

Spherical Optics by Dislocation of Crystal Structure

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A new form of optics was developed through the dislocation of crystal structure, which would generate unique, permanent 3D superplastically-formed single optical elements with high crystalline quality. This invention comprises a method of fabricating spherical optics by dislocation. This method eliminates residual stress and aberration caused by the remaining stressful forces. The fabrication by dislocation of the crystal structure is a new method of producing optics in which a crystal undergoes curvature that we are examining. The crystal must be heated to the melting point of the specific material. Dislocation and elimination of residual stress from crystal structure is very important for a variety of uses, as detailed in the paper.