

## Special Issue

# Challenges in Circuit Design for Battery Management Systems

### Message from the Guest Editor

This Special Issue aims to showcase and disseminate the latest advances in the circuit design aspects of battery management systems, focusing on overcoming the challenges posed by modern applications. Topics of interest for publication include, but are not limited to, the following:

- High-precision analog and mixed-signal circuit design for cell voltage, current, and temperature sensing;
- Power management circuits for ASICs in BMS application;
- Safety-oriented, robust, fault-tolerant, and self-healing BMS circuits;
- Communication architectures and protocols for distributed battery systems;
- ASICs and integrated circuits for battery monitoring and balancing;
- Circuit design for real-time state-of-charge (SOC) and state-of-health (SOH) estimation;
- Thermal management and protection circuits for battery systems;
- Advanced modeling and simulation techniques for BMS circuit validation;
- Low-power and miniaturized circuit solutions for portable and wearable applications;
- Emerging technologies in BMS circuits, including AI-assisted and machine learning-enabled designs.

### Guest Editor

Dr. Liji Wu

School of Integrated Circuits, Tsinghua University, Beijing 100084, China

### Deadline for manuscript submissions

closed (31 July 2025)



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*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto:energies@mdpi.com)

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### Message from the Editor-in-Chief

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### Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University  
Niccolò Cusano, 00166 Roma, Italy

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