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Shaddock

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(54) **ADAPTIVE OPTIC LENS AND METHOD OF MAKING**

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See application file for complete search history.

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(57) **ABSTRACT**

A lens for correcting human vision, for example an IOL, contact lens or corneal inlay or onlay, that carries and interior phase or layer comprising a pattern of individual transparent adaptive displacement structures. In the exemplary embodiments, the displacement structures are actuated by shape change polymer that adjusts a shape or other parameter in response to applied energy that in turn displaces a fluid media within the lens that actuates a flexible lens surface. The adaptive optic means of the invention can be used to create highly localized surface corrections in the lens to correct higher order aberrations-which types of surfaces cannot be fabricated into and IOL and then implanted. The system of displacement structures also can provide spherical corrections in the lens.

14 Claims, 17 Drawing Sheets

