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Advances in Nuclear Radiation Detection Materials

Guest Editor:

Dr. Qiang Xu

School of Materials Science and
Engineering, Xiangtan University,
Xiangtan, China

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Message from the Guest Editor

Dear Colleagues,

Ionizing radiation detector systems have been applied in a range of applications. To detect these invisible radiation signals, it is necessary to use materials that convert their energy to UV-Visible photons (indirect conversion method) or electronic signals (direct conversion method).

A series of scintillator (NaI, CsI, BGO, plastic, etc.) and semiconductor (Ge, Si, CdZnTe, etc.) materials including nanomaterials, thin films, and bulk crystals have been developed to detect invisible radiation signals. Recently, due to their unique optoelectronic properties, new materials such as perovskites and nanocomposites have been fabricated as radiation detectors. The research in this area has significantly improved radiation technology applications, which will make our lives safer and better.

This Special Issue will compile recent developments in the field of radiation detection materials. The articles will focus on growth methods of radiation materials, characterization, device fabrication, and radiation detection device applications.

Guest Editor

Dr. Qiang Xu



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Special Issue



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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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