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Titolo	Diamond films [e-book] : chemical vapor deposition for oriented and heteroepitaxial growth / Koji Kobashi
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ISBN	9780080447230 0080447236
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Nota di contenuto	1. Overview of Oriented Growth -- 2. Diamond - Structure and CVD Growth -- 3. Microwave Plasma CVD Reactors -- 4. Other CVD Reactors -- 5. Crystal Orientations and Film Surface Morphology -- 6. Formation of Twins -- 7. Homoepitaxial Growth -- 8. Surface Reconstruction -- 9. Epitaxial Growth on cBN, Ni, and Other Substrates -- 10. Diamond Nucleation -- 11. HOD Film Growth -- 12. Oriented Growth on Noble Metals -- 13. Properties and Applications of Heteroepitaxial Diamond Films -- 14. Conclusion -- APPENDICES -- - Notations and units -- - Plasma -- - Properties of diamond and other semiconducting materials -- - Reconstruction of diamond surfaces -- - Materials constants -- - Phase diagrams of carbon and metals -- - Carbon solubilities in metals -- - Biasing and growth conditions for diamond growth
Sommario/riassunto	- Discusses the most advanced techniques for diamond growth - Assists diamond researchers in deciding on the most suitable process conditions - Inspires readers to devise new CVD (chemical vapor deposition Ever since the early 1980s, and the discovery of the vapour growth methods of diamond film, heteroexpitaxial growth has become one of the most important and heavily discussed topics amongst the diamond research community.

Kobashi has documented such discussions with a strong focus on how diamond films can be best utilised as an industrial material, working from the premise that crystal diamond films can be made by chemical vapour disposition. Kobashi provides information on the process and characterization technologies of oriented and heteroepitaxial growth of diamond films