

ABSTRACT

COMPOSITE SUBSTRATE, METHOD FOR FORMING NANOCARBON FILM, AND NANOCARBON FILM

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Provided is a composite substrate which is provided with: a single crystal silicon carbide thin film 11 having a thickness of 1 μm or less; a handle substrate 12 which supports the single crystal silicon carbide thin film 11 and is formed from a heat-resistant material (excluding single crystal silicon carbide) having a heat resistance of not less than 1,100°C; and an intervening layer 13 which has a thickness of 1 μm or less and is arranged between the single crystal silicon carbide thin film 11 and the handle substrate 12, and which is formed from at least one material selected from among silicon oxide, silicon nitride, aluminum oxide, aluminum nitride, zirconium oxide, silicon and silicon carbide, or from at least one metal material selected from among Ti, Au, Ag, Cu, Ni, Co, Fe, Cr, Zr, Mo, Ta and W. This composite substrate according to the present invention enables the formation of a nanocarbon film having few defects at low cost.

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[FIG. 1]