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**Photocatalytic properties of  $\text{TiO}_2\text{-Fe}_2\text{O}_3$  and  $\text{ZnO-Fe}_2\text{O}_3$  films.**

ESTELA GOMEZ, CIDS, Instituto de Ciencias, BUAP, ENRIQUE SANCHEZ-MORA, RUTILO SILVA-GONZALEZ, Instituto de Fisica, BUAP, MATERIALES FOTOCATALITICOS Y FOTOCONDUCTIVOS TEAM — Morphological, optical and photocatalytic properties of  $\text{TiO}_2\text{-Fe}_2\text{O}_3$  and  $\text{ZnO-Fe}_2\text{O}_3$  samples were studied. The layers were deposited on glass substrate by the sol-gel method. The photocatalytic activity of the samples was performed by means of the photodecomposition of methylene blue (MB) under visible light illumination. The FTIR results indicate that the samples present surface OH that are bound to the Ti and Fe and Zn atoms. The absorption edges are displaced toward to low energies as the concentration of  $\text{Fe}_2\text{O}_3$  increases in  $\text{TiO}_2$  and  $\text{ZnO}$  respectively. Here two mechanisms are observed during the photodecomposition of the methylene blue.

Estela Gomez  
CIDS, Instituto de Ciencias, BUAP

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