Electronic Supplementary Material (ESI) for Inorganic Chemistry Frontiers.


# Electronic Supplementary Information

## Fabrication of oxidase-like hollow $MnCo_2O_4$ nanofibers and their sensitive colorimetric detection of sulfite and L-cysteine

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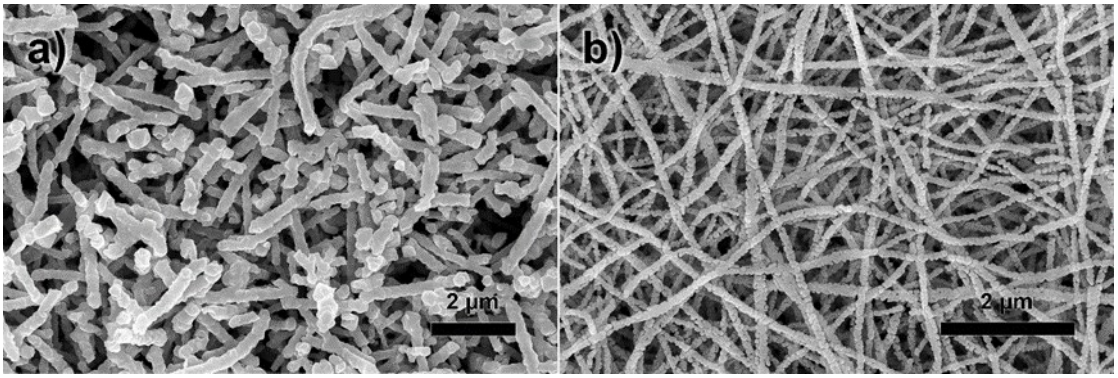


**Figure S1.** SEM images of (a) $Mn_2O_3$ NFs and (b) $Co_3O_4$ NFs that are synthesized via an electrospinning followed by calcination process. The proportion of PVP is 8.8 wt% during the electrospinning process and the calcination temperature is 550 °C.

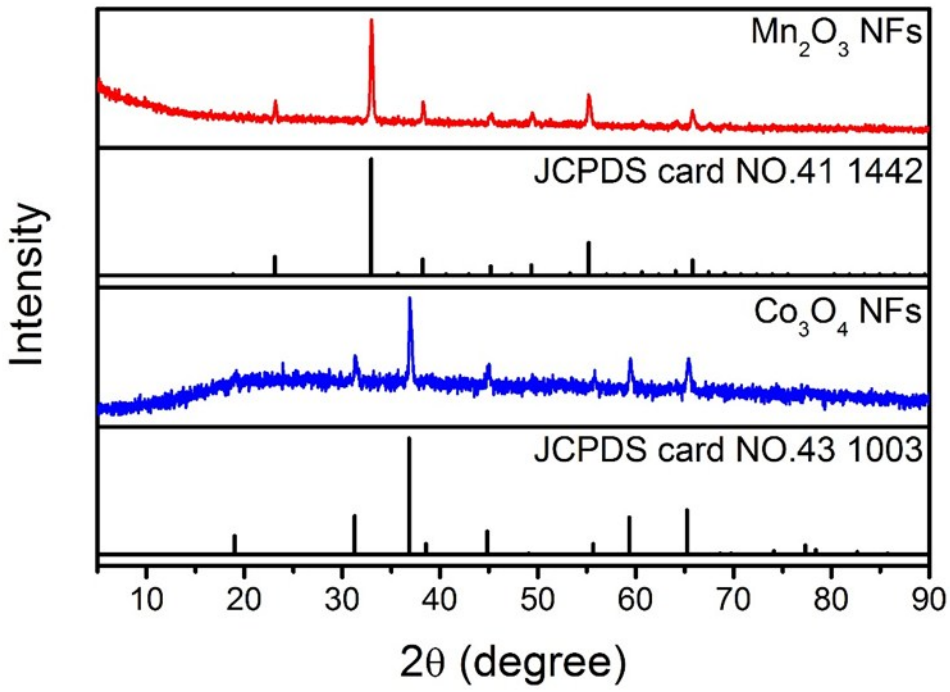


**Figure S2.** XRD patterns of $Mn_2O_3$ NFs and $Co_3O_4$ NFs that are synthesized via an electrospinning followed by calcination process. The proportion of PVP is 8.8 wt% during the electrospinning process and the calcination temperature is 550 °C.

