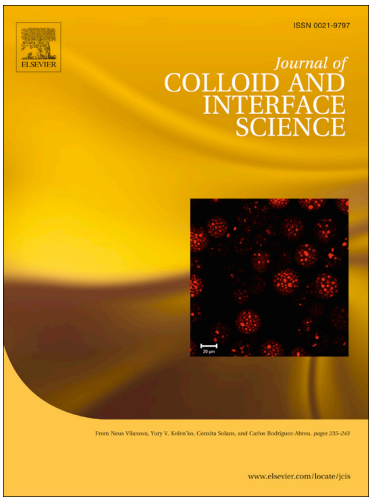

Facile synthesis of In_2S_3/UiO-66 composite with enhanced adsorption performance and photocatalytic activity for the removal of tetracycline under visible light irradiation

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Facile synthesis of In_2S_3/UiO-66 composite with enhanced adsorption performance and photocatalytic activity for the removal of tetracycline under visible light irradiation

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Abstract

In this study, a series of In_2S_3/UiO-66 composites were fabricated through a one-step solvothermal method for the first time. The diffraction peaks, composition, morphology, and chemical states of the composites were first characterized through X-ray diffraction, X-ray photoelectron spectroscopy, scanning electron microscope, or transmission electron microscope. Then, the performances of as-obtained In_2S_3/UiO-66 composites were assessed by the removal of tetracycline under 1 h dark condition and 1 h visible-light irradiation. Experimental results showed that all the In_2S_3/UiO-66 composites exhibited greater tetracycline removal, as compared with the two parent materials (i.e., UiO-66 and In_2S_3). The highest tetracycline removal was obtained by the