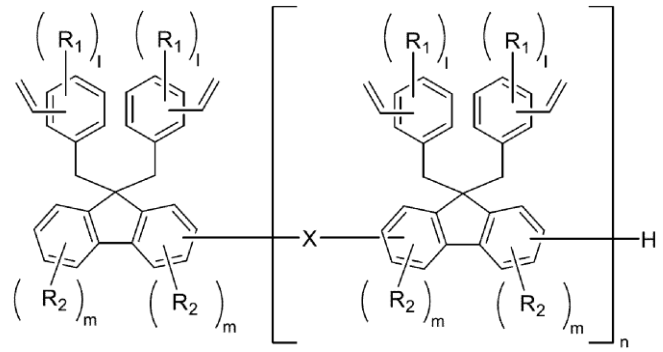
CLAIMS

[Claim 1] A compound represented by the following formula (1):

[Chemical Formula 1]



(1)

in the above formula (1), each of the multiple R_1's independently represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

each of the multiple R_2's independently represents a hydrocarbon group represented by the following formula (a);

X has a structure represented by any one of the following formulas (c) to (f);

each of the multiple l's independently represents an integer of 1 to 4;

each of the multiple m's independently represents an integer of 0 to 3;

the average value m_{ave} of m is $0 < m_{ave} \leqq 3$;

n is the number of repetitions, and

the average value n_{ave} of n is $0.05 \leqq n_{ave} \leqq 20$,

[Chemical Formula 2]



(a)

in the above formula (a),

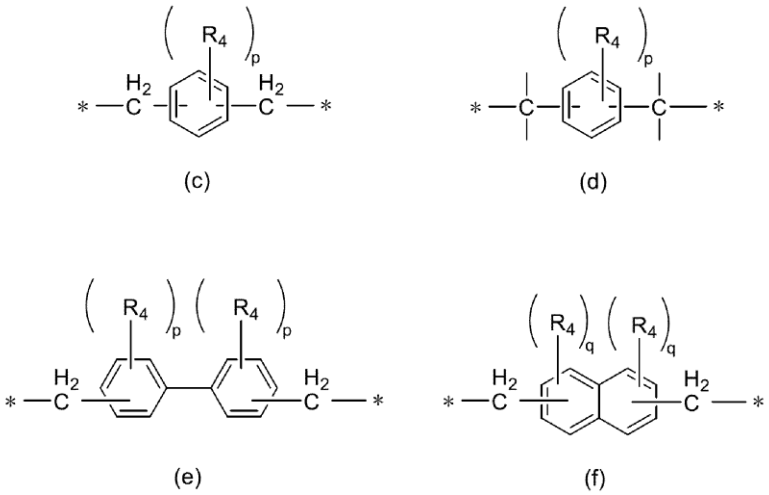
* represents a bonding position to the fluorene structure in formula (1);

R_3 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

and

k represents an integer of 1 to 5,

[Chemical Formula 3]



(c) (d)

(e) (f)

in the above formulas (c) to (f),

* represents a bonding position to the fluorene structure in formula (1);

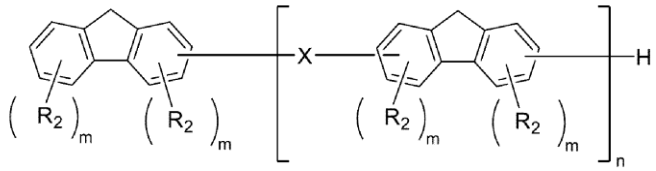
multiple R_4's each independently represent a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

multiple p's each independently represent an integer of 1 to 4, and

multiple q's each independently represent an integer of 1 to 3.

