

KITP Conference

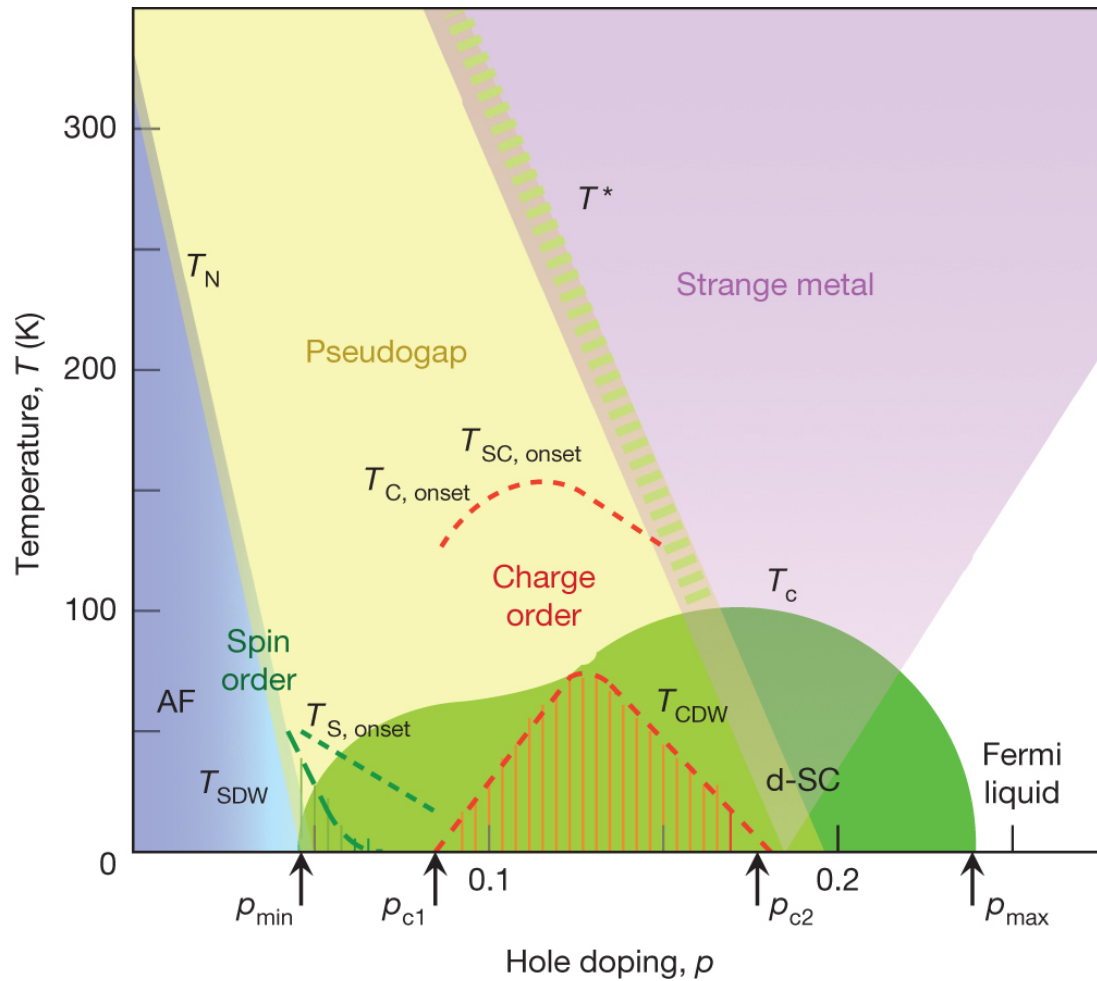
Phases and Phase Diagrams in High-Tc Superconductors

