Electronic Supplementary Material

For

Infrared Multiple Photon Dissociation Spectroscopy of Protonated Unsymmetrical Dimethylhydrazine, Proton-bound Hydrazine Dimer and Unsymmetrical Dimethylhydrazine Dimer

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Figure S1. IRMPD spectrum of (UDMH)$_2$H$^+$ compared to the IR spectra of six higher-lying isomers of (UDMH)$_2$H$^+$. Relative 298 K Gibbs energies in kJ/mol at the B3LYP, M06, mPW1PW91, PBE0, and MP2 levels are also provided. Two scaling factors were used: 0.975 for frequencies below 1400 cm$^{-1}$ (red) and 0.965 for frequencies above 1400 cm$^{-1}$ (blue). Structures are shown in Figure S2.
Figure S2. Structures of all (UDMH)$_{2}$H$^+$ species determined at the B3LYP-GD3BJ level of theory. Hydrogen bond lengths are provided in Å.