

[54] **NOVEL UV ABSORBING COMPOUNDS AND PHOTOGRAPHIC ELEMENTS CONTAINING UV ABSORBING COMPOUNDS**

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[21] Appl. No.: **762,356**

[22] Filed: **Jan. 25, 1977**

Related U.S. Application Data

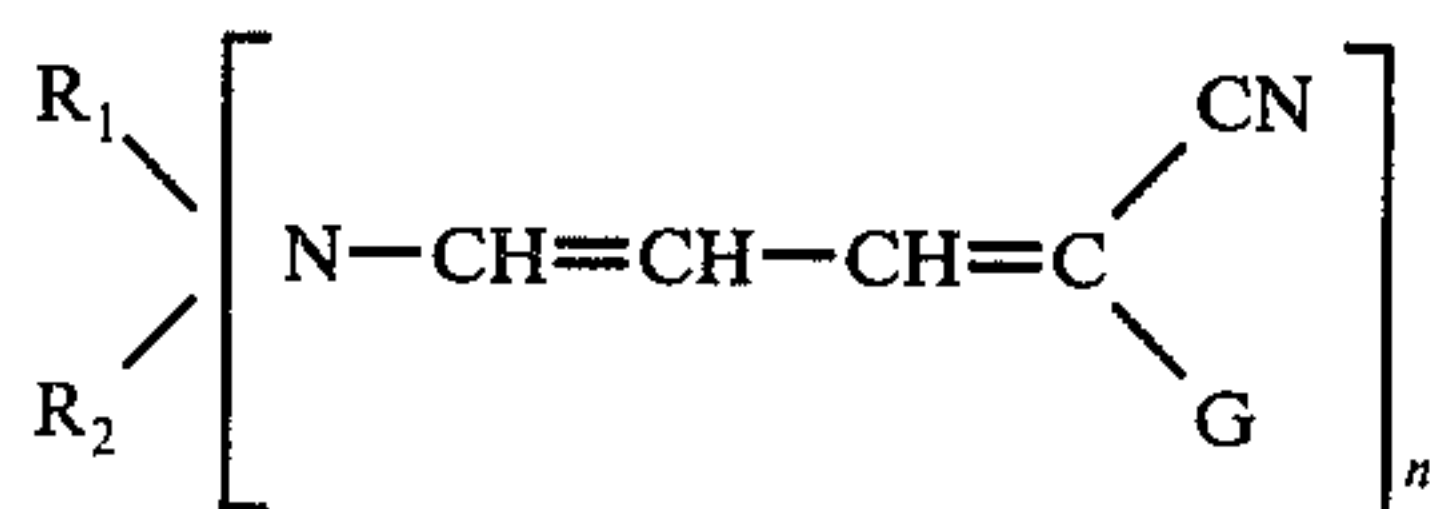
[60] Division of Ser. No. 641,788, Dec. 18, 1975, which is a continuation-in-part of Ser. No. 506,913, Sep. 17, 1974, abandoned.

[51] Int. Cl.² **C07C 87/24; C07D 223/02; C07D 241/02; C07D 295/20**

[52] U.S. Cl. **542/469; 260/239 BF; 260/268 CN; 260/465.5 R; 544/163**

[57] **ABSTRACT**

1-Amino-4-cyano-1,3-butadiene compounds of the formula



wherein n is 1 or 2; when n is 1, R_1 and R_2 are the same

or different and represent hydrogen, alkyl including substituted alkyl, aryl including substituted aryl or cyclic alkyl groups, except that both R_1 and R_2 cannot be hydrogen, or taken together R_1 and R_2 represent the elements necessary to complete a cyclic amino group and, when n is 2, at least one of R_1 and R_2 is alkylene or arylene; G represents an electron withdrawing group. The compounds are especially useful in photographic elements as UV absorbers. Particularly useful UV absorbers are 3-dibutylaminoallylidene malononitrile, 3-dihexylaminoallylidene malononitrile, 3-tert-butylaminoallylidene malononitrile, 3-diisobutylaminoallylidene malononitrile, 3-di-sec-butylaminoallylidene malononitrile, 3-hexahydroazepinoallylidene malononitrile, 3-N(n-butyl)-N-cyanomethyl aminoallylidene malononitrile, 3[N,N-bis(2,2-diethoxyethyl)amino]allylidene malononitrile, 3(N-methyl-N-cyanomethyl)aminoallylidene malononitrile, 1,4-piperazino bis(allylidene malononitrile), N,N-diethyl-N,N-di-(4,4-dicyanobutadienyl)-1,6-diaminohexane, 3-[N,N-bis(2-cyanoethyl)amino]allylidene malononitrile, 3-morpholinoallylidene methylsulfonylacetoneitrile, 3-morpholinoallylidene 4-tert-butylphenylsulfonylacetoneitrile, 3-piperazinoallylidene 4-tert-butylphenylsulfonylacetoneitrile and 3-N-methylpiperazinoallylidene 4-tert-butylphenylsulfonylacetoneitrile.

**6 Claims, No Sheets Drawing,
33 Pages Specification**

The file of this unexamined application may be inspected and copies thereof may be purchased (849 O.G. 1221, Apr. 9, 1968).