



Sensors and Next-Generation Battery Design, Fabrication and Applications

Guest Editor:

Dr. Qiannan Zhao

School of Energy and Chemical Engineering, Center for Dimension-Controllable Organic Frameworks, Ulsan National Institute of Science and Technology (UNIST), Ulsan 44919, South Korea

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Message from the Guest Editor

The integration of sensor technologies with advanced battery design and fabrication is a pivotal frontier in developing efficient and reliable energy storage systems. Carbon materials have become essential in various applications, such as lithium-ion batteries, solar cells, and electrochemical catalysts. Materials such as fullerenes, carbon nanotubes, nanodiamonds, graphene, graphite, and amorphous carbon play a significant role in developing clean and sustainable energy sources.

The accurate measurement of heat and pressure during the charge and discharge cycles is crucial for both prototyping and manufacturing batteries. Advanced sensing technologies, including State-of-Charge (SOC) and State-of-Health (SOH) measurements, enable proactive maintenance and minimize downtime.

Keywords

- state of charge (SOC) and state of health (SOH)
- novel battery design
- real-time monitoring
- advanced materials for batteries
- cathode/anode/separator/electrolyte/current collector
- battery sensor technologies





sensors



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Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria
Elettrica e dell'Informazione
(Department of Electrical and
Information Engineering),
Politecnico di Bari, Via Edoardo
Orabona n. 4, 70125 Bari, Italy

Message from the Editor-in-Chief

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Sensors Editorial Office
MDPI, Grosspeteranlage 5
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