



Magnetic Structures and Anomalous Hall effect in Non-collinear Antiferromagnetic $Mn_3XN(C)$ Compounds

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Antiperovskite $Mn_3XN(C)$ compounds have rich magnetic structures and related physical properties, especially the non-collinear antiferromagnetic states and its "lattice-spin-charge" strong coupling characteristics have attracted great attention. In recent years, the research on regulation of spin in Mn_3X (X: Ir, Pt, Sn, Ge, etc.) systems has become a hot topic in the field of spintronics. With the discovery of anomalous Hall effect in Mn_3Ga , Mn_3GaN , Mn_3Sn , Mn_3SnN , the regulation of the magnetic structures and their electronic transport properties in the antiperovskite Mn_3GaN and Mn_3GaC materials become more and more important. Herein, we report the phenomenon of multiple magnetic states and the different electronic transport behaviors in $(Mn,Cr)_3GaN$, Mn_3GaC . The results show a possibility for exploring novel antiferromagnetic spintronic materials.

Biography of presenting author:

Cong Wang: Professor of Physics in School of Integrated Circuit Science and Engineering, Beihang University in Beijing, CHINA. His research interests are in the fields of condensed matter physics, spintronics and solar energy materials. He has published more than 270 papers, 16 national patents and given more than 30 invited talks in International Conferences.

