

Fabrication of optical and electrical films, Functional surface and their applications

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Atmospheric Cold Plasma Technology (Dielectric Barrier Discharge)

Atmospheric cold plasma is generated in open space by using dielectric barrier discharge technique. Using its high energy, optical and electrical films and functional surfaces are fabricated. We develop new technique for fabricating such solar panels.

Fabrication of nano-particles Si films

As clean reproduction energy, we develop new techniques for fabricating low cost solar panels. If solar panels can be produced by a method like printing, their production cost decreases drastically. In this laboratory, I develop available Si nano-particle paste newly to print which crushed crystal Si in chemisorption monomolecular film

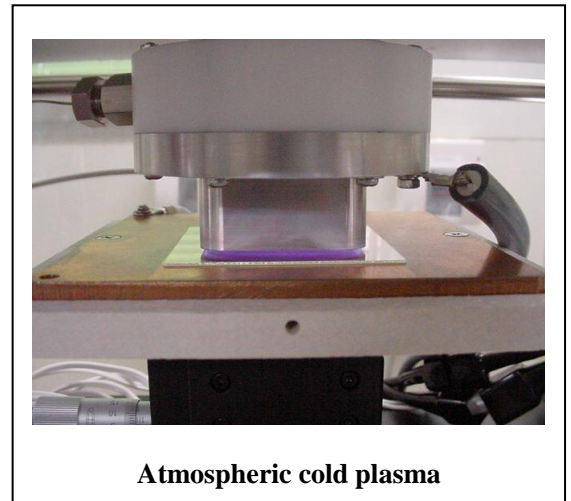
Fabrication technology of chemisorption monomolecular films

We have special technique for fabrication chemisorption monomolecular films. Using them, many functionaly surfaces such super water-repellent surface can be produced.

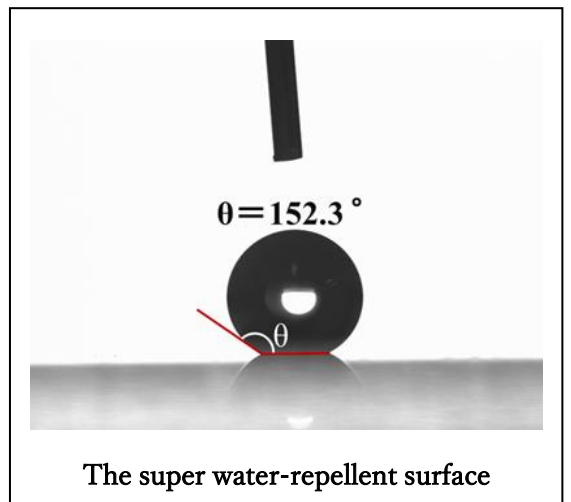
Research and development of the sensor using the optical fiber

On the Tokyo gate bridge in Japan, many high technology techniques were equipped with for health monitoring to record what kind of power it received for 24 hours as important information of the strength of the large structure body for a long time from the outside for maintenance. One of special techniques of an optical fiber sensor developed in our laboratory. 14 optical fiber sensors were set in the place under the road of the bridge and which are monitoring the bend of the beams in the bridge.

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Atmospheric cold plasma



The super water-repellent surface



Tokyo gate bridge