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Novel Ag/YVO₄ nanoparticles prepared by a hydrothermal method for photocatalytic degradation of methylene-blue dye

Elham S Aazam and R M Mohamed
King Abdulaziz University, Saudi Arabia

A hydrothermal method was used to prepare YVO₄ nanoparticles, and a photo-assisted deposition method was used to load Ag onto the YVO₄. The photocatalytic performances of the prepared photocatalysts were tested by the degradation of methylene-blue dye using visible-light irradiation. The results indicate that the Ag is well-dispersed within the YVO₄, and the surface area of the Ag/YVO₄ is smaller than that of the YVO₄ samples. The sample with 0.3 wt% Ag/YVO₄ has the highest activity for the removal of methylene-blue dye. The 0.3 wt% Ag/YVO₄ can be used five times without the loss of its photocatalytic activity.

Biography

Elham 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 campus. She has published 35 papers in reputed journals.

wayfield8@yahoo.com

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