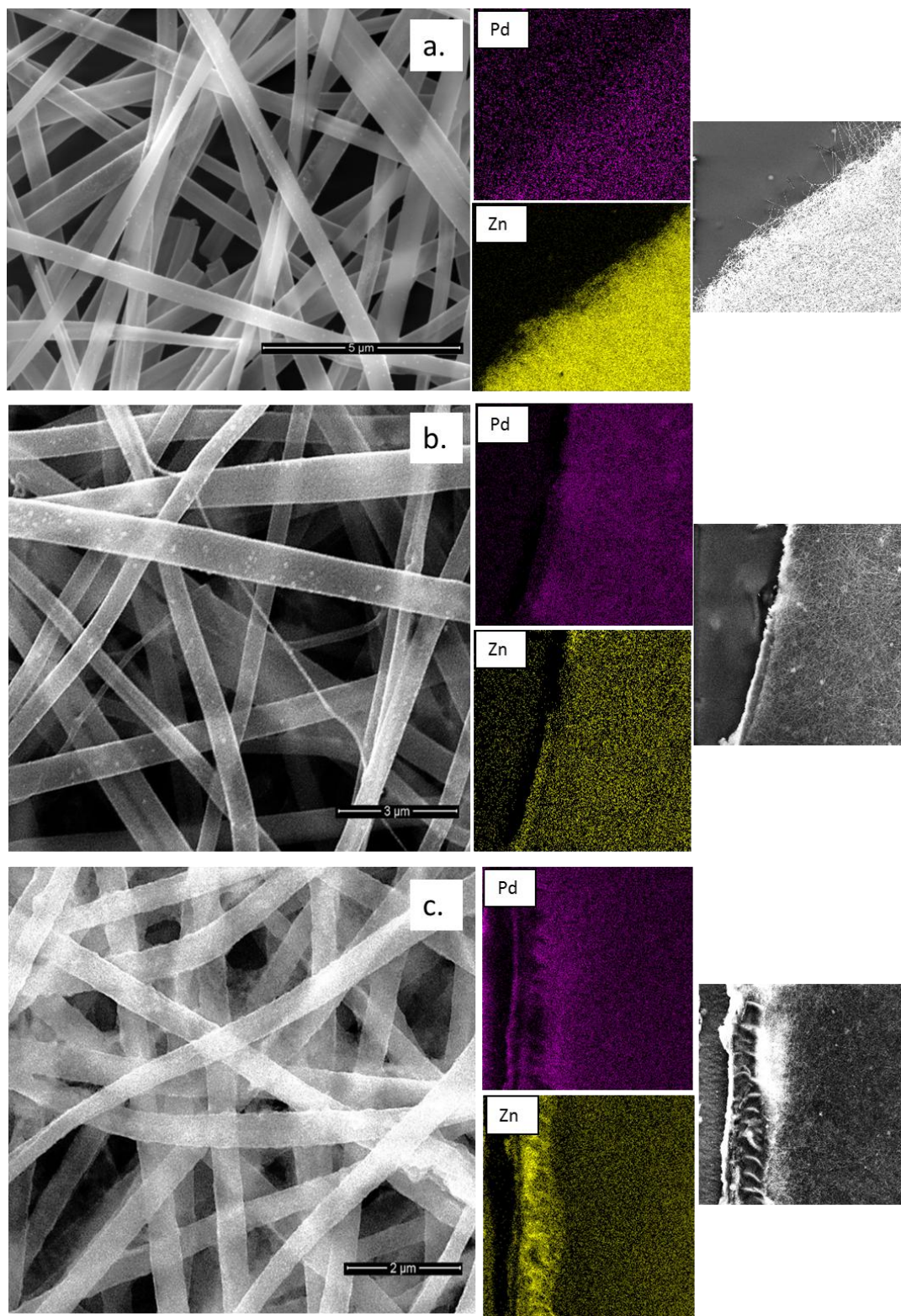
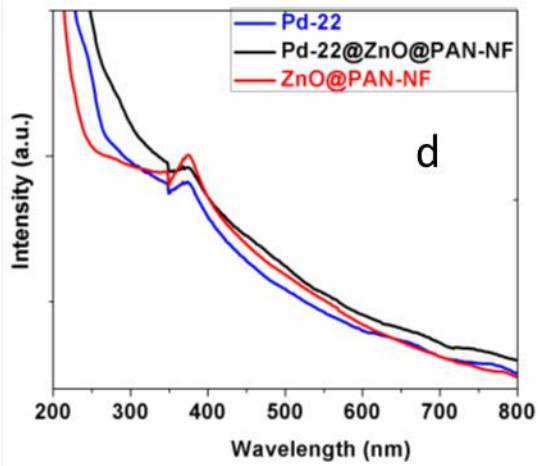
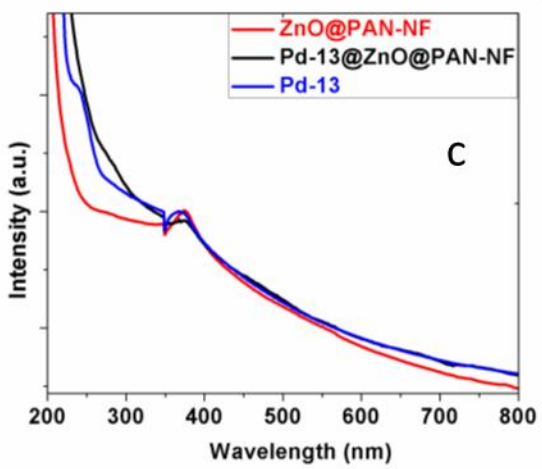
