

Cite this: DOI: 10.1039/c0xx00000x

www.rsc.org/Catalysis

Flower- like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

5 A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose^{*a} and S. Velmathi^b

^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu

^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

10

15

(ESI†) S1 Peak shift analysis of h-MoO₃

20

25

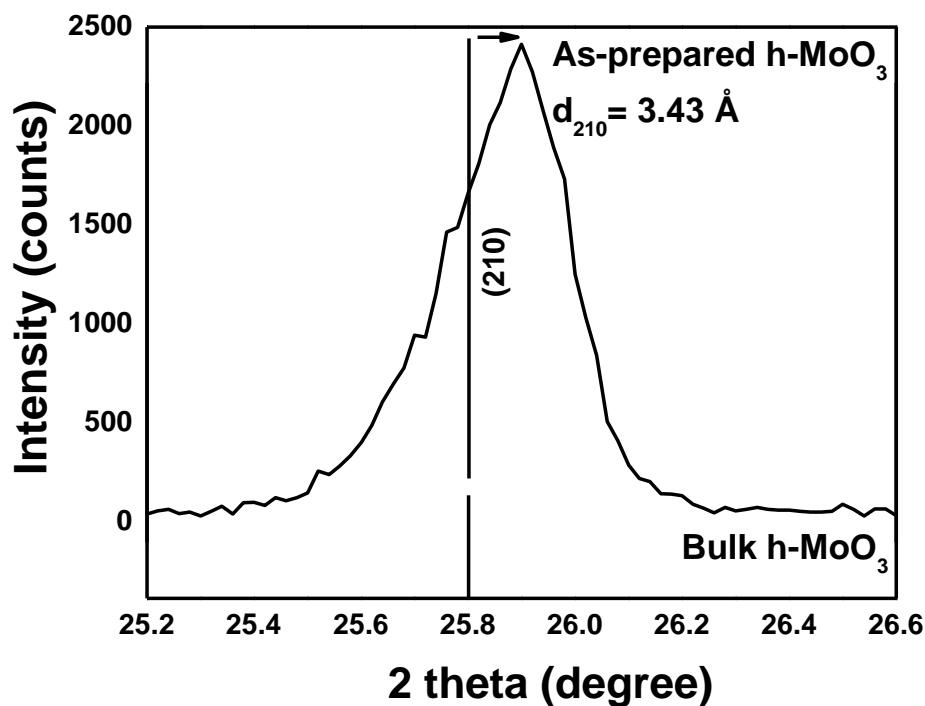
30

35

40

45

50



Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

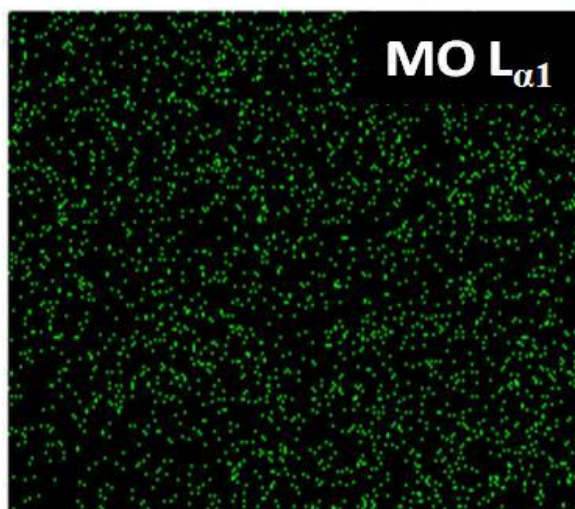
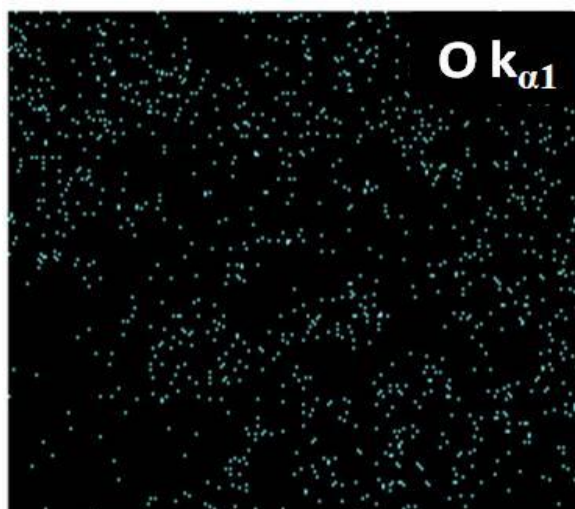
A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose*^a and S. Velmathi^b

5 ^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu
^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

