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### **Synthesis and Doping of LaFeAsO, BaFe<sub>2</sub>As<sub>2</sub>, and FeTe Compounds<sup>1</sup>**

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This talk is an overview of the various synthesis techniques used in making the high-temperature Fe-superconductors based on LaFeAsO, BaFe<sub>2</sub>As<sub>2</sub>, and FeTe, and the chemical-doping dependent phase diagrams established for these three families. Some of the basic physical properties will be discussed, along with the calculated electronic structures and neutron scattering results on the parents and their doped phases.

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