Monday, July 31, 2017

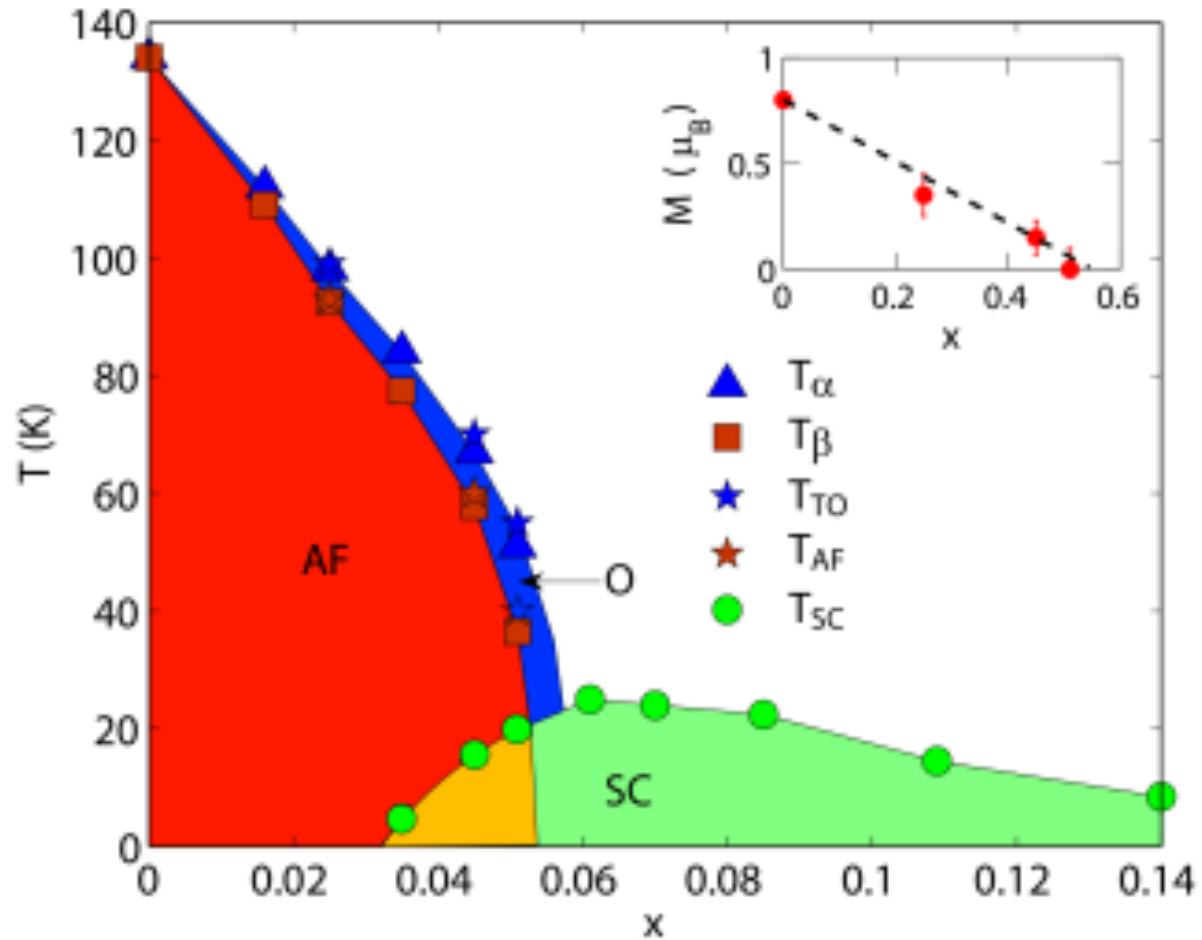
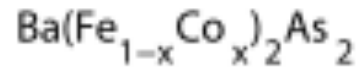
Robert J. Birgeneau

UC Berkeley | Arnold and Barbara Silverman Professor of Physics,
Materials Science and Engineering, and Public Policy

Phase diagram.



