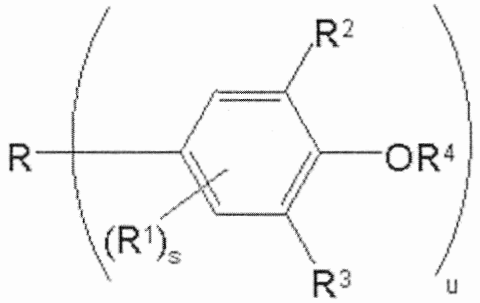
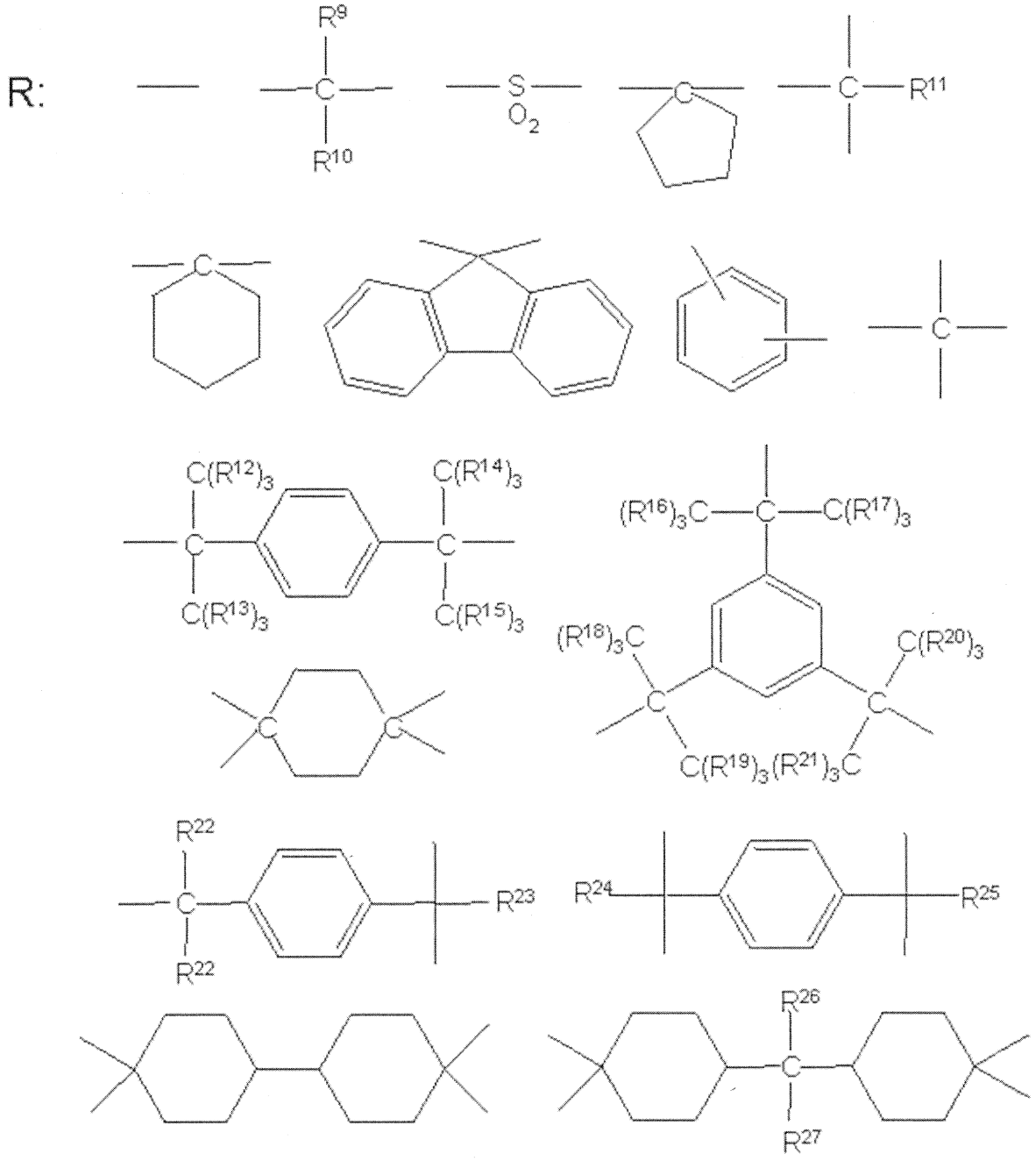
CLAIMS

1. A resin composition comprising (a) a polyimide, a polybenzoxazole, a polyimide precursor, or a polybenzoxazole precursor, (b) 1,5-dihydroxynaphthalene, 1,6-dihydroxynaphthalene, 1,7-dihydroxynaphthalene, or 2,3-dihydroxynaphthalene, and (c) a thermal cross-linking agent having a structure represented by the following formula (1) or a thermal cross-linking agent having a group represented by the following formula (2):




(1)

R:




wherein in formula (1), $R^1$ represents a monovalent hydrocarbon groups having 1 to 6 carbon atoms, Cl, Br, I, or F, $R^2$ and $R^3$ each represent $CH_2OR^5$ ($R^5$ is a monovalent hydrocarbon group having 1 to 4 carbon atoms), $R^4$ represents a hydrogen atom, a methy group or an ethyl group, s represents an integer of 0 to 2 and u represents an integer

of 2 to 4, $R^9$ to $R^{27}$ each represent a hydrogen group, a monovalent organic group having 1 to 20 carbon atoms, Cl, Br, I, or F;

$$-N(CH_2OR^6)_t(H)_v \quad (2)$$

wherein in formula (2), $R^6$ represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 6 carbon atoms, t is 1 or 2 and v is 0 or 1, provided that t + v is 1 or 2.

2. The resin composition according to claim 1, wherein component (b) is used to reduce transmittance in the visible range of a cured film obtained by the resin composition.

~~2~~3. A positive type photosensitive resin composition comprising the resin composition according to claim 1 and further (d) a photo acid generator selected from any one of quinone diazide compounds, sulfonium salts, phosphonium salts, diazonium salts, and iodonium salts.

~~34~~. A negative type photosensitive resin composition comprising the resin composition according to claim 1 and further (e) a photopolymerization initiator which generates active radicals in the part exposed to light and (f) a compound having two or more ethylenically unsaturated bonds selected from any one of ethylene glycol dimethacrylate, ethylene glycol diacrylate, diethylene glycol dimethacrylate, trimethylolpropane triacrylate, ethoxylated bisphenol A dimethacrylate, glycerin dimethacrylate, tripropylene glycol dimethacrylate, butanediol dimethacrylate, glycerin triacrylate, pentaerythritol triacrylate, pentaerythritol tetraacrylate, dipentaerythritol hexaacrylate, ethoxylated pentaerythritol tetraacrylate, and ethoxylated isocyanuric acid triacrylate.

~~45~~. The resin composition according to any one of claims 1 to ~~34~~, wherein the change in transmission of light having a wavelength of 450 nm before and after cure in a film having a thickness of 3.0 μm is 20% or more.

~~56~~. A display device comprising a substrate in which a thin film transistor has been formed, a planarization film and/or a dielectric layer obtained by curing the resin composition according to any one of claims 1 to ~~45~~, and a display element in this order.

~~67~~. The display device according to claim ~~56~~, wherein the display element is an organic electroluminescent element.