

Title (en)

CRITICAL DOPING IN HIGH-T_c SUPERCONDUCTORS FOR MAXIMAL FLUX PINNING AND CRITICAL CURRENTS

Title (de)

KRITISCHE DOTIERUNG IN HOCHTEMPERATUR-SUPRALEITERN FÜR MAXIMALE "FLUX PINNING" UND KRITISCHE STRÖME

Title (fr)

DOPAGE CRITIQUE DES SUPRACONDUCTEURS A TEMPERATURE CRITIQUE ELEVEE POUR UN LAMINAGE DE FLUX ET DES COURANTS CRITIQUES MAXIMAUX

Publication

EP 1090398 A4 20070502 (EN)

Application

EP 99931620 A 19990618

Priority

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- NZ 33397199 A 19990129

Abstract (en)

[origin: WO9966541A2] A method for maximising critical current density (J_c) of high temperature superconducting cuprate materials (HTSC) which comprises controlling the doping state or hole concentration of the materials to be higher than the doping state or hole concentration of the material that provides a maximum superconducting transition temperature (T_c), and to lie at about a value where the normal-state pseudogap reduces to a minimum. J_c is maximised at hole concentration p APPROX 0.19. HTSC compounds are also claimed.

IPC 1-7

H01B 12/00; **H01L 39/12**; **C04B 35/50**

IPC 8 full level

C01G 1/00 (2006.01); **C01G 29/00** (2006.01); **H01B 12/00** (2006.01); **H01B 13/00** (2006.01); **H01L 39/12** (2006.01)

CPC (source: EP)

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Citation (search report)

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- [AD] US 5619141 A 19970408 - TALLON JEFFERY L [NZ], et al
- [XP] FUJINAMI K ET AL: "Effect of overdoping on the irreversibility field and critical current density of the HgBa₂Ca₂Cu₃O₈+delta superconductor", PHYSICA C, NORTH-HOLLAND PUBLISHING, AMSTERDAM, NL, vol. 307, no. 3-4, October 1998 (1998-10-01), pages 202 - 208, XP004149995, ISSN: 0921-4534
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- See references of WO 9966541A2

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