

Special Issue

Spintronic Memory and Logic Devices

Message from the Guest Editors

The discovery of giant magnetoresistance in the late 1980s marked the beginning of spintronics, which has evolved into the broad and interdisciplinary field at the intersection of physics, materials science, nanotechnology it is today. Especially in the past decade, we have seen many breakthroughs in exploiting the spin degree of freedom of charge carriers in nanodevices for nonvolatile memory and logic operations. The improved understanding of solid-state transport phenomena has accelerated progress and led to the development of original device concepts for complementary metal-oxide-semiconductor (CMOS) and beyond-CMOS applications. The discovery of new physics, materials and functionalities, and advances in material synthesis and nanofabrication methods have synergistically contributed to a paradigm shift in the microelectronic industry and placed spintronics in a favorable position. Fascinated by this immense progress, we are now looking forward to creating a unique collection of research papers, perspectives, and review articles that focus on “Spintronic Memory and Logic Devices”.

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