

NEAR-INFRARED MULTIPHOTON IONIZATION SPECTROSCOPY OF TiO

HEATHER ALICE MANN and PHILIP M. JOHNSON, *Department of Chemistry, The State University of New York at Stony Brook, Stony Brook NY 11794-3400.*

The near-IR transitions of TiO were observed using MPI spectroscopy. A Nd:YAG laser was used to ablate a Ti rod, situated in the path of a supersonic expansion of Ar gas, seeded with O₂, to produce TiO in the gas phase. The mass selectivity aspect of the spectroscopic technique provides a means to study a particular species of interest chosen from the mixture of products formed in the ablation process. Our mass selective results supplement rotationally resolved results obtained, without mass resolution, by Kobayashi et. al..