

NMR studies on the new iron pnictide superconductors

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We summarize our Nuclear Magnetic Resonance (NMR) and Nuclear Quadrupole Resonance (NQR) results on the new iron pnictide superconductors in the normal and superconducting state [1-5]. The Knight shift, the quadrupole frequency, and the spin lattice relaxation rate show peculiar, doping dependent behaviour in the normal and superconducting state indicating that iron pnictides are unconventional superconductors with strong electronic correlations. We will discuss the influence of spin fluctuations as well as pseudo gap phenomena on the superconductivity, and the temperature dependence of the spin lattice relaxation rate and Knight shift in the superconducting state.

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