P-A-928

ELABORATION AND CHARACTERISATION OF A N EW CAYALYSTS SUPPORTED BASED OF DIOXIDE OF TITANIUM FOR THE CLEANUP OF WASTE WATER BY PHOTOCATALYSIS

Ouafa TAHIRI ALAOUI,

chimie physique laboratory, Paris sud university

ouafa.tahiri-alaoui@u-psud.fr

The objective of this study was to elaborate by two different techniques; the phase inversion and sol-gel, the new supported catalyst for the cleanup of the water by heterogeneous photocatalysis. Both catalysts composites synthesised TiO2/SiO2 and TiO2/PVdF was characterised by various physico-chemical and optical techniques and studied as for their photocatalytic efficiency in the degradation of dyes and disinfection of bacteria. The observation by scanning electronic microscopy shows that the photocatalytic activity of the TiO2/SiO2 is better for dyes while the TiO2/PVdF showed a high bactericidal effect. The reuse of these catalyst composites is possible with a weak loss of the photocatalytic efficiency for the TiO2/PVdF which showed a competition of the molecules of dyes for the same sites on which takes place the degradation of a mixture of dyes. Finally, the technical feasibility of the catalyst TiO2/PVdF was demonstrated with a reactor to continuous supply.