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Special Issue Reprint

Advanced Materials for Solar Energy Utilization

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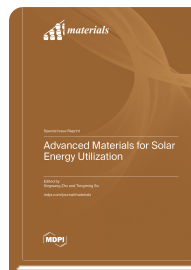
Edited by

Xingwang Zhu

Tongming Su

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This Reprint highlights recent advances in materials science for solar energy conversion and utilization. It presents a collection of innovative research articles and reviews focused on the development of high-performance materials for solar-driven applications such as water splitting, CO₂ reduction, ammonia synthesis, pollutant degradation, H₂O₂ production, photovoltaic energy harvesting, and more. By integrating insights from photochemistry, catalysis, nanotechnology, and environmental science, this Reprint explores cutting-edge strategies for enhancing light absorption, charge separation, and catalytic efficiency. The featured studies demonstrate the critical role of material design—from heterojunction engineering to vacancy modification and surface functionalization—in improving the sustainability and effectiveness of solar energy technologies. This Reprint serves as a valuable reference for researchers and engineers seeking to address global challenges in clean energy and environmental remediation through advanced photochemical and photovoltaic materials.



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