

Abstract Submitted
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Fabricating Diamond-like Amorphous Carbon CARSON MCLAUGHLIN, US Air Force Academy — Using a magnetically confined hot hollow cathode, we perform plasma-enhanced chemical vapor deposition (PE-CVD). Hydrocarbon gas is decomposed under a diluent gas to deposit hydrogenated amorphous carbon onto a sample holder. During the fabrication of the hydrogenated amorphous carbon, the electric potential, electron temperature, and electron density of the plasma are measured with a Langmuir probe. Raman spectroscopy is used to determine the structural and electronic characterization of the final hydrogenated amorphous carbon solid.

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