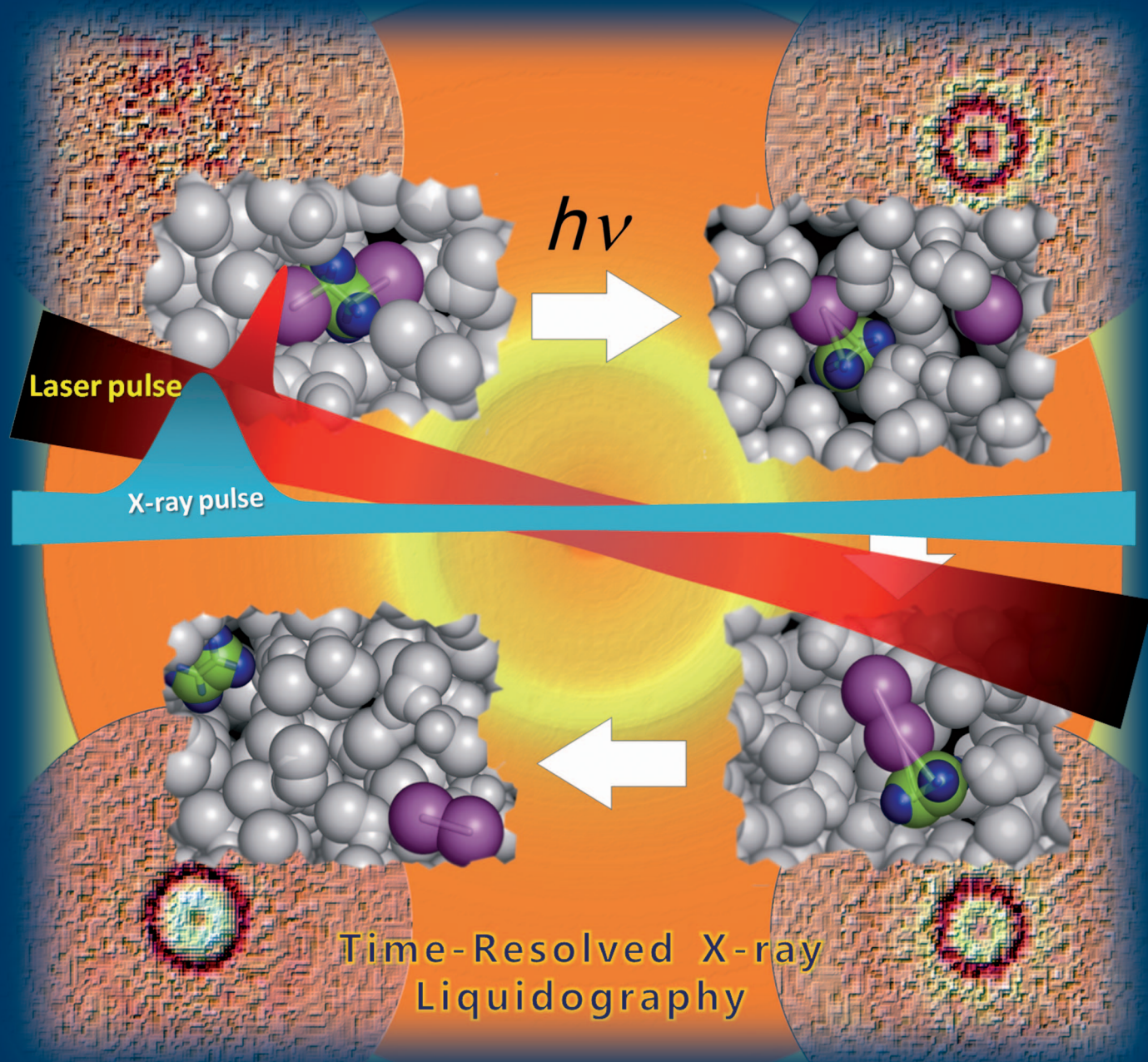


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Review: Spatiotemporal Kinetics in Solution
(H. Ihee et al.)

Highlights: Excitons in a Polymer Chain
(K. Bhattacharyya)

Fast Measurement of Circular Dichroism
(P. Bouř)

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**10th
Volume**

Cover Picture

**Tae Kyu Kim, Jae Hyuk Lee, Michael Wulff, Qingyu Kong,
and Hyotcherl Ihee***

The cover picture illustrates the technique of time-resolved X-ray liquidography (solution scattering), a direct tool to probe structural dynamics and spatiotemporal kinetics of solution-phase reactions. Picosecond optical pulses (red line) trigger a chemical reaction in a solution and 100 ps long X-ray pulses (cyan line) from a synchrotron probe the evolving structures of transient species over picoseconds to microseconds. Molecules ranging from small molecules to organometallic complexes, nanoparticles and proteins are studied. In the corners are shown time-dependent difference scattering patterns for the iodine elimination reaction of 1,2-diiodoethane ($C_2H_4I_2$) in a methanol solution, along with the associated major transient structures identified via data analysis. On page 1958 H. Ihee et al. review experimental and theoretical approaches, application examples and future perspectives for femtosecond applications of this technique.

