

Supplementary Materials

ZnO/Graphene Oxide on Halloysite Nanotubes as a Superabsorbent Nanocomposite Photocatalyst for the Degradation of Organic Dyes

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Instruments

TEM samples were prepared by placing one drop of the desired catalysts solution ($\sim 1\text{--}3\ \mu\text{M}$) onto a 300-mesh copper grid coated with carbon film, followed by drying. The samples were analyzed and photographed using a JEM 2100F (JEOL) transmission electron microscope at an accelerating voltage of 80 kV.

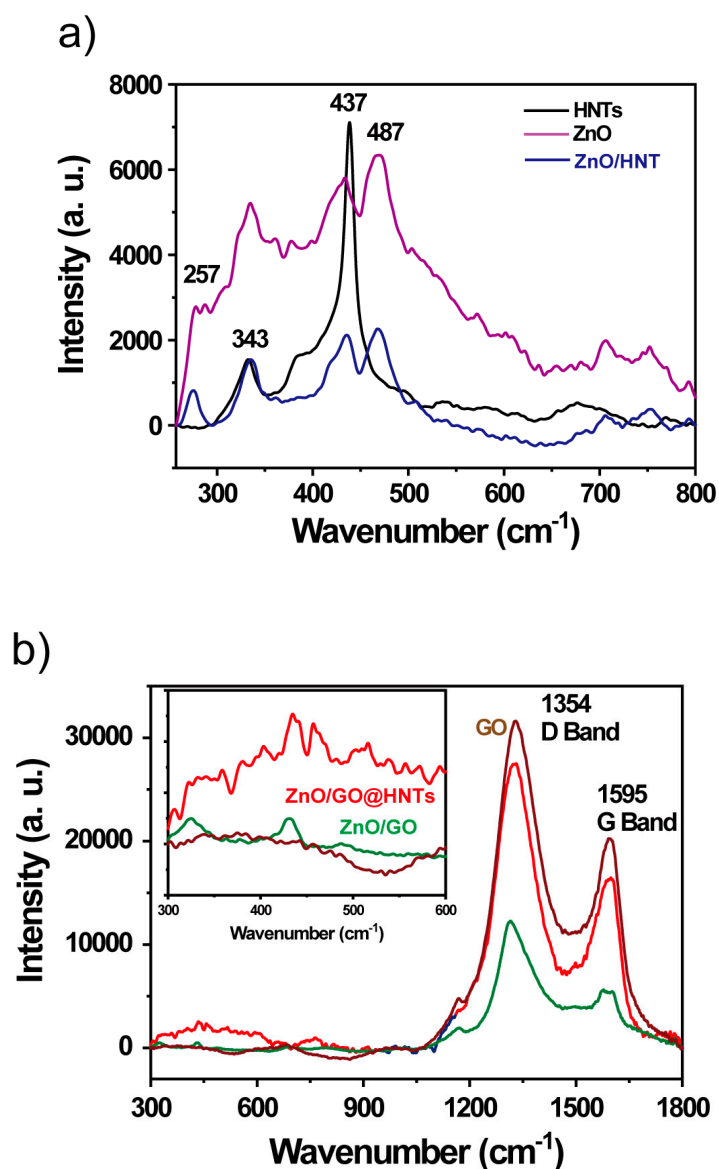


Figure S1. Raman spectrum of the nanocomposites of (a) HNT, ZnO, and ZnO/HNT, and (b) ZnO/GO and ZnO/GO/HNTs.

Table S1. Summary of the photocatalytic rhodamine B degradation of the various reported materials at direct sunlight.

Entry	Materials	Concentration	Dosing	Time	Degradation %	Ref.
1	Mn, Fe, Cu, Ce, Ag, Zr doped TiO ₂	10 mg/L 80 mL	20 mg	60 min	Mn/TiO ₂ 94.3% Fe/TiO ₂ 90.9% Cu/TiO ₂ 82.5% Ce/TiO ₂ 77.1% Ag/TiO ₂ 74.9% Zr/TiO ₂ 69.7% Pd/CCA/TiO ₂ 97.5% Ag/CCA/TiO ₂ 95.5% Co/CCA/TiO ₂ 81.8% Ni/CCA/TiO ₂ 78.8%	[51]
2	Ag, Co, Ni, Pd doped CCA/TiO ₂	10 mg/L 100 mL	100 mg	180 min		[52]
3	TiO ₂ /g-C ₃ N ₄	10 mg/L 30 mL	20 mg	40 min	91.26%	[53]
4	TiO ₂ /α-Fe ₂ O ₃	1.0 × 10 ⁻⁵ M (5 mg/L) 5 mL	10 mg	60 min	98.0%	[54]
5	LaFeO ₃ /Ag ₂ CO ₃	1.0 × 10 ⁻⁵ M (5 mg/L) 80 mL	80 mg	45 min	99.5%	[55]
6	g-C ₃ N ₄ /TiO ₂ /Bi ₂ O ₃	20 mg/L 50 mL	50 mg	120min	colorless	[56]
7	TiO ₂ /Polyfluorene	6.0 × 10 ⁻⁵ M 75 mL	10 mg	60 min	colorless	[57]
8	HNTs/TiO ₂ /La	5 mg/L 20 mL	20 mg	120 min	96.6%	[47]
9	ZnO/GO@HNT	7 ppm	3 mg	60 min	95%	This work

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