

LASER ABLATION DEPOSITION

MANUFACTURER : INRS

MODEL : IPEX

Samples

- Sample sizes: 25 mm (1 in.)
- Temperature : ambient to 850 °C
- Pressure: 10^{-5} Torr to 100 Torr

Characteristics

- Laser source 1: PulseMaster 848 de GSI Lumonics (100Hz).
- Laser source 2: PulseMaster 846 de GSI Lumonics (50 Hz).
- Minimum target substrate distance 4 cm, adjustable up to 8 cm for better uniformity
- Possibility of deposition from residual pressure of gases such as O₂, Ar, H₂, He, or N₂
- Rotating sample holder that can be used up to 600 °C
- Static sample holder that can be used up to 850 °C
- System allowing the selection of up to 4 targets and allows the deposition of multilayers without exposure to air
- System allowing the simultaneous evaporation from 2 targets and allows the deposition of composite layers

ROUTINE PROCESS

Deposition

Simple material

- Types: Au, Pt, Ir, Rh, Ni, Si, DLC, Ru...
- Thickness: from 10 nm to ~ μm
(depending on film stress)

Nitride

- Types: Si₃N₄
- Thickness: from 10 nm to ~ μm
(depending on film stress)

ROUTINE PROCESS

Deposition

Oxide

- Types: SiO₂, BST, PZT, CBN, RuO₂, BiFeO₃, SrRuO₃, SnO₂ ...
- Thickness: from 10 nm to ~ μm
(depending on film stress)

Alloy

- Types: Pt-Ru, Pt-Au, Ir-Rh, ...
- Thickness : from 10 nm to ~ μm
(depending on film stress)