

Supporting Information

A Synchrotron-Based Vacuum Ultraviolet Photoionization Mass Spectrometer-Coupled Microreactor to Probe Thermocatalysis

Dababrata Paul^{1#}, Souvick Biswas^{1#}, Nureshan Dias², Matthew T. Finn³, Andrew S. Lipton⁴, Albert Epshteyn^{3*}, Musahid Ahmed^{2*}, Ralf I. Kaiser^{1*}

¹ Department of Chemistry, University of Hawai'i at Manoa, Honolulu, Hawaii 96822, United States

² Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, California 94720, United States

³ Chemistry Division, U.S. Naval Research Laboratory, Washington, D.C. 20375, United States

⁴ Pacific Northwest National Laboratory, Richland, Washington 99354, United States

* Corresponding author. E-mail: albert.epshteyn@nrl.navy.mil
mahmed@lbl.gov
ralfk@hawaii.edu

Authors contributed equally.

Table of Contents

Figure S1. Mass spectra of the products formed upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP recorded at a photon energy of 15.4 eV.....	S3
Figure S2. PIE curves of oxidation products upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP at 950 K.....	S4
Figure S3. PIE curves of hydrocarbon products upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP at 950 K.....	S5
Figure S4. Branching ratios of the catalytically decomposed products of JP-10 with and without Ti-Al-B NP at initial temperatures.....	S6

