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## **Nuclear Structure Studies far from Stability with Gamma-ray Spectroscopy**

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Far from the valley of beta stability, the nuclear shell structure undergoes important and substantial modifications. In medium-light nuclei, interesting changes have been observed such as the appearance of new magic numbers, and the development of new regions of deformation around nucleon numbers that are magic near stability. The observed changes help to shed light on specific terms of the effective nucleon-nucleon interaction and to improve our knowledge of the nuclear structure evolution towards the drip lines.

In the last years, particular effort has been put from both the experimental and theoretical sides on the study of neutron-rich nuclei where these effects manifest more dramatically and their evolution can be followed along the isotopic and isotonic chains. Very interesting results have been obtained in proton-rich nuclei and in particular along the  $N=Z$  line.

The most precise tool to study the excited nuclear states and their decay properties is high-resolution gamma-ray spectroscopy. Detailed nuclear structure information is becoming available with stable and radioactive beams by means of large gamma-ray spectrometers coupled to key complementary instrumentation that increases the selective power.

A review of the recent experimental findings will be presented together with their theoretical interpretation.

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