10

(ESI†) S2 Elemental mapping analysis of h-MoO₃

15



Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose^{*a} and S. Velmathi^b

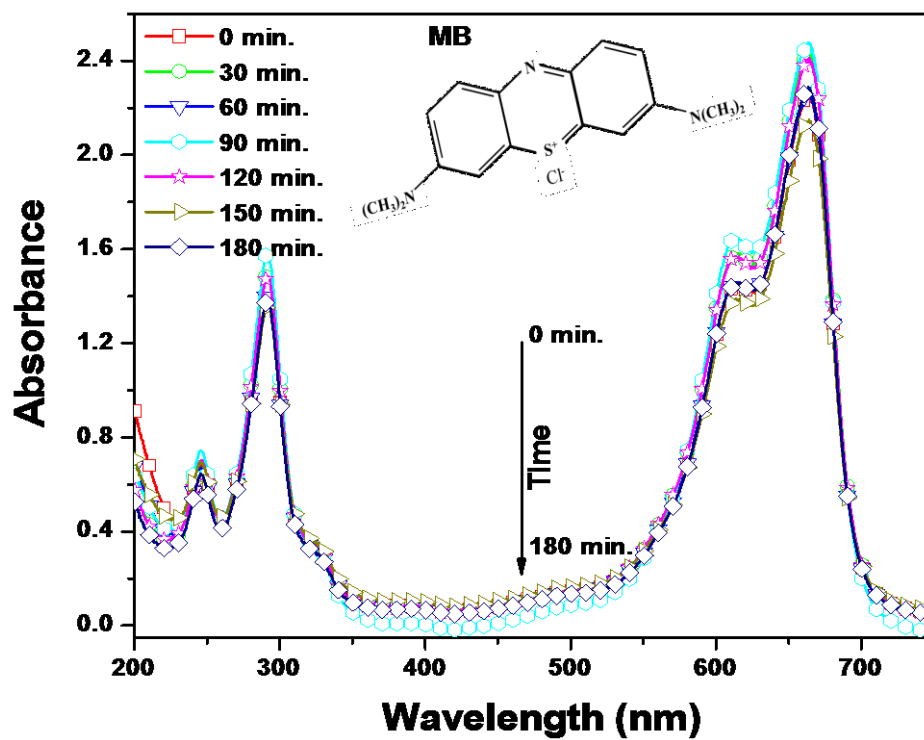
5

^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu

^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

10

(ESI†) S3 UV-Vis spectra of MB without catalyst



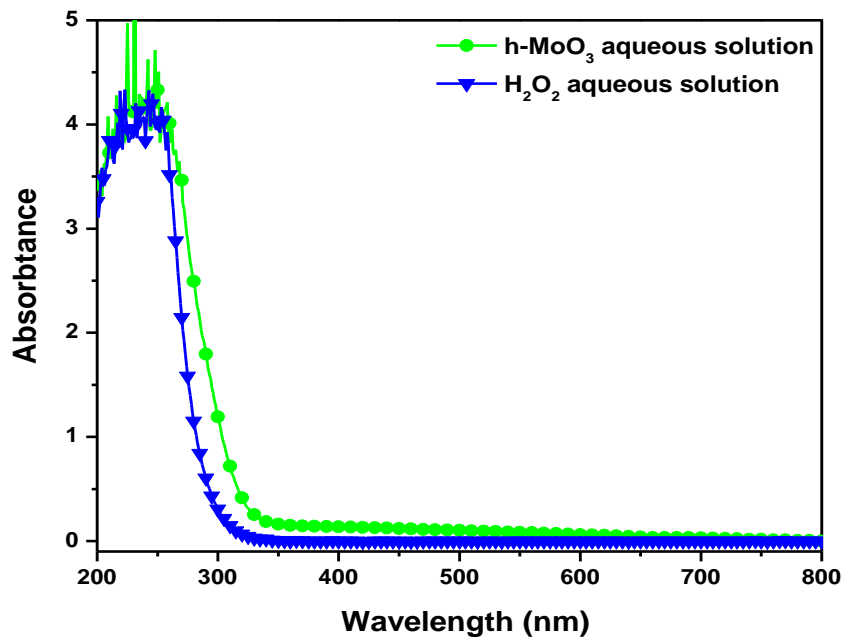
Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose*^a and S. Velmathi^b

^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu

^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

(ESI†) S4 UV-Vis spectral proof for H₂O₂ formation process in h-MoO₃ aqueous solution



