

Title (en)

METHOD FOR MAKING A PLASTIC OPTICAL FIBER, AND RESULTING PLASTIC OPTICAL FIBER

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES KUNSTSTOFFLICHTWELLENLEITERS UND SICH ERGEBENDER KUNSTSTOFFLICHTWELLENLEITER

Title (fr)

PROCEDE DE FABRICATION D'UNE FIBRE OPTIQUE PLASTIQUE, ET FIBRE OPTIQUE PLASTIQUE OBTENUE PAR CE PROCEDE

Publication

EP 1451005 A2 20040901 (FR)

Application

EP 02803435 A 20021118

Priority

- FR 0203932 W 20021118
- FR 0115038 A 20011119

Abstract (en)

[origin: FR2832514A1] The invention concerns a method for making a plastic optical fiber from at least a polymer P, said method being characterized in that said polymer P is a copolymer comprising at least two repeating units P1 and P2 of general formulae (i) and (j), i and j corresponding to a repetitive number of units, said polymer P being transparent, of amorphous type and having a P2 unit content ranging substantially between 30 and 70 mole % for X=F or Cl in P1.

[origin: FR2832514A1] Production of a plastic optical fiber with a continuous refractive index gradient from center to periphery by preparing two compositions whose refractive indices vary by at least 0.005, where each composition comprises a polymer and one also includes a reactive diluent and at least one includes a photoinitiator, mixing the compositions, spinning the mixture and photo-crosslinking the mixture, comprises using a copolymer comprising fluoroethylene and vinylene carbonate units. Production of a plastic optical fiber with a continuous refractive index gradient from center to periphery by preparing two compositions whose refractive indices vary by at least 0.005, where each composition comprises a polymer and one also includes a reactive diluent and at least one includes a photoinitiator, mixing the compositions, spinning the mixture and photo-crosslinking the mixture, comprises using a transparent amorphous copolymer comprising repeat units of formula P1 and P2, where P2 is present in an amount of 30-70 mole%: X = F or Cl.

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