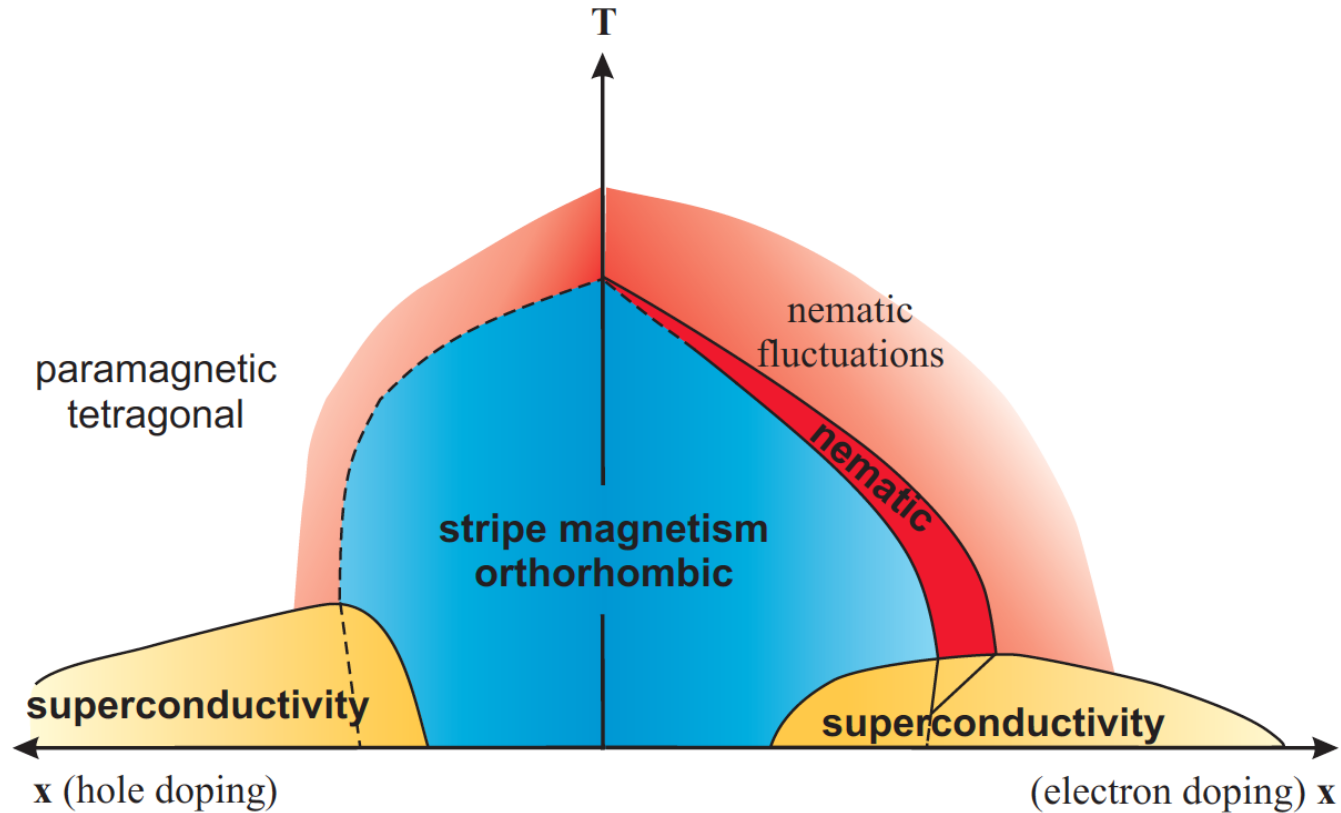
B Keimer *et al.* *Nature* **518**, 179-186 (2015) doi:10.1038/nature14165



