# Special Issue

# Nitrides and Carbides MEMS/NEMS

### Message from the Guest Editors

Gaining maturity for carbide/nitride micronanosystems in order to replace or extend silicon in harsh environments is currently stimulating long-term research. In this issue, many aspects related to the specificities of these new materials and sensor design using these emerging materials will be covered:

- Development of GaN, SiC, and innovative carbonitride materials for MEMS applications;
- Epitaxial techniques (MOCVD, MBE), atomic layer deposition, LPCVD and PECVD;
- Novel integration and fabrication strategies leading to carbide and nitride MEMS;
- Technological research on resonators and time–frequency devices (SAWs, BAWs, RF acoustic resonators);
- Piezo-resistive and piezo-transistor devices integrated on MEMS;
- Electromechanical transduction in nitride or carbide epitaxial structures;
- Nano-piezotronics for sensing or energy harvesting in group III nitride nanowires;
- Optical transductions for probes or MOEMS based on nitrides;
- Harsh conditions nitride/carbide MEMS demonstrations: high temperature, high radiation, and/or harsh chemical environments.

### Guest Editors

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### Deadline for manuscript submissions

closed (10 May 2022)

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# About the Journal

## Message from the Editor-in-Chief

*Micromachines* (ISSN 2072-666X) is a forum for cutting-edge interdisciplinary research on micro and nanoscale science and technology. We emphasise the practical, real-world value of micro and nanotechnologies that will place *Micromachines* in a leading position among engineering and technology journals.

## Editor-in-Chief

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