

FABRICATION FACTORS AFFECTING THE PROPERTIES OF GLASSY CARBON

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Several observers have reported the formation of glassy carbon from aromatic precursor resins. However, in all these cases the material exploded during pyrolysis. We have found that flaw-free monolithic glassy carbon can be produced provided one carefully controls resin formulation, temperature history and pressure during the process of curing and pyrolysis. The characteristics of the product, its degree of order, resistance to heat treatment, and thermal properties are a function of resin formulation, temperature history, and pressure.