

What is claimed is:

- 1. A device for forming a fluid lens when immersed in a liquid medium, comprising:
  - a semipermeable transparent sheath defining a fully enclosed cavity and having a plurality of pores for permitting a liquid medium to flow into said cavity;
  - a hydrophilic polymer array disposed in said cavity and presenting a pressure differential across said sheath when said sheath is immersed in the liquid medium for causing liquid medium to flow into said cavity and to hydrate said array, causing said array to expand and to completely fill said cavity, thereby causing said sheath to expand and to assume a defined lenticular shape, wherein said hydrated array assumes a shape having an outer contour defined by said expanded sheath and constitutes a fluid lens.
- 2. The device of claim 1 wherein said transparent sheath has a thickness of less than 50 microns.
- 3. The device of claim 1 wherein the liquid medium in which said lens is to be immersed comprises a physiological solution.
- 4. The device of claim 3 wherein said physiological solution comprises a physiological saline solution
- 5. The device of claim 3 including a physiologically active agent complexed to said array.
- 6. The device of claim 1 wherein said array is photo-stable.
- 7. The device of claim 1 wherein said array is inert.
- 8. The device of claim 1, wherein said sheath comprises two semipermeable transparent sheets each having a peripheral edge, said edges being joined together to form said cavity and further comprising scaffolding means attached to one of said sheets for maintaining said one sheet in a concave shape relative to said cavity.
- 9. A device according to claim 1, wherein said sheath is a biodegradable polymer film.
- 10. A lens comprising:
  - a semipermeable transparent sheath having a plurality of pores therein and including opposite anterior and posterior portions each having a peripheral

- edge, said edges being joined together to form a closed interior space between said portions;
- a hydrophilic polymer array disposed in the interior space of said sheath and being hydrated by a liquid which enters the interior space of said sheath through said pores, said hydrated array filling the interior space of said sheath and constituting a fluid lens having anterior and posterior surfaces bounded and defined by said anterior and posterior portions of said sheath, respectively.
- 11. A method of locating an intraocular lens into an eye comprising the steps of:
  - (a) providing a lens forming device comprising a semipermeable transparent sheath defining a fully enclosed cavity and having a plurality of pores for permitting a liquid to flow into the cavity and an at least partially dehydrated, hydrophilic polymer array disposed in the cavity and presenting a pressure differential across the sheath when the sheath is located in the eye of a wearer of the lens for causing a physiological liquid present in the eye of the wearer to flow into the cavity and to hydrate the array, causing the array to expand and to completely fill the cavity, thereby causing the sheath to expand and to assume a defined lenticular shape, wherein the hydrated array assumes a shape having an outer contour defined by the expanded sheath and constitutes a fluid lens;
  - (b) making an incision for insertion of the lens forming device into the eye; and
  - (c) inserting the lens forming device into the eye whereby the physiological liquid present in the eye will flow into the cavity to hydrate the array to form a fluid lens.
- 12. The method of claim 11 including folding the sheath prior to inserting it into the eye and unfolding the sheath after insertion into the eye.
- 13. The method of claim 12 wherein said making step includes making the incision only large enough to permit the insertion of the folded sheath.

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