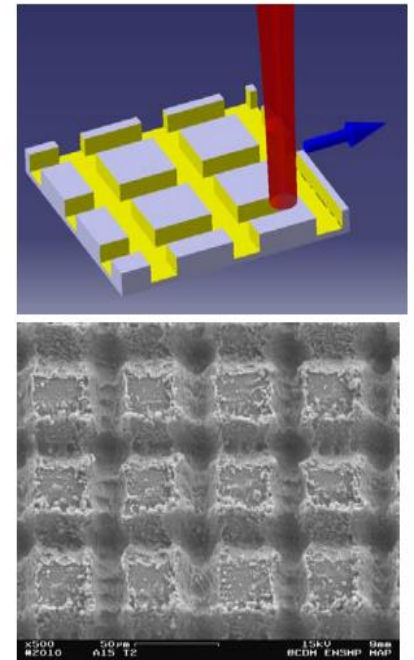
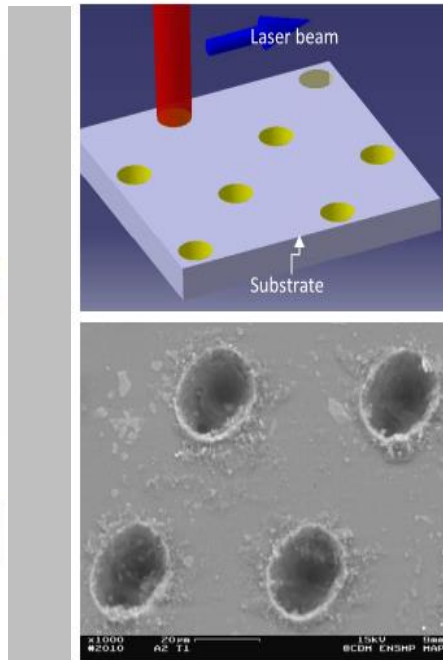
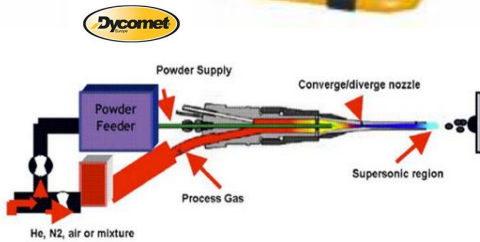


# Low pressure Cold Sprayed coatings on laser-textured substrates and composites metallization



## Low Pressure Cold Spraying for sensitive material protection

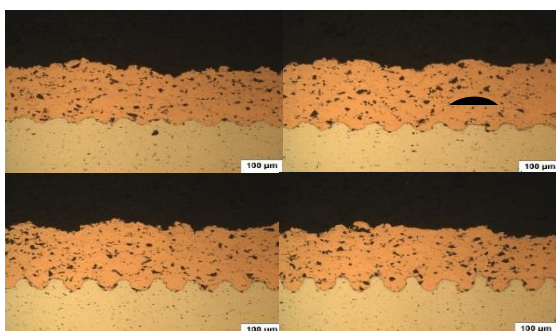
On metallic materials

Copper coatings on AW5083 Aluminum alloys (automotive industry).

- ✓ Protective coatings with improved behaviors

Issues:

- ✓ ductile substrates
- ✓ Low adherence values
- ✓ Low spraying yield



Improving coating adherence thanks to laser texturing (x2)

- Fracture mechanisms modified from adhesive to cohesive
- Surface morphology controlled via laser treatment
- Surface treatments environmentally friendly

On organic materials (composite)

Copper coatings on PEEK/Carbon fibers composites (SAAB, Airbus)

- ✓ Electrical / thermal conductivity
- ✓ Pure Cu powders (less abrasive than Cu/Al<sub>2</sub>O<sub>3</sub>)

Issues:

- ✓ Heat sensitive substrates
- ✓ Low impact resistance

