

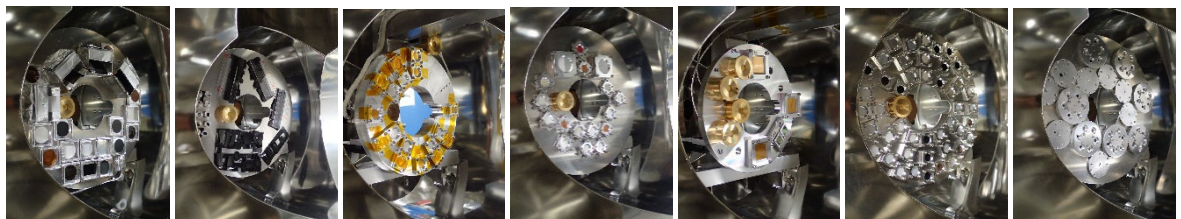
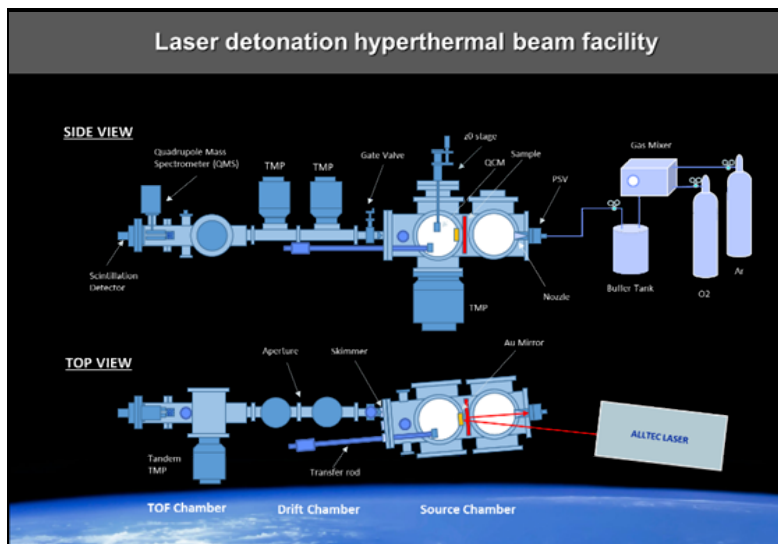
Atomic Oxygen (AO) beam exposure service

Due to many requests from the satellite companies, parts suppliers and space organizations / Universities, we are starting the atomic oxygen (AO or ATOX) exposure services to your samples.

From our experiences studying AO reaction with materials in low Earth orbit (LEO) for more than 30 years, we achieved highly-reliable three laser detonation beam sources at Tagawa Lab. in Kobe University as is shown in Figures below. We have published many research papers using these machines (see the list in this web page). One of our machines will be used for the AO exposure for your samples. This machine is capable to generate intense hyperthermal AO beam pulses (Average velocity: 5-8 km/s, Flux: $>1E+15$ atoms/cm²/s). We have already performed AO testing more than 20 only in FY2024.

Not only conventional AO exposure testing, but we offer new AO+Ar simultaneous exposure testing which could simulate AO+N₂ neutral gas environment in VLEO. Exposure results of this new technology provides similar results observed by the world's first VLEO materials erosion data obtained by the superlow altitude test satellite (SLATS).

If you are interested in AO testing with our laser detonation beam source, please feel free to contact us at tagawa@mech.kobe-u.ac.jp



※ Reference pdf is here (Sorry in Japanese)