

Exploring neutron-rich nuclei through low and high energy reactions

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The neutron-rich nuclei have opened a new view to our conventional concepts in nuclear physics. The exotic structures and properties appearing in these regions are an outcome of several changes to our traditional view of nuclear structure. An important consequence is the change in single particle orbitals leading to changes in shell closure.

The low-energy ISOL type radioactive beam facilities and high-energy radioactive beam facilities offer complementary ways to understand the exotic nuclei. In this presentation I will discuss the nuclear transfer reactions program at TRIUMF, Canada using re-accelerated low-energy beams. Recent experiments on nucleon knockout reactions at relativistic energies probing the changes in shell closure performed at GSI, Germany will be discussed as well.