CLAIMS

[Claim 1]

A resin composition for a lens, comprising:

a photocationic polymerization initiator (X) including a salt formed from an anion represented by General Formula (1) and a cation; and

an epoxy compound (Y) containing two or more epoxy groups in a molecule,

wherein the epoxy compound (Y) is represented by General Formula (2), and

wherein a cured substance obtained by applying the resin composition for a lens onto a glass plate to a thickness of 250 μm, carrying out UV exposure under conditions of a wavelength of 365 nm, an irradiation intensity of 150 mW/cm^2, and an integrated irradiation amount of 3,000 mJ/cm^2, and carrying out heating under conditions of 120°C for 30 minutes in a nitrogen atmosphere satisfies the following requirement (B):

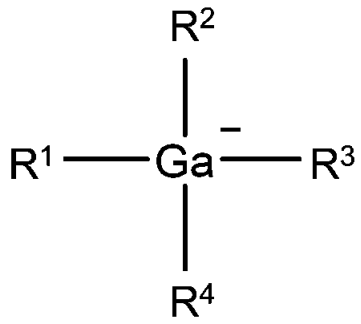
(B) the cured substance has a refractive index of 1.57 or more;

with the proviso that the resin composition for a lens excludes an energy-ray-curable composition comprising:

an acid generator that contains an onium gallate salt represented by the following General Formula (I) and an onium phosphate salt represented by the following General Formula (II); and

a cationically polymerizable compound,

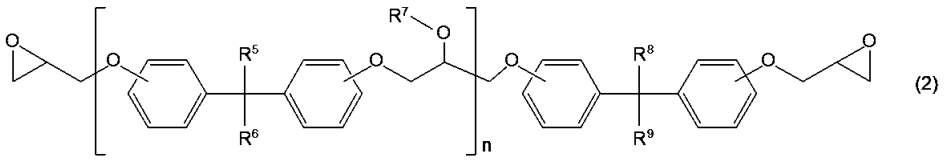
[Chem. 1]



(1)

(in General Formula (1), R^1 to R^4 each independently represent an alkyl group having 1 to 18 carbon atoms or an aryl group having 6 to 14 carbon atoms);

[Chem. 2]



(2)

(in General Formula (2), R^5, R^6, R^8, and R^9 each independently represent a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or a trifluoromethyl group, R^7's each independently represent a hydrogen atom or a glycidyl group, and n is an average repetition number, where n represents a real number in a range of 0 to 30);

$$[(R^5)_{n+1}\text{-}E]^+[(R^1)(R^2)(R^3)(R^4)Ga]^- \quad (I)$$

(in Formula (I), R^1 to R^4 are each independently an alkyl group having 1 to 18 carbon atoms or Ar, provided that at least one of R^1 to R^4 is Ar;

Ar is an aryl group having 6 to 14 carbon atoms (excluding the carbon atoms of the following substituents), wherein a part of the hydrogen atoms in the aryl group may be substituted with an alkyl group having 1 to 18 carbon atoms, an alkyl group

having 1 to 8 carbon atoms substituted with a halogen atom, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18 carbon atoms, an aryl group having 6 to 14 carbon atoms, a nitro group, a hydroxyl group, a cyano group, an alkoxy group or an aryloxy group represented by $-OR^6$, an acyl group represented by R^7CO-, an acyloxy group represented by R^8COO-, an alkylthio group or an arylthio group represented by $-SR^9$, an amino group represented by $-NR^{10}R^{11}$, or a halogen atom;

R^6 to R^9 are an alkyl group having 1 to 8 carbon atoms or an aryl group having 6 to 14 carbon atoms;

R^{10} and R^{11} are a hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or an aryl group having 6 to 14 carbon atoms;

E represents an element of Groups 15 to 17 (IUPAC notation) having a valence of n;

n is an integer of 1 to 3; and

R^5 is an organic group bonded to E, the number of R^5 groups is n+1, the (n+1) R^5 groups may be the same as or different from each other, and two or more R^5 groups may form a ring structure containing the element E, directly or via -O-, -S-, -SO-, $-SO_2-$, -NH-, -CO-, -COO-, -CONH-, an alkylene group, or a phenylene group);

$$[(R^5)_{n+1}-E]^+[(Rf)_bPF_{6-b}]^- \quad (II)$$

(in Formula (II), Rf represents an alkyl group in which 80% or more of the hydrogen atoms are substituted with fluorine atoms; b represents the number thereof and is an integer of 1 to 5; the b Rf groups may be the same as or different from each other; and R^5, E, and n are as defined in General Formula (I)).

