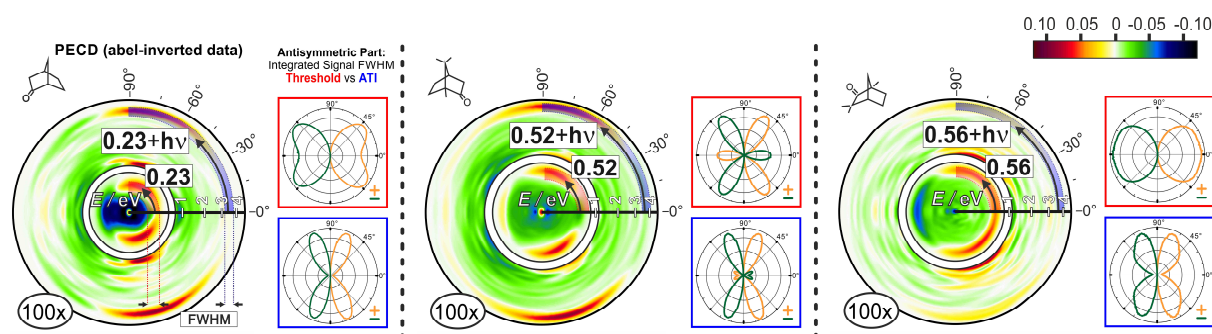


Photoelectron Circular Dichroism in the Above-Threshold-Ionization of Bicyclic Ketones observed via Femtosecond Laser Ionization

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Photoelectron Circular Dichroism (PECD) - i.e. the difference of the Photoelectron Angular Distribution (PAD) from ionization with left circularly polarized light and the PAD from ionization with right circularly polarized light - was so far investigated using synchrotron radiation on chiral molecules and shows asymmetries in forward/backward direction with respect to the light propagation. The effects measured are several orders of magnitude larger than in conventional CD [1]. A CD in ion yield was observed after Resonance Enhanced Multi-Photon Ionization (REMPI) in mass spectrometry of chiral molecules [2,3]. We demonstrated that PECD is also accessible via REMPI on chiral molecules using femtosecond laser pulses, containing highly structured asymmetries up to $\pm 15\%$ [4]. In this poster we show that PECD also appears in the Above-Threshold-Ionization on the bicyclic ketones Camphor, Norcamphor and Fenchone (see Figure, PECD of the Abel-inverted data). We observe contributions of higher order Legendre polynomials in the angular distributions as compared to the threshold ionization (see Figure, red resp. blue boxes).



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