

Special Issue

Materials in Cell Therapies and Cell Manufacturing

Message from the Guest Editor

In cell therapy, cells with therapeutic potential are (1) harvested from a patient (autologous) or donor (allogenic); (2) expanded and sometimes genetically, chemically, or physically modified, and (3) then introduced into the patient. Cell therapies are being approved worldwide, including CAR T-cells to treat cancer, and mesenchymal stromal cells (MSCs) to treat acute graft versus host disease, while many others are undergoing clinical trials. In all steps of cellular therapies, from harvest to delivery, materials play a critical role. Cells are known to respond to a material's geometry, topography, stiffness, and chemistry. Thus, finely tuning materials throughout the cell manufacturing and cell therapy process is essential to ensure therapeutic success. In this Special Issue, we invite contributions from researchers exploring the role of materials in the context of cell therapies and cell manufacturing. Articles regarding materials for cell delivery, cell expansion, enhancing cell potency, cryoprotection, gene therapy, and bioreactors, among others are welcome as either full papers, communications, or reviews.

Guest Editor

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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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