Special Issue

Memristors beyond the Limitations: Novel Methods and Materials

Message from the Guest Editors

The main focus of this SI is on conduction mechanisms, the reliability of memristors, scaling down beyond nanotechnology limitations, fabrication methods, artificial synapses, neuromorphic and RF/mmWave applications. The research areas of the submitted papers should fall into the following categories:

- Theory, simulation, and modelling of memristors;
- Novel fabrication methods (bottom-up and top-down methods) and physical phenomena;
- Memristive technology for high frequency applications.
- Structural and electrical characterisations;
- Materials including 2D materials, phase change materials, ferroelectric materials, perovskites, and metal oxides;
- Novel artificial synapses and memristive devices;
- Conduction mechanism in memristors including dynamic evolution of conductive filaments;
- Organic materials and carbon-based memristors and synapses;
- Effect of moisture and device size (dimension) on physical properties;
- Applications of memristors in neuromorphic computing and artificial intelligence.
- Applications of memristive components in high frequency systems and circuits, spanning telecommunications, radar, etc.

Guest Editors

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Deadline for manuscript submissions

closed (15 April 2025)

Electronics

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Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/174064

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

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