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Nota di contenuto	Homoepitaxial Diamond Growth by Plasma-Enhanced Chemical Vapor Deposition -- Diamond/-SiC Composite Thin Films: Preparation,

Properties and Applications -- Surface Chemistry of Diamond -- Surface Modifications of Nanodiamonds and Current Issues for Their Biomedical Applications -- Diamond Nanowires: Fabrication, Structure, Properties and Applications -- Nanoparticle-Based Diamond Electrodes -- Modified Diamond Electrodes for Electrochemical Systems for Energy Conversion and Storage -- Diamond PN/PIN Diode Type Electron Emitter with Negative Electron Affinity and its Potential for the High Voltage Vacuum Power Switch -- Diamond Ultramicro- and Nano-Electrode Arrays -- Advances in Electrochemical Biosensing Using Boron Doped Diamond Microelectrode.

Sommario/riassunto

This book focuses on new research fields of diamond, from its growth to applications. It covers growth of atomically flat diamond films, properties and applications of diamond nanoparticles, diamond nanoparticles based electrodes and their applications for energy storage and conversion (supercapacitors, CO₂ conversion etc.). Diamond for biomimetic interface, all electrochemical devices for in vivo detections and photo-electrochemical degradation of environmental hazards are highlighted.
