VECTOR CORRELATION IN THE PHOTODISSOCIATION OF METAL NITROSYLS

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The vector correlation in the photodissociation of metal nitrosyls has been determined using linearly-polarized laser light and velocity-mapped ion imaging. The 225-nm dissociation beam excites a doubly-degenerate metal-to-ligand charge transfer in both η^5-C_5H_5NiNO and $Co(CO)_3NO$. State-resolved detection of the NO product through the A (v'=0) ← X (v"=0) transition reveals that both molecules dissociate promptly with a high degree of vector correlation.