

GATEWAY MEDIATED INTERSYSTEM CROSSING IN C₂H₂

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Recent Surface Electron Ejection by Laser-Excited Metastable (SEELEM) spectra have provided a clearer picture of the intersystem crossing of the $3\nu_3$ level of the S₁ surface of C₂H₂ to near-degenerate triplet states. The simultaneously recorded LIF and SEELEM spectra indicate that a single vibrational level of the T₃ surface couples the $3\nu_3$ level of the S₁ surface to a dense manifold of T₁ and T₂ states. This proposed coupling mechanism, Gateway Mediated Intersystem Crossing (GMISC), and other proposals will be discussed in light of the new data.