Special Issue

Scintillators for Medical Imaging Applications

Message from the Guest Editors

Scintillator materials are used as radiation-converting media in various applications of medical imaging. Particularly, scintillators (in powder, optical ceramic, or crystal form) are currently employed in a variety of applications, from low-energy examinations, such as mammography, general radiography, and computed tomography, to higher energies used in nuclear medicine and radiotherapy. Scintillators in crystal form are widely applied in nuclear medicine, for example in positron emission tomography (PET) and single photon emission computed tomography (SPECT) scanners. Current trends in multimodal imaging detectors (i.e., PET/CT, PET/MRI, and SPECT/MRI) recommend the exploitation of single-crystal scintillators or semi-transparent optical ceramics over a wider range of energies, covering CT/PET and portal imaging applications.

The aim of this Special Issue is to collect contributions about scintillators that involve growth production and experimental evaluation of single crystals, new crystalline host and co-doped scintillator materials, the integration of single crystals into medical devices, and theoretical calculations focusing on medical imaging applications.

Guest Editors

Dr. David Stratos

Department of Biomedical Engineering, University of West Attica, 12210 Athens, Greece

Prof. Dr. Ioannis Kandarakis

Radiation Physics, Materials Technology and Biomedical Imaging Laboratory, Department of Biomedical Engineering, University of West Attica, 12210 Athens, Greece

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Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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