[Claim 2]

The resin composition for a lens according to Claim 1, wherein an epoxy equivalent of the epoxy compound (Y) is 100 g/eq or more and 200 g/eq or less.

[Claim 3]

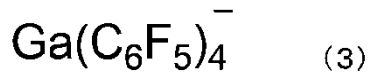
The resin composition for a lens according to Claim 1 or 2, wherein a content of the epoxy compound (Y) is 40% by mass or more in non-volatile components of the resin composition for a lens.

[Claim 4]

The resin composition for a lens according to any one of Claims 1 to 3,

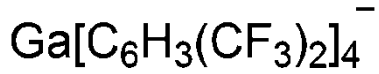
wherein the photocationic polymerization initiator (X) contains, as an anion, an anion represented by any of Formula (3) or (4),

[Chem. 3]



(3)

[Chem. 4]



(4)

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[Claim 5]

The resin composition for a lens according to any one of

Claims 1 to 4,

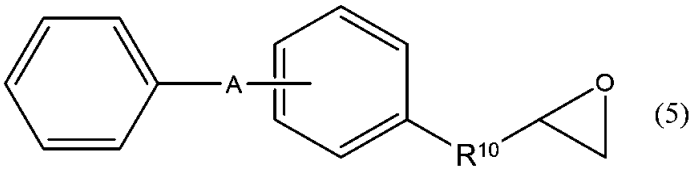
wherein the photocationic polymerization initiator (X) contains a sulfonium ion as the cation.

[Claim 6]

The resin composition for a lens according to any one of Claims 1 to 5, further comprising:

a monofunctional epoxy compound (Z) represented by General Formula (5),

[Chem. 5]



(5)

(in General Formula (5), A is selected from a single bond, an oxygen atom, and a sulfur atom, R^{10} is an alkylene having 1 to 8 carbon atoms, and any methylene group may be substituted with an oxygen atom).

[Claim 7]

The resin composition for a lens according to Claim 6,

wherein the monofunctional epoxy compound (Z) is o-phenylphenol glycidyl ether.

[Claim 8]

The resin composition for a lens according to any one of Claims 1 to 7, further comprising:

an oxetane compound (W).

[Claim 9]

The resin composition for a lens according to Claim 8,

wherein the oxetane compound (W) is a biphenyl type oxetane compound.

[Claim 10]

The resin composition for a lens according to any one of Claims 1 to 9,

wherein in a case where the resin composition for a lens is subjected to a measurement with an E-type viscometer under conditions of a temperature of 25°C and a rotation speed of 2.5 rpm, a viscosity of the resin composition for a lens is 100 mPa·s or more and 5,000 mPa·s or less.

[Claim 11]

The resin composition for a lens according to any one of Claims 1 to 10,

wherein a cured substance satisfies the following requirements (A), (C), and (D), where the cured substance is obtained by applying the resin composition for a lens onto a glass plate to a thickness of 250 μm, carrying out UV exposure under conditions of a wavelength of 365 nm, an irradiation intensity of 150 mW/cm^2, and an integrated irradiation amount of 3,000 mJ/ cm^2, and carrying out heating under conditions of 120°C for 30 minutes in a nitrogen atmosphere,

(A) the cured substance has a curing shrinkage rate of 1.0%

or more and 5.0% or less,

(C) the cured substance has a light transmittance of 80% or more in a thickness direction, and

(D) the cured substance has a rate of change in light transmittance after heating (125°C, 168 hours) of 10% or less in the thickness direction.

[Claim 12]

The resin composition for a lens according to any one of Claims 1 to 11,

wherein the resin composition for a lens is used for a wafer-level lens.

[Claim 13]

A cured substance for a lens, which is obtained by curing the resin composition for a lens according to any one of Claims 1 to 12.

[Claim 14]

A lens comprising:

the cured substance for a lens according to Claim 13.