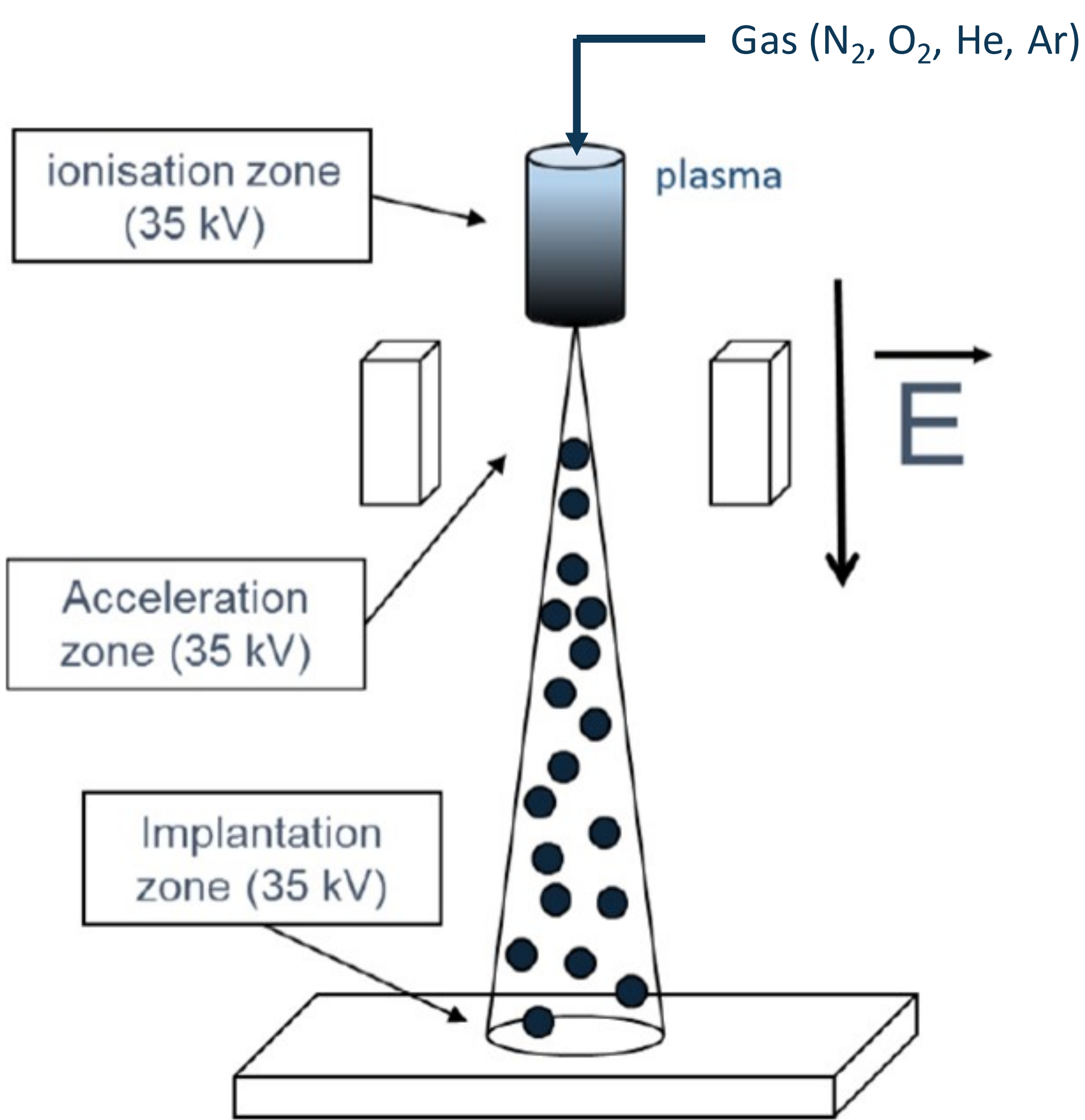
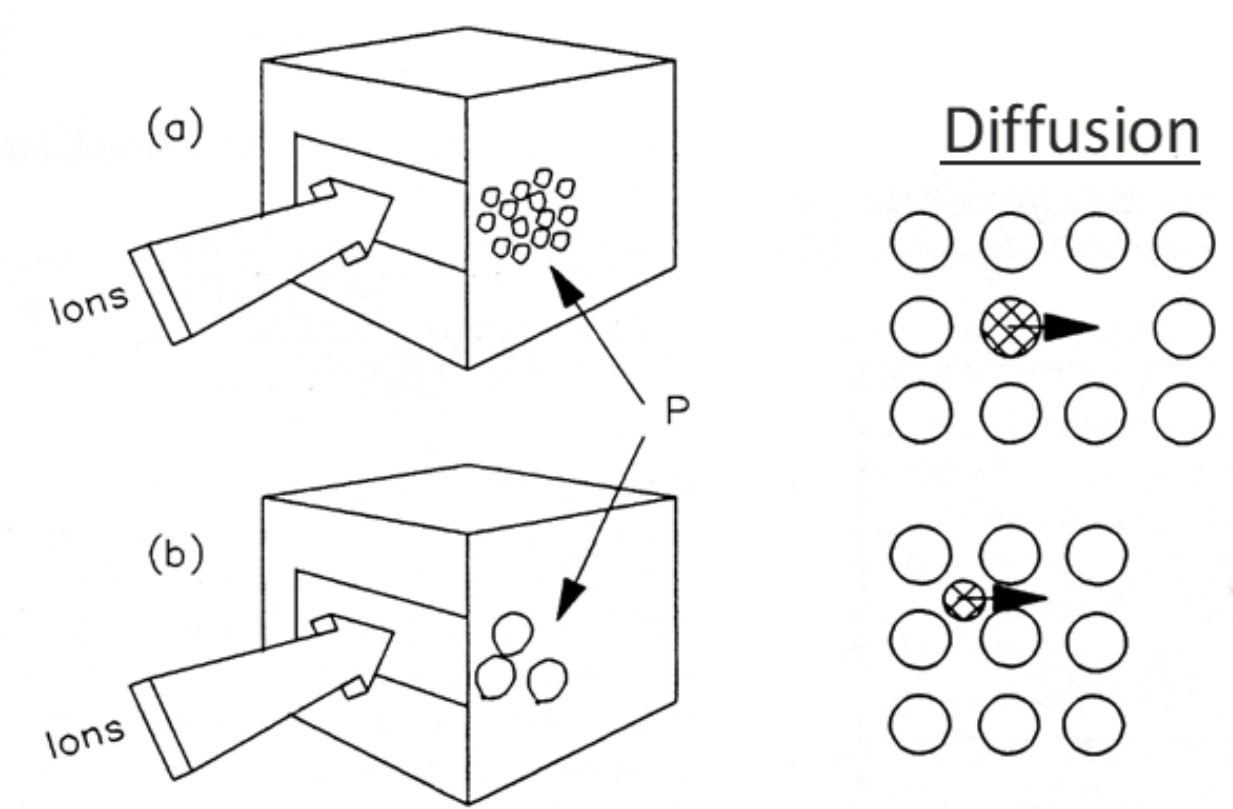


