Special Issue

Illuminating the Future: Unveiling Breakthroughs in Silicon Solar Cells

Message from the Guest Editor

The quest for sustainable energy sources has reached new heights, and the remarkable advances in silicon solar cells are at the forefront of this revolution. Recent breakthroughs have unleashed a materials revolution, propelling silicon solar cells to unprecedented efficiency levels. Novel device configurations are revolutionizing the field, boosting light absorption and charge carrier mobility. Silicon solar cells are no longer confined to photovoltaics plants, rooftops, and power grids. These remarkable devices are finding their way into diverse applications, from space to portable electronics and wearables to integrated photovoltaics in buildings and smart cities. This Special Issue "Advances in Silicon Solar Cells: Materials, Devices, and Applications" encapsulates the remarkable strides made in this dynamic field. With breakthroughs in materials, device engineering, and a wide range of applications, researchers and scholars are poised to unlock the full potential of solar energy, illuminating a sustainable future for generations to come. Join the vanguard of this transformative journey and be part of a global community shaping a brighter and cleaner tomorrow.

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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