



JOURNAL OF
SYNCHROTRON
RADIATION

Volume 31 (2024)

Supporting information for article:

PEPICO analysis of catalytic reactor effluents towards quantitative isomer discrimination: DME conversion over a ZSM-5 zeolite

Morsal Babayan, Evgeniy Redekop, Esko Kokkonen, Unni Olsbye, Marko Huttula and Samuli Urpelainen

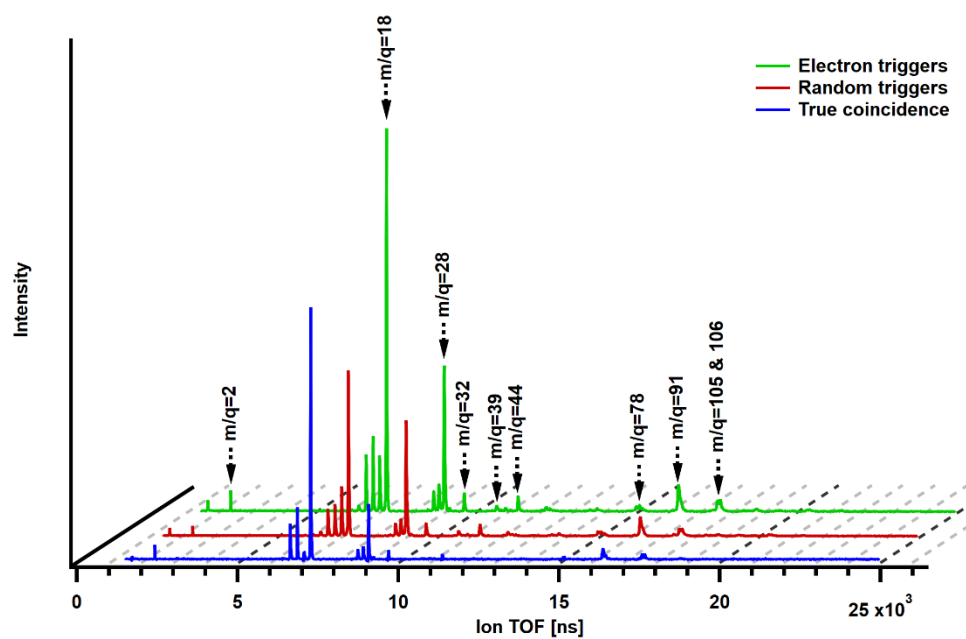


Figure S1 The TOF mass spectra of ions for random triggers, electron triggers, and true coincidences recorded with photon energy of 40 eV.

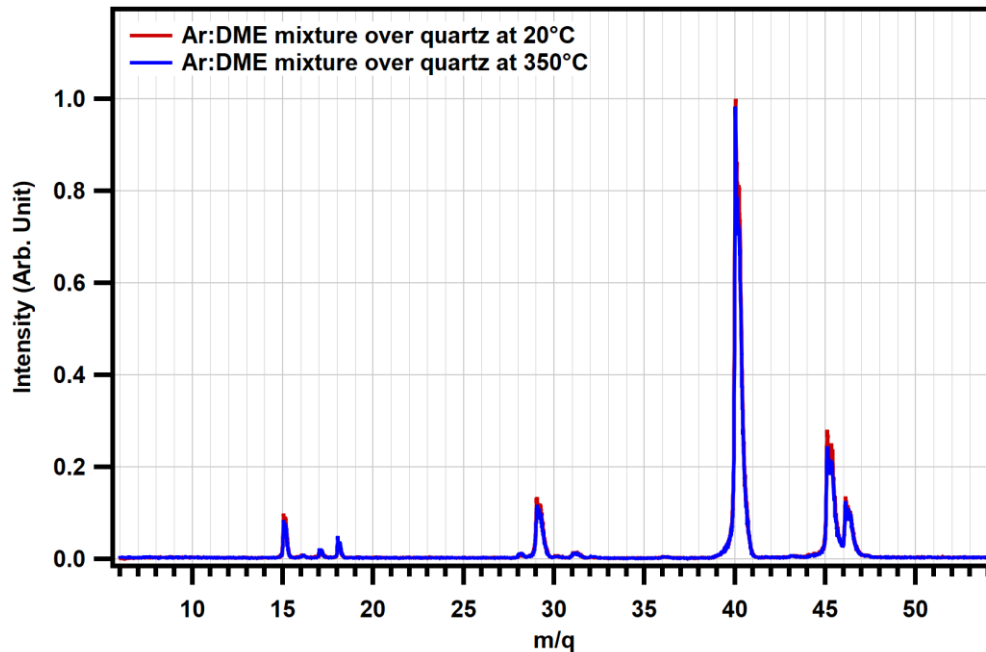


Figure S2 The TOF mass spectra of a mixture of Ar and DME (3:1 ratio) flowing over the empty reactor at 20 and 350 °C temperatures.

