

# MODELING PHOTODETACHMENT FROM $\text{HO}_2^-$ USING THE pd CASE OF THE GENERALIZED MIXED CHARACTER MOLECULAR ORBITAL MODEL

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Using the generalized model for photodetachment of electrons from mixed-character molecular orbitals, we gain insight into the nature of the HOMO of  $\text{HO}_2^-$  by treating it as a coherent superposition of one p- and one d-type atomic orbital. Fitting the pd model function to the ab initio calculated HOMO of  $\text{HO}_2^-$  yields a fractional d-character,  $\gamma_p$ , of 0.979. The modeled curve of the anisotropy parameter,  $\beta$ , as a function of electron kinetic energy for a pd-type mixed character orbital is matched to the experimental data.