deformed lens returns to its original nondeformed state. However, according to the invention, the lens is formed from a material having a combination of excellent elastic memory and slow speed of retraction characteristics. The lens thus returns slowly to the nondeformed state without injuring eye tissue while achieving the final nondeformed state without creases, wrinkles, or other structural deviations which would otherwise result in optical distortions.

A variety of further modifications and improvements to the invention describe herein are believed to be apparent to those skilled in the art. Accordingly, no limitation is intended by way of the description herein, except as set forth in the appended claims.

I claim:

1. A deformable-elastic intraocular lens (IOL), comprising:

a deformable-elastic lens body of crosslinked acrylic material comprising copolymers of methacrylate and a acrylate esters which are relatively hard and [relative] *relatively* soft at body temperature, crosslinked with a diacrylate ester wherein the crosslinked acrylic material has a substantially tack-free surface, a crosslink density of between [0.5×10^{-2} and 1.5×10^{-2}] *0.23×10^{-1} and 1.66×10^{-1}* moles per liter, a glass transition temperature between −30° and 25° C., a tensile modulus between 1000 and 3000 psi and an elongation at break of at least 100%; and

flexible haptics attached to the lens body to position the lens body in the eye.

2. The IOL of claim **1** wherein the lens body is formed by chemically crosslinking the diacrylate ester with a partially polymerized mixture of the copolymers, curing the crosslinked acrylic and holding the cured crosslinked acrylic at a temperature below its Beta-relaxation temperature while machining the lens body.

3. The IOL of claim **2** wherein each haptic is attached by forcing an enlarged end thereof into a smaller hole in an edge of the lens body.

4. A deformable-elastic intraocular lens (IOL), comprising:

a deformable-elastic lens body of crosslinked acrylic material formed by mixing copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temperature, with a diacrylate ester to produce an acrylic material having crosslinked density of between [0.5×10^{-2} and 1.5×10^{-2}] *0.23×10^{-1} and 1.66×10^{-1}* moles per liter and a glass transition temperature of between −30° and 25' C.; and

flexible haptics attached to the lens body to position the lens body in the eye.

5. The IOL of claim **4** wherein the copolymers are mixed and partially polymerized before mixing with the diacrylate ester.

6. A deformable-elastic intraocular lens body of a crosslinked acrylic material comprising copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temperature, crosslinked with a diacrylate ester wherein the acrylic material has a substantially tack-free surface, a crosslink density of between [0.5×10^{-2} and 1.5×10^{-2}] *0.23×10^{-1} and 1.66×10^{-1}* moles per liter, a glass transition temperature between −30° and 25° C., a tensile modulus between 1000 and 3000 psi and an elongation at break of at least 100%.

7. A deformable-elastic intraocular lens body of a crosslinked acrylic material formed by reacting copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temperature to produce a reaction product having a glass transition temperature between −30° and 25° C., partially polymerizing the reaction product and mixing it with a diacrylate ester to produce a crosslinked acrylic having a crosslink density of between [0.5×10^{-2} and 1.5×10^{-2}] *0.23×10^{-1} and 1.66×10^{-1}* moles per liter, curing the acrylic and machining the lens body therefrom.

8. The lens body of claim **7** wherein the relatively hard methacrylate ester is a fluoroacrylate.

9. The lens body of claim **7** wherein reaction product comprises ethyl methacrylate, trifluoro ethyl methacrylate and an acrylate ester present in percent by weight concentrations of 25 to 45, 5 to 25 and 30 to 60%, respectively.

10. The lens body of claim **9** wherein the acrylate ester is selected from n-butyl acrylate, ethyl acrylate and 2-ethyl hexyl acrylate.

11. The lens body of claim **10** wherein the diacrylate ester is present in a percent by weight concentration of 0.5 to 3.0%.

12. The lens of body of claim **11** wherein the diacrylate ester is selected from ethylene glycol dimethacrylate, propylene glycol dimethacrylate, and ethylene glycol diacrylate.

13. A method of forming a deformable-elastic intraocular lens body comprising the steps of:

(a) mixing copolymers of methacrylate and acrylate ester which are relatively hard and relatively soft at body temperature;

(b) partially polymerizing the product of Step (a);

(c) chemically crosslinking the product of Step (b) with a diacrylate ester;

(d) curing the product to Step (c); and

(e) forming a lens body having a predetermined optical characteristic from the product of Step (d).

14. The method of claim **13** wherein Step (e) comprises holding the product of Step (d) at a temperature below its Beta-relaxation temperature while machining the lens body.

15. The method of claim **13** wherein the methacrylate and acrylate esters are mixed together in approximately a 45 to 55% by weight ratio.

16. The method of claim **15** wherein the diacrylate ester of Step (C) is present in a percent composition by weight of 0.5 to 3.0%.

17. The method of claim **16** further including the mixing of a UV-absorber and a free radical initiator in Step (a).

18. The method of claim **13** wherein the relatively hard methacrylate ester is a fluoroacrylate.

19. The method of claim **18** wherein Step (a) further including mixing the fluoroacrylate in a concentration range by weight of between 5 and 25% with ethyl methacrylate in a concentration range by weight of between 25 and 45% and an acrylate ester selected from n-butyl acrylate, ethylacrylate or 2-ethyl hexyl acrylate in a concentration range by weight of between 30 and 60%.

20. The method of claim **19** wherein the fluoroacrylate is trifluoro ethyl methacrylate.

21. The method of claim **20** wherein Step (a) further includes the mixing of a UV-absorber in a concentration range by weight of between 0 and 10% and a free radical initiator in a concentration range by weight of 0.05 and 0.2%.

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