⚡ International Symposium on Advanced Electrical Characterization of Materials and Devices (ELEC-CHAR 2026)

April 5–7, 2026

🔍 Symposium Overview

The International Symposium on Advanced Electrical Characterization of Materials and Devices (ELEC-CHAR 2026) brings together leading researchers working on electrical transport, charge carrier dynamics, thermoelectric behavior, and advanced electronic device diagnostics.

This symposium provides a focused platform to discuss the latest methods, instrumentation, and analytical models used to probe and optimize electrical properties from nanoscale materials to bulk engineering systems.

🧩 Symposium Tracks

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1. 🔌 Electrical Transport Phenomena

- DC / AC electrical conductivity
- Four-point probe and van der Pauw techniques
- Hall effect, carrier concentration & mobility analysis
- Low-temperature and high-field transport measurements

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2. 🔥 Thermoelectric and Energy Harvesting Measurements

• Seebeck coefficient & power factor (PF) characterization
• Thermal conductivity & ZT evaluation
• In situ electrical/thermal coupling measurements
• Instrumentation for high-temperature TE testing

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3. 📡 Impedance and Dielectric Spectroscopy

• Electrochemical Impedance Spectroscopy (EIS)
• Dielectric relaxation and polarization mechanisms
• Interface charge behavior in composites and nanomaterials

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4. 🧑‍💻 Electronic Device-Level Characterization

• I–V, C–V, G–V measurements
• Thin-film transistors, diodes, sensors
• Contact resistance, Schottky barrier, mobility extraction
• Reliability testing: breakdown, fatigue, leakage analysis

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5. 🚀 Advanced & Emerging Techniques

• Scanning probe–assisted electrical measurements
• Microwave, RF and terahertz electrical characterization
• Pulsed electrical testing, transient spectroscopy
• AI-assisted data analysis and electrical property prediction