Special Issue

Advances in Elemental Characterization of Materials and Mass Spectrometry Technique Development

Message from the Guest Editors

The extensive development of novel micro-and nanotechnologies, based on thin films and nanoparticle-containing systems, requires precise and reliable chemical characterization techniques, being particularly important for microelectronics, microdevices for new energy applications, and biotechnological applications such as the chemical structure-determining electrical, mechanical, and optical properties of new materials and, therefore, their ultimate functionality. The Special Issue intends to cover all recent aspects of mass spectrometry, including fundamental research, method upgrades, as well as its applications. The scope will mainly focus on, but is not limited to:

- Mass spectrometry basics (ionization mechanisms, matrix effect, resolution and sensitivity improvements, signal enhancement methods, data interpretation, and troubleshooting);
- TOF-SIMS, including gas-assisted TOF-SIMS;
- Atom probe tomography (ATP);
- Chemical characterization of surfaces, thin films, nanoparticles, organic-inorganic hybrid materials;
- Correlative studies in micro-and nanoscale;
- In situ process analysis and early-stage detection of process malfunction.

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Message from the Editor-in-Chief

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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