

ULTRAFAST CHIRALITY: A TOPOLOGICAL CONNECTION

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Max Born Institute, TU Berlin, Germany, Technion, Haifa, Israel We introduce the concept of temporal geometry, which encompasses geometric and topological properties of temporal shapes, e.g. trajectories traced by a tip of a time-dependent vector, and apply it to ultrafast electron currents in chiral molecules. The curvature and connection emerge as ubiquitous features of photoexcited chiral electron dynamics opening a way to ultrafast, topologically non-trivial, enantio-sensitive chemical dynamics and new highly-sensitive robust chiral observables.