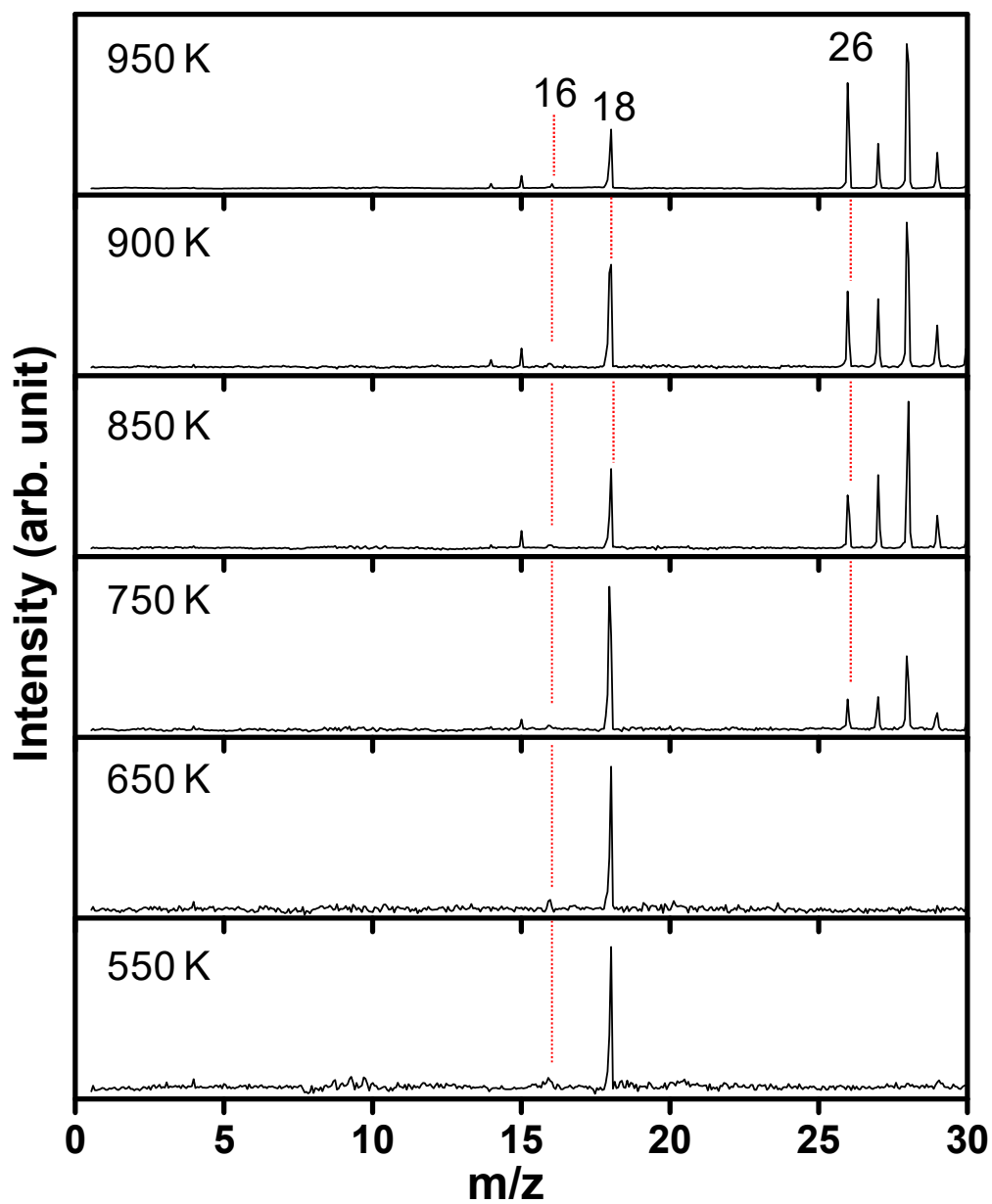


Figure S1. Mass spectra of the products formed upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP recorded at a photon energy of 15.4 eV in the 550 - 950 K temperature range for m/z upto 30 amu.

