# Special Issue

# Semiconductor Packaging for the Age of Digitalization: New Materials, Technologies and Processes

## Message from the Guest Editor

We are continuously observing new challenges in microelectronic packaging. Major trends like the Internet of Things, digitalization, and the application of Artificial Intelligence (AI) drive new requirements for hardware: new chip and system architecture, an increasing number of electric interconnects, low power consumption and miniaturization. In addition, autonomous intelligent systems such as self-driving cars will cause new challenges for functional safety, reliability, and lifetime prediction in the field of electronic devices. Cost-efficient methods for condition monitoring needs to be integrated on package level and realized on system level. Another major trend is the transition of energy supply and electrification, which affects microelectronic packaging. Power electronics, e.g., converters and electromobility, enable, in combination with wide gap semiconductors, high operation temperature under severe environmental conditions which are demanding for electronic materials. The upcoming age of digitalization and Artificial Intelligence will be based on the hardware—based on new material, technologies, and packaging processes.

## Guest Editor

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## Deadline for manuscript submissions

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### Message from the Editorial Board

*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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