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III-V Heteroepitaxy for Solar Energy Conversion

Guest Editor:

Dr. Henning Döscher
Competence Center Emerging Technologies,
Fraunhofer Institute for Systems and Innovation Research ISI,
Breslauer Str. 48 | 76139 Karlsruhe | Germany

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Message from the Guest Editor

The III-V material system dominates optoelectronic technologies—except for solar energy conversion, where the high cost still constrains commercial success in niche markets. Vast promises and critical bottlenecks associated with III-V materials in solar energy generation constitute a challenging context for the current Special Issue.

This Special Issue is intended to provide a unique international forum, aimed at exploring both technological perspectives and commercialization prospects of epitaxial III-V absorbers, with respect to future sustainable systems.

This volume, especially, is open to visionary and/or interdisciplinary work addressing advanced epitaxial devices or components for solar energy systems, or prospects for their widespread application. Subject areas of particular interest include:

- Advanced solar absorber structures and concepts
- Multi-junction photovoltaics and device implementation strategies
- Efficient solar fuel generation and material durability
- Structural characterization and in situ analysis
- High-volume production and emerging growth techniques
- Alternative substrates and substrate reuse
- Sustainability and economic viability

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Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, Italy

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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Contact Us

Crystals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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