PRINCIPLE & BENEFITS



PROCESS

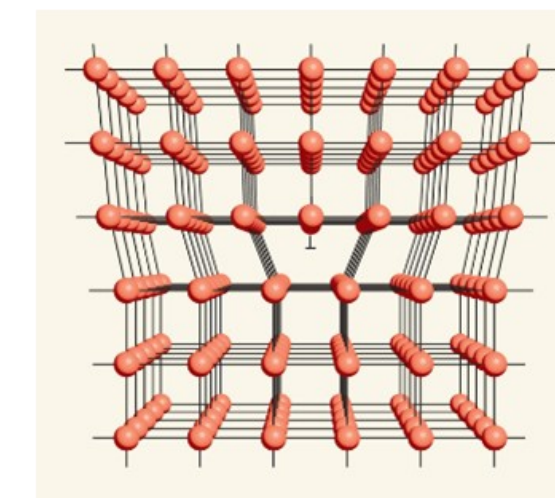
- ◆ Simple process ⇒ Industrialization
- ◆ Low temperature technology
- ◆ Any **solid** materials: metals - polymers - glasses...
- ◆ Any shapes: flat - powders - small 3D objects...
- ◆ No adherence issues
- ◆ Environmental friendly process



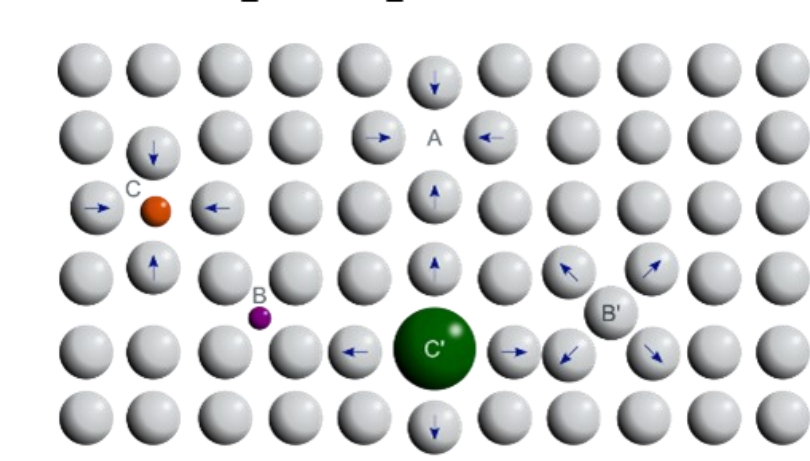
BENEFITS

- ◆ Surface hardening
- ◆ Friction coefficient reduction
- ◆ Improved corrosion resistance and high temperature oxidation resistance
- ◆ Wettability modification (hydrophobic - hydrophilic)
- ◆ Advanced products with optical, electronic, catalytic properties...

