

Dedicated to my parents, Sofronia and Brebenel Arion

Acronyms

- COLTRIMS *Cold-target recoil ion momentum spectroscopy*
- CSD *charge separation distance*
- CS₂ *carbon disulfide*
- CHI₃ *iodoform*
- DFT *density functional theory*
- ECR *electron cyclotron resonance*
- EXAFS *extended x-ray absorption fine spectra*
- HCI *highly charged ions*
- IE *ionization energy*
- K *Kelvin*
- KER *kinetic energy release*
- MCP *micro-channel plate*
- NEXAFS *near-edge x-ray absorption fine spectra*
- PEPIPICO *photoelectron-photoion-photoion coincidence*
- SR *synchrotron radiation*
- SCF *self consistent field*
- Z *atomic number*

