

# THE 8TH IEEE CONFERENCE ON ENERGY INTERNET AND ENERGY SYSTEM INTEGRATION

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## Special Session 12

### Advanced Electrochemical Energy Storage Materials and Devices for Power Grids

#### INTRODUCTION AND TOPICS

Energy storage technologies play a crucial role in developing novel power systems that primarily rely on renewable energy sources. Investigating the applications of energy storage materials and devices within power systems can maximize its benefits and facilitate the effective, safe, and stable functioning of power grids. Currently, lithium-ion batteries are widely used in energy storage power stations due to their high energy density and long lifespan. At the same time, as the demand for large-scale energy storage applications in the power grid continues to grow, the requirements for battery cost and safety performance have also increased accordingly. This special session invites researchers to submit their contributions focusing on the latest developments in electrochemical energy storage materials and devices.

The scope of this special session includes the following topics:

- Materials for lithium/sodium ion batteries, solid-state batteries;
- Materials for next-generation batteries and supercapacitors;
- State estimation, prediction, and management for batteries;
- Cascade utilization and recycling technologies for batteries;
- Safety protection technologies for energy storage power stations;
- Applications of artificial intelligence and big data technology in energy storage.

#### SPECIAL SESSION CHAIR

Assoc. Prof. Junyi Yin

North China Electric Power University, China

#### PUBLICATION & SUBMISSION

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in IEEE EI² 2024 International Conference Proceedings, which will be submitted for inclusion in the [IEEE Xplore Digital Library](#), and submitted for indexing by [EI compendex](#) and [Scopus](#).



Scan the QR code on the left or open the submission link to submit your paper.

• Submission link: <https://easychair.org/conferences/?conf=ei22024>

Submission Deadline: 15 October, 2024

ORGANIZATIONS



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For any questions, please contact the conference secretary, Ms. Joyce Zhong, via [EI2\\_2024@outlook.com](mailto:EI2_2024@outlook.com).