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Nota di contenuto	Plasma Processes and Polymers; Contents; Preface; List of Contributors; Part I Plasma Deposition of Thin Films; 1 Polymer Surface Modification with Monofunctional Groups of Different Type and Density; 1.1 Introduction; 1.2 Experimental; 1.3 Results; 1.3.1 Kinetics of the Deposition of Copolymers; 1.3.2 Variation of the Density of Functional Groups; 1.3.3 Structure and Stability of Copolymers; 1.3.4 Relation between Functional Groups of Copolymers and Surface Energy; 1.3.5 Relation between Functional Groups of Copolymers and Adhesion; 1.4 Discussion 2RF-Plasma Deposition of SiO(x) and a-C:H as Barrier Coatings on Polymers2.1 Introduction; 2.2 Experimental; 2.3 Results and Discussion; 2.4 Conclusions; 3 Upscaling of Plasma Processes for Carboxyl Functionalization; 3.1 Introduction; 3.2 Experimental; 3.2.1 Materials; 3.2.2 Plasma-Deposition Apparatus; 3.2.3 Characterization Techniques; 3.3 Results and Discussion; 3.4 Conclusions; 4 Deposition of Fluorocarbon Films on Al and SiO(2) Surfaces in High-Density Fluorocarbon Plasmas: Selectivity and Surface Wettability; 4.1 Introduction; 4.2 Experimental; 4.3 Results and Discussion

4.3.1 Etching and Deposition in C(4)F(8) Plasmas; 4.3.2 Etching and Deposition Experiments in CHF(3)/CH(4) Plasmas; 4.3.3 FC Film Characterization: Chemical Composition; 4.4 Conclusions; 5 Hot-wire Plasma Deposition of Doped DLC Films on Fluorocarbon Polymers for Biomedical Applications; 5.1 Introduction; 5.2 Experimental Details; 5.2.1 Preparation of Samples; 5.2.2 Plasma Deposition Technique; 5.2.3 Surface Characterization; 5.2.4 Platelet-Adhesion Technique; 5.3 Results and Discussion; 5.3.1 Characterization of Deposited Film; 5.3.2 Platelet Adhesion

6 Properties of Silicon Nitride by Room-Temperature Inductively Coupled Plasma Deposition; 6.1 Introduction; 6.2 Experimental Systems; 6.3 Results and Discussion; 6.4 Conclusions; 7 Structural Analysis of Diamond-like Carbon Films Deposited by RF (13.56 MHz) in a Methane Gas Plasma Atmosphere; 7.1 Introduction; 7.2 Experimental Procedure; 7.2.1 Deposition Apparatus; 7.2.2 Experimental Conditions; 7.3 Results and Discussions; 7.3.1 X-ray Auger Electron Spectroscopy (XAES); 7.3.2 Electron Energy Loss Spectroscopy (EELS); 7.4 Conclusion; 8 Rate constant of HMDSO + O reaction in plasma afterglow

8.1 Introduction; 8.2 Experimental; 8.3 Calculation of the rate constant; 8.4 Results and discussion; 8.5 Conclusion; 9 Plasma-Enhanced Thin-Film Deposition On Polycarbonates; 9.1 Introduction; 9.2 Experimental; 9.3 Results; 9.4 Discussion; 9.5 Conclusions; 10 Molecular Tailoring Coating on TiO(2) Nanoparticle Surface by Plasma Polymerization; 10.1 Introduction; 10.2 Experimental; 10.3 Results and Discussions; 10.3.1 Surface Morphology; 10.3.2 Surface Molecular Structure; 10.3.3 Dispersion Behavior of AA-Plasma-Polymer-Coated TiO(2) Nanoparticles; 10.4 Conclusion

Part II Plasma-Grafting of Functional Groups

Sommario/riassunto

This volume compiles essential contributions to the most innovative fields of Plasma Processes and Polymers. High-quality contributions cover the fields of plasma deposition, plasma treatment of polymers and other organic compounds, plasma processes under partial vacuum and at atmospheric pressure, biomedical, textile, automotive, and optical applications as well as surface treatment of bulk materials, clusters, particles and powders. This unique collection of refereed papers is based on the best contributions presented at the 16th International Symposium on Plasma Chemistry in Taormina, I