WHAT IS CLAIMED IS:

1. A biocompatible energization element comprising:

   a first and second current collector;

   a cathode;

   an anode;

   an electrolyte;

   a laminar structure comprising a cavity structure; and

   an encapsulation for the energization element, wherein the encapsulation is a polymer film capable of sealing, wherein the polymer film capable of sealing is treated to form a seal with itself and with elements of the biocompatible energization element.

2. The biocompatible energization element of claim 1 wherein the polymer film capable of sealing comprises polypropylene.

3. The biocompatible energization element of claim 1 wherein the polymer film capable of sealing is treated by a means of welding.

4. The biocompatible energization element of claim 3 wherein the polymer film capable of sealing is further adhered to the biocompatible energization element with adhesive.

5. The biocompatible energization element of claim 3 wherein the polymer film capable of sealing is welded to a separator contained within the biocompatible energization element.

6. The biocompatible energization element of claim 3 wherein the polymer film capable of sealing is welded to a separator shelf contained within the biocompatible energization element.

7. The biocompatible energization element of claim 3 wherein the polymer film capable of sealing is welded to a current collector of the biocompatible energization element.

8. A biocompatible energization element comprising:

a first and second current collector;

a cathode;

an anode;

an electrolyte;

a laminar structure comprising a cavity structure; and

an encapsulation for the energization element, wherein the encapsulation comprises polypropylene, wherein the polypropylene is welded to form a seal on at one at least one edge of the encapsulation around the biocompatible energization element.

9. The biocompatible energization element of claim 8 wherein the biocompatible energization element is used in a biomedical device.

10. The biocompatible energization element of claim 9 wherein the biomedical device is an ophthalmic device.

11. The biocompatible energization element of claim 10 wherein the ophthalmic device is a contact lens.

12. A method for encapsulating a biocompatible energization element wherein the method comprises:

obtaining a first polymer film capable of sealing;

placing a first current collector with a first electrode upon the first polymer capable of sealing;

placing a separator shelf upon the first current collector wherein the separator shelf surrounds the first electrode and wherein the separator shelf creates a defined cavity within a laminar structure;

placing a separator upon the separator shelf wherein the separator will enclose the first electrode inside the cavity;

placing a second electrode with a second current collector upon the separator;

placing a second polymer film capable of sealing upon the second current collector; and

sealing together the first and second polymer capable of sealing to form a sealed and encapsulated energization element wherein the biocompatible energization element comprises:

a first and second current collector;

a cathode

an anode;

an electrolyte; and

a laminar structure comprising a cavity.

13. The method of claim 12 wherein the first and second polymer film capable of sealing comprise polypropylene.

14. The method of claim 12 wherein the sealing together the first and second polymer capable of sealing comprises welding.

15. The method of claim 12 wherein the sealing together the first and second polymer capable of sealing comprises adhering the first and second polymer capable of sealing with adhesive.

16. The method of claim 12 wherein the sealing together the first and second polymer capable of sealing comprises a combination of adhesives and welding of the first and second polymer capable of sealing.

17. The method of claim 12 further comprising adhering the first and second current collectors to the separator shelf with adhesive.

18. The method of claim 12 further comprising adhering the polymer film capable of sealing to the biocompatible energization element with adhesive.

19. The method of claim 12 further comprising metalizing at least a polymer film capable of sealing to form a metalized polymer film.

20. The method of claim 19 further comprising sealing the metalized polymer film with the energization element by welding.

21. The method of claim 20 further comprising sealing the metalized polymer film to a current collector by welding.

22. The method of claim 12 further comprising:

placing the biocompatible energization element into an insert; and

placing the insert into a biomedical device.

23. The method of claim 22 wherein the biomedical device is an ophthalmic device.

24. The method of claim 23 wherein the ophthalmic device is a contact lens.

25. A method for encapsulating a biocompatible energization element wherein the method comprises:

obtaining a first polymer film capable of sealing;

placing a first current collector upon the first polymer capable of sealing;

placing a separator shelf upon the first current collector wherein the separator shelf creates a defined cavity within a laminar structure;

placing a separator upon the separator shelf;

placing a second current collector upon the separator;

placing a second polymer film capable of sealing upon the second current collector; and

sealing together the first and second polymer capable of sealing to form a sealed and encapsulated energization element wherein the biocompatible energization element comprises:

a first and second current collector;

a separator; and

a laminar structure comprising a cavity.

26. The method of claim 25 further comprising placing a first electrode in between the first current collector and the separator.

27. The method of claim 26 wherein the placing of the first electrode comprises injecting the first electrode into the laminar structure in between the first current collector and the separator.

28. The method of claim 25 further comprising placing a second electrode in between the second current collector and the separator.

29. The method of claim 28 wherein the placing of the second electrode comprises placing the second electrode on to the second current collector before placing the second polymer film capable of sealing upon the second current collector.

