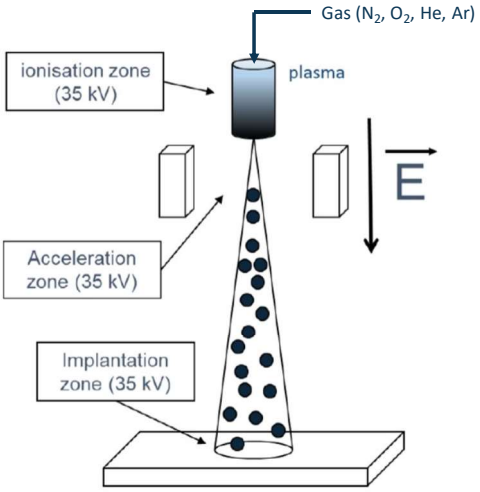
MATERIA NOVA Materials R&D Center

ION BEAM IMPLANTATION

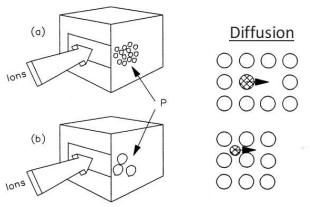
SMART TECHNOLOGY FOR SMART MATERIALS

PRINCIPLE & BENEFITS

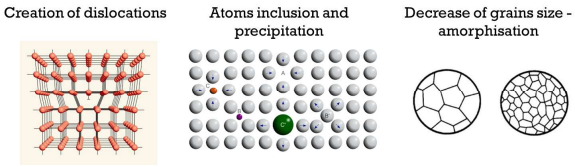


PROCESS

- 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...

FACILITIES

SEVERAL LAB-SCALE ION IMPLANTERS

- Flat samples (up to 40 x 40 cm^2) 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 m^2 with motorized XY conveyor

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BUSINESS FIELDS

Automotive

- Motors
- Wipers
- Windows
- Catalytic converters

Luxury

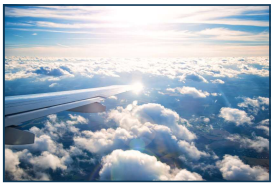
- Watches
- Jewels

Tools

- Machining
- Molds

Aviation

- Turbines
- Wings



Health

- Implants
- Packaging

Connectors

MATERIA NOVA Materials R&D Center
Parc Scientifique Initialis
Avenue Copernic, 3 - 7000 MONS (B)
+ 32 65 55 49 16
+ 32 65 55 49 42
www.materianova.be
Contacts
Thomas.godfroid@materianova.be
Fabien.monteverde@materianova.be
UMONS Innovation Center