

### A Special Issue on

# **"Towards High Performance Ga<sub>2</sub>O<sub>3</sub> Electronics: Epitaxial Growth and Power Devices"**

## CALL FOR PAPERS

Gallium oxide (Ga<sub>2</sub>O<sub>3</sub>) is graining tremendous traction for power electronics applications due to its high breakdown field. Ga<sub>2</sub>O<sub>3</sub> possesses an ultra-wide bandgap of 4.8 eV, well above SiC and GaN ( $3.3 \sim 3.4$  eV). Extensive research efforts have been devoted to developing effective epitaxial growth method for high quality Ga<sub>2</sub>O<sub>3</sub> films and exploring high performance Ga<sub>2</sub>O<sub>3</sub> electronic devices. Exciting research achievements have been achieved in Ga<sub>2</sub>O<sub>3</sub> large size substrate, epitaxial growth techniques, and devices. These progresses make Ga<sub>2</sub>O<sub>3</sub> promising for realizing more efficient, high power, high frequency power electronics.

This special issue focuses on recent progress in the topics related to Ga<sub>2</sub>O<sub>3</sub> epitaxial growth and electronic devices. Both experimental and theoretical works will be accepted. We invite submission of original research articles/communications and comprehensive review papers to this special issue. The topics to be covered in this special issue include, but are not limited to:

- High voltage Ga<sub>2</sub>O<sub>3</sub> electronic devices;
- Ga<sub>2</sub>O<sub>3</sub> radio frequency devices;
- Ga<sub>2</sub>O<sub>3</sub> heterojunction devices;
- High quality epitaxial growth of Ga<sub>2</sub>O<sub>3</sub> films;
- Heterogeneous integration of Ga<sub>2</sub>O<sub>3</sub> on foreign substrates;
- Theoretical modelling and simulation of Ga<sub>2</sub>O<sub>3</sub> device;
- Large-size Ga<sub>2</sub>O<sub>3</sub> single crystals and wafers.

#### **GUEST EDITORS**

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# IOP Journal of Semiconductors

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# **Manuscript Submission:**

Manuscripts should be prepared according to Journal's guidelines, available at <u>http://www.jos.ac.cn/news/Preparing\_Your\_Manuscript.htm</u>.

Submit your manuscripts directly to the listing guest editors via the e-mail addresses above. Or directly submit via the online submission address at <u>https://mco3.manuscriptcentral.com/jos-iop</u>.

Please notify well in advance for your intension to submit a research paper.

### **Key Timetable Dates:**

Manuscript due: **December 31, 2022** Authors' notification: **February 28, 2023** Publication date: **May 31, 2023** 





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