Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

Electronic conduction in Sr_2RuO_4 and Sr_2RhO_4 thin films YOSHIHARU KROCKENBERGER, HIROSHI IRIE, JOSH KUO, HIDEKI YAMAMOTO, NTT Basic Research Labs — Transition metal oxides belonging to the Ruddelsden-Popper series, e.g., T′-La_2CuO_4, Sr_2RuO_4, and Sr_2RhO_4, share several geometrical- and associated electronic features. In all cases, squares of transition metal oxide layers are separated by insulating layers, hence, the observed electronic conduction is anisotropic. So far, much attention has been attributed to the metallic conduction in cuprates and ruthenates and metallic conduction in rhodates has been sparsely acknowledged. This is partly due to the absence of superconductivity in the RhO_2 planes. We show that the metallic conduction in RhO_2 planes is subject to $d_{[Rh-O]}$ distance which can be tuned by epitaxial strain.

Yoshiharu Krockenberger
NTT Basic Research Labs

Date submitted: 13 Nov 2014 Electronic form version 1.4