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Metal Oxides for Photovoltaic and Photocatalytic Applications

Guest Editor:

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Deadline for manuscript submissions:
closed (20 November 2023)

Message from the Guest Editor

It is known that the growth and progress of modern human societies require smart environmental friendly solutions for energy harvesting and energy consumption. The duet Photovoltaics - Photocatalysis employing semiconductor metal oxides seems to be amongst the most reasonable sustainable solutions. Electrical charges are in both cases generated after interaction of light with the semiconductor material; the wide bandgaps of metal oxides hinders the spontaneous charge recombination process that tends to occur immediately afterwards. In photovoltaics the produced charges are employed in the production of electrical energy while in photocatalysis these charges are used in chemical oxidation reactions occurring on the surface of the materials. Tunability and efficiency of both processes still face challenges and are therefore very active ongoing research.

This issue is meant to create an open space for debate and exchange and therefore invites the whole community of academic and industrial researchers involved in both fundamental studies and applied solutions to share recent findings, views, and expectations in this challenging field of research and technology.

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Message from the Editor-in-Chief

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