Special Issue

Advancing Sustainable Energy Through Quantum Material Innovation

Message from the Guest Editors

"Advancing Sustainable Energy Through Quantum Material Innovation" focuses on leveraging quantum materials to enhance sustainable energy solutions. Quantum computing and artificial intelligence are emerging as powerful tools for optimizing renewable energy systems, improving energy storage, and designing new materials. For instance, quantum simulations can model atomic structures to identify compounds with high energy storage potential, crucial for renewable energy storage. Additionally, quantum materials like perovskite quantum dots are showing promise in developing more efficient solar cells and LEDs. These innovations aim to address the intermittency of renewable energy sources and improve overall energy efficiency, contributing to a sustainable future.

Guest Editors

Prof. Dr. Eduard Babulak

National Science Foundation (NSF), Alexandria, VA, USA

Prof. Dr. Mark Hermann Rümmeli

1. Key Laboratory of Advanced Carbon Materials and Wearable Energy Technologies of Jiangsu Province, Key Laboratory of Core Technology of High Specific Energy Battery and Key Materials for Petroleum and Chemical Industry, Soochow Institute for Energy and Materials Innovation, College of Energy, Soochow University, Suzhou 215006, China
2. Electron Beam Emergent Additive Manufacturing (EBEAM) Centre, Institute of Environmental Technology (IET), Centre for Energy and Environmental Technologies (CEET), VSB—Technical University of Ostrava, 17. Listopadu 15, 708 33 Ostrava, Czech Republic
3. Institute for Materials Chemistry, IFW Dresden, 20 Helmholtz Strasse, 01069 Dresden, Germany

Dr. Alicja Bachmatiuk

Faculty of Chemistry, Wroclaw University of Science and Technology, 50-370 Wroclaw, Poland

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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