

Special Issue

Interaction of Gaseous Plasma with Polymers and Polymer Composites

Message from the Guest Editor

Polymers and polymer composites are often treated by gaseous plasma to obtain the desired surface finish, such as surface functionalization, nanostructuring, and selective etching (preferential removal of one component from the surface of a polymer composite). Although the technique has been used on an industrial scale for decades, the scientific background of the interaction between reactive gaseous species and polymer materials is still unclear. In particular, there is a lack of reliable information on the surface finish versus the plasma parameters. Furthermore, the evolution of surface properties of complex polymers and block and graft copolymers upon plasma treatment has rarely been reported. The plasma treatment often causes unwanted effects, such as modification of subsurface film, formation of loosely bonded molecular fragments on the polymer surface, and aging—spontaneous modification of surface properties of polymers and polymer composites that have been exposed to gaseous plasma. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

Prof. Dr. Miran Mozetič

Department of Surface Engineering, Jozef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia

Deadline for manuscript submissions

closed (30 November 2021)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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