



Opening doors of versatile surface modifications with plasma process

Lenka Zajíčková

CEITEC Brno University of Technology, Dept. Condens. Matter Phys., Masaryk University

Abstract:

Plasma-based material processing as an important enabling technology. It includes very different applications such as plasma etching in microelectronics, plasma treatment of polymers to increase their surface free energy, deposition of hard and protective coatings, and plasma gasification and waste treatment. I will briefly explain the background of plasma processes for surface treatment, thin film deposition, and etching. Then, I will show recent advances in the plasma processing of bioactive surfaces with potential applications in biosensors and tissue engineering, plasma processing of nanomaterials, and the development of atmospheric pressure plasma sources for non-vacuum surface treatment.