CLAIMS

1. A biocompatible energization element comprising:

a first and second current collector;

a cathode;

an anode;

an electrolyte;

a laminar structure comprising a cavity structure; and

an encapsulation for the energization element, wherein the encapsulation is a polymer film capable of sealing, wherein the polymer film capable of sealing is treated to form a seal with itself and with elements of the biocompatible energization element wherein the polymer film capable of sealing comprises polypropylene.

2. The biocompatible energization element according to claim 1, wherein the polymer film capable of sealing is sealed by a means of welding.

3. The biocompatible energization element according to claim 2, wherein the polymer film capable of sealing is further adhered to the biocompatible energization element with adhesive.

4. The biocompatible energization element according to claim 2, wherein the polymer film capable of sealing is welded to a separator contained within the biocompatible energization element.

5. The biocompatible energization element according to claim 2, wherein the polymer film capable of sealing is welded to a separator shelf contained within the biocompatible energization element.

6. The biocompatible energization element according to claim 2, wherein the polymer film capable of sealing is welded to a current collector of the biocompatible energization element.

7. A biocompatible energization element comprising:

a first and second current collector;

a cathode;

an anode;

an electrolyte;

a laminar structure comprising a cavity structure; and

an encapsulation for the energization element, wherein the encapsulation comprises polypropylene, wherein the polypropylene is welded to form a seal on at one at least one edge of the encapsulation around the biocompatible energization element wherein the biocompatible energization element is used in a biomedical device and wherein the biomedical device is an ophthalmic device.

8. The biocompatible energization element according to claim 7, wherein the ophthalmic device is a contact lens.

9. A method for encapsulating a biocompatible energization element wherein the method comprises:

obtaining a first polymer film capable of sealing;

placing a first current collector with a first electrode upon the first polymer capable of sealing;

placing a separator shelf upon the first current collector wherein the separator shelf surrounds the first electrode and wherein the separator shelf creates a defined cavity within a laminar structure;

placing a separator upon the separator shelf wherein the separator will enclose the first electrode inside the cavity;

placing a second electrode with a second current collector upon the separator;

placing a second polymer film capable of sealing upon the second current collector; and

sealing together the first and second polymer capable of sealing to form a sealed and encapsulated energization element wherein the biocompatible energization element comprises:

a first and second current collector;

a cathode

an anode;

an electrolyte; and

a laminar structure comprising a cavity.

10. The method according to claim 9, wherein the first and second polymer film capable of sealing comprise polypropylene.

11. The method according to claim 9, wherein the sealing together the first and second polymer capable of sealing comprises welding.

12. The method according to claim 9, wherein the sealing together the first and second polymer capable of sealing comprises adhering the first and second polymer capable of sealing with adhesive.

13. The method according to claim 9, wherein the sealing together the first and second polymer capable of sealing comprises a combination of adhesives and welding of the first and second polymer capable of sealing.

14. The method according to claim 9, further comprising adhering the first and second current collectors to the separator shelf with adhesive.

15. The method according to claim 9, further comprising adhering the polymer film capable of sealing to the biocompatible energization element with adhesive.

16. The method according to claim 9, further comprising metalizing at least a polymer film capable of sealing to form a metalized polymer film.

17. The method according to claim 15, further comprising sealing the metalized polymer film with the energization element by welding.

18. The method according to claim 16, further comprising sealing the metalized polymer film to a current collector by welding.

19. The method according to claim 9, further comprising:

placing the biocompatible energization element into an insert; and

placing the insert into a biomedical device.

20. The method according to claim 19, wherein the biomedical device is an ophthalmic device.

21. The method according to claim 20, wherein the ophthalmic device is a contact lens.

22. A method for encapsulating a biocompatible energization element wherein the method comprises:

obtaining a first polymer film capable of sealing;

placing a first current collector upon the first polymer capable of sealing;

placing a separator shelf upon the first current collector wherein the separator shelf creates a defined cavity within a laminar structure;

placing a separator upon the separator shelf;

placing a second current collector upon the separator;

placing a second polymer film capable of sealing upon the second current collector; and

sealing together the first and second polymer capable of sealing to form a sealed and encapsulated energization element wherein the biocompatible energization element comprises:

a first and second current collector;

a separator; and

a laminar structure comprising a cavity.

23. The method according to claim 22, further comprising placing a first electrode in between the first current collector and the separator.

24. The method according to claim 23, wherein the placing of the first electrode comprises injecting the first electrode into the laminar structure in between the first current collector and the separator.

25. The method according to claim 22, further comprising placing a second electrode in between

the second current collector and the separator.

26. The method according to claim 25, wherein the placing of the second electrode comprises placing the second electrode on to the second current collector before placing the second polymer film capable of sealing upon the second current collector.