INSTITUTSKOLLOQUIUM

Gemeinsames Kolloquium der Physik und Chemie

Am Dienstag, dem 23. Januar 2024, spricht um 17:15 Uhr im Faraday-Hörsaal,

Laura Barillas-Mora
Forschungsgruppenleiterin Biosensorische Oberflächen (BSO)
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Greifswald

zum Thema:

"SurfAP3® – Direct Writing Micro Plasma Printing for High Resolution Surface Modification and Microfabrication"

Abstract:

Plasma-assisted surface modification processes are widely applied in academic research and industrial processes nowadays, as they can offer scalability, rapid processing, and can treat a diversity of materials. However, achieving precise modifications in microfabrication, in particular using atmospheric-pressure plasmas, still presents challenges. Traditional methods involving masks limit flexibility and can involve high costs, while treatment rates can be very low.

This talk presents a novel and flexible plasma printing technology developed at INP known as SurfAP3®, which introduces the highest resolution available for maskless atmospheric-pressure plasma processes, capable of producing structures starting at linewidth resolution of 40 µm. The technology's core, state-of-the-art atmospheric-pressure microplasma source (µAPPS), performs targeted surface processes with minimal gas flow and power, ensuring unique precision and efficiency, and allowing fine cleaning, activation, functionalization, crosslinking of thin films and layer removal operations, on multiple materials. SurfAP3® is a powerful platform that can open new applications across disciplines, including life sciences, materials development, printed electronics and enhanced additive manufacturing, among others.

Wir laden Sie zu diesem Kolloquium herzlich ein!

Die Hochschullehrer der Institute für Physik und Chemie