Special Issue

New Semiconductor Materials, Devices, Power Applications, and Radiation Effects

Message from the Guest Editors

New materials include wide bandgap semiconductors (GaN, SiC), ultra-wide band gap semiconductors (Ga2O3, diamond, AlGaN, AlN), carbon-based materials and other semiconductor materials. New structural devices include lateral HEMT, grooved VDMOSFET, trench MOSFET, vertical Fin MOSFET, super junction, etc. New semiconductor materials have superior characteristics, such as high breakdown electric field, low specificity of resistance and high temperature resistance. Combined with innovations in device structure, they can make power circuits, such as DC–DC and AC–DC, more efficient, smaller and more powerful. In addition, new materials, devices and circuits have also received extensive attention in total dose, single event effect and other radiation aspects. The topics of interest include, but are not limited to:

- Wide bandgap semiconductor (SiC, GaN);
- Ultra-wide bandgap semiconductor (Ga2O3, diamond, AlGaN, AlN, BN);
- Compound semiconductor materials and devices;
- Power conversion circuits;
- Packaging of wide bandgap semiconductor devices;
- Devices and circuits reliability;
- Total dose and single event effects.

Guest Editors

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Deadline for manuscript submissions

closed (15 March 2024)

Electronics

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CiteScore 6.1

mdpi.com/si/145050

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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 guest-edited by leading experts in selected topics of interest.

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