

## **Electronic Supplementary Information**

# **New ZnO@cardanol porphyrin composite nanomaterials with enhanced photocatalytic capability under solar light irradiation**

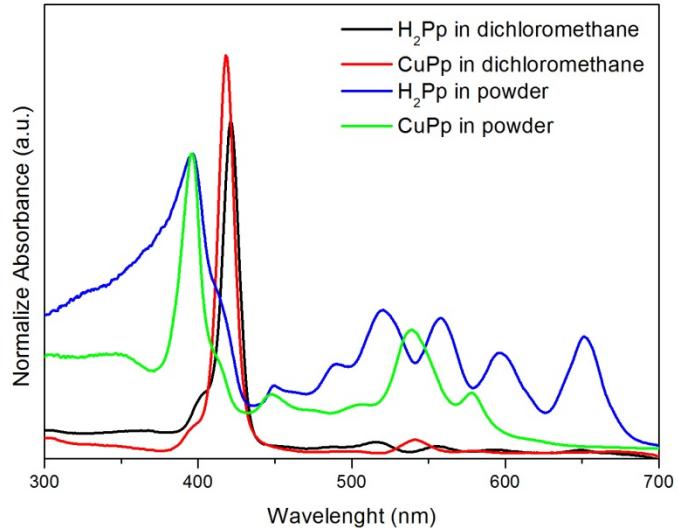
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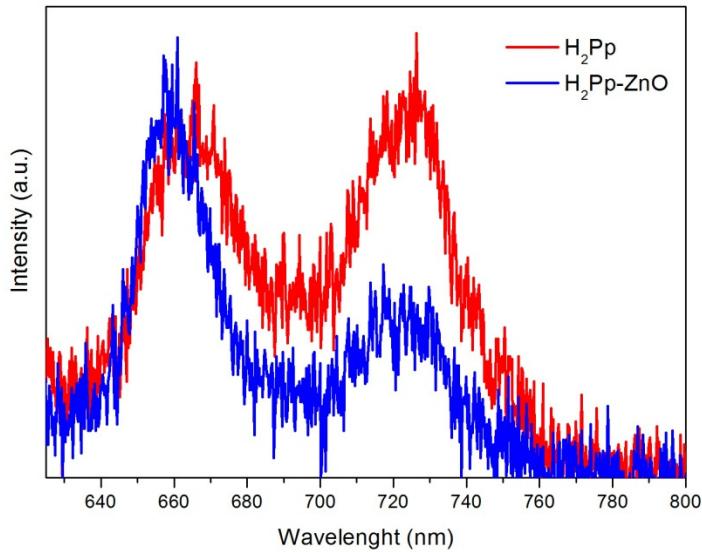
<sup>4</sup>CNR NANOTEC-Istituto di Nanotecnologia c/o Campus Ecotekne Università del Salento, Via Monteroni, 73100 Lecce, Italy.



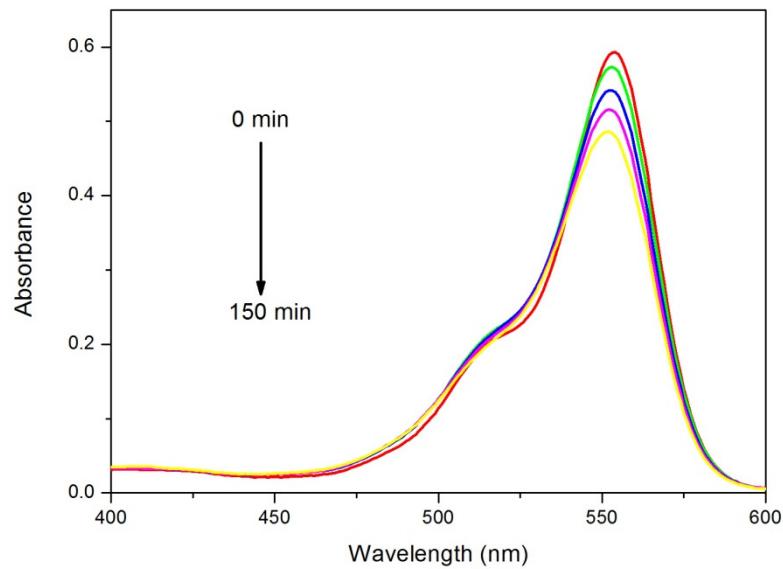
**Figure S1.** UV-Vis spectra of H<sub>2</sub>Pp and CuPp in solution and powder.

