What is claimed is:

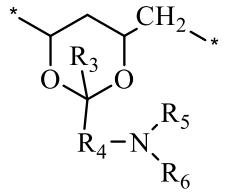
1. A method for producing soft contact lenses, comprising the steps of:
   (1) obtaining a preformed hydrogel contact lens having a hydrogel lens body and an opaque color image printed with an ink on and/or in one of the anterior and posterior surface of the hydrogel lens body, wherein the ink comprises pigment particles, wherein the opaque color image is a cosmetic pattern, wherein the hydrogel lens body is a non-silicone hydrogel lens body which is composed of a polymer comprising at least 50% by mole of repeating units of at least one hydroxyl-containing vinylic monomer;
   (2) contacting the preformed hydrogel contact lens with a first aqueous coating solution of a polyanionic polymer at a pH of about 4.0 or less and at a coating temperature of from about 25°C to about 80°C to obtain a colored contact lens precursor which is the preformed hydrogel contact lens having a layer of the polyanionic polymer thereon, wherein the polyanionic polymer is one or more homo- or copolymers of acrylic acid, methacrylic acid, ethylacrylic acid, 2-acrylamidoglycolic acid, or 2-methacrylamidoglycolic acid, wherein the layer of the polyanionic polymer encloses the preformed hydrogel contact lens having the opaque color image; and
   (3) heating the colored contact lens precursor obtained in step (2), in a second aqueous coating solution which comprises a water-soluble and thermally-crosslinkable hydrophilic polymeric material having azetidinium groups, at a temperature of from about 60°C to about 140°C for at least 30 minutes to crosslink the water-soluble thermally-crosslinkable hydrophilic polymeric material and the polyanionic polymer so as to form the colored contact lens, wherein the colored contact lens has a hydrogel coating covalently attached onto the layer of the polyanionic polymer,

   wherein the colored contact lens in fully hydrated state has a friction rating of about 2 or lower after 7 cycles of manual rubbing.

2. The method of claim 1, wherein said at least one hydroxyl-containing vinylic monomer is selected from the group consisting of hydroxyethyl (meth)acrylate, 2-hydroxypropyl (meth)acrylate, 3-hydroxypropyl (meth)acrylate, glycerol (meth)acrylate, N-2-hydroxyethyl (meth)acrylamide, N-2-hydroxypropyl (meth)acrylamide, N-3-hydroxypropyl (meth)acrylamide, N,N-bis(hydroxyethyl) (meth)acrylamide, N-2,3-dihydroxypropyl (meth)acrylamide, *N*-tris(hydroxymethyl)methyl (meth)acrylamide, vinyl alcohol, allyl alcohol, and combinations thereof.

3. The method of claim 1, wherein the non-silicone hydrogel lens body is obtained by polymerizing an aqueous lens-forming composition comprising a water-soluble, actinically-crosslinkable polyvinyl alcohol prepolymer which comprises:
   at least 60% by mole of repeating units of vinyl alcohol;

from about 1% to about 25% by mole of repeating units of formula (I); and



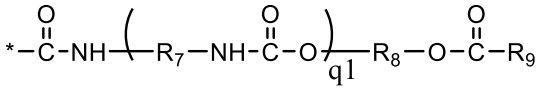
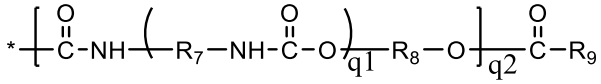
(I)

in which:

R_3 can be hydrogen or a C_1-C_6 alkyl group;

R_4 is a C_1-C_6 alkylene divalent radical;

R_5 is hydrogen or C_1-C_6 alkyl;

R_6 is an ethylenically unsaturated group of  or  in which q1 and q2 independently of each another are zero or one, and R_7 and R_8 independently of one another are a C_2-C_8 alkylene divalent radical, R_9 is C_2–C_8 alkenyl.

