Special Issue

Oxide Semiconductor Materials and Devices

Message from the Guest Editors

Over the past few decades, oxide semiconductors have been successfully mass-produced for being used as driving transistors in display backplanes. Recently, their applications have expanded to include configurations where oxide semiconductors and silicon transistors are integrated into the same backplane circuitry for low-power operation (known as LTPO). Moreover, there is ongoing research to utilize the low leakage current of oxide semiconductors in various memory devices (such as DRAM and NAND), and efforts are being made to enhance the utilization of silicon chips by integrating oxide transistors monolithically in the BEOL area of silicon chips. This Special Issue aims to present original research and comprehensive review articles on recent advances in all aspects of oxide semiconductor materials and devices. Potential topics include but are not limited to the following:

- Fabrication methods: sputter, ALD, CVD, solution,
- High mobility oxide semiconductor
- Instability issues of oxide semiconductor
- Scaling of oxide semiconductor transistors for high-resolution
- Novel, emerging applications of oxide semiconductor

Guest Editors

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Deadline for manuscript submissions

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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