

Thermopower of Cerium compounds and alloys at very high pressures

Pablo Pedrazzini and Didier Jaccard

DPMC – University of Geneva, 24 Quai Ernest-Ansermet, CH-1211 Geneva, Switzerland

Thermopower is a very convenient tool to study strongly correlated electron systems since it gives important information about the evolution of some characteristic temperatures and about underlying physical mechanisms. This has propelled the development of techniques to measure this transport property at pressures as high as 25 GPa. We will present the results of recent multi-probe high pressure experiments that combine thermopower with resistivity and heat capacity measurements. The case of the intermediate valent compound CePd_3 that displays a largely enhanced thermopower up to 22 GPa will be compared with that of ferromagnetic $\text{CePd}_{0.6}\text{Rh}_{0.4}$, in which we find the conventional evolution of thermopower as p drives the system from ferromagnetism to an intermediate valent state.

E-mail Presenting Author : Pablo.Pedrazzini@physics.unige.ch