Special Issue

Hybrid Materials, Semiconductors and Carbon Photocatalysis

Message from the Guest Editors

Despite the significant advances in developing sustainable solar fuels and chemicals, their efficiency is still low and they remain far from practical application. The development of these new processes will also require highly efficient methods to remediate the pollutants and sub-products formed in reactions. In this sense, heterogenous photocatalysts, including new types of semiconductors, hybrid photocatalysts and carbon-based photocatalysts, are of great interest. The purpose of this Special Issue, entitled “Hybrid Materials, Semiconductors and Carbon Photocatalysis”, is to cover significant recent advances in solar fuels, chemical production and environment remediation, mainly referred to as solar-driven chemical reactions, using efficient semiconductors, and hybrid and carbon-based photocatalysts. Works related to eco-friendly synthesis routes for innovative photocatalysts, as well as hybrid and carbon-based materials, used to produce energy vectors such as H2, NH3, or other fuels; CO2 reduction; photo-assisted valorization of organic molecules; and the environmental remediation of polluted water and air are welcome for this Special Issue.

Guest Editors

Prof. Dr. Juan Matos Lale

Unidad de Cambio Climático y Medio Ambiente (UCCMA), Instituto Iberoamericano de Desarrollo Sostenible (IIDS), Facultad de Arquitectura, Construcción y Medio Ambiente, Universidad Autónoma de Chile, Temuco 4780000, Chile

Dr. Adriana Consuelo Mera Benavides

Unidad de Cambio Climático y Medio Ambiente (UCCMA), Instituto Iberoamericano de Desarrollo Sostenible (IIDS), Facultad de Arquitectura, Construcción y Medio Ambiente, Universidad Autónoma de Chile, Temuco 4780000, Chile

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

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Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

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