Experimentelle Physik 2

Seminar Festkörperphysik (CMP Seminar)

Aktuelle Probleme der Festkörperphysik für Studenten und Mitarbeiter
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Spin relaxation of localized electrons in monolayer $MoSe_2$

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We study the Hanle and spin polarization recovery effects on resident electrons in a monolayer MoSe2 by means of single-beam pump-probe technique. Localized electrons provide the main contribution to the spin dynamics signal at low temperatures below 15 K for small magnetic fields of only a few mT. The spin relaxation of these electrons is determined by random effective magnetic fields due to hyperfine interaction with the nuclei of MoSe2. From the magnetic field angular dependence of the spin polarization we evaluate the anisotropy of the intervalley electron g factor and the spin relaxation time.