CFEL SCIENCE

SEMINAR

4th May 2023 - 10:00 h

CFEL – Building 99, seminar room IV (ground floor)

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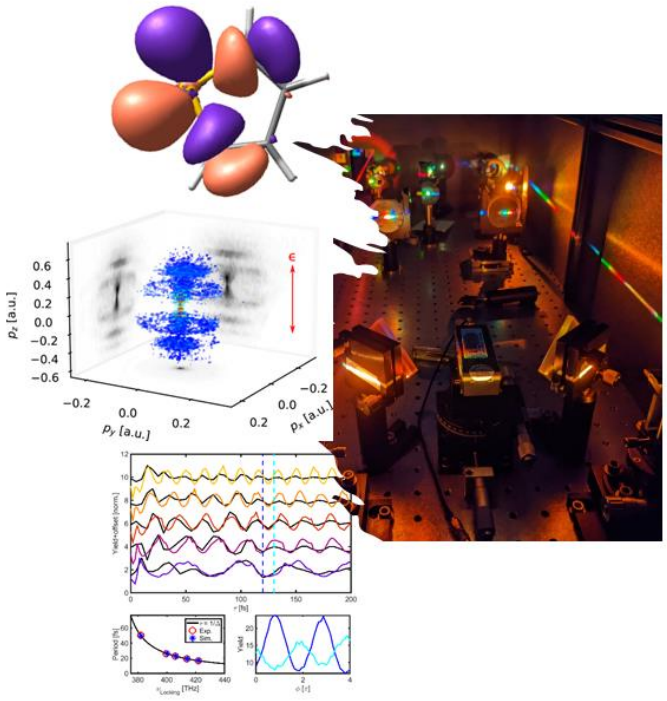
Long Lived Electronic Coherences in Molecules

I will discuss experiments and calculations that demonstrate long lived electronic coherences in molecules using a combination of measurements with shaped octave spanning ultrafast laser pulses, 3D velocity map imaging and calculations of the light matter interaction. Our pump-probe measurements prepare and interrogate entangled nuclear-electronic wave packets whose electronic phase remains well defined despite vibrational motion along many degrees of freedom. The experiments and calculations illustrate how coherences between excited states survive even when coherence with the ground state is lost, and have important implications for light harvesting, electronic transport and attosecond science.



Host: Francesca Calegari and Andrea Trabattoni / CFEL Molecular and Ultrafast Science Seminar