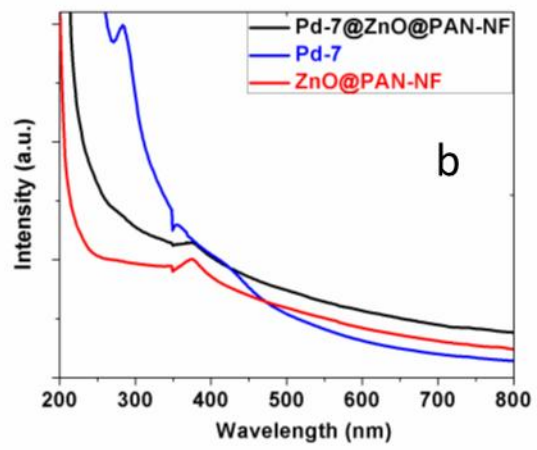
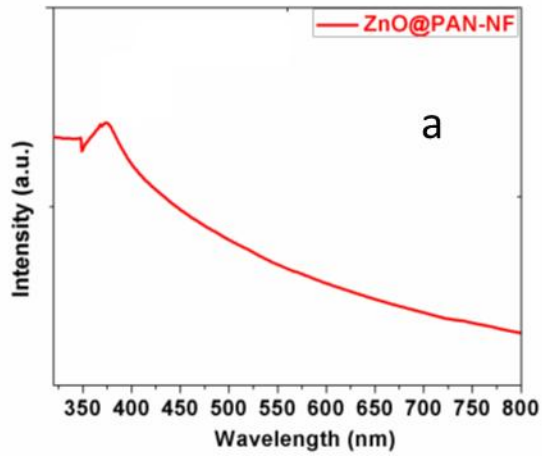


