



Ultrafast processes in the solid state

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Abstract

In this talk, I will give a brief introduction to ultrafast processes in the solid-state focusing on the excitation and dynamics of elementary excitations by light. I will then go on to describe how femtosecond time-resolved x-ray scattering holds promise as a high resolution spectroscopic tool of these excitations and their interactions. As an example, I will describe recent experiments probing short wavelength phonon dynamics in the limit of harmonic and a strongly anharmonic crystals.