MAGNETISM AND SUPERCONDUCTIVITY IN IRON PNICTIDES

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The discovery of high temperature superconductivity in iron pnictides and chalcogenides has resulted in surprising new insights into high temperature superconductivity and its relationship with magnetism. This talk provides an overview of some of what is known about the electronic structure and the interplay of magnetism and superconductivity in these materials. Similarities and contrasts with the cuprate superconductors are emphasized. The superconducting pairing is discussed within the framework of spin fluctuations. Recent discoveries and some of the many remaining challenges to understanding these materials are discussed.

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