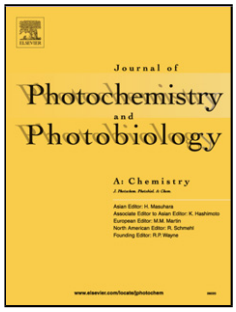

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Microwave assisted facile and green route for synthesis of CuO nanoleaves and their efficacy as a catalyst for reduction and degradation of hazardous organic compounds

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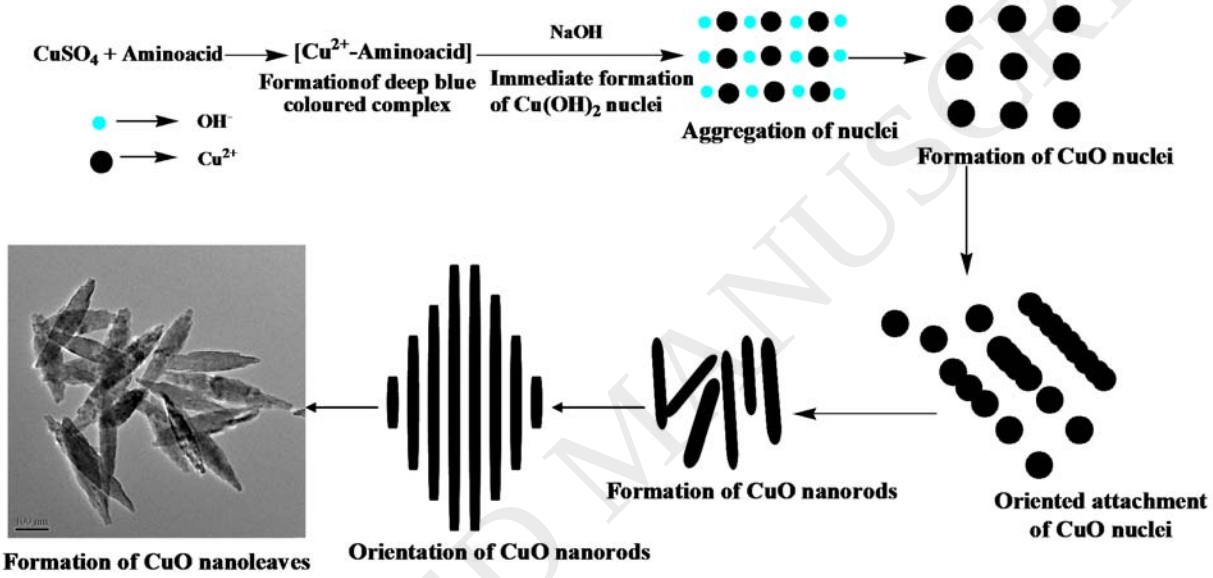
Graphical abstract



Highlights:

1. For the first time, 2D CuO nanoleaves were developed using glutamic acid
2. Microwave assisted route was designed for the synthesis of CuO nanoleaves (NLs)
3. L-glutamic acid acts as complexing and capping agent in the synthesis of CuO NLs
4. Reduction of toxic nitro compounds were carried out in aqueous phase using CuO NLs as catalyst
5. CuO NLs act as photocatalyst for the degradation of methyl violet 6B and Rose Bengal dye