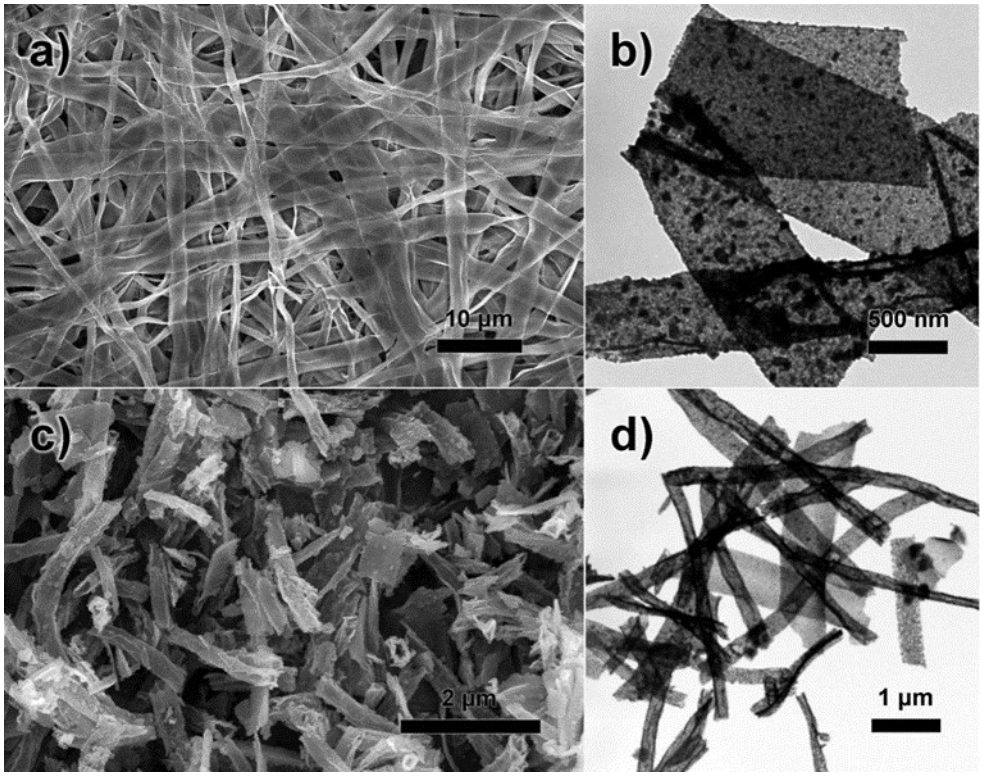


**Figure S3.** (a, b) SEM and TEM images of $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of both PVP and metal salts of 10 wt%; (c, d) SEM and TEM images of $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of PVP and metal salts of 10 wt% and 5 wt% respectively.

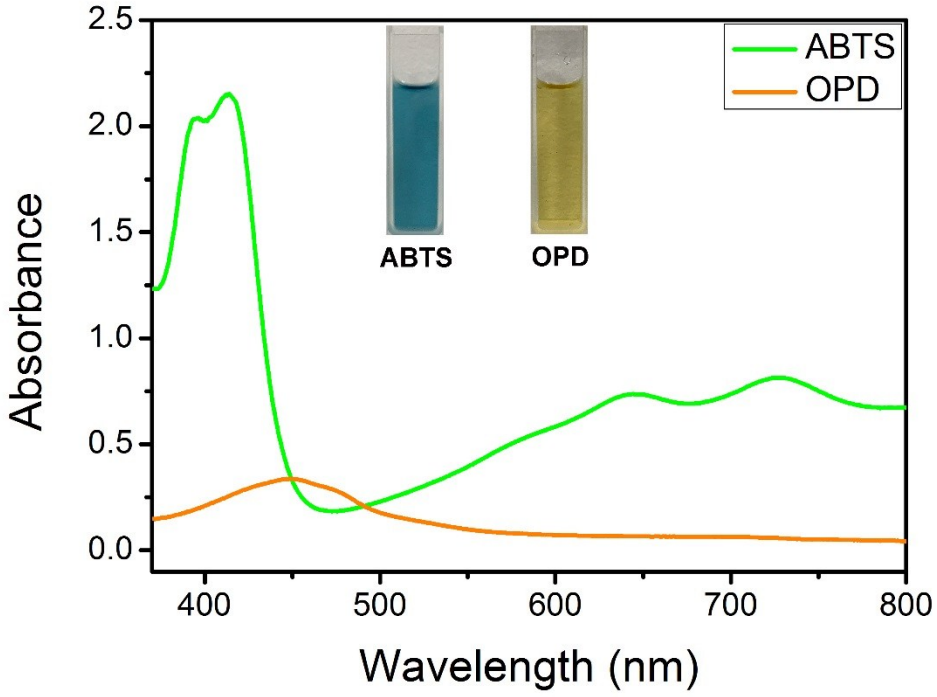


**Figure S4.** UV-vis absorption spectrum of the oxidized ABTS and OPD in acetate buffer solution (pH=4.0) and corresponding optical photographs.

