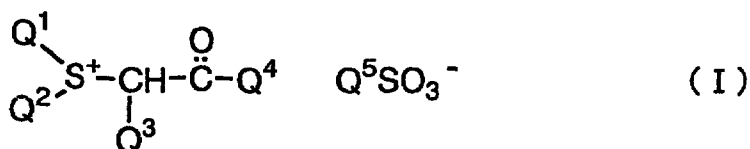


Abstract

CHEMICAL AMPLIFYING TYPE POSITIVE RESIST COMPOSITION AND
SULFONIUM SALT

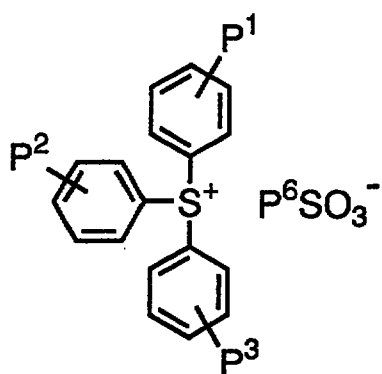
A chemical amplifying type positive resist composition which provides a resist pattern having an exceedingly improved line edge roughness, and is excellent in various resist performances such as dry etching resistance, sensitivity and resolution; and comprises:

(A) an acid generator containing (a) a sulfonium salt represented by the following formula (I):

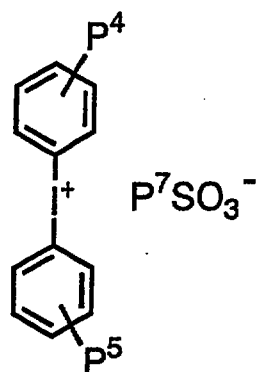


wherein Q¹ and Q² is alkyl or a cycloalkyl, or Q¹ and Q² form, together with a sulfur atom to which Q¹ and Q² are adjacent, an heteroalicyclic group; Q³ represents a hydrogen atom, Q⁴ represents alkyl or a cycloalkyl, or Q³ and Q⁴ form, together with a CHC(O) group to which Q³ and Q⁴ are adjacent, a 2-oxocycloalkyl group; and Q⁵SO₃⁻ represents an organosulfonate ion, and

(b) at least one onium salt selected from a triphenylsulfonium salt represented by the following formula (IIa), and a diphenyliodonium salt represented by the following formula (IIb):



(II a)



(II b)

wherein P^1 to P^5 represent hydrogen, a hydroxyl group, alkyl, or alkoxy; and $P^6SO_3^-$ and $P^7SO_3^-$ each independently represent
 5 an organosulfonate ion; and

(B) a resin which has a polymerization unit having a group instable against an acid, and is alkali-insoluble or -slightly soluble itself, but is converted to alkali-soluble by the action of an acid.