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**New Fe-based superconductor S doped FeTe using nontoxic elements** YOSHIHIKO TAKANO, YOSHIKAZU MIZUGUCHI, National Institute for Materials Science (NIMS) — Discovery of Fe-based new superconductor was received with considerable surprise. The Fe based-superconductor is expected to be a new series of high-Tc superconductors such as cuprate High-Tcs. However, one of the demerit of Fe based-superconductor is that it contains toxic element of As or Se. So, new Fe based- superconductors composed of nontoxic elements were required. Recently, we have discovered S doped FeTe as a new superconductor using nontoxic elements. Its superconducting transition temperature is around 10K and the upper critical fields is 70T. This material has merit for superconducting applications.

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