**SURFACE MODIFICATION**

| Low pressure plasma technology |
| Atmospheric pressure plasma technology |
| VUV technology |

The experts of Plasma Technology and Surfaces – PLATO – at Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM offer solutions for

- fine-cleaning,
- surface activation as well as
- functional coatings.

These technologies of different surface modification allow economical treatment of either large or localized areas depending on the specific requirements.

Thus a wide range of different and combinable surface properties can be achieved, which means that these technologies are ideal for innovative product development. For example, the surface energy, which is a measure of the hydrophobic or hydrophilic character of a surface, can be varied from 5 mN/m to 80 mN/m with lasting stability of the effect.

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**Example applications**

- Adhesive bonding and paint/lacquer technology
  - Permanently hydrophilic surfaces
  - Optimization of wetting properties
  - Improvement of adhesion
  - Adhesion promotion

- Plastic processing/Textile technology
  - Hydrophobic surfaces
  - Anti-fouling properties
  - Non-stick layers
  - Permanent release layers
  - Soft-feel fabrics or textiles
  - Hydrophobic or oleophobic properties with permeability to water vapor
  - Reduction of water absorption

- Protection of surfaces
  - Transparent corrosion protection
  - Local corrosion protection
  - Diffusion barriers
  - Scratch protection
  - Friction reduction

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*Filter with improved chemical resistance and longer service life due to an ultra-thin plasma-polymer coating.*
Medical applications

- Non-cytotoxic, antimicrobial effect

Most of the effects can generally be realized independent of the substrate material.

Contact

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Permanent release layer to allow molded CFRP components to be removed from molds.