



VABILO NA PREDAVANJE

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z naslovom:

Non-Thermal Plasma Utilization in Materials Technology and Environmental Applications

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Vljudno vabljeni!

Abstract:

Plasma technology is shaping our everyday life over many decades. This includes many fields of technology, such as electric lighting and surface engineering. For applications on organic materials or if high energy-efficiencies are required, non-thermal plasmas are the preferred means. Our works mainly focus on applications, where gaseous species from the plasma interact with solid or liquid surfaces. In the field of materials technology, we employ cold plasma discharges for surface functionalization, to induce reactions such as polymerization processes, and for plasma-enhanced deposition techniques, e.g. in combination with Pechini synthesis or using Latex emulsions. For environmental applications, we employ non-thermal plasmas to remove polluting emissions. Some of our approaches include oxidation processes in the gas phase; others aim at enhancing conventional wet chemical or catalytic processes. All of these plasma applications have in common, that we employ plasma-enhanced reactions to induce chemical processes at room temperature. In this manner, non-thermal plasmas are a valuable tool for innovative applications in materials technology and environment protection.