MASS-ANALYZED PULSED FIELD THRESHOLD IONIZATION AND RYDBERG SPECTRA OF ThO

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Several new band systems of the ThO spectrum have been observed using resonantly enhanced multi-photon ionization (REMPI). Rotational constants and band origins were obtained for all new band systems we observed. An accurate value of the ionization potential for ThO has been determined from MATI, PIE and Rydberg spectra, and was found to be approximately 0.5 eV higher that the currently accepted value determined by Electron Impact. Analysis of Rydberg series for ThO molecule and rotational structure of the ground state of ThO^+ molecule will be also presented.