

Title (en)
AZOIC COMPOUNDS FUNCTIONALIZED WITH HETEROCYCLES

Title (de)
MIT HETEROCYCLEN FUNKTIONALISIERTE AZOVERBINDUNGEN

Title (fr)
COMPOSES AZOIQUES FONCTIONNALISES AVEC DES HETEROCYCLES

Publication
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Application
EP 98951385 A 19980911

Priority

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- EP 9805806 W 19980911

Abstract (en)

[origin: DE19802335A1] Azo compounds functionalized with heterocycles are useful for radical polymerisation of olefinically unsaturated compounds to give (co)polymers with heterocyclic terminal groups. Azo compounds functionalized with heterocycles are of formula (I). Y = 1-20C alkyl, 6-14C aryl, 6-14C aryl substituted with functional groups based on non-metallic elements of Groups IVA, VA, VIA or VIIA, 3-10C cycloalkyl, aralkyl with 1-10C in the alkyl portion and 6-14C in the aryl portion, 1-20C alkyl substituted with functional groups based on non-metallic elements of Groups IVA, VA, VIA or VIIA, or a group of formula (II); Ra, Ra' = H, 1-20C alkyl, 6-14C aryl, aralkyl with 1-10C in the alkyl portion and 6-14C in the aryl portion, 3-10C cycloalkyl, or (not simultaneously) functional groups based on non-metallic elements of Groups IVA, VA, VIA or VIIA; Z' = -O-, -S- or -N(R')-; X = -(C(Rb)(Rb'))l or (=N)-(C(Rb)(Rb'))m-A-(C(Rb)(Rb'))n-(E)p; Rb, Rb' = as for Ra and Ra'; A = -C(O)O-, -O-, -S-, -C(O)N(R)-, -N(R)-, -C(O)- or -C(R)=N-; E = optionally substituted 6-14C arylene; R', R = H, alkyl, aryl or aralkyl; k = 2 or 3; l = a whole number 1-24; m, n = whole numbers 0-12, and m+n ≥ 1; and p = 0, 1, 2 or 3, and n + p ≥ 1. An Independent claim is also included for the preparation of compounds (I) comprising reacting a compound of formula (IIIa) with a halogenating agent in a polar aprotic solvent at -20 to 100 deg C to form the corresponding compound (IIIb: B = Cl, Br or I), and reacting the isolated compound (IIIb) with a base in a polar protic solvent at 0-50 deg C. Y = 1-20C alkyl, 6-14C aryl, 6-14C aryl substituted with functional groups based on nonmetallic elements of Groups IVA, VA, VIA or VIIA, 3-10C cycloalkyl, aralkyl with 1-10C in the alkyl part and 6-14C in the aryl part, 1-20C alkyl substituted with functional groups based on nonmetallic elements of Groups IVA, VA, VIA or VIIA, or a residue of formula (IV); Ra, Ra' = H, 1-10C alkyl, 6-14C aryl, aralkyl with 1-10C in the alkyl part and 6-14C in the aryl part, 3-10C cycloalkyl or (not both simultaneously) functional groups based on nonmetallic elements of Groups IVA, VA, VIA or VIIA; Z' = -O-, -S- or -N(R')-; X = -(C(Rb)(Rb'))l or -(C(Rb)(Rb'))m-A-(C(Rb)(Rb'))n-(E)p-; Rb, Rb' = as for Ra and Ra'; A = -C(O)O-, -O-, -S-, -C(O)N(R)-, -N(R)-, -C(O)- or -C(R)=N-; E = optionally substituted 6-14C arylene; R', R = H, alkyl, aryl or aralkyl; k = 2 or 3; l = a whole number 1-24; m, n = whole numbers 0-12, and m + n at least 1; p = 0, 1, 2 or 3, and n + p at least 1; and B = OH, mesyl, trifluoromethylsulphonyl, tosyl or brosyl.

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