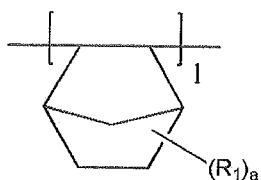


# NOVEL COPOLYMER AND PHOTORESIST COMPOSITION COMPRISING THE SAME

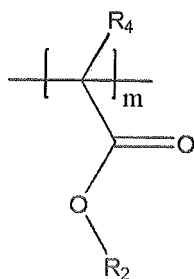
## ABSTRACT OF THE DISCLOSURE

There are provided a novel copolymer including monomers  
5 represented by the following formulas 1 to 4, and a  
photoresist composition containing the copolymer:

[Formula 1]

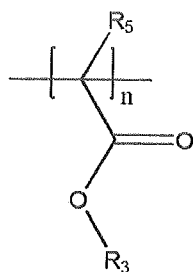


[Formula 2]

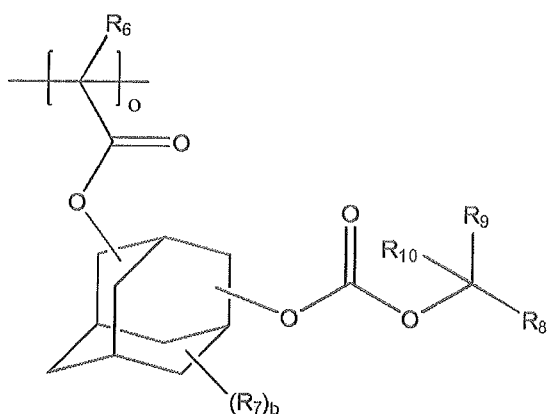


10

[Formula 3]



[Formula 4]



wherein in the formulas 1 to 4,

$R_1$  to  $R_{10}$  each independently represent any one selected from the group consisting of a halogen atom, a hydroxyl group, a carboxyl group, a nitrile group, an aldehyde group, an epoxy group, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group and a heteroaryl group;

$a$  is an integer from 0 to 10;

$b$  is an integer from 0 to 14; and

$l$ ,  $m$ ,  $n$  and  $o$  are integers satisfying the relationships such as that  $l+m+n+o=1$ ,  $0.01 < l/(l+m+n+o) < 0.4$ ,  $0 < m/(l+m+n+o) < 0.6$ ,  $0 \leq n/(l+m+n+o) < 0.6$ , and  $0 < o/(l+m+n+o) < 0.4$ .

The copolymer is rapidly dissolved in common solvents, and is easily soluble in most of solvents. The copolymer can be produced into a resin having a desired molecular weight, depending on the amount of olefin introduced thereinto, and thus can be produced without using a molecular weight controlling agent.

Figure 1