James Analytis

Schematic phase diagram of the iron pnictides

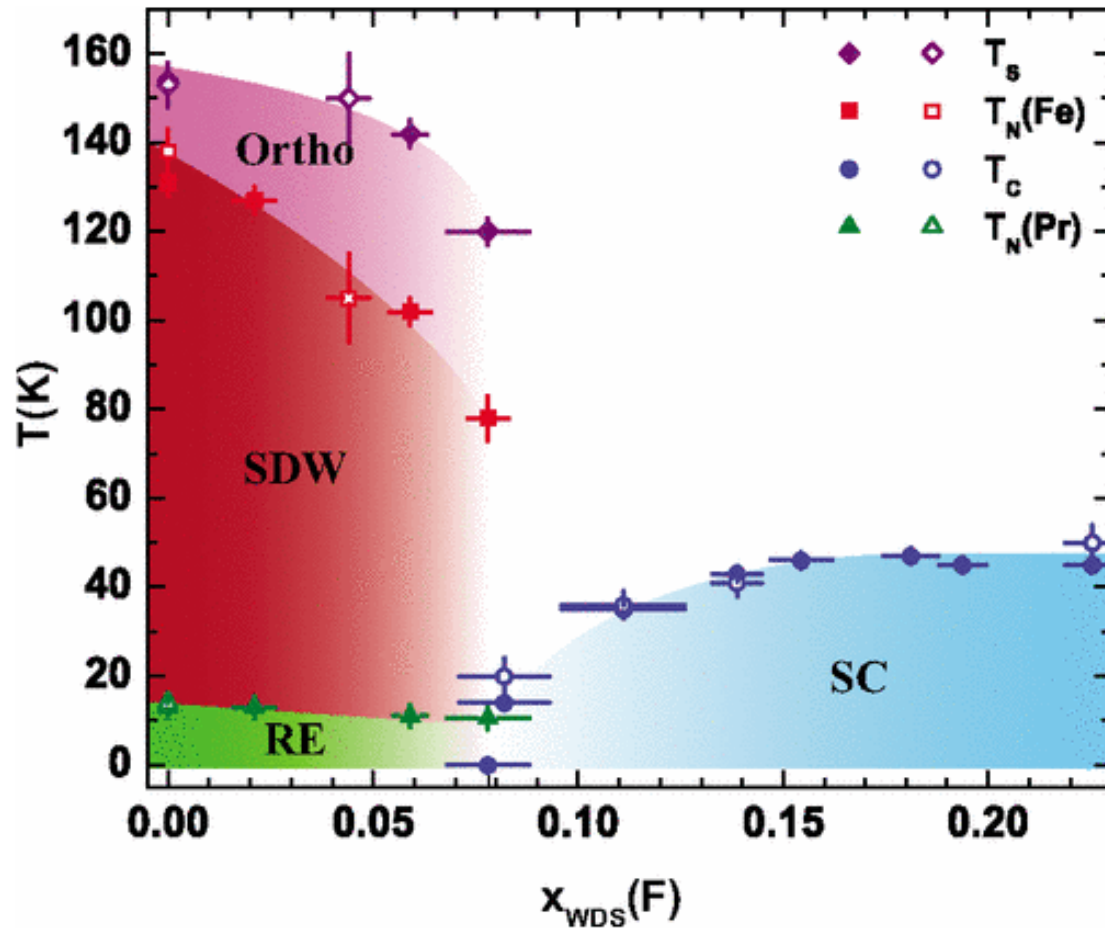
- what is the origin of the nematic instability?
- what is the importance of nematicity to superconductivity?



