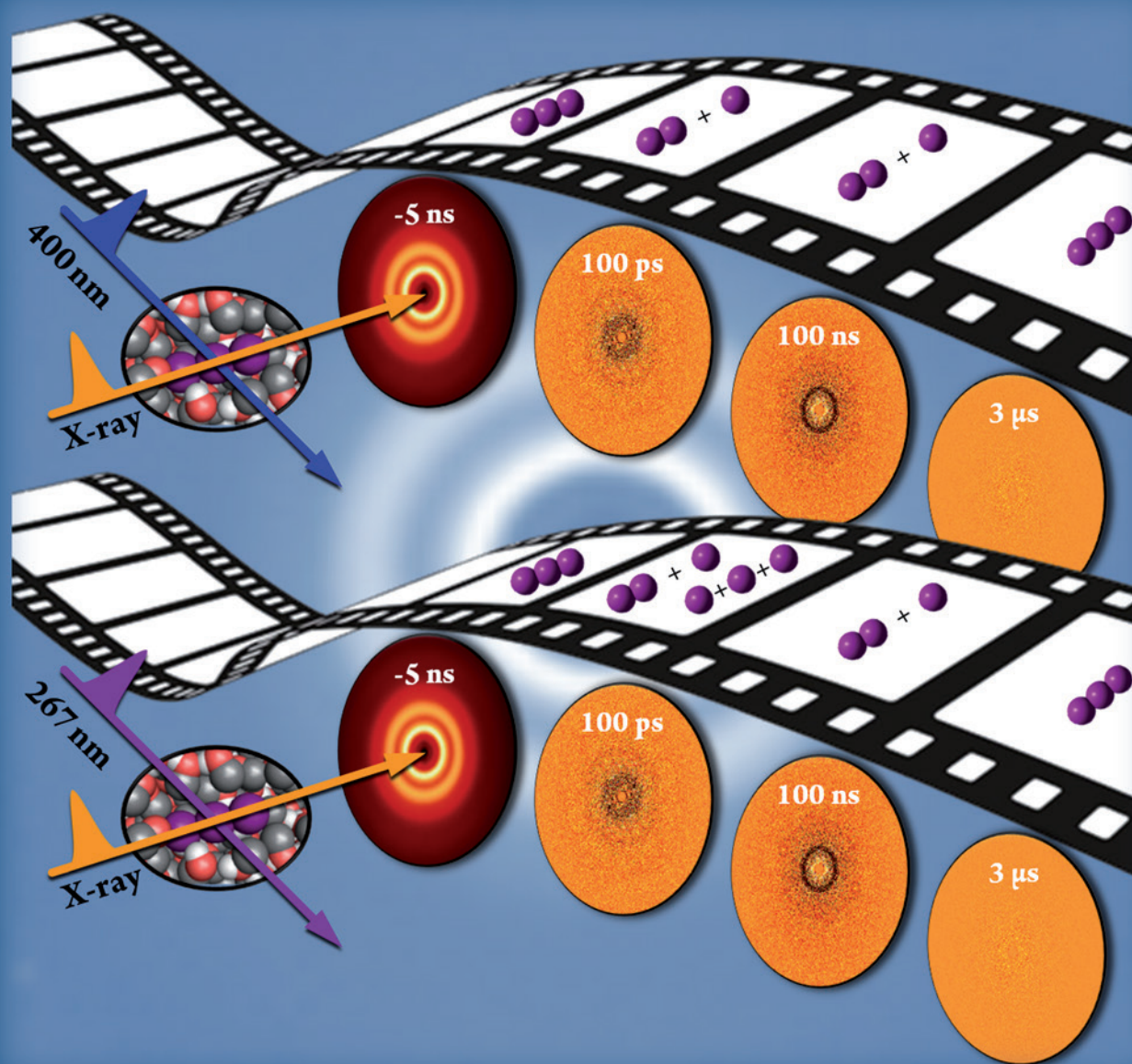


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Concepts: Dissolution of Polyols in Salt Solutions and Ionic Liquids at Molecular Level (R. Ludwig et al.), Hard X-ray Spectroscopic Nano-Imaging of Hierarchical Functional Materials at Work (J. C. Andrews, B. M. Weckhuysen)

Original Contributions: Temperature-Dependent Surface-Enrichment Effects of Imidazolium-Based Ionic Liquids (H.-P. Steinrück et al.)

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Cover Picture

Kyung Hwan Kim, Hosung Ki, Key Young Oang, Shunsuke Nozawa, Tokushi Sato, Joonghan Kim, Tae Kyu Kim, Jeongho Kim, Shin-ichi Adachi, and Hyotcherl Ihee*

Time-resolved X-ray liquidography (TRXL) is a powerful tool for revealing the structural dynamics of chemical reactions in solution. By recording the difference scattering pattern at various time delays between ultrashort laser and X-ray pulses this technique allows to collect information on the structural change of the reacting molecules. This is shown by H. Ihee et al. on p. 3687, who elucidate the reaction mechanism of the photo-dissociation of I_3^- in solution. In addition to the reaction dynamics of the solute species, the transient structure of the solute/solvent cage and the changes in solvent density and temperature are revealed.

