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Control of spatially resolved spin polarization of photoelectrons produced from nitric oxide

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We theoretically study the electron dynamics of \pi_\pm orbitals of nitric oxide (NO) driven by strong elliptically polarized (EP) laser pulses. Our theoretical analysis shows that the interactions of \pi_+ and \pi_- orbitals with strong EP pulses will lead to the tilted polarization of the orbital with respect to the major axis of the EP field. As a result, the most probable ionization times of \pi_+ and \pi_- orbitals are after and before and the field maximum, respectively. According to the attoclock configuration, the spin-up and spin-down photoelectrons from \pi_- and \pi_+ orbitals, respectively, will be spatially separated due to different ionization times

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