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Thermoelectric response in the incoherent transport region near Mott transition: the case study of  $La_{1-x}Sr_xVO_3$ MASAKI UCHIDA, K. OISHI, Y. ONOSE, J. FUJIOKA, Y. TOKURA, University of Tokyo, M. MATSUO, M. MORI, S. MAEKAWA, JAEA, W. KOSHIBAE, RIKEN ASI, S. MIYASAKA, Osaka University We report a systematic investigation on the high-temperature thermoelectric response in a typical filling-control Mott transition system  $La_{1-x}Sr_xVO_3$ . In the vicinity of the Mott transition, incoherent charge transport appears with increasing temperature and the thermopower undergoes two essential crossovers, asymptotically approaching the limit values expected from the entropy consideration, as known as Heikes formula. By comparison with the results of the dynamical mean field theory, we show that the thermopower in the Mott critical state mainly measures the entropy per charge carrier that depends on electronic degrees of freedom available at the measurement temperature. Our findings verify that the Heikes formula is indeed applicable to the real correlated electron systems at practical temperatures (T > 200 K).

> Masaki Uchida University of Tokyo

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