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CVD technologies assisted with millimeter waves ALEXANDER LITVAK, ANATOLY VIKHAREV, SERGEY GOLUBEV, ALEXEY GORBACHEV, PETR SENNIKOV, Institute of Applied Physics of RAS, INSTITUTE OF APPLIED PHYSICS OF RAS TEAM — Gas discharges supported by quasi-optical millimeter wave beams are considered. Application in the plasma enhanced chemical vapour deposition technologies of such discharges that are characterized by high electron density allow to increase essentially the rate of activation of the gas medium as compared with traditional microwave based reactors with frequencies 2.45 GHz and 0.915 GHz. The results of films deposition in the plasma reactors pumped by 30 GHz gyrotron are presented for two cases: high rate growth of diamond films and production of nanocrystalline silicon films enriched with Si-isotope.

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