Special Issue

Preparation and Property Characterization of Novel Photocatalysts

Message from the Guest Editor

The aim of this topic is to prepare various new photocatalysts, various composite photocatalysts, or composite heterojunction catalysts for photocatalytic degradation of organic pollutants in dye wastewater, pesticide wastewater, or pharmaceutical wastewater under visible light irradiation or ultraviolet light irradiation. The catalysts can also be used for hydrogen production by water splitting. X-ray diffractometer, transmission electron microscope, scanning electron microscope, X-ray photoelectric spectrometer, and other instruments can be used for characterizing the physical, chemical, and photochemical properties of the above catalysts such as their atomic space coordinates and crystal system structures. At the same time, the intermediate products of these target pollutants can be obtained using a liquid chromatography mass spectrometer. The degradation path of various target pollutants can be obtained, and the degradation mechanism of the organic pollutants can be achieved. Two major problems can be resolved by using the abovementioned catalysts. One is the conundrum of water environment pollution, and the other is producing hydrogen energy.

Guest Editor

Prof. Dr. Jingfei Luan

1. School of Physics, Changchun Normal University, Changchun 130032, China
2. State Key Laboratory of Pollution Control and Resource Reuse, School of the Environment, Nanjing University, Nanjing 210093, China

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma
State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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