



New Aspects of Si-Based Material and Device

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Message from the Guest Editor

For more than half a century, Si-based materials and devices have been utilized and mass-produced for a wide range of uses including microprocessors and memory technologies thanks to high-quality silicon dioxide and cost-effectiveness. Alternative semiconductor materials have been investigated to replace Si as the end of Moore's law is approaching, however, it is still important to understand fundamental material properties of Si and develop Si-based devices in order to provide novel breakthrough approaches to overcome the physical limits of current ICs and present their feasibility with the mature Si technology platform. This special issue is devoted to highlight pioneering research papers, rapid communications, and review articles on Si-based materials and devices for advanced semiconductor technologies.





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Message from the Editor-in-Chief

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