SFB1242

SFB 1242 Nichtgleichgewichtsdynamik kondensierter Materie in der Zeitdomäne

UNIVERSITÄT DUISBURG ESSEN

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Light-induced modification of Hubbard U in a strongly correlated materials: Insights from ab initio simulations

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Engineering effective electronic parameters is a major focus in condensed matter physics. Their dynamical modulation opens the possibility of creating and controlling physical properties in systems driven out of equilibrium. In this talk, I will discuss how the Hubbard U, the widely used on-site Coulomb repulsion in strongly correlated materials, can be modified on femtosecond timescales by a strong nonresonant laser pulse excitation. Using the recently developed time-dependent density-functional theory plus self-consistent U method, I will discuss the importance of a dynamically modulated U in the the optical properties of strongly correlated materials, and discuss how the predicted effects could be measured.

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

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