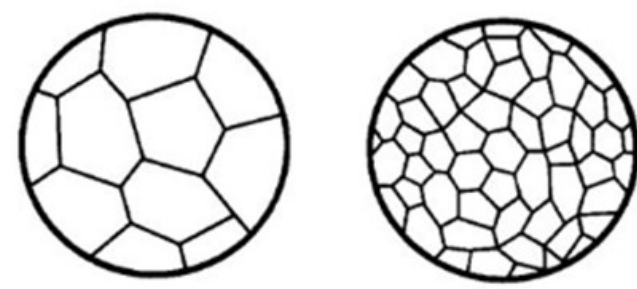
Creation of dislocations



Atoms inclusion and precipitation



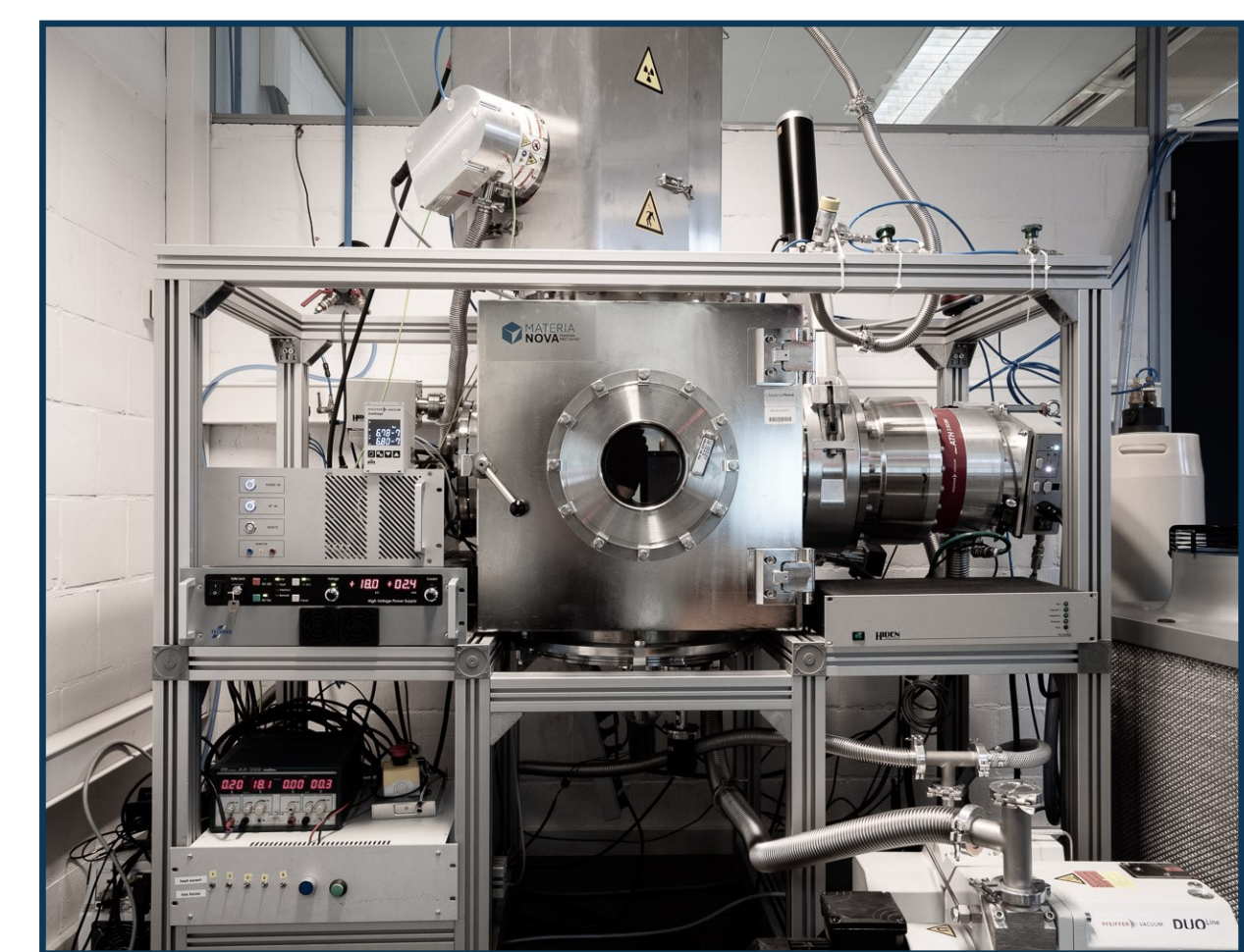
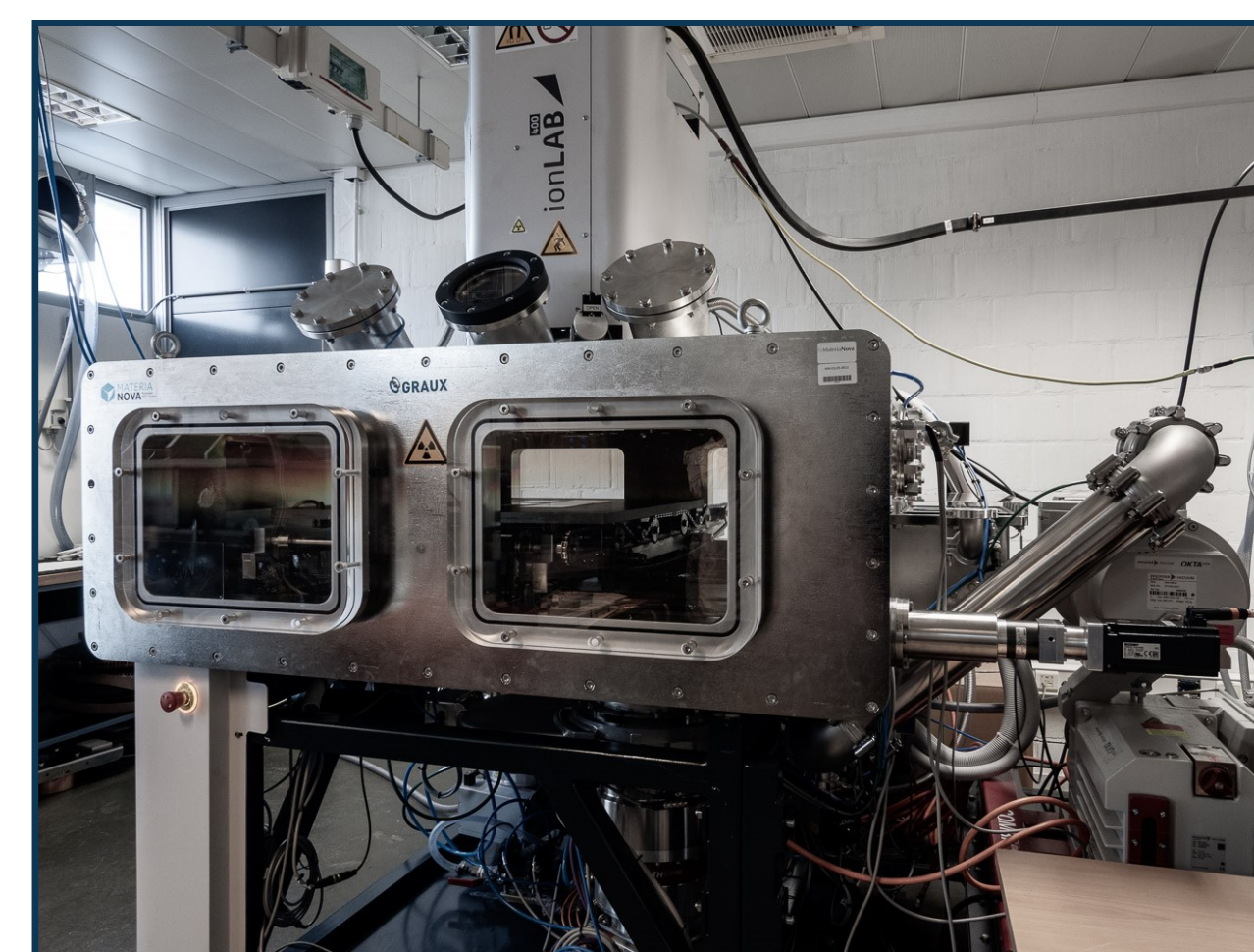
Decrease of grains size - amorphisation



