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 5.4 UNCD and Carbon Nanotube/UNCD Composites as Potential High-Efficiency, High-Temperature Thermoelectric Materials5.5 Summary; Acknowledgments; References; Chapter 6. Plasma-Assisted Synthesis: Plasma Experimental Diagnostics and Modeling; Introduction; 6.1 Experimental Details; 6.2 Fundamentals of Plasma Diagnostics; 6.3 Investigations of Typical NCD Deposition Conditions; 6.4 Investigations of Ar/H₂/CH₄ Microwave Discharges with the Plasma Thermochemical Model; 6.5 General Conclusion; References
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Sommario/riassunto

Ultrananocrystalline Diamond: Syntheses, Properties, and Applications is a unique practical reference handbook that brings together the basic science of nanoscale carbon structures, particularly its diamond phase, with detailed information on nanodiamond synthesis, properties, and applications. Here you will learn about UNCD in its two forms, as a dispersed powder made by detonation techniques and as a chemical vapor deposited film. You will also learn about the superior mechanical, tribological, transport, electrochemical, and electron emission properties of UNCD for a wide range of applicati