

## **Thermopower in correlated electron systems revisited: non-monotonic temperature dependence**

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We examine the role of the strong Coulomb interaction on thermopower, whose temperature dependence will be particularly discussed in detail. For this purpose, the single band Hubbard model is adopted as a minimum model and the strong Coulomb interaction is treated in the dynamical mean field theory. We find that the strong Coulomb interaction brings about the coherent-to-incoherent crossover as temperature increases, and then gives rise to a non-monotonic temperature-dependence [1]. Such a overall behavior is well described by the entropy consideration at high temperatures, i.e, the Mott-Heikes formula. In the light of our theoretical results, we discuss the thermoelectric response in some transition metal oxides [2]. Magnetic field dependence and multi-orbital effects will be discussed as well.

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