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Author
Ibrahimkutty S. Issenmann D. Schleef S. Muller A-S. Mathis Y-L. Gasharova B. Huttel E. Steininger R. Gottlicher J. Baumbach T. Bartels A. Janke C. Plech A.
Author/Editor Affiliation
Ibrahimkutty S. Issenmann D. Schleef S. Muller A-S. Mathis Y-L. Gasharova B. Huttel E. Steininger R. Gottlicher J. Baumbach T. Plech A. : Institute for Synchrotron Radiation, Karlsruhe Institute of Technology, PO Box 3640, Karlsruhe D-76021, Germany
Bartels A. Janke C. : Center for Applied Photonics, University of Konstanz, Universitatsstrasse 10, Konstanz D-78457, Germany
Title
Asynchronous sampling for ultrafast experiments with low momentum compaction at the ANKA ring
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Abstract
A high-repetition-rate pump-probe experiment is presented, based on the asynchronous sampling approach. The low- mode at the synchrotron ANKA can be used for a time resolution down to the picosecond limit for the time domain sampling of the coherent THz emission as well as for hard X-ray pump probe experiments, which probe structural dynamics in the condensed phase. It is shown that a synchronization of better than 1 ps is achieved, and examples of phonon dynamics of semiconductors are presented. (31 References).