



Dynamics as probed by muons

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Abstract

The muon spin rotation and relaxation (muSR) technique is well known in condensed matter physics for its high sensitivity in the detection of magnetic or superconducting transitions. Through their magnetic coupling to the host system, muons are also an excellent probe of dynamics.

The basic principles of muSR as applied to the study of dynamical phenomena will be exposed. Examples of applications in the field of magnetism will be provided and the complementarity of muSR with other techniques including neutron scattering will be highlighted. The talk will end with other applications of muSR involving dynamics e.g. for the study of superconductors or the diffusion of light elements like Li ions in materials for batteries.