[Claim 2] A compound obtained by reacting a compound represented by the following formula (A) with a compound represented by the following formula (B):

[Chemical Formula 4]



(A)

in the above formula (A), multiple R_2's each independently represent a hydrocarbon group represented by the following formula (a);

X has a structure represented by any one of the following formulas (c) to (f);

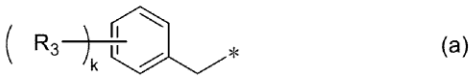
multiple m's each independently represent an integer of 0 to 3,

the average value m_{ave} of m is $0 < m_{ave} \leqq 3$;

n is the number of repetitions; and

the average value n_{ave} of n is $0.05 \leqq n_{ave} \leqq 20$,

[Chemical Formula 5]



(a)

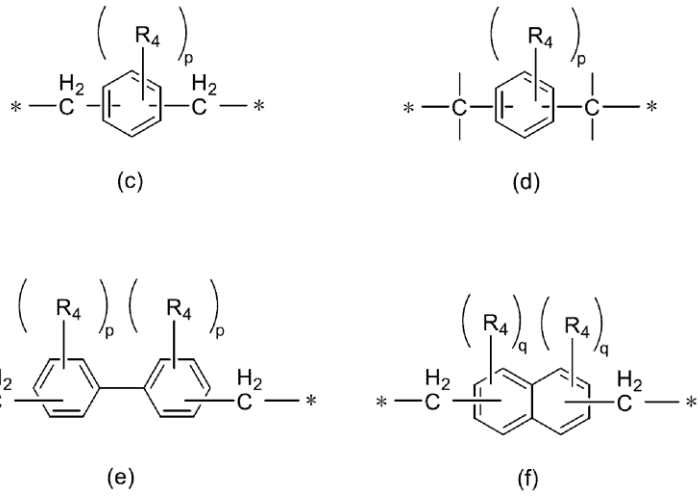
in the above formula (a),

* represents the bonding position to the fluorene structure in formula (A);

R_3 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms; and

k represents an integer of 1 to 5,

[Chemical Formula 6]



(c) (d) (e) (f)

in the above formulas (c) to (f),

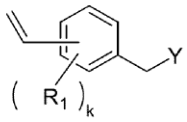
* represents the bonding position to the fluorene structure in formula (1);

each of the multiple R_4's independently represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

each of the multiple p's independently represents an integer of 1 to 4; and

each of the multiple q's independently represents an integer of 1 to 3,

[Chemical Formula 7]



(B)

in the above formula (B),

R_1 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

k represents an integer of 1 to 4; and

Y represents a halogen atom.

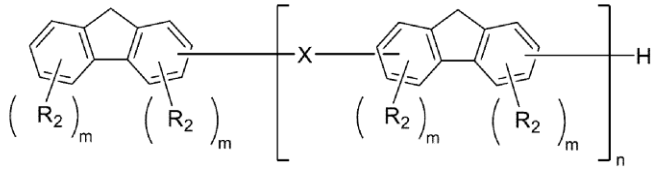
[Claim 3] A curable resin composition containing the compound according to claim 1 or 2.

[Claim 4] A cured product obtained by curing the compound according to claim 1 or 2.

[Claim 5] A cured product obtained by curing the curable resin composition according to claim 3.

[Claim 6] A method for producing a compound obtained by reacting a compound represented by the following formula (A) with a compound represented by the following formula (B) in an aprotic polar solvent in the presence of a basic catalyst:

[Chemical Formula 8]



(A)

in the above formula (A), multiple R_2's each independently represent a hydrocarbon group represented by the following formula (a);

X has a structure represented by any one of the following formulas (c) to (f);

multiple m's each independently represent an integer of 0 to 3;

the average value m_{ave} of m is $0 < m_{ave} \leqq 3$;

n is the number of repetitions; and

the average value n_{ave} of n is $0.05 \leqq n_{ave} \leqq 20$,

[Chemical Formula 9]



(a)

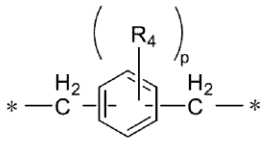
in the above formula (a),

* represents the bonding position to the fluorene structure in formula (A);