**Table S1.** UV-Vis data of H<sub>2</sub>Pp and CuPp.

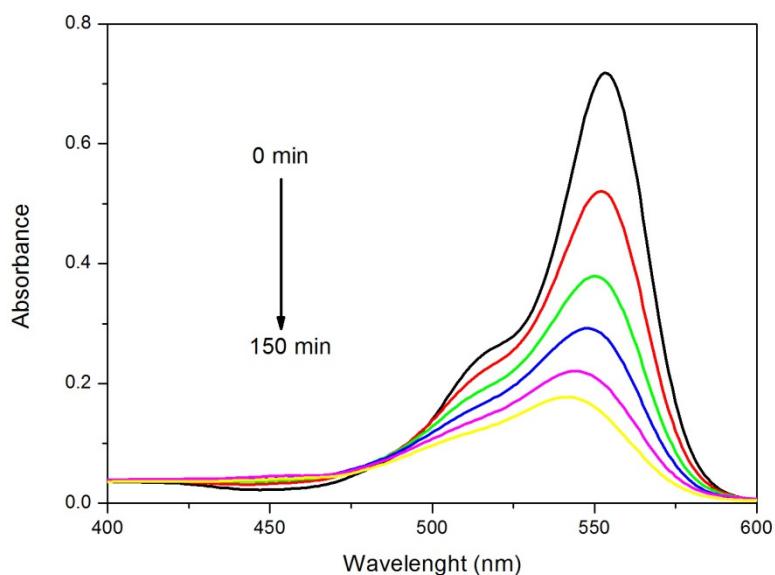
Measure condition	Absorption $\lambda_{\text{max}}$ / nm (Soret and Q bands)	
	H <sub>2</sub> Pp	CuPp
Solution in CH <sub>2</sub> Cl <sub>2</sub>	421, 515, 555, 593, 649	418, 541, 578
DRS in powder	396, 519, 558, 596, 651	396, 539, 578
DRS on catalyst	440, 523, 562, 609, 652	426, 543, 578



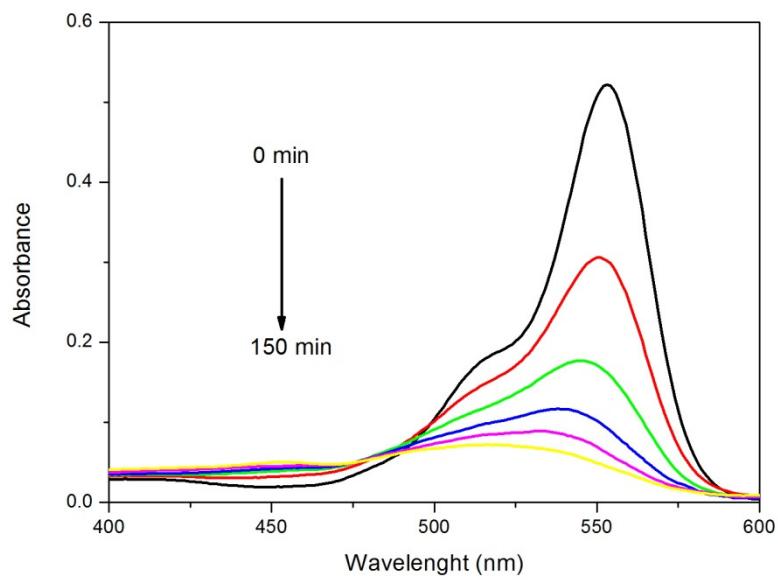
**Figure S2.** Photoluminescence spectra of H<sub>2</sub>Pp and H<sub>2</sub>Pp-ZnO excited at 470 nm.



