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(54) Title: CAPACITIVELY COUPLED RF DIAMOND-LIKE-CARBON REACTOR

(57) Abstract

A process of coating a non-conductive fiber with diamond-like carbon, including passing a non-conductive fiber between a pair of parallel metal grids within a reaction chamber, introducing a hydrocarbon gas into the reaction chamber, forming a plasma within the reaction chamber for a sufficient period of time whereby diamond-like carbon is formed upon the non-conductive fiber, is provided together with a reactor chamber for deposition of diamond-like carbon upon a non-conductive fiber, including a vacuum chamber, a cathode assembly including a pair of electrically isolated opposingly parallel metal grids spaced apart at a distance of less than about 1 centimeter, an anode, a means of introducing a hydrocarbon gas into said vacuum chamber, and a means of generating a plasma within said vacuum chamber.

