

4th International Conference on **Nanotek & Expo**

December 01-03, 2014 DoubleTree by Hilton Hotel San Francisco Airport, USA

Photocatalytic oxidation of methylene blue dye under visible light by Ni doped Ag₂S nanoparticles

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Ag₂S nanoparticles were prepared using a hydrothermal method, and Ni was doped via a photo-assisted deposition method. The samples produced were characterized using different tools. Furthermore, the catalytic performance of the Ag₂S and Ni/Ag₂S samples was examined in the degradation of methylene blue dye under visible light. The UV-Vis spectral analysis detected a red shift after loading of Ni. The maximum degradation efficiency achieved was 100% with 3 wt% Ni/Ag₂S as the photocatalyst after a 40 min reaction time. The catalyst could be reused without any loss in activity for the first five cycles.

Biography

E S Aazam has completed her PhD from Sussex University, UK and is a professor at King Abdulaziz University at the Science College and chemistry department. She is the head of the Chemistry department at the female section; she has published 35 papers in reputed journals.

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