



## Advances in Energy Storage and Conversion Devices Utilizing Ionic Liquid Electrolytes

Guest Editors:

**Dr. Alessandro Mariani**

Karlsruhe Institute of  
Technology, Helmholtz Institute  
Ulm, 89081 Ulm, Germany

**Dr. Matteo Bonomo**

Department of Chemistry,  
University of Turin, 10125 Turin,  
Italy

**Prof. Dr. Xinpei Gao**

School of Chemical Engineering  
and Technology, Hainan  
University, Haikou 570228, China

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### Message from the Guest Editors

Dear Colleagues,

Ionic liquids (ILs) are organic salts with melting points lower than their decomposition temperature. Being salts in the liquid state, they show attractive and tunable physical and chemical properties, such as negligible vapour pressure, modest ionic conductivity, low flammability, and wide electrochemical window.

In the last two decades, ILs have been exploited in almost any field of chemistry, industry, and engineering.

Throughout this collection, we aim at gathering a series of papers together focused on the most recent advances in the uses of ILs in energy conversion and storage electrochemical devices. The contributions will tackle (but not limited to) smart-design for task-specific applications, implementation as electrolytes for solar cells, proton-shuttling media in fuel-cells, solvation-specific solvent for multivalent ions in post-lithium batteries, optimization of SEI formation for lithium-ion batteries, structure-properties relationship in electrochemical performances. Both theoretical and experimental approaches are equally welcomed.

Dr. Alessandro Mariani

Dr. Matteo Bonomo

Dr. Xinpei Gao





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## Editor-in-Chief

### **Prof. Dr. Enrico Sciubba**

Department of Mechanical and  
Aerospace Engineering,  
University of Roma Sapienza, Via  
Eudossiana 18, 00184 Roma, Italy

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*Energies* Editorial Office  
MDPI, Grosspeteranlage 5  
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