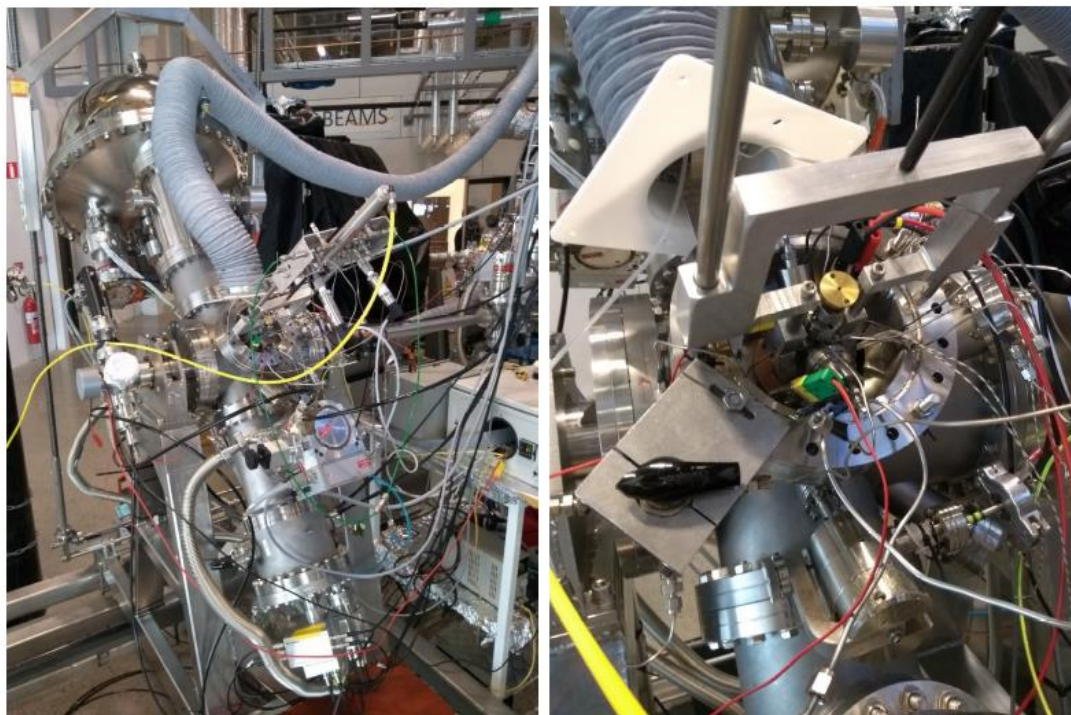


Figure S3 Photographs of the experimental setup at the GPES.

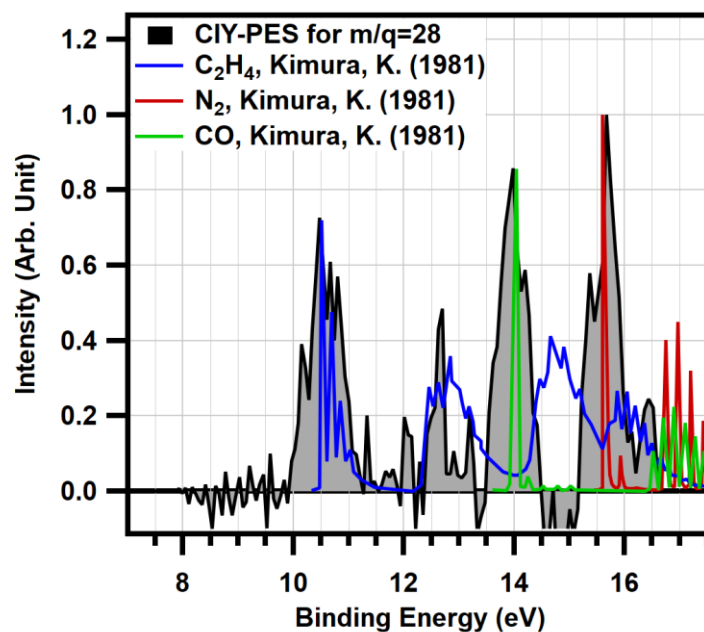


Figure S4 Comparison of extracted coincidence ion yield PES at 40 eV photon energy with reference spectra for ions with mass 28 (Kimura, 1981).