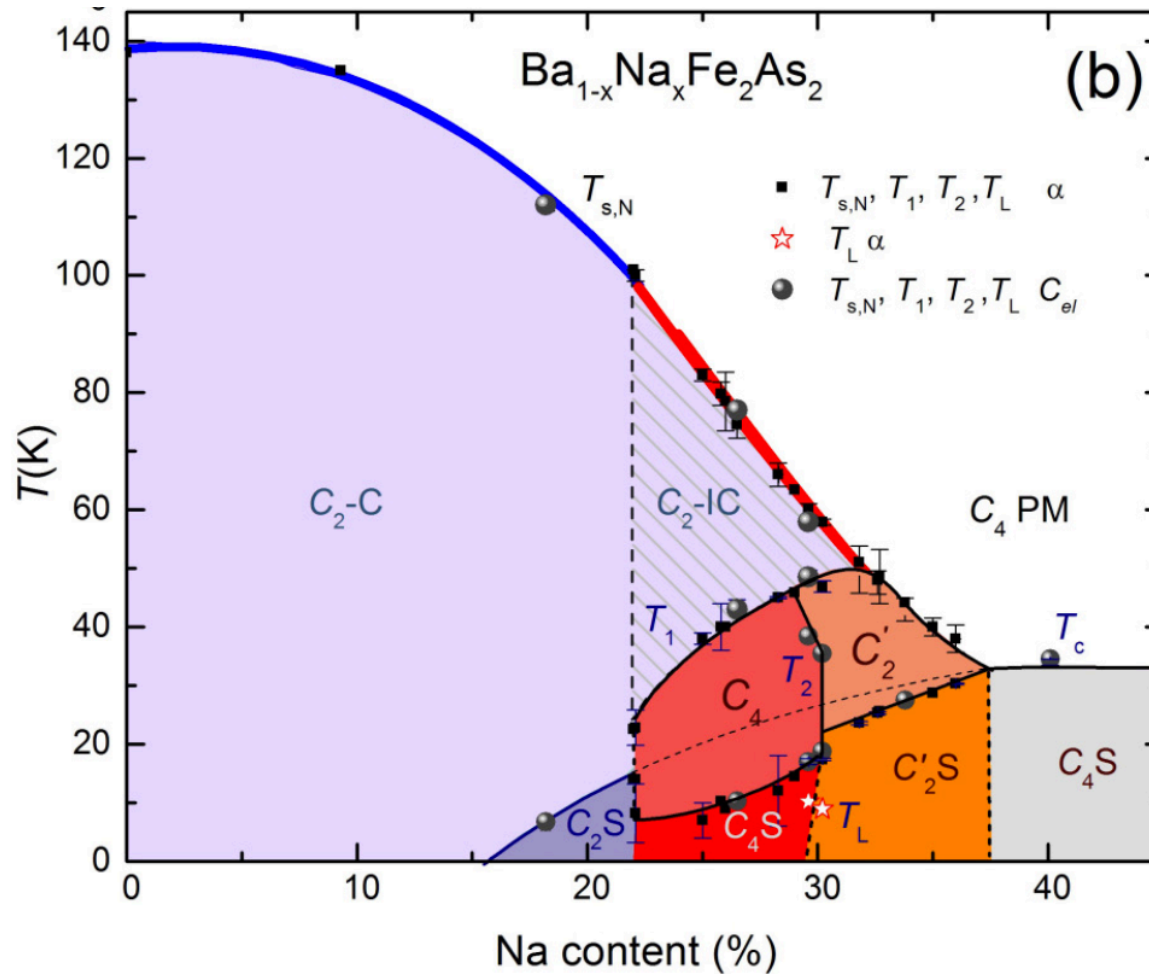
nematic transition = tetragonal-to-orthorhombic transition

