Special Issue

Radiation Physics: Advances in DNA and Cellular Technologies

Message from the Guest Editors

DNA damage studies are of growing interdisciplinary interest, spanning fields such as radio-protection, radiotherapy, and space mission research. These investigations rely on modeling radiation interactions with matter at the nanoscale, incorporating not only the underlying physics but also the resulting chemical reactions and biological repair mechanisms.
To explore this complex research area, significant computational advancements have been made over the past decades, leading to the development of track-structure Monte Carlo tools capable of simulating various aspects of this intricate process. Notable examples include Geant4-DNA, GATE, PARTRAC, RITRACKS, TOPAS, TRAX-CHEM, CHEM-KURBUC, and IONLYS-IRT. This Special Issue aims to gather articles on recent progress in DNA damage modeling across diverse fields of applications, including radiobiology, radiochemistry, medicine, and space radiation research, with a focus on improving our understanding of DNA damage and its biological consequences.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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