

1 The ROTOCO system for 3D plasma treatment

2 Close-up view

3D PLASMA TREATMENT AND COATING OF MICROSCOPIC OBJECTS

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3D Plasma treatment

Plasma treatment is the first choice for engineering surface properties in an all dry process.

Tailored surface properties can be realized for small parts and components without affecting bulk properties.

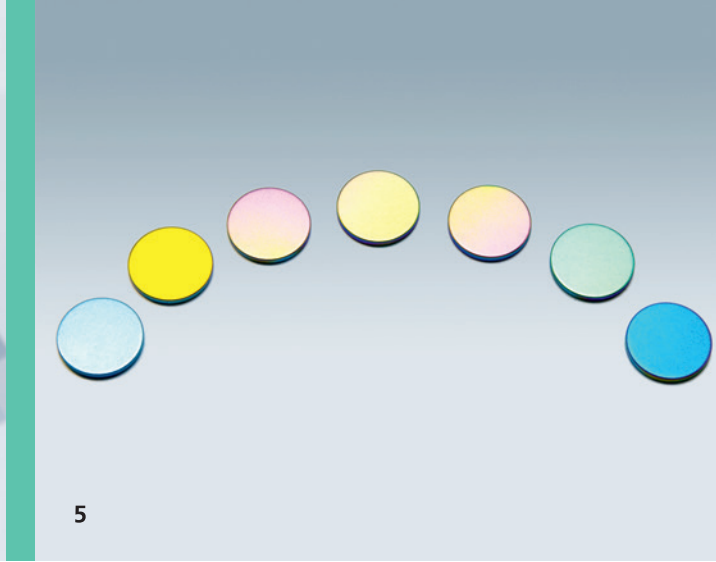
Micro-structured objects with complex shapes and geometries are treated homogeneously providing full surface coverage and thus maximum product efficacy and safety. 3D plasma treatment is suitable for medical devices, 3D printed components and rapid prototyping.

Instrument setup

The ROTOCO system combines fast and efficient treatment of small 3D objects with a high ease of use.

It is a versatile tool for optimizing your polymeric, ceramic or metallic products or prototypes by enabling a variety of active precursors to impart new and multiple functionalities to the surface.

ROTOCO is small, portable and can be integrated into processing including table top manufacturing.



Capabilities

Plasma treatment using ROTOCO offers a reliable coating process enabling nanometer scale modifications, while at the same time preserving surface morphologies and microstructures.

It enables the cleaning, activation and surface modification of small polymeric or metallic parts and components, as for example from 3D printing, CNC milling, stereolithography and selective laser sintering.

A general side effect of all processes is sterilization, which offers a particular advantage for all medically relevant parts and components.

Capacity / Throughput

As in all the 3D prototyping technologies the described method is a batch-process implicating a confined load. Up-scaling is possible upon request.

The treatment proceeds at room temperature thus preserving sensitive components.

Process conditions such as input power, gas flow rate and speed of rotation allow for a fine tuning of the process, tailored to the designed effects and properties in question. Multilayer applications enable multifunctional surface properties.

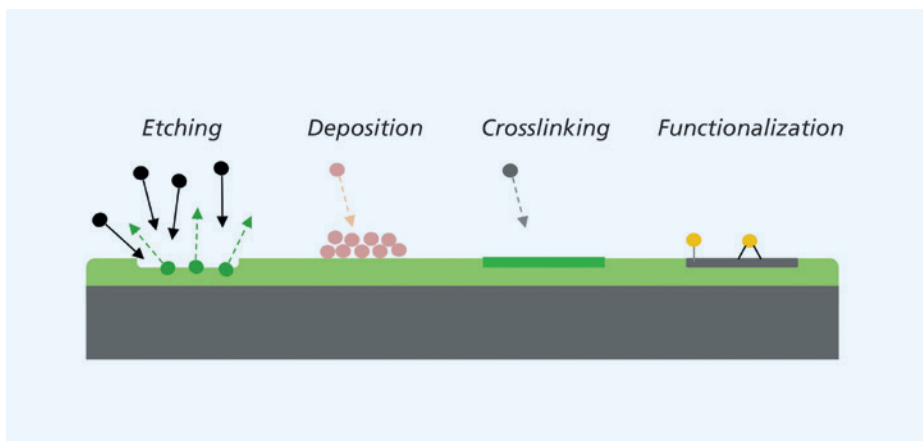
All processes are fast, dry and substrates require no further processing.

We will provide support to find solutions for innovative, smart surface design and cost efficient process development on every level of your R&D activities.

Competences and services

20 years of experience in plasma surface modification and extensive know-how in surface engineering processes.

- Surface functionalization
- Surface activation
- Hydrophilic/hydrophobic treatment
- Stick/nonstick surfaces
- Protective coatings
- Optical coatings
- Medically compliant surfaces
- Multiple functionalities



- 3 Modification of fracture implants
- 4 Dental implants
- 5 Miscellaneous 3D parts and components