



23 June 2021, 11:00–12:00h

Zoom virtual meeting <https://desy.zoom.us/j/97001188073>

(Meeting-ID: 970 0118 8073, Password: 971942)

Daniela Pfannkuche

Universität Hamburg

Ultrafast Electron Dynamics with Matrix-Product-States

Dynamics on the attosecond time scale is governed by the motion of electrons. The complexity of a full quantum mechanical description of their intricate interactions and mutual correlations grows exponentially with their number. Expressing the many-body wave function in terms of Matrix-Product-States has been tremendously successful in exploring the ground states of strongly correlated solid state systems as well as of increasingly complex molecules. In this talk I will present our approach to generalize the Matrix-Product-State method to time-dependent phenomena and show first results for small molecules.