

Preparation and Photocatalytic Properties of Anatase TiO₂ with Hollow Hexagonal Frame Structure

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Characterization data

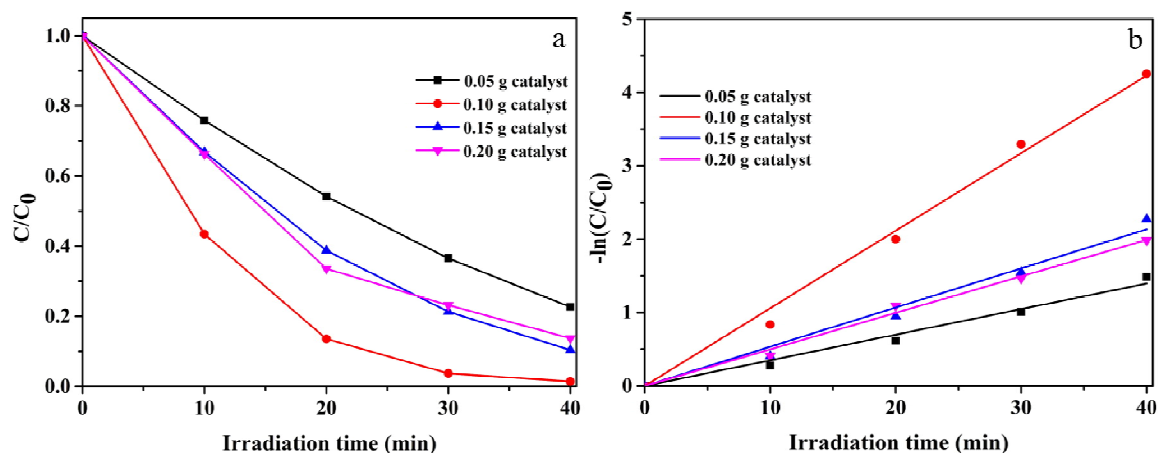


Figure S1. (a) Photocatalytic degradation of RhB under UV light with different amounts of catalyst; (b) Linear fit between $-\ln(C/C_0)$ and time of different amounts of catalyst.

Table. S1 Comparison of photocatalytic degradation of organic dyes catalyzed by TiO₂ catalysts

No.	Catalyst	Dyes	Reaction conditions	Degradation Rate.	Ref.
1	TiO ₂ microspheres	Methylene Blue (MB)	$c(\text{MB}) = 5.0 \text{ mg/L}$, $c(\text{Cat.}) = 1.0 \text{ g/L}$, 60 min, UV light	99.0 %	[1]
2	TiO ₂ nanotubes	Rhodamine B (RhB)	$c(\text{RhB}) = 10.0 \text{ mg/L}$, $c(\text{Cat.}) = 0.2 \text{ g/L}$, 100 min, UV-Vis. light	95.8 %	[2]
3	tube-in-tube TiO ₂ nanotubes	MB	$c(\text{MB}) = 10^{-5} \text{ mol/L}$, $c(\text{Cat.}) = 0.3 \text{ g/L}$, 180 min, UV light	77.0 %	[3]
4	TiO ₂ hollow spheres	Methyl Orange (MO)	$c(\text{MO}) = 10^{-5} \text{ mol/L}$, $c(\text{Cat.}) = 0.4 \text{ g/L}$, 140 min, UV light	89.7 %	[4]
5	3D hierarchical flower-like TiO ₂	RhB	$c(\text{RhB}) = 10.0 \text{ mg/L}$, $c(\text{Cat.}) = 1.0 \text{ g/L}$, 60 min, UV light	90.0 %	[5]

nanospheres					
6	ultrathin TiO ₂ nanosheets	RhB	$c(\text{RhB}) = 10.0 \text{ mg/L}$, $c(\text{Cat.}) = 1.0 \text{ g/L}$, 60 min, UV light	99.0 %	[6]
7	hollow hexagonal frame TiO ₂	RhB	$c(\text{RhB}) = 20 \text{ mg/L}$, $c(\text{Cat.}) = 1 \text{ g/L}$, 40 min, UV-Vis light	99.0 %	Our work

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