Special Issue

Advances in Electrochemical Oxygen Evolution and Photocatalytic Reaction

Message from the Guest Editor

Oxygen evolution reactions (OERs) are very crucial for energy conversion in the realm of renewable energy technologies. Expensive metals such as Ir, Ru, and their oxides are currently considered standard materials for good OER performance. However, due to their high cost, low abundance, and low durability, exploration of other inexpensive alternatives with good OER capability has become a priority. Materials which are stable under OER conditions must be targeted for this particular case. Similarly, another branch which comes under renewable and clean energy is photocatalysis. It can be applied in various applications, such as water purification, ammonia synthesis, water splitting, CO2 reduction, electrochemical, etc. These electrochemical and photocatalytic applications are very promising but far from commercialization and need more research. Therefore, in this Special Issue, the synthesis, in-depth characterizations, and applications of nano- or micromaterials/hybrids into the domain of photo and electrochemical domains will be explored. New materials and techniques with enhanced performance, which add crucial knowledge to the existing science, will be considered.

Guest Editor

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Message from the Editor-in-Chief

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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