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Universal Scaling of Nonequilibrium Transport in the Kondo Regime of Single Molecule Devices GAVIN SCOTT, ZACHARY KEANE, Rice University, Dept of Physics & Astronomy, JACOB CISZEK[1], JAMES TOUR, Rice University, Dept of Chemistry, DOUGLAS NATELSON, Rice University, Dept of Physics & Astronomy, Dept of Electrical & Computer Engineering — Scaling laws and universality are often associated with systems exhibiting emergent phenomena possessing a characteristic energy scale. We report nonequilibrium transport measurements on two different types of single-molecule transistor (SMT) devices in the Kondo regime. The conductance at low bias and temperature adheres to a scaling function characterized by two parameters. This result, analogous to that reported recently in semiconductor dots with Kondo temperatures two orders of magnitude lower, demonstrates the universality of this scaling form. We compare the extracted values of the scaling coefficients to previous experimental and theoretical results.

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