Special Issue

Future Trends of Micro and Nanocomposites in Dentistry

Message from the Guest Editors

Resin composites emerged as the undisputed choice for direct dental restorations. Research on these materials has expanded substantially, and the topic now covers specific areas such as *antimicrobial* resin composites, *bioactive* materials, and *self-healing* formulations. A plethora of techniques is used in dental biomaterials, including spectroscopic techniques, such as FTIR, AFM, XPS, DSC and coupled with imaging techniques such as micro-CT, SEM, TEM, and analytical techniques, such as HPLC and gas chromatography. All of these are supported by a range of mechanical properties emphasizing the fatigue of materials and adopting a forensic approach with techniques such as fractography. We aim to gather a selection of papers covering all aspects of dental micro- and nanocomposite materials. Key areas will be nanoparticles, synthesis and incorporation in novel formulation of resin composites. Additionally, the issue will include antibacterial composites, emphasizing the biological aspect of either matrix or nanoparticles. This also applies to CAD/CAM composites. More speculative areas that have attracted attention recently, nanocoatings and biomineralization are also welcome.

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Deadline for manuscript submissions

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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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