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Metal oxides composites for use as photocatalysts

Organic compounds from industries are one of the major causes of water pollution. Various strategies have been employed to remove these toxic compounds. One of the most interesting approaches is heterogeneous photocatalysis because the process is based on the use of solar energy, which is clean and abundant in nature. In this presentation synthesis and characterization of photocatalysts based on semiconducting metal oxides composites are presented. Synthetic techniques are hydrothermal, sonochemical, precipitation and sol-gel methods. Semiconducting metal oxides composites of interest include $BiVO_4/TiO_2$ composite; core-shell $Fe_3O_4/SiO_2/CeO_2$ composite, CeO_2/SiO_2 composite and GO/CeO_2 composite. Photodegradation of dyes using the nanocomposites are discussed in terms of kinetics studies.

Biography

Sukon Phanichphant is a Professor in Materials Science at Materials Science Research Center, Faculty of Science, Chiang Mai University, Thailand. She is currently working as a Senior Researcher. Her research interests include synthesis and characterization of nanoparticles/composites for use in catalysis, medical and sensor applications as well as synthesis and characterization of conducting polymer for light-emitting devices.

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