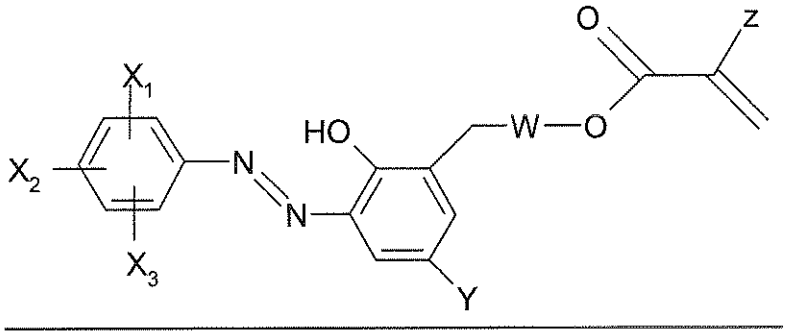
additional visible light absorbing compounds that are copolymerizable with other ingredients in implantable lens materials, relatively inexpensive to synthesize, and are efficient in absorbing light between approximately 380 – 495 nm.

Summary ~~of the Invention~~

The present disclosure~~invention~~ provides novel azo compounds that satisfy the above objectives. These azo compounds are especially suitable for use as monomers that absorb a portion of visible light (approximately 380 – 495 nm). These absorbers are suitable for use in ophthalmic lenses, including contact lenses. They are particularly useful in implantable lenses, such as intraocular lenses (IOLs).

The azo compounds of the present disclosure~~invention~~ contain reactive groups, which allow for covalent attachment of the absorbers to ocular lens materials. Additionally, the absorbers of the present disclosure~~invention~~ can be synthesized in approximately 3 - 4 steps from readily available, inexpensive starting materials without the need for column chromatography.

In a first aspect, there is provided an azo compound of the formula



wherein

X_1, X_2, and X_3 independently = H, $C_1 - C_6$ alkyl, $C_1 - C_6$ alkoxy, phenoxy, or benzyloxy;

Y = H, F, Cl, Br, I, or $C_1 - C_6$ alkyl;

W = nothing or –O-C(=O)–NH-CH_2-CH_2-; and

Z = H, CH_3, C_2H_5, or CH_2OH.

The present disclosure~~invention~~ also relates to ophthalmic device materials containing such azo compounds

In a second aspect, there is provided an ophthalmic device material comprising an azo compound as defined above and a device-forming monomer selected from the group consisting of acrylic monomers and silicone-containing monomers.

In a third aspect, there is provided an intraocular lens comprising an azo compound as defined above.

In a fourth aspect, there is provided an ophthalmic device comprising the ophthalmic device material as defined above.

Brief Description of the Drawings

Figures 1 - 4 show percent transmittance curves for Compounds A – C at various concentrations.

Figure 5 shows the percent transmittance curve for a combination of Compound A and the UV absorber ("UV-1").

Figure 6 shows the photostability results for the formulation of Example 11D after light exposure equivalent to 20 years