FACILITIES

SEVERAL LAB-SCALE ION IMPLANTERS

- ◆ Flat samples (up to 40 x 40 cm²) with motorized XY stage
- ◆ Small 3D shapes and powders (up to 30 gr) with vibrating and rotating bowl mixing devices
- ◆ Glancing angle implantation: monitoring the ion depth penetration



1 SEMI-INDUSTRIAL ION IMPLANTER

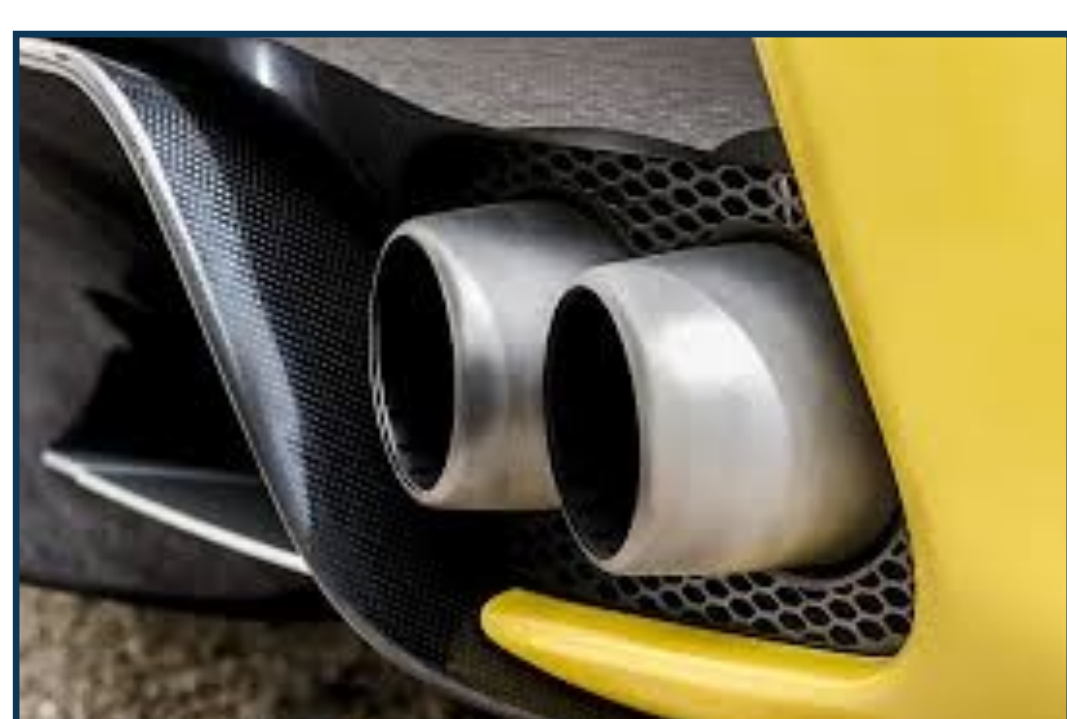
- ◆ Multi-head ion implanter
- ◆ Flat samples up to 1.8 x 1.6 m² with motorized XY conveyor



BUSINESS FIELDS

Automotive

- ◆ Motors
- ◆ Wipers
- ◆ Windows
- ◆ Catalytic converters



Luxury

- ◆ Watches
- ◆ Jewels



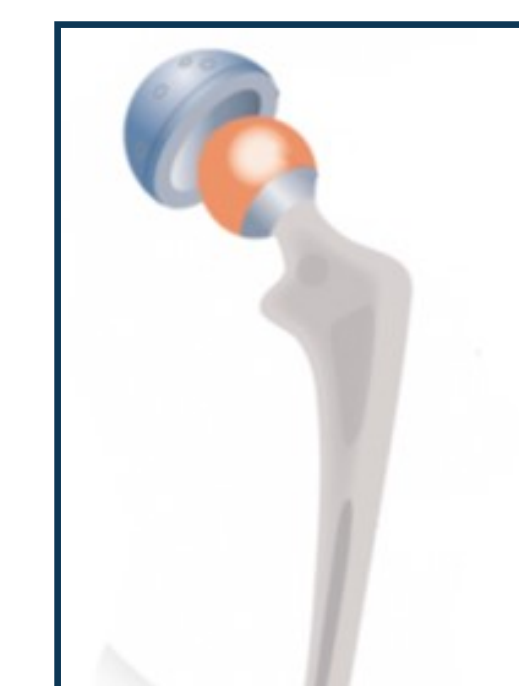
Tools

- ◆ Machining
- ◆ Molds



Health

- ◆ Implants
- ◆ Packaging



Connectors



Aviation

- ◆ Turbines
- ◆ Wings