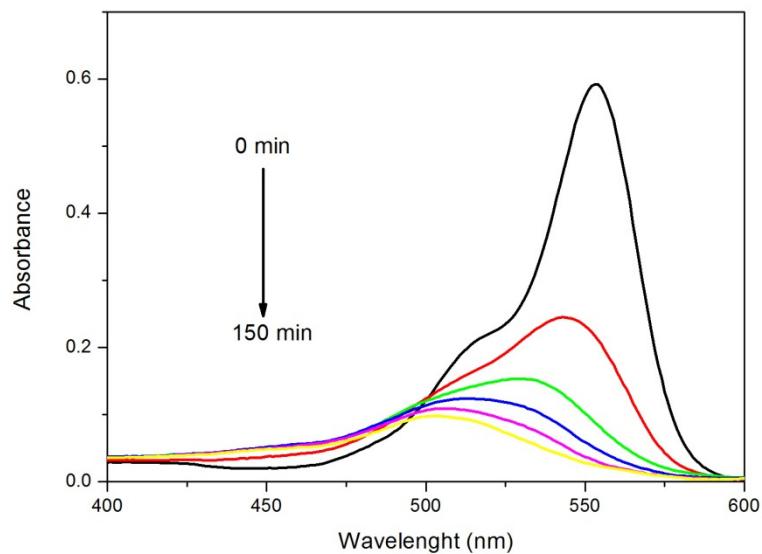
**Figure S3.** RhB degradation profile in blank experiment under visible light.



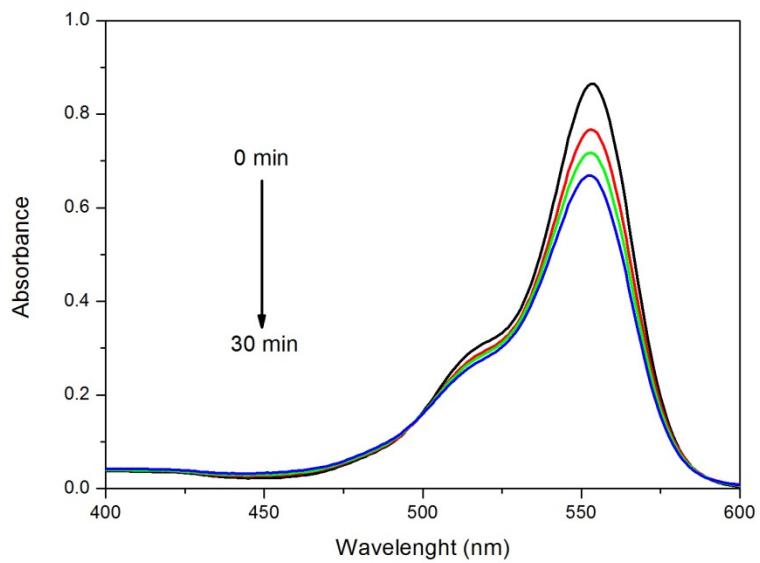
**Figure S4.** RhB degradation profile in the experiment with ZnO under visible light.



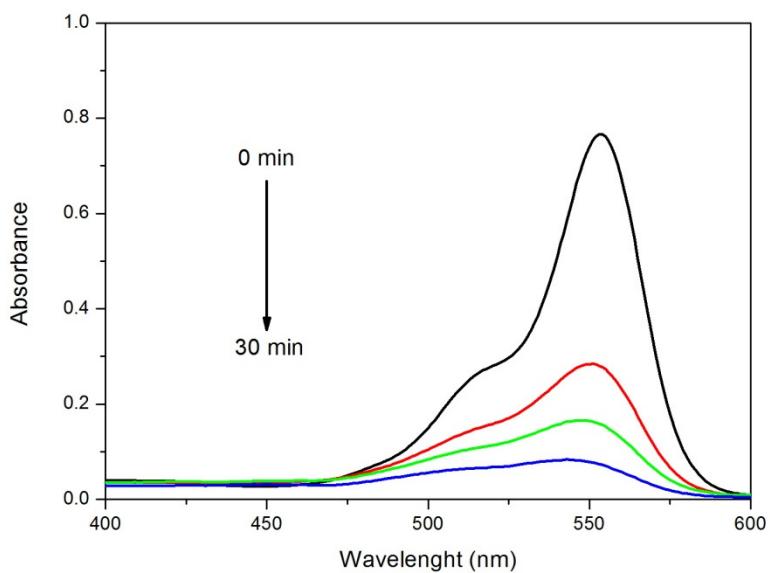
**Figure S5.** RhB degradation profile in the experiment with  $\text{H}_2\text{Pp-ZnO}$  under visible light.