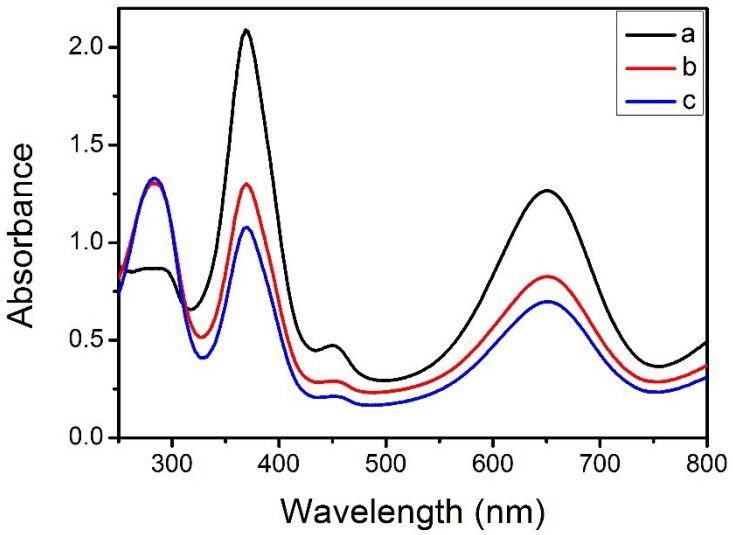


**Figure S5.** Dependence of the oxidase-like activity on the ratio of spinning solutions. Oxidase-like activity of (a) hollow $MnCo_2O_4$ nanofibers that are synthesized with the proportion of PVP and metal salts at 8.8 wt% and 5 wt%, (b) $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of PVP and metal salts of 10 wt% and 5 wt% respectively and (c) $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of both PVP and metal salts of 10 wt%.

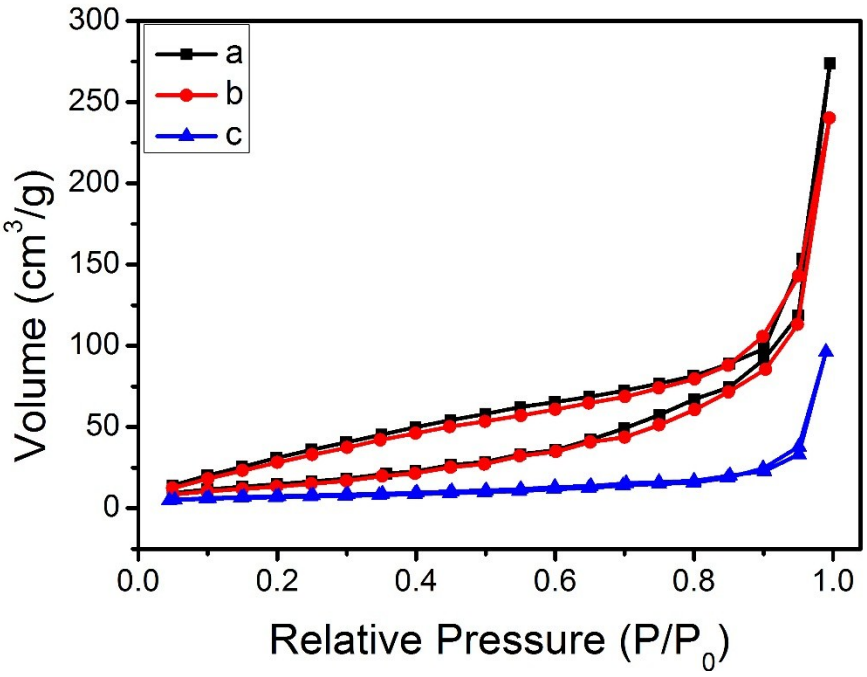


**Figure S6.** Nitrogen adsorption-desorption isotherms of (a) hollow $MnCo_2O_4$ nanofibers that are synthesized with the proportion of PVP and metal salts at 8.8 wt% and 5 wt%, (b) $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of PVP and metal salts of 10 wt% and 5 wt% respectively and (c) $MnCo_2O_4$ nanobelts that are synthesized with the concentrations of both PVP and metal salts of 10 wt%.