

Photoelectron Imaging in the Molecular Frame

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The internal conversion of energy in photoexcited molecules is extremely important in the chemistry of several biological processes, such as vision. Developing new tools to monitor these processes is crucial to gain new insights into these complex dynamics. One such tool is photoelectron angular distributions (PADs), which can provide detailed information regarding the electronic character of the states involved in these processes. Traditional methods of obtaining these PADs can, however, provide only a partial and obscured measurement of this character. This report details experiments performed at the CLF's Artemis facility using strong field alignment and HHG photoelectron spectroscopy to overcome these limitations, and measure PADs approaching the molecular frame limit. We highlight the success of the experiments and implications for this new methodology

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