

## Supporting Information

# Carboxyfullerene decorated titanium dioxide nanomaterials for reactive oxygen species scavenging activities

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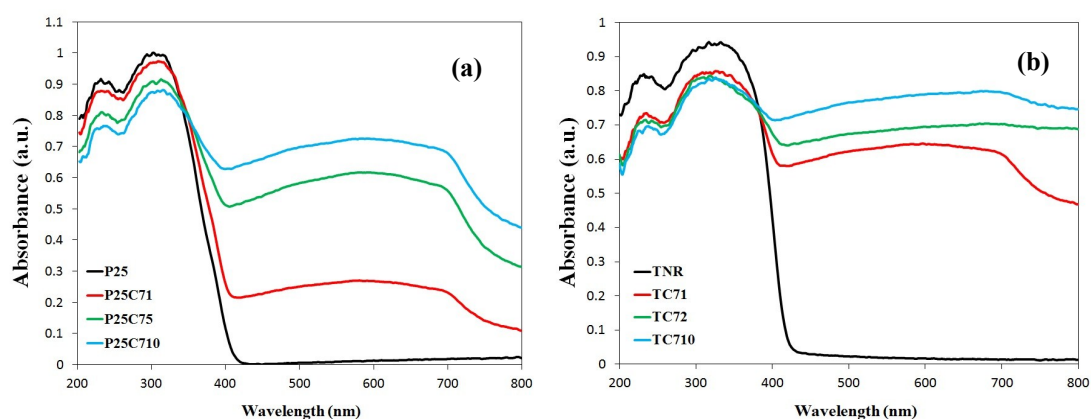
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## Optical Spectra

Figure S1 displays the UV-vis diffuse reflectance spectra of TiO<sub>2</sub> and their composites. It can be seen that all of TiO<sub>2</sub> nanomaterials contained C<sub>70</sub>-COOH increase the light absorbance in the visible light region. In addition, the absorbance effects are higher and higher with the addition amounts of C<sub>70</sub>-COOH in 1% to 10% (w/w). Furthermore, a qualitative red shift to higher wavelength is observed in the edge of both P25 composites and TNR composites due to the electron interactions between TiO<sub>2</sub> and C<sub>70</sub>-COOH [1].



**Figure S1. UV-vis diffuse reflectance spectra of (a) P25 and P25/C<sub>70</sub>-COOH composites (b) TNR and TNR/C<sub>70</sub>-COOH composites.**

## Reference:

- [1] H. Fu, T. Xu, S. Zhu, Y. Zhu, *Environmental science & technology*, 2008, **42**, 8064.