Photocatalytic Acticity of TiO_2 Immobilized on Glass Beads

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Increasingly stringent regulation concerning the quality of water make a need to develop method of treatment of wastewater stream before they are introduced into the environment. Heterogenous photocataylsis in the presence of semicondutcors is a promising technology in new wastewater treatment and water purification. TiO_2 is the most widely used photocatalyst pollutants because of its good activity, chemical stability, commercial availability, and inexpensiveness. However, the fine TiO_2 has problems of separation and recovery. An alternative method is immobilization of TiO_2 powder on inert and suitable supports. In this study, we prepared TiO_2-coated glass beads and all samples were applied to photocatlaytic degradation of Methylen blue in fixed-bed reactor. TiO_2-coated glass beads were characterized using XRD, SEM and UV-Vis spectroscopy.
Acknowledgment: This work is financially supported by Korea Ministry of Environment (MOE) as Waste to Energy Recycling Human Resource Development Project.