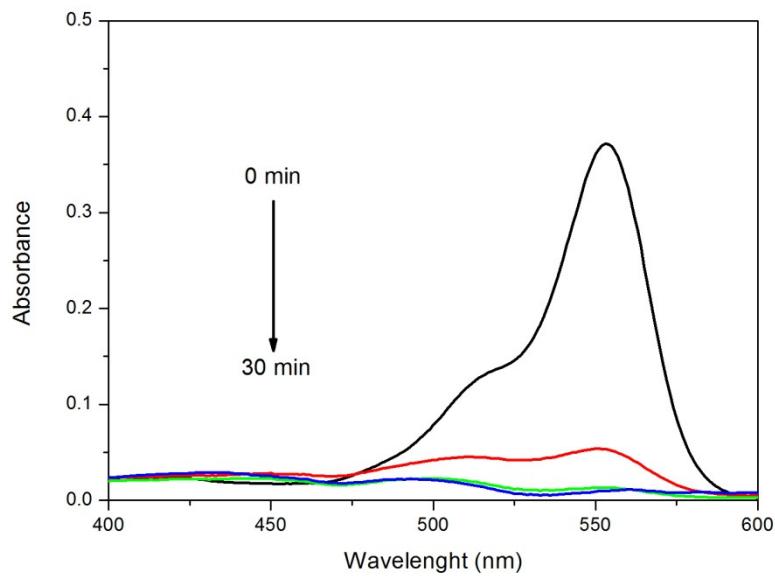
**Figure S6.** RhB degradation profile in the experiment with  $\text{CuPp-ZnO}$  under visible light.



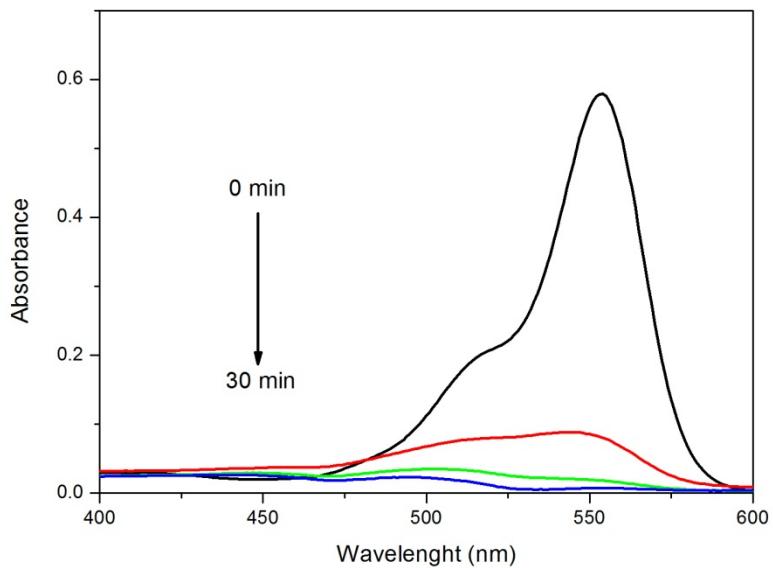
**Figure S7.** RhB degradation profile in blank experiment under sunlight.



**Figure S8.** RhB degradation profile in the experiment with ZnO under sunlight.



**Figure S9.** RhB degradation profile in the experiment with H<sub>2</sub>Pp-ZnO under sunlight.



**Figure S10.** RhB degradation profile in the experiment with CuPp-ZnO under sunlight.