

Title (en)  
MODIFIED POLY(ETHYNYLENE PHENYLENE ETHYNYLENE SILYLENE) POLYMERS, COMPOSITIONS CONTAINING SAME, PREPARATION METHODS THEREOF AND CURED PRODUCTS

Title (de)  
MODIFIZIERTE POLY(ETHINYLEN- PHENYLEN-ETHINYLEN-SILYLEN)-POLYMERE, DIESE ENTHALTENDE ZUSAMMENSETZUNGEN, HERSTELLUNGSVERFAHREN DAFÜR UND GEHÄRTETE PRODUKTE

Title (fr)  
POLYMERES MODIFIES DE POLY(ETHYNYLENE PHENYLENE ETHYNYLENE SILYLENE), COMPOSITIONS LES CONTENANT, LEURS PROCEDES DE PREPARATION ET PRODUITS DURCIS

Publication  
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Application  
**EP 04805820 A 20041110**

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• FR 0350832 A 20031113

Abstract (en)  
[origin: FR2862307A1] Modified poly(ethynylene-phenylene-ethynylene-silylene) polymers (I) produced by selective addition of a monofunctional compound (II) to the acetylenic bonds of a poly(ethynylene-phenylene-ethynylene-silylene) polymer (III) are new. Independent claims are also included for: (1) producing (I) by introducing (III) into a reactor, adding (II) and optionally a catalyst, reacting the mixture until selective addition of (II) to the acetylenic bonds of (III) is complete, and recovering the product; (2) composition comprising (II), (III) and optionally a catalyst; (3) modified poly(ethynylene-phenylene-ethynylene-silylene) polymer of formula (VII); (4) poly(ethynylene-phenylene-ethynylene-silylene) polymer of formula (IIa); (5) matrix for composite materials comprising (I) or (VII). [Image] -[CC-W o-CC-X o] r-[CC-Y o-CC-Z o-CC] s- (IIa) R 1', R 2' : H, 1-20C alkyl, 3-20C cycloalkyl, 1-20C alkoxy, 6-20C aryl, 6-20C aryloxy, 2-20C alkenyl, 3-20C cycloalkenyl or 2-20C alkynyl, all optionally substituted with halo, alkyl, alkoxy, aryl, aryloxy, NH 2, disubstituted amino or silyl; R 3' : 1-20C alkyl, 10-20C alkenyl or 6-20C aryl; R 4' : phenylene substituted with 0-4 of R 5', or a group with at least two aromatic rings linked by a covalent bond or divalent group; R 5' : halo, 1-20C alkyl, 3-20C cycloalkyl, 1-20C alkoxy, 6-20C aryl, 6-20C aryloxy, 2-20C alkenyl, 3-20C cycloalkenyl, 2-20C alkynyl, NH 2, disubstituted amino or silyl, all optionally substituted with halo, alkyl, alkoxy, aryl, aryloxy, NH 2, disubstituted amino or silyl; x, y, z : 0-1000; r, s : 1-1000; X o, Z o SiR 9R 10(OSiR 11R 12) m1 or SiR 9R 10(SiR 11R 12) n1; m1, n1 : 1-1000; R 9-R 12H, 1-20C alkyl, 2-20C alkenyl, 2-20C alkynyl or 6-20C aryl, all optionally substituted with halo, alkyl, alkoxy, phenoxy, disubstituted amino or silyl; W o, Y oCH 2(O) iR 13(O) iCH 2, 3-R 17-6-R 18-1,2-phenylene, 3-R 17-5-R 19-6-R 18-1,2-phenylene, 3-R 17-4-R 20-5-R 19-6-R 18-1,2-phenylene, 2-R 17-4-R 18-6-R 19-1,3-phenylene, 2-R 17-4-R 18-5-R 19-6-R 20-1,3-phenylene, 2-R 17-3-R 18-5-R 19-6-R 20-1,4-phenylene or a divalent heterocyclic group; i : 0 or 1; R 13a divalent group comprising one or more rings; R 17-R 20H, 1-20C alkyl, 3-20C cycloalkyl, 1-20C alkoxy, 6-20C aryl, 6-20C aryloxy, 2-20C substituted amino or 1-10C silanyl, all optionally substituted with halo, alkoxy, phenoxy, disubstituted amino or silyl.

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