



Contribution ID: 220

Type: Oral Presentation

## Unconventional transport behavior in some ultra pure systems

*Friday 11 July 2025 09:20 (20 minutes)*

Most monoatomic paramagnetic metals show a monotonic increase in electrical resistivity  $\rho$  with increase in temperature  $T$ . This behavior can be quite efficiently described by Bloch-Grüneisen (BG) model of conduction carrier scattering from acoustic phonons. The scope of the BG model that leads to a linear  $\rho(T)$  at sufficiently high temperatures and  $\rho \propto T^5$  at low temperatures is, however, not limited to monoatomic metals and it often accurately describes the electrical transport characteristics of multiautomic compounds. Depending upon the complexity of interactions and transitions, deviation from this behavior is not uncommon. However, the  $\rho(T)$  of metallic compounds rarely shows a positive curvature. So far only four compounds belonging to two different families, delafossites and layered pnictides, have shown this feature. Here we discuss the observation of this unusual behavior along with a few other uncommon transport properties of some novel compounds.

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**Session Classification:** Physics of Condensed Matter and Materials

**Track Classification:** Track A - Physics of Condensed Matter and Materials