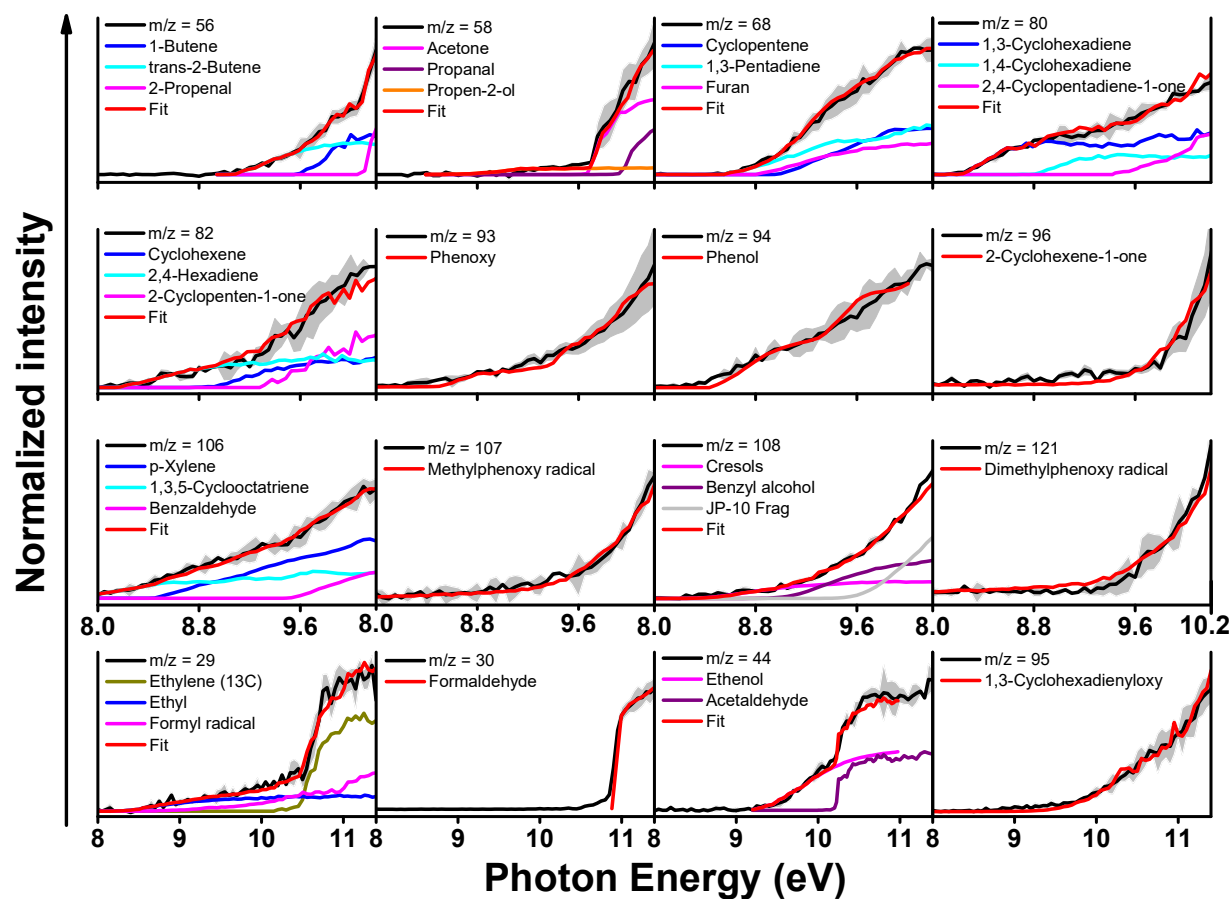


Figure S2. PIE curves of oxidation products upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP at 950 K.

