



Fig. 2 Ionization schemes of fenchone molecules used in the PECD measurements discussed in the article, by photons at 133, 400, 800 and 1850 nm from left to right. The photoabsorption cross section is adapted from Pulm *et al.*²⁴ The right panel shows the highest-occupied and 3s Rydberg state molecular orbitals.

a rather low repetition rate not suitable for coincidence imaging. In the following we show that high-order harmonic generation offers an elegant alternative.

Multiphoton PECD has emerged in the past few years as an alternative to XUV PECD, with a natural femtosecond resolution. Using ultrashort ~ 400 nm laser pulses, Lux *et al.* have demonstrated that a strong PECD could be observed in the 3-photon resonance-enhanced ionization of fenchone and camphor molecules.²⁵ Fanood *et al.*¹⁹ and Kastner *et al.*²⁶ have shown that multiphoton PECD has the necessary sensitivity to offer a reliable characterization of enantiomeric excesses. This technique is especially interesting in complex mixtures when combined with coincident mass spectrometry.¹⁹