Special Issue

Gel Dosimetry (2nd Edition)

Message from the Guest Editors

Over the past 25 years, radiotherapy technology has significantly enhanced dose conformation to tumors and healthy tissue preservation, providing nearly real-time feedback through high-precision treatments and theranostics. Consequently, developing advanced systems to meet the demands of modern ionizing radiation is crucial to address the limitations of traditional 1D and 2D dosimeters. In this context, gel dosimetry emerges as a key tool for evaluating 3D high-resolution dose distributions. **Gel dosimeters**, which rely on radiation-induced chemical reactions stabilized by gelling agents, allow for precise 3D dose mapping. Despite considerable research, gel dosimeters have not yet gained broad clinical acceptance due to three major practical concerns: the toxicity of active materials, oxygen sensitivity of the dose response, and spatial instability of dose information.

This Special Issue invites contributions from researchers and clinicians **on basic, translational, and clinical research in ionizing radiation dosimetry, including but not limit to optimization of dosimetric hydrogel matrices and exploration of the physical-chemical mechanisms in dosimetric responses.**

Guest Editors

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Deadline for manuscript submissions

closed (28 February 2025)

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About the Journal

Message from the Editorial Board

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

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