Title: Plasma effects in aligned carbon nanoflake growth by plasma-enhanced hot filament chemical vapor deposition

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Highlights

►Plasma-specific effects in the growth of carbon nanoflakes (CNFs) are studied.

►Electic field in the plasma sheath promotes separation of CNFs from the substrate.

►The orentention of GNFs is related to the combined electic force and growth effects.

►The high growth grates of aligned GNFs are plasma-related.