Figure S7: SEM and EDX atomic mapping of the Pd nanocube decorated ZnO@PAN-NF mats. a) Pd-7@ZnO@PAN-NF, b) Pd-13@ZnO@PAN-NF and c) Pd-22@ZnO@PAN-NF.



S8: UV-Vis absorption spectra of the a) ZnO@PAN-NF and comparison of the different size Pd decorated nanocomposite systems with respect to Pd nanocube and ZnO@PAN-NF b) Pd-7@ZnO@PAN-NF c) Pd-13@ZnO@PAN-NF d) Pd-22@ZnO@PAN-NF.

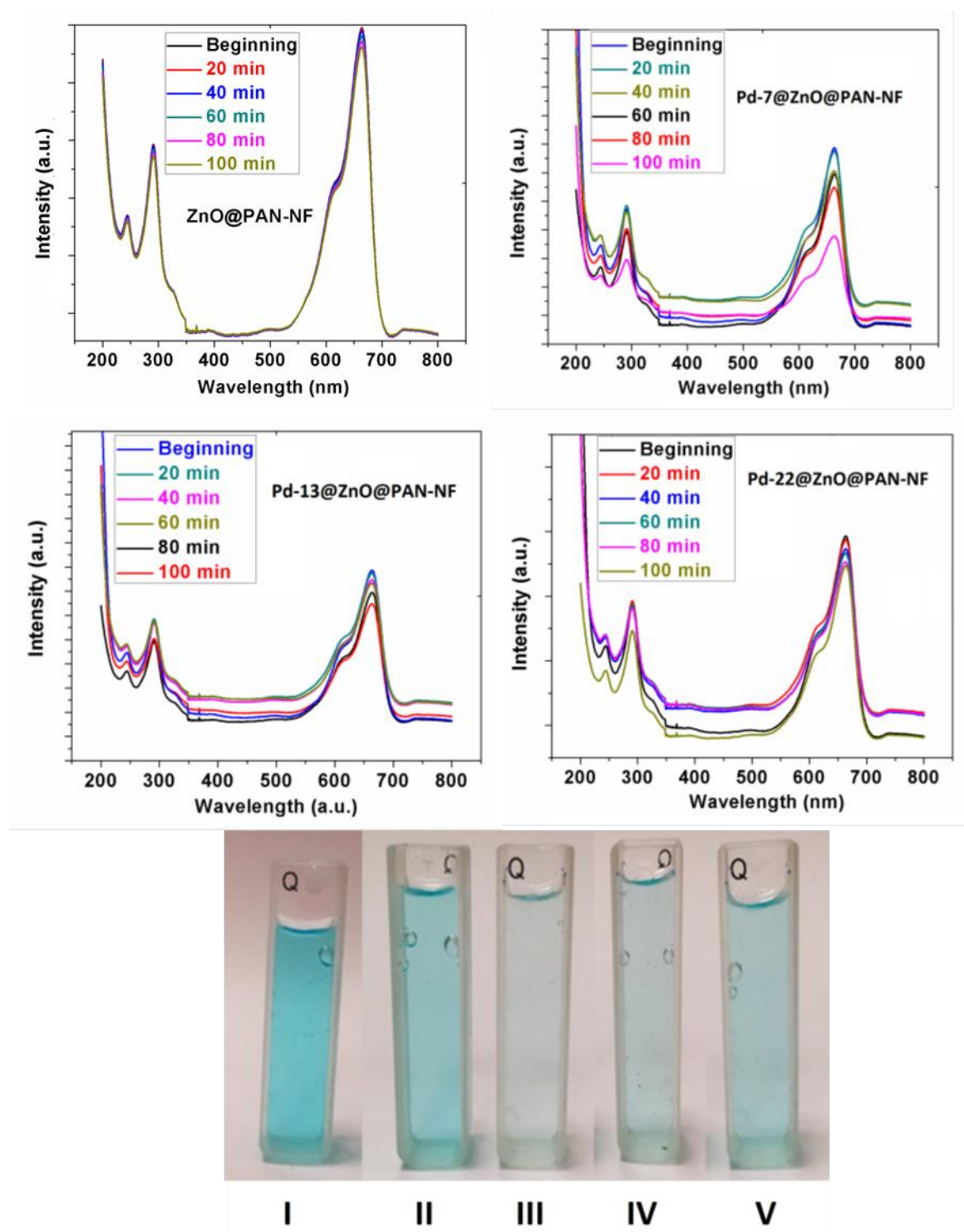
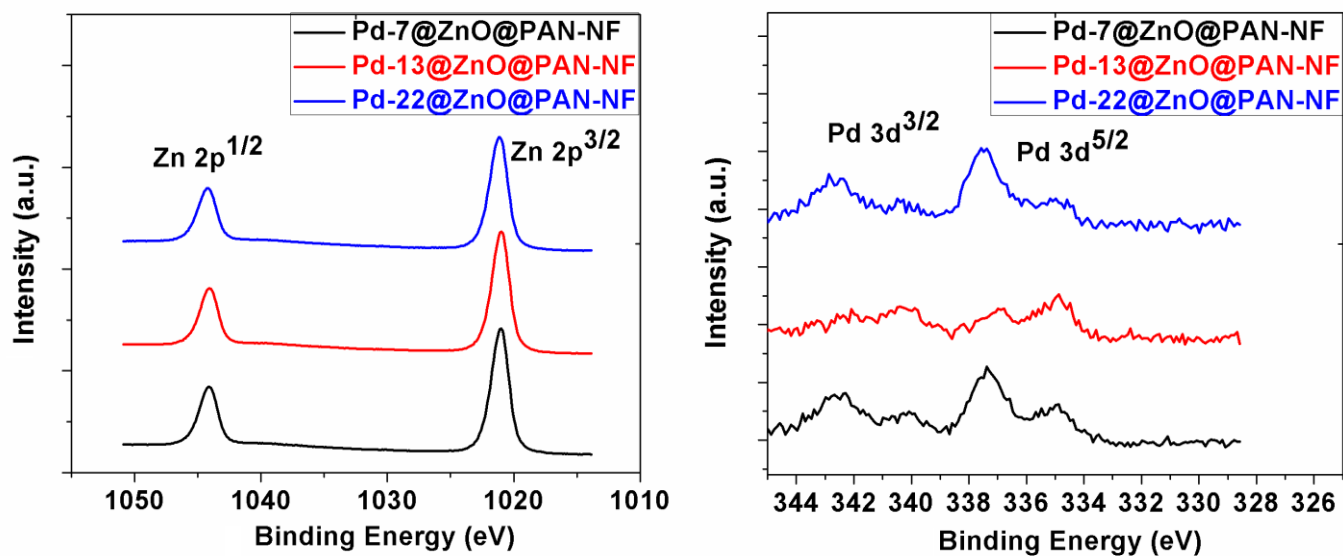