Rafael Fernandes

Phase diagram of $\text{PrFeAsO}_{1-x}\text{F}_x$

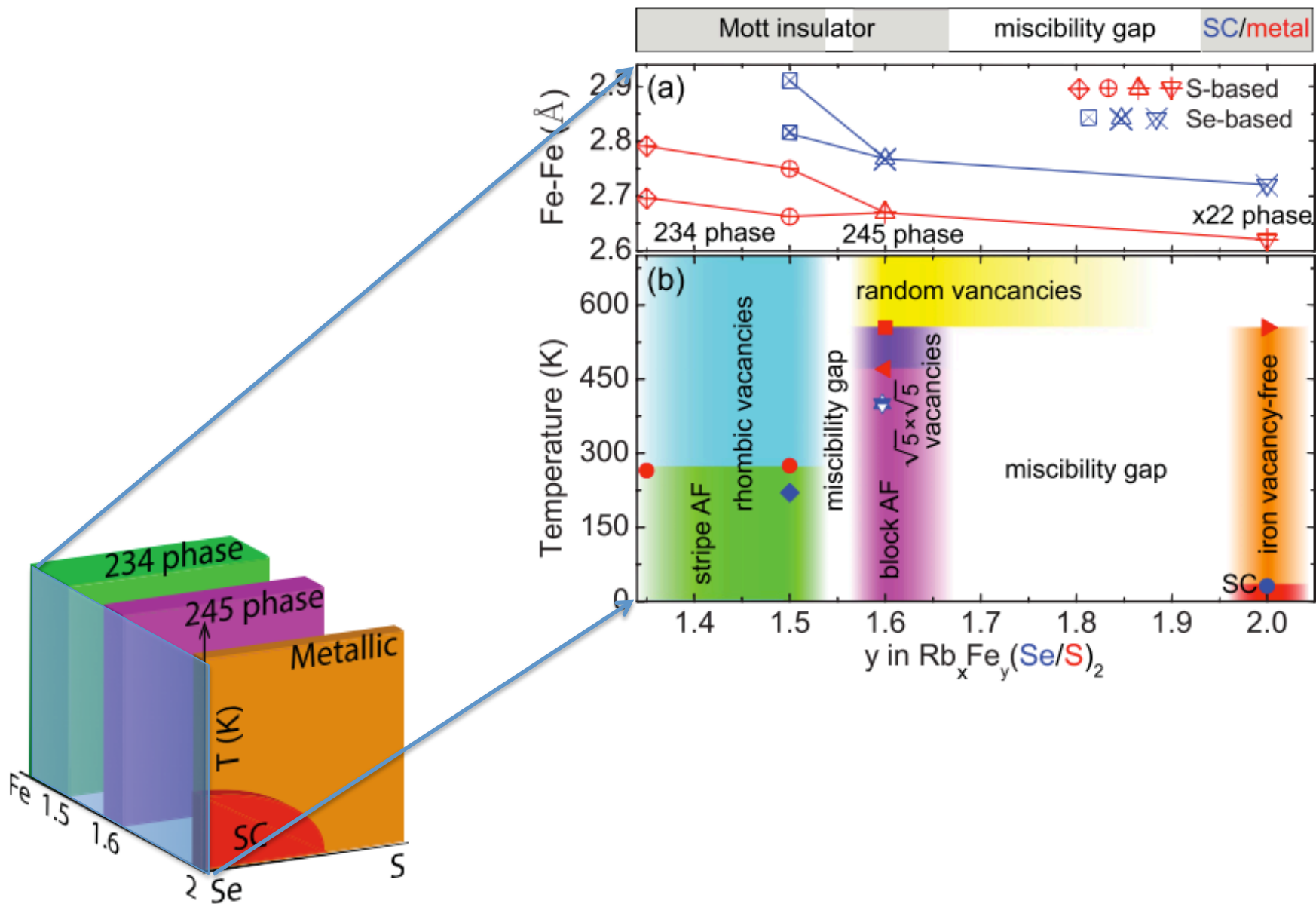


C. R. Rotundu



A. Bohmer *et al.* Nat. Comm. 6, 7911 (2015)
 L. Wang *et al.* Phys. Rev. B 93, 014514 (2016)

Varying Fe content in $\text{Rb}_x\text{Fe}_y\text{Se}_{2-z}\text{S}_z$



Substituting S for Se in $\text{Rb}_x\text{Fe}_y\text{Se}_{2-z}\text{S}_z$

