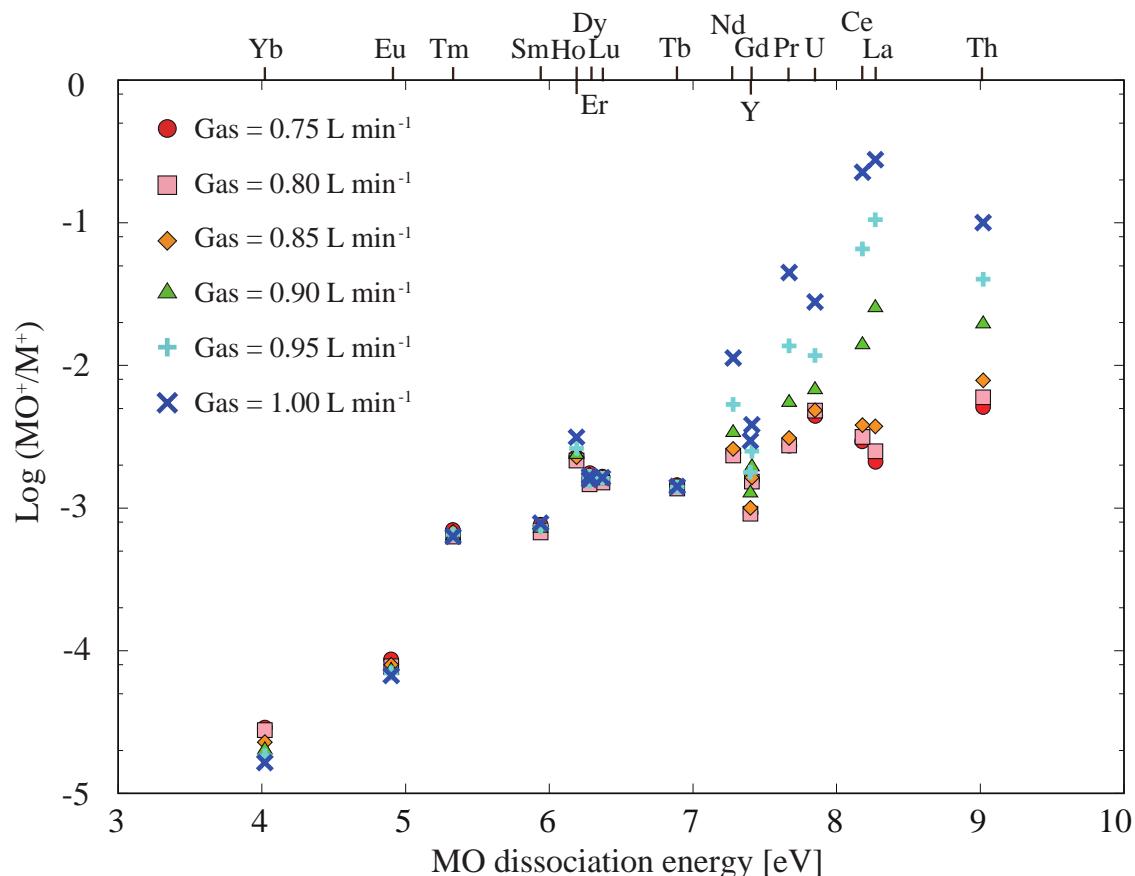


## Electronic Supplementary Information

**ESI Figure S-1.** Plot of  $\log (\text{MO}^+/\text{M}^+)$  of phosphate versus MO dissociation energy for REE, Th, and U with various sample gas flow rates.

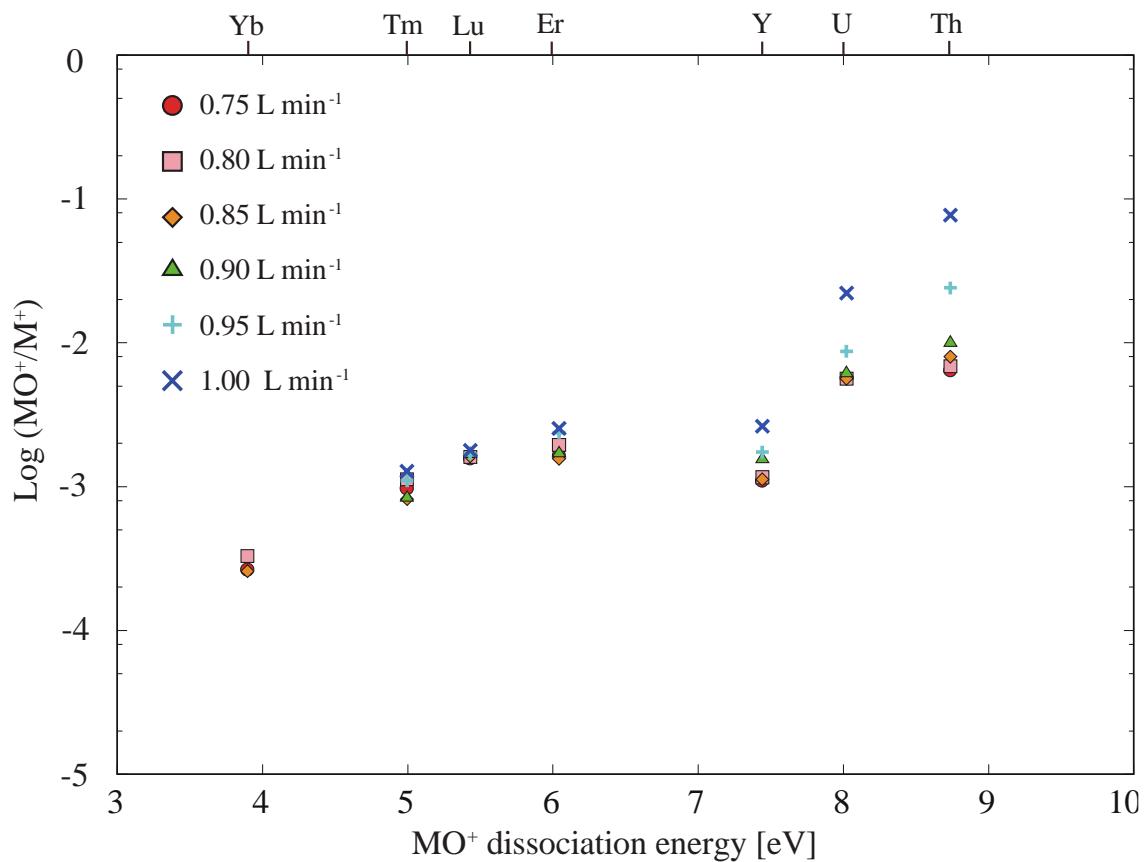


## References

- (1) Haynes., W. M. *CRC Handbook of Chemistry and Physics*, 94th ed.; CRC Press: Boca Raton, 2013.
- (2) Ackermann, R. J. *J. Chem. Phys.* **1976**, *65* (3), 1027.

## Electronic Supplementary Information

**ESI Figure S-2.** Plot of  $\log (\text{MO}^+/\text{M}^+)$  of zircon versus  $\text{MO}^+$  dissociation energy for REE, Th, and U with various sample gas flow rates.



## References

- (1) Haynes., W. M. *CRC Handbook of Chemistry and Physics*, 94th ed.; CRC Press: Boca Raton, 2013.
- (2) Ackermann, R. J. *J. Chem. Phys.* **1976**, *65* (3), 1027.