Figure S9: UV-Visible investigation of the MB decomposition for the ZnO@PAN-NF and different size Pd decorated ZnO@PAN-NF samples with visual decomposition profiles of MB solution (I: beginning, II: after ZnO@PAN-NF, III: after Pd-7@ZnO@PAN-NF, IV: after Pd-13@ZnO@PAN-NF and V: after Pd-22@ZnO@PAN-NF treatment).



	Pd (%)	Zn (%)	O (%)	C (%)
Pd-7	0.79	33.4	36.8	29.2
Pd-13	0.54	32.6	37.2	29.8
Pd-22	0.49	31.2	38.1	30.0

Figure S10: High resolution Zn 2p and Pd 3d XPS peaks and composition table of each atomic ratios in Pd decorated ZnO@PAN-NF

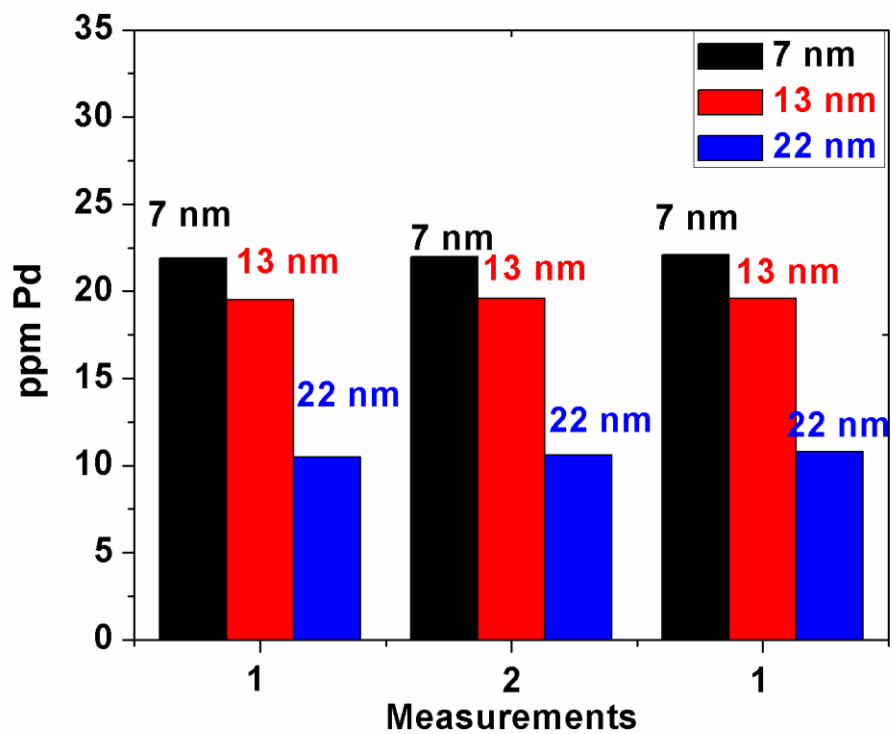


Figure S11: ICP-MS concentration detection of the decorated Pd nanocubes on the PAN@ZnO-NF with 3 different measurements