Abstract Submitted
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Attosecond delay and angular asymmetry in plasmonic photoemission of C_{60}[1] T. BARILLOT, C. CAUCHY, V. LORIOT, C. BORDAS, F. LEPINE, Institut Lumiere matiere, France, P-A. HERVIEUX, Chimie des materiaux, France, M. GISSELBRECHT, P. JOHNSSON, J. LAKSMAN, E. MANSSON, S. SORENSEN, S. CANTON, Lund University, Sweden, J. DAHLSTROM, Stockholm University, Sweden., M. MAGRAKVELIDZE, H. CHAKRABORTY, Northwest Missouri State University, G. DIXIT, MBI, Berlin, Germany, M. MADJET, QEERI, Doha, Qatar — We present a theory-experiment joint study of effects of the giant plasmon resonance of C_{60} on photoionization angular asymmetry, phase and time delay. Phases of ionization amplitudes are utilized to compute Wigner-Smith delays and angular asymmetries of emissions from HOMO and HOMO-1 levels in time-dependent local density approximation (TDLDA) [1, 2], uncovering significant plasmon effects [3]. Electron momentum imaging spectroscopy is used to measure the photoelectron angular distribution asymmetry parameter at the plasmon that agreed well with TDLDA [3]. Preliminary results of our experiments using RABITT pump-probe metrology show promise of attosecond measurements of plasmon-driven delays to complement our predictions. * franck.lepine@univ-lyon1.fr
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[1] Madjet et al., JPB 41, 105101 (2008);
[2] Maurat et al., JPB 42, 165105 (2009);
[3] Barillot et al., (in review).

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