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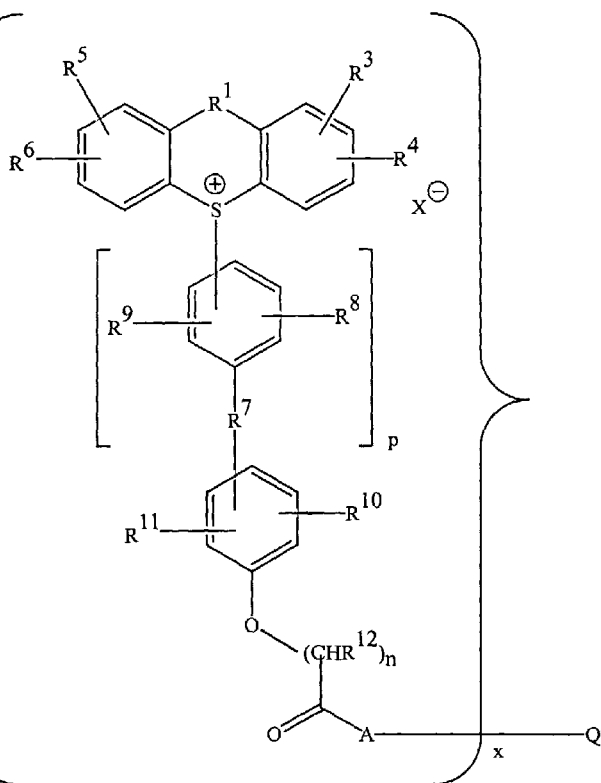
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(54) Title: MULTIFUNCTIONAL CATIONIC PHOTOINITIATORS, THEIR PREPARATION AND USE



(57) Abstract: Compounds of formula (I):
[where: R¹ is a direct bond, oxygen, a group
>CH₂, sulphur, a group >C=O, a group-(CH₂)₂- or
a group-N-R^a, where R^a is hydrogen or alkyl; R³,
R⁴, R⁵ and R⁶ are hydrogen or substituents; R⁸,
R⁹, R¹⁰ and R¹¹ are hydrogen, hydroxy or alkyl; or
R⁹ and R¹¹ are joined to form a fused ring system
with the benzene rings to which they are attached;
R⁷ is a direct bond, oxygen or a -CH₂-group;
p is 0 or 1; substituents are: alkyl, alkoxy,
alkenyl, halogen, nitrile, hydroxyl, aryl, aralkyl,
aryloxy, aralkyloxy, arylalkenyl, cycloalkyl,
carboxy, carboxyalkoxy, alkoxycarbonyl, ary-
loxycarbonyl, alkylcarbonyloxy, alkanesulphonyl,
arenesulphonyl, alkanoyl or arylcarbonyl; n is 1
to 12; R¹² is hydrogen, methyl or ethyl; A is a
group -[O(CHR¹³CHR¹⁴)_a]_y-, -[O(CH₂)_bCO]_y-, or
-[O(CH₂)_bCO]_(y-1)-[O(CHR¹³CHR¹⁴)_a]-, where:
one of R¹³ and R¹⁴ is hydrogen and the other is
hydrogen, methyl or ethyl; a is 1 to 2; b is 4 to 5;
Q is a residue of a polyhydroxy compound having
from 2 to 6 hydroxy groups; x is a number greater
than 1 but no greater than the number of available
hydroxyl groups in Q; y is a number from 1 to 10;
and X⁻ is an anion]; and esters thereof are useful
as cationic photoinitiators, especially for use in
surface coating applications, such as printing inks
and varnishes, and which are intended to be cured

by polymerisation initiated by radiation.



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