

NVSP-400

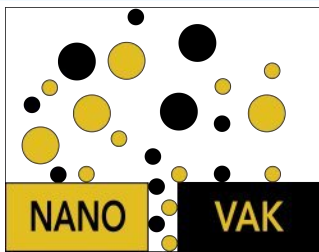
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Magnetron Sputtering Systems

Box type Physical Vapor Deposition system, are based on prismatic/cylindrical vacuum chambers. These systems have 1-4 DC/RF sputtering sources. Multi-layered thin films of 4 different materials can be prepared by NVSP system. NANOVAK® Sputter System can be tailored to fit user desires in order to produce multilayered, nanosize metallic, oxide, carbide or nitride films, such as Ni, Fe, Au, Zr, Ti, Si, SiO₂, ZnO, TiO₂, Si₃N₄, SiC, etc.

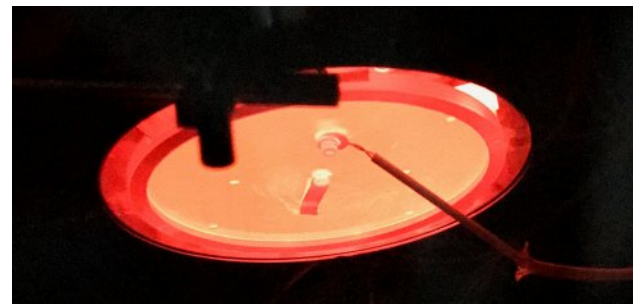
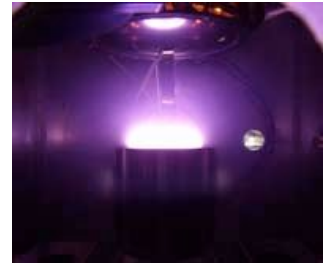
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Magnetron Sputtering Systems



- Fully automatic computer touch screen panel control with real time LCD displays
- Prismatic / cylindrical vacuum chamber made of SS304. 30, 40, 50, 60 cm box size clean electro-polished surface
- Front viewing window and rotatable shutter
- Standard 1", QF, CF, ISO ports as desired,
- Internal lighting and baking system, internal baking up to 120°C
- RF Power supply, 13.6 MHz, 300 - 1200 W
- DC Power supply, 0 - 1000 V DC, 2000 W
- 10^{-8} Torr base pressure level, 2×10^{-6} Torr vacuum level in 20 minutes
- Turbomolecular + Mechanical pump, cryo and dry pump as desired
- Wide range ($1000 - 10^{-9}$ Torr) vacuum control and measurement system
- 50-700°C PID sample heating as desired
- 2-30 rpm sample rotation unit
- Sample plasma cleaning unit, RF plasma clean via RF biasing of samples
- Automatic start-stop, closed loop water cooling
- $0,1 \text{ \AA/s}$ dual-channel precision thickness rate measuring unit with 1-4 QCM's
- 1-4 set, DC/RF magnetron sputter sources (1", 2", 3", 4")
- Mass flow meter controlled gas inputs, (Ar, N₂, O₂, He, CH₄, H₂), 3 channel real time electronic control and display
- Throttle, vent and isolation valves, precise pressure setting, 1 - 100 mTorr
- 1.5 hour experiment cycle-time
- Ability remain under vacuum with isolation valve when not in use.
- PC control via Lab-VIEW program to coat each layer fully automatically
- Additional capacitance manometer for precise measurement of plasma pressure
- 75x120 cm footprint, lockable wheels
- Easy passage through standard doors
- One year warranty for design, materials and workmanship