

## Special Issue

# Advanced Micro-Integrated Power Devices and Gate Driving Technologies

### Message from the Guest Editor

Power electronics for renewable generation, HVDC transmission, electrified transportation and smart grids is shifting toward higher power density, faster switching, and greater intelligence. Meeting these goals increasingly relies on micro-integrated solutions that co-design power devices, gate drivers, sensing, isolation, and packaging to control parasitics, improve EMI/EMC, manage heat, and enhance reliability. We are pleased to invite you to contribute to this Special Issue in *Micromachines*, a journal dedicated to micro/nano-scaled structures, materials, devices and systems. This Special Issue aims to present original research articles and reviews on micro/nano-integrated power devices and gate driving technologies, as well as microsystem-enabled sensing and integration for next-generation smart power modules. Research areas may include but are not limited to:

- Micro-integrated driver ICs and protection
- Embedded micro-sensing (current/voltage/junction temperature/electric field)
- High-voltage isolation and advanced fabrication
- Low-inductance packaging
- Thermal management
- EMI/EMC modeling and mitigation
- SiC/GaN driving and integration
- Power system-on-chip
- Multi-physics modeling and reliability

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### Guest Editor

Dr. Zhanqing Yu

Department of Electrical Engineering, Tsinghua University, Beijing 100084, China

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### Deadline for manuscript submissions

31 October 2026



## Micromachines

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*Micromachines*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[micromachines@mdpi.com](mailto:micromachines@mdpi.com)

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## About the Journal

### Message from the Editor-in-Chief

You are invited to contribute research articles or comprehensive reviews for consideration and publication in *Micromachines* (ISSN 2072-666X). *Micromachines* is published in the open access format. Research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the general public have unlimited free access to the content as soon as it is published. As an open access journal, *Micromachines* is supported by the authors or their institutes by payment of article processing charges (APC) for accepted papers. We are pleased to welcome you as our authors.

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### Editor-in-Chief

Prof. Dr. Nam-Trung Nguyen

Queensland Quantum and Advanced Technologies Research Institute,  
Griffith University, West Creek Road, Nathan, QLD 4111, Australia

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