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Gamma Rays: Technology, Applications and Health Implications

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Editors: Istvan Bikit (Department of Physics, University of Novi Sad, Novi Sad, Serbia)

Book Description:

Gamma-rays originate from the decay of excited states of the atomic nuclei in a similar manner as the visible light originates from the decay of the atom itself. Gamma rays belong to the class of ionizing radiation, together with alpha rays (doubly ionized atoms of helium) and beta rays (electrons). The spectroscopy of gamma rays, having the unique feature that by photoeffect transform their total energy to the energy of electrons in the detection material, contributed decisively to the establishing of the decay schemes of atomic nuclei. Strong sources of gamma radiation are widely used in contemporary technologies for cancer treatment, material modification, medical imaging, and food sterilization. The main goal of this book is to present to the non-specialist reader the contemporary applications of gamma rays by selected chapters on that issue. This book has 16 selected chapters from basic application of gamma rays to applied issues like food sterilization and polymer modification. (Imprint: Nova)

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