

Abstract Submitted to the  
3rd Conference on Concepts in Electron Correlation  
30 September - 5 October, 2005  
Hvar, Croatia

## **Anomalous transport behavior of $RCuAs_2$ and $R_7Rh_3$ (R= Rare-earths) compounds**

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In this talk, I will review the results of bulk measurements on two classes of compounds,  $RCuAs_2$  and  $R_7Rh_3$  (R= Rare-earths), hitherto not paid much attention in the literature, with a particular focus on transport behavior. As far as  $RCuAs_2$  series is concerned,  $CeCuAs_2$  is found to be a Kondo insulator with an unusual temperature ( $T$ ) dependence of electrical resistivity ( $\rho$ ), while some "normal" R-members (R= Sm, Gd, Tb, and Dy) exhibit a minimum in  $\rho(T)$  above respective Néel temperatures ( $T_N$ ). With respect to the  $R_7Rh_3$  series, the sign of  $d\rho/dT$  above  $T_N$  (at least in some  $T$  range) is negative for heavy rare-earth members (unlike positive sign for light rare-earth members) and the observed magnetoresistance is unusually large in the paramagnetic even near 300 K. These results call for new theoretical approaches to describe electron scattering.

*Keywords* : Electrical transport, Kondo insulator, Rare-earth compounds