Chemical substitution study on magnetism and superconductivity in Ce$_{1-x}$Sm$_x$CoIn$_5$.\textsuperscript{1} N. POUSE, S. JANG, B. WHITE, S. RAN, M. B. MAPLE, University of California, San Diego, C. C. ALMASAN, Kent State University — We report electrical resistivity, magnetization, and specific heat measurement measurements on the Ce$_{1-x}$Sm$_x$CoIn$_5$ system for 0 \( \leq x \leq 1 \). Superconductivity in CeCoIn$_5$ is suppressed with increasing Sm concentrations up to \( x = 0.1 \), above which there is no evidence for superconductivity from measurements down to 50 mK; antiferromagnetic ordering in SmCoIn$_5$ persists deep into the Ce-rich side, and is not completely suppressed until \( x = 0.25 \). We have observed the development of a low-temperature upturn in electrical resistivity for 0.70 \( \leq x \leq 0.85 \) which is consistent with behavior for a single-ion impurity Kondo effect and suggests that the substitution of Sm for Ce causes a change of the relative strength of competing Kondo and Ruderman-Kittel-Kasuya-Yosida energy scales.

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Naveen Pouse  
University of California, San Diego

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