NANOVAK

NANOVAK® offers global products

Load-Lock Equipped Coating Systems

Systems with Load-Lock chambers are preferable for faster processing and higher quality coating of products. Sample loading/unloading is done in the Load-Lock chamber and the sample is transferred to the main chamber using a magnetic transfer arm. Within our product range, Load-Lock enhancement is applicable to Thermal, Sputtering, E-Beam or HiPIMS type systems. It may be possible to complete the coating process in 10^{-7} Torr high vacuum cleanliness while loading a new wafer very 15 minutes with Nanovak Load-Lock setup.

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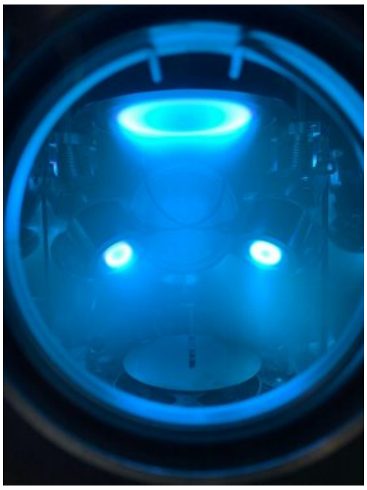

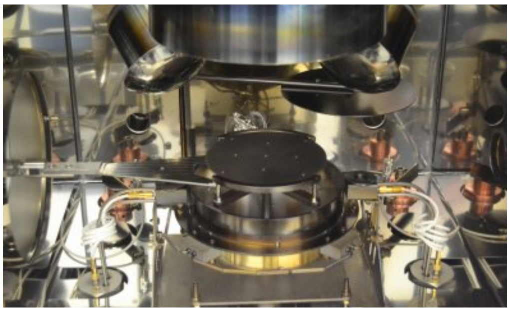

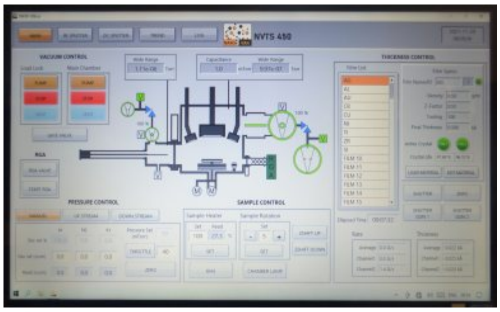

- Prismatic / cylindrical vacuum chamber made of SS304. Feather-touch, electro-polished inner surface, SS304 liner, water cooled surfaces when needed
- Standard 1", QF, CF, ISO ports as desired. Easy upgrade to additional thermal, sputter sources
- UV-blocking, observation window, rotatable door shutter. Sample Shutter-thickness control by LabVIEW program
- Turbo-molecular, mechanical pump, dry pump with high pumping speed. 10^{-8} Torr base pressure level in main chamber
- Separate pumps for Load-Lock. 10^{-6} Torr vacuum level in the Load-Lock in 10 minutes. Load-Lock can be adapted to systems with sputtering, e-beam and thermal sources
- Throttle, vent, isolation and gate valves. Chamber remains under vacuum with an isolation valve when not in use
- Automatic computer control and/or panel control with real time LCD displays. Fully automatic deposition by software
- Automatic closed loop water cooling system, interlock controlled, automatic on-off process control to prevent premature use of power without vacuum, water cooling on
- 1"- 6" sputtering guns , RF and DC driven guns with flex head, self-axis rotation and compression seal
- Ability to coat conductors like Au, Al, Ti, Ni and insulators like MgO, TiO_2, SiO_2, TiN, at high rates with recipe control
- (1000 - 10^{-9} Torr) vacuum control and measurement, ability to fix pressure to desired values by downstream/upstream means
- 50 - 600 °C PID controlled sample heating, ±1 °C sensitivity
- 2 - 30 rpm sample rotation with speed adjustment, PC control of speed, sample plasma cleaning by DC/RF
- Easy sample loading/unloading with magnetic arm. 2", 3",4", 6", sample loading ability
- 0.1 Å/s dual-channel precision thickness-rate measuring unit with two QCM's
- 8V - 500A, 4000W thermal sources for sequential and co-evaporation. Special design to prevent cross contamination, easy replacement of sources and materials
- 50-800±1°C effusion cells for evaporation of organics
- Digital MFC leaked gas inputs (Ar, N_2, O_2, He, CH_4, ...), mix of gases, 0.1 sccm sensitivity, reactive sputtering ability.
- 1.5 hour experiment cycle-time, possibility for 10-15 experiments per day
- 2 year warranty for materials, design and workmanship

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