

COHERENT CONTROL OF IONIZATION FRAGMENTATION OF SO₂

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The coherent control of ionization fragment of SO₂ is obtained by managing the ionization contribution from a highly vibrational excited state of the ground electronic state, which is coupled to a ro-vibronic state of ^gR(6)_{1,5} of SO₂ \tilde{C} state and is coherently prepared by a pump laser pulse. Carefully choosing the probe wavelength, the ion fragment from either the "bright" or the "dark" state of SO₂ can be manipulated.