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Bldg. 5, DESY Auditorium

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Watching chemistry in the molecular frame

The spatial orientation of a molecule plays a crucial role for its interaction with other molecules, atoms or electromagnetic radiation.

I will discuss how moderately intense laser pulses – possibly assisted by weak static electric fields – can efficiently control the spatial orientation of molecules. Examples of applications of such fixed-in-space molecules are given including femtosecond time-resolved torsion of chiral molecules, ultrafast photoelectron angular distributions, and rotation of molecules dissolved in superfluid liquid helium droplets.

