

Graphitic Nanowires Embedded in Diamond-Like Carbon Films

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Diamond-like Carbon (DLC) films are due to their tetrahedrally coordinated structure electrically insulating. If a heavy ion passes through this film, the material is melted in a narrow channel along the path and recrystallizes in a graphitic form which is electrically conducting. In this way, nanometer-sized conducting channels are formed. Recent data characterizing these channels are presented.