Strain induced Magnetocrystalline Anisotropy in double perovskite Sr_2FeMoO_6

Jicheol Son*, Jisang Hong
Department of Physics, Pukyong National University, Busan 608-737, South Korea

Transition metal oxides with perovskite structure is an essential class of materials which posses a range of typical properties in magnetism. Herein, we have systematically investigated the electronic structure, magnetic and optical properties of the double perovskite oxides Sr_2FeMoO_6 using first principles calculations. In particular, we have explored the strain effect on the magnetocrystalline anisotropy and optical property of Sr_2FeMoO_6.

(This research was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2013R1A1A2006071) and Converging Research Center Program through the Ministry of Education, Science and Technology (No. 2012K001312))