



Memristive Materials and Devices

Guest Editor:

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Message from the Guest Editor

With the rapid development of information technology, computing systems with low energy consumption and high processing speed are in great demand. Conventional computing architectures are now facing a von Neumann bottleneck due to the separation of memory and processor. New materials, devices, and architectures are being aggressively studied to meet future computing needs.

Memristive devices, also known as resistive switching devices, have attracted intensive attention due to their simple structure, high switching speed, low power consumption, and desirable switching dynamics for emulating biological synapses. These features make the devices a good candidate for broad applications of nonvolatile memory, logic, in-memory computing, and neuromorphic computing.

This Special Issue aims to compile recent developments in the field of memristive materials and devices. The articles presented in this Special Issue will cover various topics, ranging from but not limited to the development of memristive materials, the study of memristive mechanisms, the optimization of memristive performance, and the functionalization of memristive devices.





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