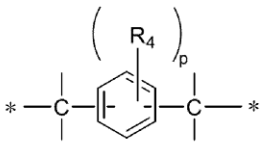
R_3 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms; and

k represents an integer of 1 to 5,

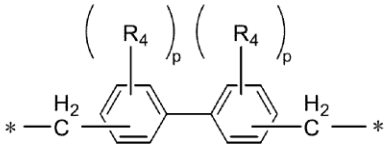
[Chemical Formula 10]



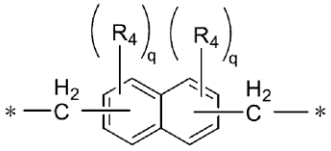
(c)



(d)



(e)



(f)

in the above formulas (c) to (f),

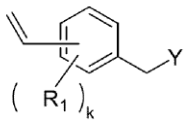
* represents the bonding position to the fluorene structure in formula (A);

each of the multiple R_4's independently represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

each of the multiple p's independently represents an integer of 1 to 4; and

each of the multiple q's independently represents an integer of 1 to 3,

[Chemical Formula 11]



(B)

in the above formula (B),

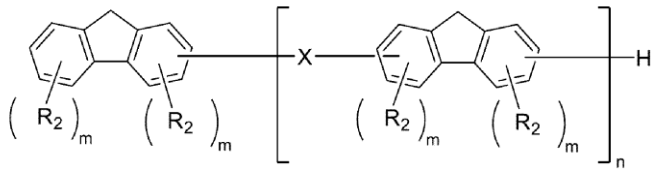
R_1 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

k represents an integer of 1 to 4; and

Y represents a halogen atom.

[Claim 7] A compound represented by the following formula (A):

[Chemical Formula 12]



(A)

in the above formula (A),

multiple R_2's each independently represent a hydrocarbon group represented by the following formula (a);

X has a structure represented by any one of the following formulas (c) to (f);

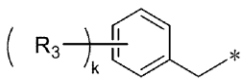
multiple m's each independently represent an integer of 0 to 3;

the average value m_{ave} of m is $0 < m_{ave} \leqq 3$;

n is the number of repetitions; and

the average value n_{ave} of n is $0.05 \leqq n_{ave} \leqq 20$,

[Chemical Formula 13]



(a)

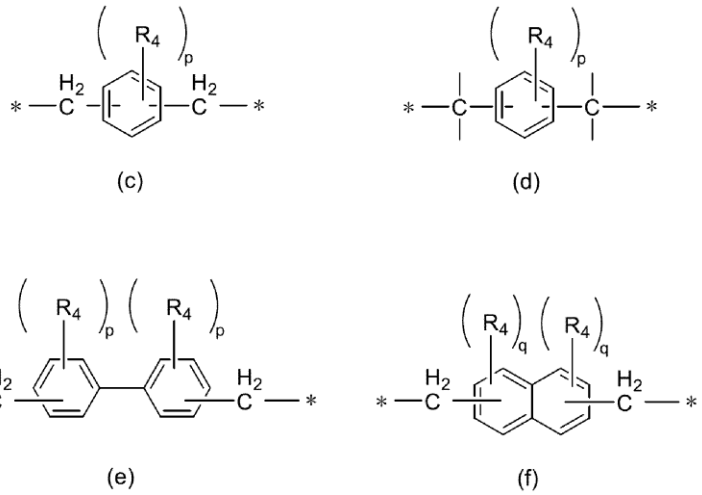
in the above formula (a),

* represents the bonding position to the fluorene structure in formula (A);

R_3 represents a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms; and

k represents an integer of 1 to 5,

[Chemical Formula 14]



in the above formulas (c) to (f),

* represents the bonding position to the fluorene structure in formula (A);

multiple R_4's each independently represent a hydrogen atom or a hydrocarbon group having 1 to 5 carbon atoms;

multiple p's each independently represents an integer of 1 to 4; and

multiple q's each independently represents an integer of 1 to 3.