

Abstract Submitted  
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**Spectroscopy around  $N = 126$  nuclei produced by multi-nucleon transfer reaction** Y. HIRAYAMA, IPNS, KEK, N. IMAI, H. ISHIYAMA, S.C. JEONG, H. MIYATAKE, K. NIKI, M. OKADA, M. OYAIZU, Y.X. WATANABE, KEK, M. WADA, T. SONODA, A. TAKAMINE, RIKEN — The  $\beta$ -decay properties of the neutron-rich isotopes with neutron number  $N = 126$  are supposed to play a critical role for better understanding of r-process. We will study  $\beta$ -decay properties and nuclear structures around  $N = 126$  nuclei by  $\beta$ -decay and laser spectroscopy. As the first step, we are going to produce  $^{202}\text{Os}$  ( $Z = 76$ ,  $N = 126$ ), which has not been produced in any other facilities, by using the multi-nucleon transfer reactions in  $^{136}\text{Xe}$  (stable beam) +  $^{198}\text{Pt}$  (target) collision. The Pt target is used as the window of the gas catcher for collecting all reaction products by the collision, from which the  $^{202}\text{Os}$  will be extracted as singly-charged ions by laser resonance ionization and transported to a detection station after being mass-separated for the spectroscopy.

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