Special Issue

Design and Development of Polymeric Matrix Composites for Dentistry

Message from the Guest Editors

Resin-based dental restorative materials are typically composed of an organic matrix, silane-treated reinforcing fillers, and chemicals that modulate the polymerization reaction. With regard to the organic matrix, Bis-GMA is the monomer most commonly used, in addition to diluent monomers such as TEGDMA and UDMA, which are used to improve the handling characteristics of materials. In terms of the polymerization modulators (i.e., initiation system), a binary system composed of camphorquinone as a photoinitiator and a tertiary amine as a coinitiator is the most frequently used in dental formulations, making the restorative material light-sensitive. This Special Issue focuses on the synthesis, formulation, and characterization of resin-based materials based on novel organic components that would result in materials with improved mechanical or chemical properties. It welcomes, but is not limited to, original research articles and reviews in the following research areas:

- Monomers for the formulation of novel organic matrices.
- Photoinitiators.
- Coinitiators.
- Polymerization inhibitors.
- Organic fillers.

Guest Editors

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Deadline for manuscript submissions

10 April 2026

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/243942

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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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