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Electronic energy transfer in the layered single crystal $\mathbf{Sm[Ag_{.5}Au_{.5}(CN)_2]_3}$ STEFAN OEHRLEIN[1], CHRISTIE LAROCHELLE[2], Franklin and Marshall College — The aim of this study is to examine the energy transfer between $[Ag_{.5}Au_{.5}(CN)_2]_3$ donors and the Sm^{3+} acceptors with which they have been doped. The single crystals of $[Ag_{.5}Au_{.5}(CN)_2]_3$ have been doped with varying concentrations of Samarium. Energy transfer was characterized using steady-state excitation and emission spectra, lifetime measurements and time-resolved spectra. Data was obtained as a function of temperature between 77 K and room temperature. Strong luminescence is seen at all temperatures in the mixed-metal system, a contrast from the luminescence displayed in the pure gold and silver dicyanide donors.

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