Title (en)

SILANE-SUBSTITTED RAFT-REAGENTS AND SILANE-CROSS-LINKABLE POLYMERS

Title (de)

SILAN-SUBSTITUIERTE RAFT-REAGENZIEN UND SILAN-VERNETZBARE POLYMERE

Title (fr)

RÉACTIFS RAFT SUBSTITUÉS PAR UN SILANE, ET POLYMÈRES RÉTICULABLES AVEC UN SILANE

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Application

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Abstract (en)

[origin: WO2009047070A2] The invention relates to silane-substituted RAFT reagents of general formulae R1 n(OR2)3-nSi-L1 -Rf -R3 (1a), R1 n(OR2)3-nSi-L1 -Rf -L2 -Si(OR2)3-nR1 n(1b), and R1 n(OR2)3-n Si-L1 -Rf -L2 -Rf -L3 -Si(OR2)3-nR1 n (1c), wherein R1, R2 and R3 represent, independently from each other, hydrogen atoms or monovalent C1-C20-hydrocarbon radicals, that are optionally substituted with -CN, -NCO, -NR1 2, -COOH, -COOR1, - PO(OR1) 2, -halogen, -acyl, -epoxy, -SH, -OH or CONR1 2, and in which optionally one or more, carbon atoms that are not adjacent to each other are substituted with the groups -O-, -CO-, -COO-, -OCO-, -OCOO-, CONR1 -, -S-, -CSS-, -CSO-, -COS-or NR1 -, -N= or P=, n being, respectively, a whole number having a value of between 0 to 2, L1, L2 and L3 are respectively, independent of each other, linear or cyclic, divalent C1-C20-hydrocarbon radicals, that are optionally substituted with -CN, -NCO, -NR1 2, -COOH, -COOR1, -PO(OR1) 2, -halogen, -acyl, -epoxy, -SH, -OH or CONR1 2, and in which, optionally, one or more carbon atoms that are not adjacent to each other are substituted with the groups -O-, -CO-, -COO-, -OCO-, -OCOO-, CONR1 -, -S-, -CSS-, -CSO-, -COS-or NR1 -, -N= or P=, and Rf is a divalent RAFT-reactive group. The invention also relates to silane-cross-linkable polymers that are obtained by radically initiated polymerisation of A) one or more ethylenically unsaturated monomers selected from the group consisting of (meth) acryl acid ester, vinyl ester, vinyl aromates, olefine, 1,3-diene, vinyl halogen and vinyl ether, and optionally B) one or more ethylenically unsaturated auxiliary monomers. The invention is characterised in that polymerisation takes place in the presence of one or more silane substituted RAFT-reagents.

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