

Particle accelerators for the production of medical radioisotopes

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Radioactive isotopes play a key role in biology to unearth fundamental cellular processes. By acting as labeling tags, gamma-emitting radionuclides are useful tools to visualize the interaction of molecular probes targeting specific biomolecules in living organisms by means of external detectors. This information is an essential component of the current paradigm of molecular imaging, a diagnostic approach aimed at elucidating the origin and intrinsic nature of diseases at the molecular level. In turn, this fundamental knowledge can be used to develop more efficient therapeutic strategies that are tailored to a single individual based on his/her chemical profile (chemotype).

A key discovery has been that there exists a subset of radioisotopes that naturally manifest favorable bi

Although some radioisotopes are obtained through nuclear reactions characterized by high cross sections f

This lecture will review the crucial role played by nuclear physics in developing efficient methods for t

**If a proceedings is prepared,
</br> will you submit a contribution?**

Yes

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