4. The method of claim 1, wherein the preformed hydrogel contact lens is in contact with the first aqueous coating solution for a contacting time of at least one minute.
5. The method of claim 4, wherein the polyanionic polymer is poly(acrylic acid) (PAA), poly(methacrylic acid) (PMAA), poly(acrylic acid-co-methacrylic acid) (pAA-pMAA), poly(ethylacrylic acid) (PEAA), poly(acrylic acid-co-ethylacrylic acid) (pAA-pEAA), poly(methacrylic acid-co-ethylacrylic acid) (pMAA-pEAA), poly[2-acrylamidoglycolic acid], poly[2-methacrylamidoglycolic acid], or a combination thereof, wherein the polyanionic polymer has a weight average molecular weight of at least 100,000 Daltons.
6. The method of claim 5, wherein the water-soluble thermally-crosslinkable polymeric material comprises

(i) from about 20% to about 95% by weight of first polymer chains derived from a polyamidoamine-epichlorohydrin or a poly(2-oxazoline-co-ethyleneimine)-epichlorohydrin,

(ii) from about 5% to about 80% by weight of hydrophilic moieties and/or second polymer chains,

wherein each of the hydrophilic moieties is derived from at least one first hydrophilicity-enhancing agent which is a primary amine-containing monosaccharide, a secondary amine-containing monosaccharide, a carboxyl-containing monosaccharide, a thiol-containing monosaccharide, a primary amine-containing disaccharide, a secondary amine-containing disaccharide, a carboxyl-containing disaccharide, a thiol-containing disaccharide, a primary amine-containing

oligosaccharide, a secondary amine-containing oligosaccharide, a carboxyl-containing oligosaccharide, a thiol-containing oligosaccharide, or a combination thereof, wherein the hydrophilic moieties are covalently attached to the first polymer chains through one or more covalent linkages each formed between one azetitdinium group of the polyamidoamine-epichlorohydrin and one amino, carboxyl or thiol group of the first hydrophilicity-enhancing agent,

wherein each of the second polymer chains is derived from at least one second hydrophilicity-enhancing agent having at least one reactive functional group selected from the group consisting of primary amino group, secondary amino group, carboxyl group, thiol group, and combination thereof, wherein the second polymer chains are covalently attached to the first polymer chains through one or more covalent linkages each formed between one azetitdinium group of the polyamidoamine-epichlorohydrin and one amino, carboxyl or thiol group of the second hydrophilicity-enhancing agent, and

(iii) azetidinium groups which are parts of the first polymer chains or pendant or terminal groups covalently attached to the first polymer chains.

7. The method of claim 6, wherein the water-soluble thermally-crosslinkable polymeric material comprises from about 5% to about 80% by weight of the second polymer chains, wherein the second hydrophilicity-enhancing agent is:

a polyethylene glycol having one sole amino, carboxyl or thiol group; a polyethylene glycol with two terminal amino, carboxyl and/or thiol groups;

a multi-arm polyethylene glycol with one or more amino, carboxyl and/or thiol groups;

a polyethylene glycol dendrimer with one or more amino, carboxyl and/or thiol groups; a primary amine-containing polysaccharide;

a secondary amine-containing polysaccharide;

a carboxyl-containing polysaccharide;

hyaluronic acid;

chondroitin sulfate;

a copolymer which is a polymerization product of a composition comprising (1) about 60% or less by weight of one or more reactive vinylic monomers and (2) one or more non-reactive hydrophilic vinylic monomers, wherein said one or more reactive vinylic monomers are vinylic monomers having a carboxyl, primary amino, or secondary amino group, wherein said one or more non-reactive vinylic monomers are selected from the group consisting of a phosphorylcholine-containing vinylic monomer, (meth)acrylamide, N,N-dimethyl (meth)acrylamide, N-vinylpyrrolidone (NVP), N-vinyl formamide, N-vinyl acetamide, N-vinyl isopropylamide, N-vinyl-N-methyl acetamide, N,N-dimethylaminoethyl (meth)acrylate, N,N-dimethylaminopropyl (meth)acrylamide, glycerol (meth)acrylate, N-2-