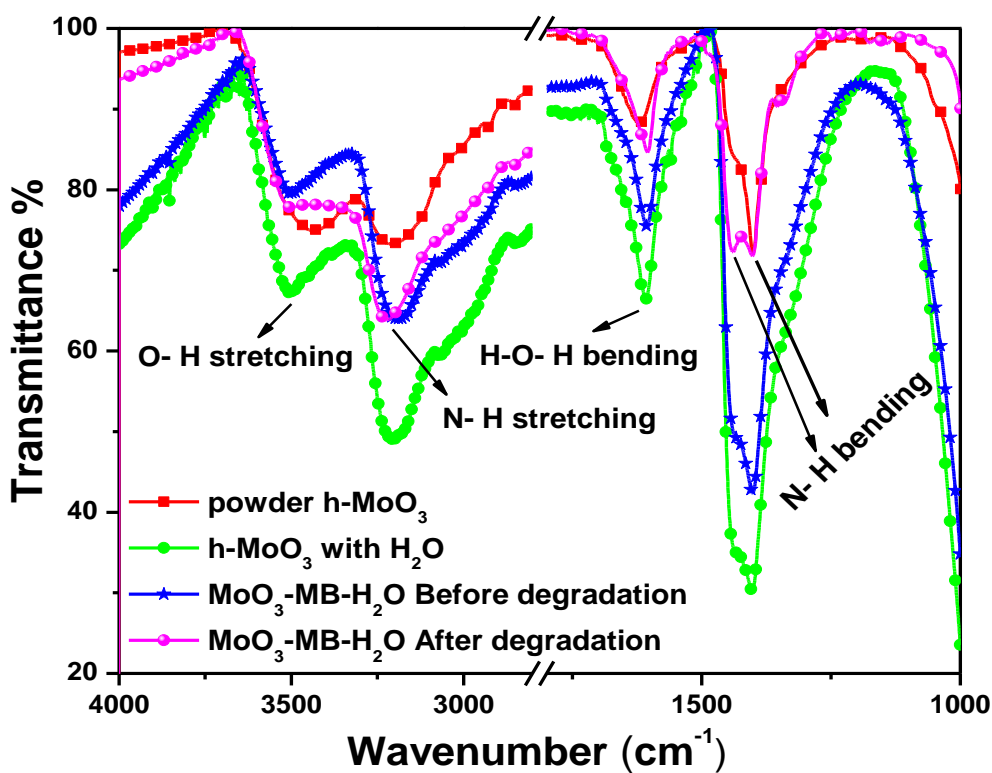
Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose*^a and S. Velmathi^b

^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu

^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

15 (ESI†) S5 FT-IR spectra of h-MoO₃ during photocatalytic reaction



Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

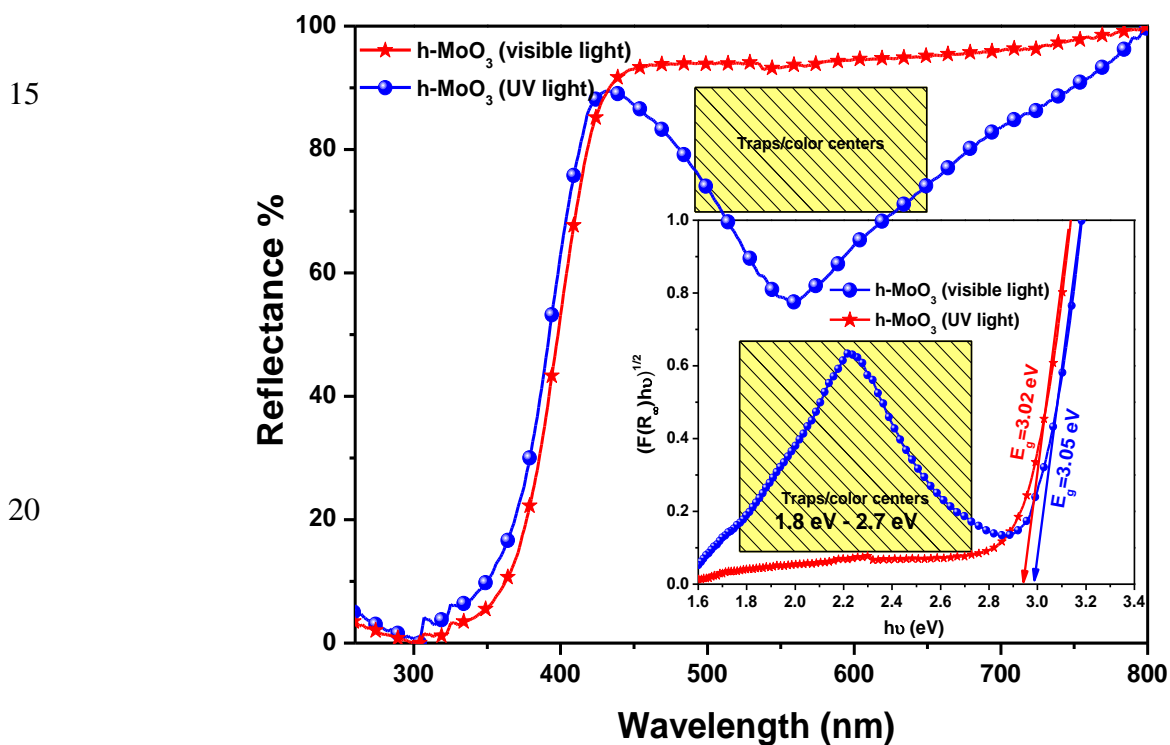
5 A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose^{*a} and S. Velmathi^b

^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu

^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

10

(ESI†) S6 DRS spectra for visible light (350 W) and UV light (365 nm) irradiated h-MoO₃ for 1h



Flower-like hierarchical h-MoO₃: A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation

A. Chithambararaj^a, N. S. Sanjini^b, A. Chandra Bose*^a and S. Velmathi^b

5 ^a Nanomaterials Laboratory, Department of Physics, National Institute of Technology, Tiruchirappalli – 620 015, India. E-mail: acbose@nitt.edu
^b Organic and polymer synthesis laboratory, Department of Chemistry, National Institute of Technology, Tiruchirappalli – 620 015, India

10

(ESI†) S7 XRD pattern of h-MoO₃ before and after photocatalytic reaction

15

