

Title (en)

METHOD FOR PRODUCING A COMPOSITE MATERIAL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES VERBUNDWERKSTOFFES

Title (fr)

PROCEDE DE PRODUCTION D'UN MATERIAU COMPOSITE

Publication

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Application

EP 04703310 A 20040120

Priority

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Abstract (en)

[origin: WO2004080914A1] The invention relates to a heat sink comprised of a diamond-containing composite material. In addition to having a diamond proportion of 40 to 90 % by volume, the composite material contains 0.005 to 12 % by volume of a silicon carbon compound, 7 to 49 % by weight of an Ag-rich, Au-rich or Al-rich phase, and less than 5 % by volume of another phase, whereby the volume ratio of the Ag-rich, Au-rich or Al-rich phase to silicon carbide is greater than 4, and at least 60 % of the surface of the diamond is covered by the silicon carbon compound. Preferred production methods involve pressureless and pressure-assisted infiltration techniques. This part is suited for use, in particular, as a heat sink for semiconductor components.

IPC 1-7

C04B 35/52; **C22C 26/00**; **C22C 9/10**; **C22C 5/00**; **H01L 23/373**; **B22F 3/14**; **B22F 3/26**

IPC 8 full level

C04B 35/634 (2006.01); **C04B 35/653** (2006.01); **C22C 1/10** (2006.01); **C22C 26/00** (2006.01); **H01L 23/373** (2006.01)

CPC (source: EP US)

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Citation (search report)

See references of WO 2004080913A1

Citation (examination)

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