NEAR-INFRARARED MULTIPHOTON IONIZATION SPECTROSCOPY OF TiO

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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 O_2, 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..