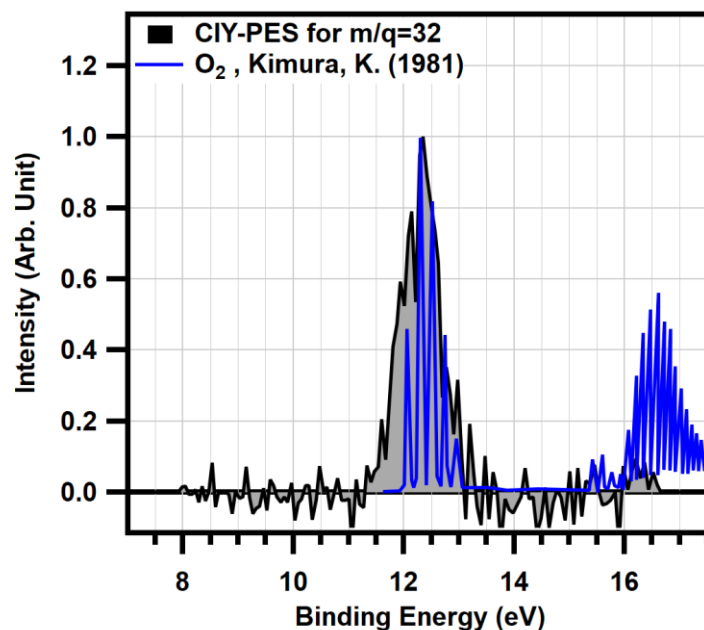


Figure S5 Comparison of extracted coincidence ion yield PES at 40 eV photon energy with reference spectrum for ions with mass 32 (Kimura, 1981).

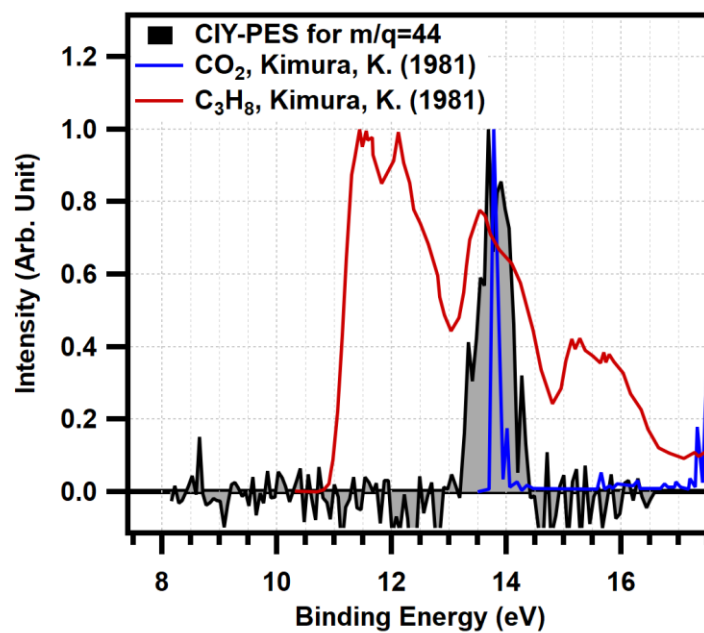


Figure S6 Comparison of extracted coincidence ion yield PES at 40 eV photon energy with reference spectra for ions with mass 44 (Kimura, 1981).

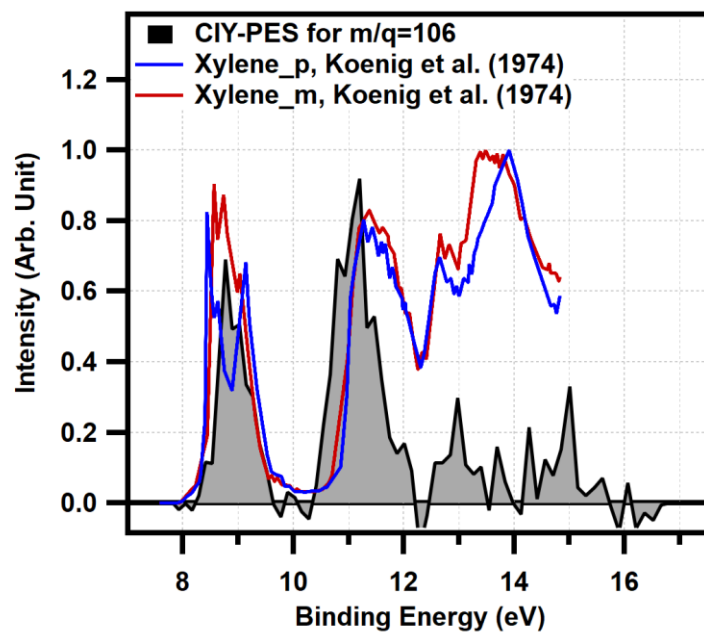


Figure S7 Comparison of extracted coincidence ion yield PES at 40 eV photon energy with reference spectra for ions with mass 106 (Koenig et al., 1974).

References

- Kimura, K. (1981). *Handbook of HeI Photoelectron Spectra of Fundamental Organic Molecules*. Halsted Press.
- Koenig, T., Tuttle, M. & Wielessek, R. (1974). *Tetrahedron Lett.* **15**(29), 2537–2540.