Claims

1. A method of forming an ophthalmic device comprising:

depositing an organic semiconductor layer on a substrate;

dividing said substrate into a plurality of insert pieces, wherein each of said insert pieces comprises an organic semiconductor layer on a substrate;

attaching at least one of the insert pieces onto an ophthalmic lens insert; and

forming an encapsulating layer around the ophthalmic lens insert.

2. The method of claim 1, wherein the substrate is silicon wafer.

3. The method of claim 1, wherein the encapsulating layer is parylene.

4. The method of claim 3, wherein the encapsulating layer is forming a hydrogel around the lens insert.

5. The method of claim 4 additionally comprising:

forming at least a first gate conductor on the substrate.

6. The method of claim 5 additionally comprising:

depositing an energization element upon the substrate in electrical communication with the first gate conductor.

7. The method of claim 6 wherein:

the energization element is an electrochemical cell.

8. The method of claim 1, wherein the organic semiconductor layer comprises an n-type organic semiconductor.

9. The method of claim 1, wherein the organic semiconductor layer comprises a p-type organic semiconductor.

10. The method of claim 1, wherein the organic semiconductor layer comprises an n-type organic semiconductor, a p-type organic semiconductor and a combination thereof.

11. The method of claim 8, wherein the n-type organic semiconductor layer comprises copper hexadecafluorophthalocyanine ($F_{16}CuPC$).

12. The method of claim 9, wherein the p-type organic semiconductor layer comprises pentacene.

13. The method of claim 6, wherein the energization element comprises a plurality of electrochemical cells connected at least in part in a series manner.

14. The method of claim 5, wherein the first gate conductor comprises a transparent electrode.

15. The method of claim 14, wherein the transparent electrode comprises indium tin oxide.

Claims

1. A method of forming an ophthalmic device comprising:

forming a gate conductor on a substrate;

depositing a dielectric layer on the gate conductor;

depositing an organic semiconductor layer on the dielectric layer;

dividing said substrate into a plurality of insert pieces, wherein each of said insert pieces comprises an organic semiconductor layer on a substrate;

attaching at least one of the insert pieces onto an ophthalmic lens insert; and

forming an encapsulating layer around the ophthalmic lens insert.

2. The method of claim 1, wherein the substrate is silicon wafer.

3. The method of claim 1, wherein the encapsulating layer is parylene.

4. The method of claim 3, wherein the encapsulating layer is forming a hydrogel around the lens insert.

5. The method of claim 1 additionally comprising:

depositing an energization element upon the substrate in electrical communication with the gate conductor.

6. The method of claim 5 wherein:

the energization element is an electrochemical cell.

7. The method of claim 1, wherein the organic semiconductor layer comprises an n-type organic semiconductor.

8. The method of claim 1, wherein the organic semiconductor layer comprises a p-type organic semiconductor.

9. The method of claim 1, wherein the organic semiconductor layer comprises an n-type organic semiconductor, a p-type organic semiconductor, and a combination thereof.

10. The method of claim 7, wherein the n-type organic semiconductor layer comprises copper hexadecafluorophthalocyanine ($F_{16}CuPC$).

11. The method of claim 8, wherein the p-type organic semiconductor layer comprises pentacene.

12. The method of claim 5, wherein the energization element comprises a plurality of electrochemical cells connected at least in part in a series manner.

13. The method of claim 1, wherein the gate conductor comprises a transparent electrode.

14. The method of claim 13, wherein the transparent electrode comprises indium tin oxide.