Oxygen Plasma Treatment

Dry surface blast using low pressure oxygen plasma.

Contact information

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Technological Offers type

Technological scientific services

Research and innovation areas

- Bioeconomy, Biotechnology and Food Systems
- Industry, Materials and Circular Economy
- Science For Engineering and Architecture
- Social Innovation, Open Science, Governance, and Education Science

ODS

Available from: 2021

Where?

Center for Biomedical Technology Photonic and Biophotonic Optics Group (GOFB)

Keywords: | hydrophobicity | micro fabrication | nano fabrication | plasma | surface treatment

Scientific and technology services

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KEY WORDS: surface treatment, plasma, hydrophobicity, micro manufacture, nano manufacture

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Description of the services offered

Oxygen plasma at low pressure (high vacuum) reacts with the molecules deposited on the surface of the piece being worked on, it breaks them up and converts them into volatile compounds.

Needs requested and applications

Oxygen plasma is particularly effective for eliminating organic compounds, such as grease, oil and polymers, from the surface. It is also a strong disinfectant. It can also be used for etching processes and activating OH groups on rusty surfaces, changing the hydrophilic properties.

Sector or area of application

Micro and nano manufacture

Equipment description

The oxygen plasma equipment is a Diener ATTO M1 for low pressure plasma treatment.
– Vacuum chamber (round, borosilicate glass, 211 mm. ø cover, 300 mm. long., approx 10.5 L volume) with a 200x260x5 mm glass tray.
– Two gas channels via needle valve. Currently oxygen.
– Generator: 40 kHz / 200W automatic.
– Standard stainless steel and aluminium electrode
– Control: Manual.
– Pfeiffer Duo5 (5 m3/h) vacuum pump.

Request for service

Contact by e-mail, putting ¿PROVISION OF SERVICE¿ in the subject, and the service in question with an approximate description of what is required and the time line in the body of the e-mail.
Contact e-mails: info.gofb@gmail.com or betxu.santamaria@upm.es

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