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Doping studies and superconductivity in the transition metal doped Zr5-xTxGe3 system.[1] SHENG LI, XIAOYUAN LIU, VARUN ANAND, BING LV, Department of Physics, The University of Texas at Dallas, BING LV TEAM — Inspired by the discovery of superconductivity in the hexagonal Mn5Si3-type Zr5Sb3 and tetragonal W5Si3-type Hf5Sb3-xRux reported recently, we have carried out systematical studies of searching for possible superconductivity in the transition metal doped Zr5-xTxGe3 ($0 \leq x \leq 5$) system. Different transition metal species, either with the same Mn5Si3-type hexagonal structure or other different tetragonal W5Si3-type structures, are investigated. The details of evolved phase transitions, new physics, and superconductivity upon doping will be presented and discussed.

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