

Title (en)
CHALCOGENIDE DOPING OF OXIDE GLASSES

Title (de)
CHALKOGEN-DOTIERUNG VON OXID-GLÄSERN

Title (fr)
DOPAGE CHALCOGENE D'OXYDE DE VERRE

Publication
EP 1183560 A4 20060607 (EN)

Application
EP 00932178 A 20000508

Priority
• RU 99109637 A 19990519
• US 0012550 W 20000508

Abstract (en)
[origin: WO0068718A1] The present invention relates to a glass article for use as an optical waveguide fiber (1), the core (4) of which is doped with a chalcogenide element to significantly increase the refractive index of the core (4). The subject of this invention is novel doped silica core composition wherein a portion of the oxygen in the silica is replaced with either sulfur, selenium or tellurium using plasma enhanced chemical vapor deposition (PECVD). These compositions are designed to have higher refractive indices than silica, low coefficient of expansion, high optical transparency and appropriate viscosity and softening points to make them ideal candidates for use as optical waveguide fibers.

IPC 8 full level
C03B 19/14 (2006.01); **C03B 37/018** (2006.01); **C03C 3/06** (2006.01); **C03C 3/076** (2006.01); **C03C 13/04** (2006.01); **G02B 6/00** (2006.01); **G02B 6/02** (2006.01); **G02B 6/028** (2006.01); **H01S 3/06** (2006.01); **H01S 3/10** (2006.01)

CPC (source: EP KR)
C03B 19/1415 (2013.01 - EP); **C03B 19/1423** (2013.01 - EP); **C03B 37/01807** (2013.01 - EP); **C03B 37/0183** (2013.01 - EP); **C03C 3/06** (2013.01 - EP); **C03C 3/076** (2013.01 - EP); **C03C 13/046** (2013.01 - EP); **G02B 1/00** (2013.01 - KR); **G02B 6/021** (2013.01 - EP); **G02B 6/02114** (2013.01 - EP); **C03B 2201/58** (2013.01 - EP); **C03C 2201/10** (2013.01 - EP); **C03C 2201/28** (2013.01 - EP); **C03C 2201/31** (2013.01 - EP); **C03C 2201/32** (2013.01 - EP); **C03C 2201/3417** (2013.01 - EP); **C03C 2201/42** (2013.01 - EP); **C03C 2201/58** (2013.01 - EP); **C03C 2203/40** (2013.01 - EP); **C03C 2203/44** (2013.01 - EP); **G02B 6/02138** (2013.01 - EP); **G02B 6/0219** (2013.01 - EP)

Citation (search report)
• [Y] GB 2029400 A 19800319 - SUMITOMO ELECTRIC INDUSTRIES, et al
• [Y] EP 0585088 A2 19940302 - AMERICAN TELEPHONE & TELEGRAPH [US]
• [Y] US 5367588 A 19941122 - HILL KENNETH O [CA], et al
• [Y] US 5106402 A 19920421 - GEITTNER PETER E E [DE], et al
• [Y] US 4696941 A 19870929 - SHROOT BRAHAM [FR], et al
• [A] US 4675038 A 19870623 - AINSLIE BENJAMIN J [GB], et al
• [PA] EP 0976687 A1 20000202 - SHINETSU CHEMICAL CO [JP]
• [XY] PATENT ABSTRACTS OF JAPAN vol. 012, no. 176 (C - 498) 25 May 1988 (1988-05-25)
• [A] DATABASE WPI Section Ch Week 198103, Derwent World Patents Index; Class L01, AN 1981-02865D, XP002371441
• See references of WO 0068718A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0068718 A1 20001116; AU 4993900 A 20001121; CA 2373153 A1 20001116; CN 1220075 C 20050921; CN 1353823 A 20020612; EP 1183560 A1 20020306; EP 1183560 A4 20060607; JP 2002544535 A 20021224; KR 100716823 B1 20070509; KR 20020001866 A 20020109; RU 2156485 C1 20000920

DOCDB simple family (application)
US 0012550 W 20000508; AU 4993900 A 20000508; CA 2373153 A 20000508; CN 00807274 A 20000508; EP 00932178 A 20000508; JP 2000616449 A 20000508; KR 20017014178 A 20011106; RU 99109637 A 19990519