

Free Sample Preview

MPCVD Diamond Thin Film

Process parameters & industrialization

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Full version includes more chapters & cases.

MPCVD Diamond Thin Film · Key Technology

What is this report?

Systematic study of MPCVD diamond thin-film for semiconductor use; 42-page monograph with data & roadmap.

Key process parameters

Microwave power, pressure, substrate temp, CH₄/H₂ ratio, bias; each affects growth rate, quality & morphology.

Industrialization path

Heteroepitaxy on Ir / Si, doping (B/N), thermal management; seeding & scale-up challenges.

Applications

Ultimate semiconductor (5.5 eV gap), AI heat dissipation, NV-center quantum.

Full version: 42 pages with experimental data, characterization & patent landscape.