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TiO₂-doped WO₃ coated on charcoal activated with increases photocatalytic and antibacterial properties synthesized by microwave-assisted sol-gel method

TiO₂-doped WO₃ coated on CA were prepared by microwave-assisted sol-gel method. The calcined at the temperature of 500 °C for 2 h with a heating rate of 10 °C/min were characterized by XRD, EDS and SEM. The photocatalytic and an antibacterial activity of TiO₂-doped WO₃ coated on CA were investigated by means of degradation of a MB solution and against the bacteria E.coli respectively. The effects of WO₃ concentration were discussed. The 1mol%WO₃-doped TiO₂ coated on CA seems to exhibit the higher photocatalytic and an antibacterial activity than other samples. The TiO₂-doped WO₃ coated on CA are expected to be applied as a materials photocatalyst for the water purification.

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