Surface texturing

Creation or modification of a specific property or function of the surface of materials

ALPhA NOV
Optics & Lasers Technology Center

www.alphanov.com
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Laser texturing and surface functionalization make it possible to create effects or generate new properties on all surface types.

**BENEFITS**
- Various functionalities (modification of surface wettability, emissivity, colour, tribological and antibacterial properties)
- Process without material removal by remodelling technique
- Surface texture tailored to needed function
- Large area and/or 3D treatment
- Possibility of reproducing the functionalities on polymers by injection moulding

**PERFORMANCE**
- Super-hydrophobicity / self-cleaning surface (Contact angle >150°)
- Hydrophilicity (Contact angle < 30°)
- Reflectance < 5% in the range from UV to near IR
- Reduction of bacteria proliferation (up to 98%)

**MATERIALS**
- All materials
- Depending on desired function

**THROUGHPUT**
Up to several cm².s⁻¹ for depending on the process

**SURFACE FINISHING**
Adaptable depending on the application by generation of self-organizing structures or by controlled etching

**LASER WORKSTATION**
- Laser fs to ns
- From IR to UV
- Scanning systems

**AREAS OF APPLICATION**
- Sensors
- Aeronautics
- Medical
- Household appliances
- Food packaging
- Energy

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