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Theory of probing attosecond electron wave packets via two-path interference of angle-resolved photoelectrons N.N. CHOI, Department of Physics, Kansas State University, Manhattan, Kansas, USA and School of Natural Science, Kumoh National Institute, Gumi, Gyeongbuk, Korea, T.F. JIANG, Department of Physics, Kansas State University, Manhattan, Kansas, USA and Institute of Physics, National Chiao Tung University, Hsinchu, Taiwan, W.-C. CHU, C.D. LIN, Department of Physics, Kansas State University, Manhattan, Kansas, USA —
We study theoretically the electron wave packet generated by an attosecond pulse train (APT) which is probed with a time-delayed infrared (IR) laser pulse. The APT creates an excited state and a continuum electron wave packet. By ionizing the excited state with an IR, a delayed new continuum electron wave packet is created. The interference of the wave packets from the two paths, as reflected in the angle-resolved photoelectron spectra, is analyzed analytically.

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