

The Iron Age of Superconductivity: Impact of Scattering Methods

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Keywords: Superconductivity, Magnetism, Neutron and X-ray Scattering

The discovery of superconductivity in layered iron based compounds has attracted much attention by the solid state physics community. Finally, more than 20 years after the finding of high T_C cuprates, compounds without copper and oxygen were found to be superconducting at temperatures up to some 57K. In the meantime, differences and similarities between the iron pnictides and the cuprates have become apparent, where the most striking similarity is probably the proximity to magnetism.

Once again, scattering methods prove crucial to access microscopic information about this new class of compounds. Here we will give an introduction into the properties of this new class of compounds, review some of our recent extensive neutron scattering studies on magnetic order and the spin and lattice dynamics in a number of iron pnictides [1, 2] and compare with the situation in the cuprates.

References

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