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Campus Duisburg

Non-equilibrium electronic structure of graphene and graphite: a non-linear and time-resolved ARPES study

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Here I will provide some basic information about the non-equilibrium electronic properties of these materials. In particular, by detecting the ultrafast dynamics of excited carriers, closely linked to the ultrafast dynamics of excited carriers, closely linked to the Dirac spectrum, it is possible to observe the quasi-instant thermalization of the electron gas and to disentangle the subsequent decay into excitations of optical phonons and acoustic phonons, showing that the acoustic phonons decay is governed by super-collisions mechanisms.

Furthermore, by measuring the Image Potential States (IPS) it is shown that when the system is brought out of equilibrium, by an ultra-short light pulse tuned across the π-band van Hove singularity, important renormalization effects take place, suggesting the possibility of inducing and controlling in these materials many-body interactions via ultrashort light pulses.

Für diese Zeit steht eine Kinderbetreuung nach vorheriger Anmeldung zur Verfügung.

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