Title (en)

Mesophase pitch for use in the making of carbon materials.

Title (de)

Mesophasepech zur Herstellung von Carbonmaterialien.

Title (fr)

Brai en phase méso pour la préparation d'objets en carbone.

Publication

EP 0430689 B1 19940406 (EN)

Application

EP 90312978 A 19901129

Priority

- JP 27230090 A 19901012
- JP 30948289 A 19891129

Abstract (en)

[origin: EP0430689A1] Pitch obtained from naphthalene derivatives having at least one methyl group and an optically anisotropic phase which is substantially 100% is disclosed. This mesophase pitch has a H/C atomic ratio of about 0.5-1.0 and an aromatic carbon ratio (fa) of at least about 0.7, contains methylic carbon in an amount of at least about 4% of the total carbon atoms, and has a softening point of 200-250 DEG C. Fibers melt spun from this mesophase pitch can be converted to carbon or graphite fibers having high strength and modulus of elasticity by a heat treatment which consists of heating to a temperature of 200-350 DEG C in an air atmosphere, then heating to about 1,000 DEG C or higher in an inert gas atmosphere. Such mesophase pitch is produced by polymerizing a naphthalene derivative having at least one methyl group for about 5-300 minutes at a temperature of about 180-400 DEG C and at a pressure of about 5-100 atmosphere in the presence of about 0.1-20 moles of HF and about 0.05-1.0 mole of BF3 per mole of the naphthalene derivative.

IPC 1-7

C10C 3/00; D01F 9/145

IPC 8 full level

C10C 3/00 (2006.01); **D01F 9/15** (2006.01); **D01F 9/155** (2006.01)

CPC (source: EP)

C10C 3/00 (2013.01); **D01F 9/15** (2013.01); **D01F 9/155** (2013.01)

Cited by

EP0693543A3; EP0575748A1; US5547654A; US5944980A; US5372702A; EP0838515A3

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