ODSEK ZA KOMPLEKSNE SNOVI

Seminar odseka za kompleksne snovi F7

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Ultrafast spin density wave dynamics at intense optical pulse excitation.

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Ultrafast time-resolved optical spectroscopy has become an important tool for characterizing the various energy transfer processes occurring after absorption of intense laser pulses. The relaxation timescales observed after photoexcitation can in some case reveal the microscopic origins of a specific macroscopic material property. In this work I studied the properties of photoinduced excitations of the spin density wave state in EuFe_2As_2 and SrFe_2As_2 by systematic measurements of the temperature and fluence dependence of the transient reflectivity. The results obtained from the standard pump-probe measurements reveal the relaxation dynamics of the photoexcited quasiparticles while the three pulse technique uncovered the temporal evolution of the SDW order of the system undergoing photoinduced phase transition.

Predavanje bo v angleškem jeziku.
Vljudno vabljeni.