CLAIMS

1. A method of manufacturing a contact lens battery comprising:
   obtaining a cathode collector film, wherein the cathode collector film comprises titanium;
   coating the cathode collector film with a carbon coating;
   depositing a transition metal oxide slurry upon the carbon coating, wherein the transition metal oxide slurry also comprises a salt of lithium;
   drying the transition metal oxide deposit;
   forming a polymer electrolyte system comprising a polymer backbone and ionic constituents;
   plasticizing the polymer electrolyte system with a plasticizer;
   laminating the polymer electrolyte system to the transition metal oxide deposit;
   drying the polymer electrolyte system;
   laminating a metal foil to the polymer electrolyte system;
   encapsulating the metal foil, polymer electrolyte system, transition metal oxide deposit, and cathode collector in a biocompatible encapsulating film; and
   singulating a battery element from the encapsulated metal foil, polymer electrolyte system, transition metal oxide deposit, and cathode collector in a biocompatible encapsulating film.

2. The method of claim 1 wherein the transition metal oxide comprises manganese;
   wherein the metal foil comprises zinc; and
   wherein the ionic constituents comprise zinc.

3. The method of claim 1 wherein the transition metal oxide comprises manganese;
   wherein the metal foil comprises zinc; and
   wherein the ionic constituents comprise lithium.

4. The method of claim 3 wherein the singulated battery element has a thickness is less than 1 mm at least along a first dimension of the extents of the singulated battery element.

5. The method of claim 3 wherein the singulated battery element has a thickness is less than 500 microns at least along a first dimension of the extents of the singulated battery element.

6. The method of claim 3 wherein the singulated battery element has a thickness is less than 250 microns at least along a first dimension of the extents of the singulated battery element.

7. The method of claim 3 wherein the shape of the singulated battery element is curvilinear.

8. The method of claim 1, wherein the polymer backbone is comprised of at least one of polyethylene oxide, poly (methyl methacrylate), and poly (vinyl chloride).

9. The method of claim 1, wherein the plasticizer is propylene carbonate.