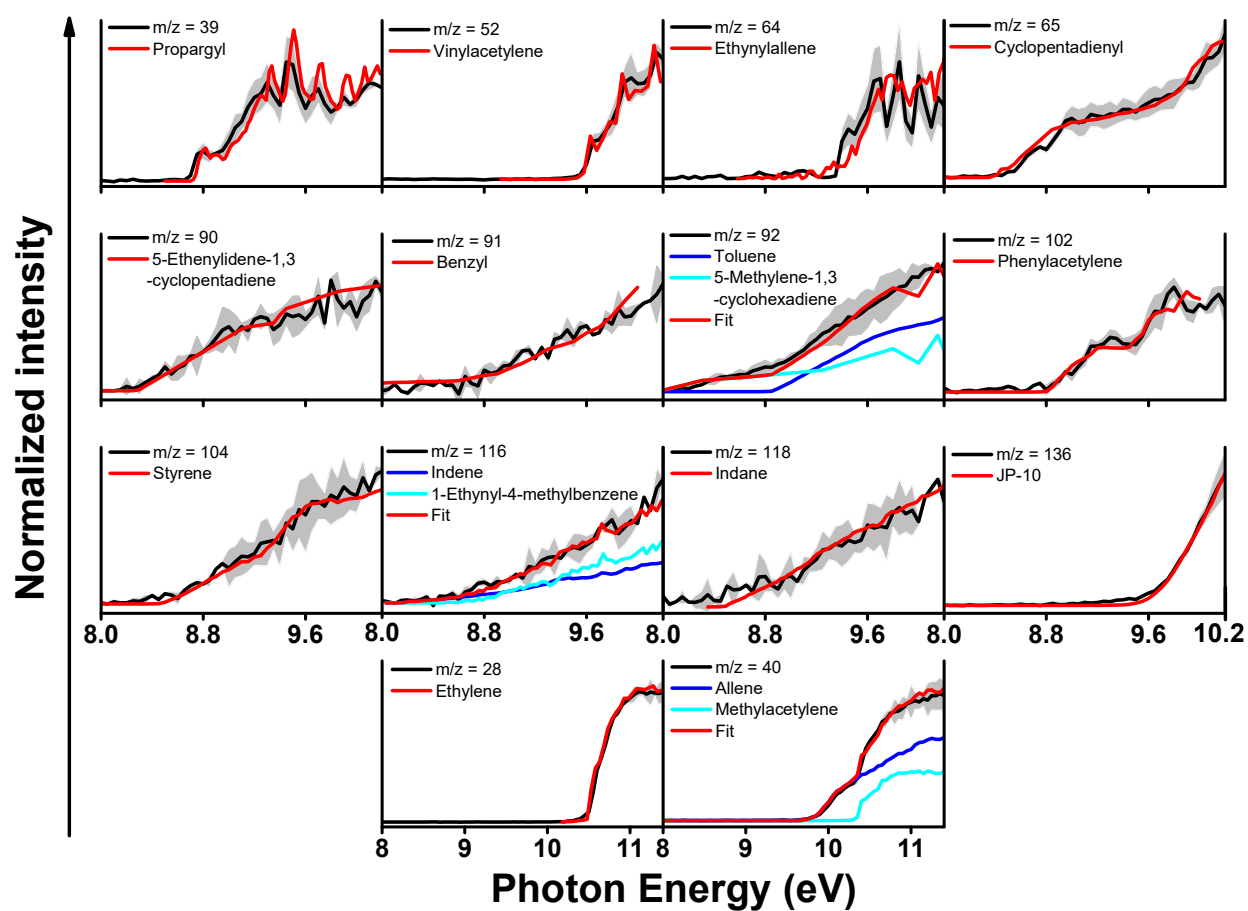


Figure S3. PIE curves of hydrocarbon products upon thermocatalytic oxidative decomposition of JP-10 over Ti-Al-B NP at 950 K.

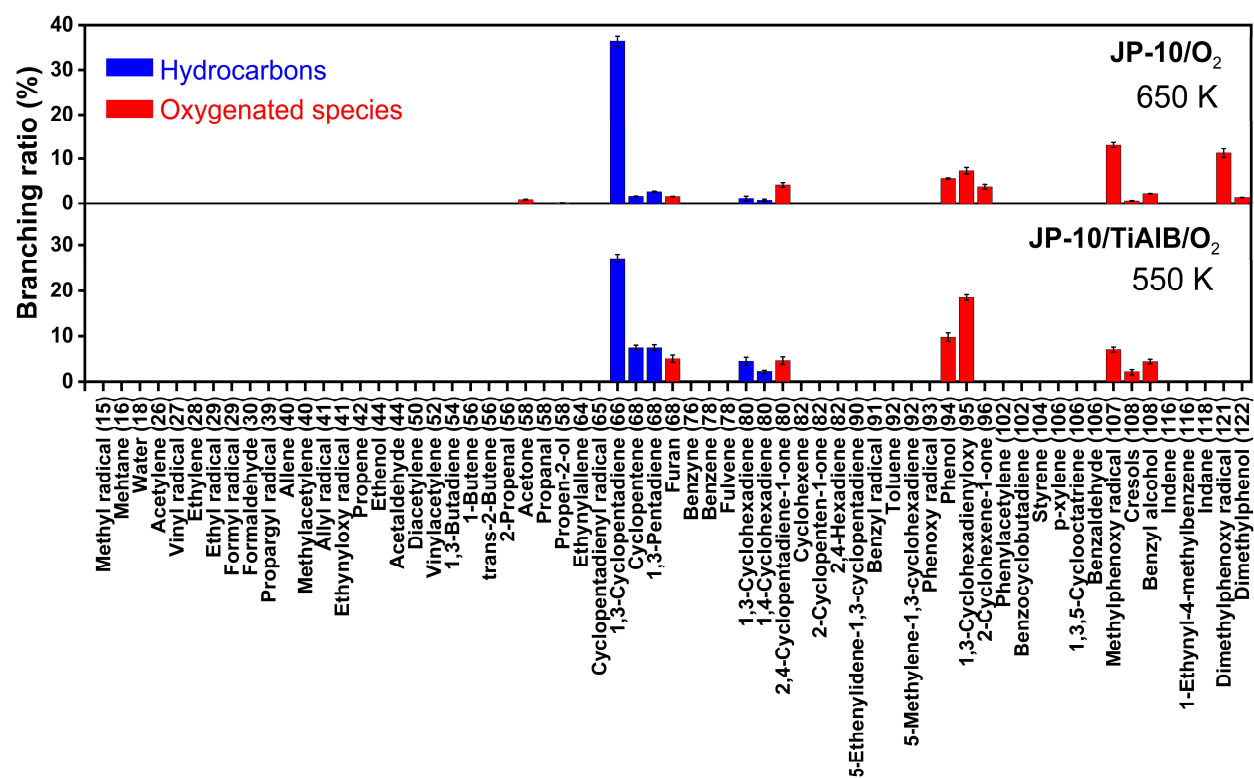


Figure S4. Branching ratios of the catalytically decomposed products for the oxidative decomposition of JP-10 with and without Ti-Al-B NP at initial temperatures of 550 K and 650 K, respectively.