hydroxyethyl (meth)acrylamide, N-2-hydroxypropyl (meth)acrylamide, N-3-hydroxypropyl (meth)acrylamide, N,N-bis(hydroxyethyl) (meth)acrylamide, N-2,3-dihydroxypropyl (meth)acrylamide, *N*-tris(hydroxymethyl)methyl (meth)acrylamide, N-methyl-3-methylene-2-pyrrolidone, 1-ethyl-3-methylene-2-pyrrolidone, 1-methyl-5-methylene-2-pyrrolidone, 1-ethyl-5-methylene-2-pyrrolidone, 5-methyl-3-methylene-2-pyrrolidone, 5-ethyl-3-methylene-2-pyrrolidone, 2-hydroxyethyl (meth)acrylate, hydroxypropyl (meth)acrylate, C_1-C_4-alkoxy polyethylene glycol (meth)acrylate having a weight average molecular weight of up to 1500 Daltons, allyl alcohol, vinyl alcohol, and combinations thereof; or

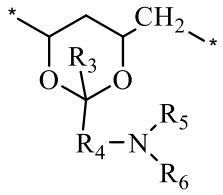
a combination thereof.

8. The method of claim 7, wherein the step of heating is performed by autoclaving the colored contact lens precursor immersed in the second aqueous coating solution in a sealed lens package at a temperature of from about 115°C to about 125°C for about 30 minutes to about 90 minutes, wherein the second aqueous coating solution is a buffered aqueous solution with a pH of from 6.7 to 7.6.
9. A colored contact lens, comprising: a hydrogel lens body having an opaque color image thereon and/or therein; and a coating which encloses the hydrogel lens body and the opaque color image, wherein the hydrogel lens body is a non-silicone hydrogel lens body which is composed of a polymer comprising at least 50% by mole of repeating units of at least one hydroxyl-containing vinylic monomer, wherein the opaque color image is a cosmetic pattern, wherein the coating comprises an anchoring layer of a polyanionic polymer and a layer of a hydrogel material, wherein the polyanionic polymer is one or more homo- or copolymers of acrylic acid, methacrylic acid, ethylacrylic acid, 2-acrylamidoglycolic acid, or 2-methacrylamidoglycolic acid, wherein the hydrogel material is derived from a hydrophilic polymeric material having azetidinium groups and is covalently attached onto the anchoring layer of the polyanionic polymer through linkages each formed between one carboxyl group and one azetidinium group, wherein the colored contact lens in fully hydrated state has a friction rating of about 2 or lower after 7 cycles of manual rubbing.
10. The colored contact lens of claim 9, wherein said at least one hydroxyl-containing vinylic monomer is selected from the group consisting of hydroxyethyl (meth)acrylate, 2-hydroxypropyl (meth)acrylate, 3-hydroxypropyl (meth)acrylate, glycerol (meth)acrylate, N-2-hydroxyethyl (meth)acrylamide, N-2-hydroxypropyl (meth)acrylamide, N-3-hydroxypropyl (meth)acrylamide, N,N-bis(hydroxyethyl) (meth)acrylamide, N-2,3-dihydroxypropyl (meth)acrylamide, *N*-tris(hydroxymethyl)methyl (meth)acrylamide, vinyl alcohol, allyl alcohol, and combinations thereof.
11. The colored contact lens of claim 9, wherein the non-silicone hydrogel lens body is

composed of a crosslinked product of a water-soluble, actinically-crosslinkable polyvinyl alcohol prepolymer which comprises:

at least 60% by mole of repeating units of vinyl alcohol;

repeating units of formula (I); and



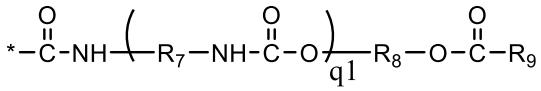
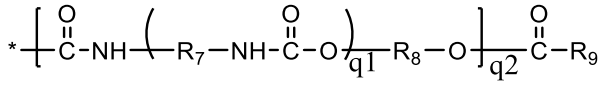
(I)

in which:

R_3 can be hydrogen or a C_1-C_6 alkyl group;

R_4 is a C_1-C_6 alkylene divalent radical;

R_5 is hydrogen or C_1-C_6 alkyl;

R_6 is an ethylenically unsaturated group of  or  in which q1 and q2 independently of each another are zero or one, and R_7 and R_8 independently of one another are a C_2-C_8 alkylene divalent radical, R_9 is C_2–C_8 alkenyl.

12. The colored contact lens of claim 9, wherein the polyanionic polymer is poly(acrylic acid) (PAA), poly(methacrylic acid) (PMAA), poly(acrylic acid-co-methacrylic acid) (pAA-pMAA), poly(ethylacrylic acid) (PEAA), poly(acrylic acid-co-ethylacrylic acid) (pAA-pEAA), poly(methacrylic acid-co-ethylacrylic acid) (pMAA-pEAA), poly[2-acrylamidoglycolic acid], poly[2-methacrylamidoglycolic acid], or a combination thereof.

13. The colored contact lens of claim 12, wherein the hydrophilic polymeric material comprises

(i) from about 20% to about 95% by weight of first polymer chains derived from a polyamidoamine-epichlorohydrin or a poly(2-oxazoline-co-ethyleneimine)-epichlorohydrin,

(ii) from about 5% to about 80% by weight of hydrophilic moieties and/or second polymer chains,

wherein each of the hydrophilic moieties is derived from at least one first hydrophilicity-enhancing agent which is a primary amine-containing monosaccharide, a secondary amine-containing monosaccharide, a carboxyl-containing monosaccharide, a thiol-containing monosaccharide, a primary amine-containing disaccharide, a secondary amine-containing disaccharide, a carboxyl-containing disaccharide, a thiol-containing disaccharide, a primary amine-containing

oligosaccharide, a secondary amine-containing oligosaccharide, a carboxyl-containing oligosaccharide, a thiol-containing oligosaccharide, or a combination thereof, wherein the hydrophilic moieties are covalently attached to the first polymer chains through one or more covalent linkages each formed between one azetitdinium group of the polyamidoamine-epichlorohydrin and one amino, carboxyl or thiol group of the first hydrophilicity-enhancing agent,

wherein each of the second polymer chains is derived from at least one second hydrophilicity-enhancing agent having at least one reactive functional group selected from the group consisting of primary amino group, secondary amino group, carboxyl group, thiol group, and combination thereof, wherein the second polymer chains are covalently attached to the first polymer chains through one or more covalent linkages each formed between one azetitdinium group of the polyamidoamine-epichlorohydrin and one amino, carboxyl or thiol group of the second hydrophilicity-enhancing agent, and

(iii) azetidinium groups which are parts of the first polymer chains or pendant or terminal groups covalently attached to the first polymer chains.

14. The colored contact lens of claim 13, wherein the water-soluble thermally-crosslinkable polymeric material comprises from about 5% to about 80% by weight of the second polymer chains, wherein the second hydrophilicity-enhancing agent is:

a polyethylene glycol having one sole amino, carboxyl or thiol group; a polyethylene glycol with two terminal amino, carboxyl and/or thiol groups;

a multi-arm polyethylene glycol with one or more amino, carboxyl and/or thiol groups;

a polyethylene glycol dendrimer with one or more amino, carboxyl and/or thiol groups; a primary amine-containing polysaccharide;

a secondary amine-containing polysaccharide;

a carboxyl-containing polysaccharide;

hyaluronic acid;

chondroitin sulfate;

a copolymer which is a polymerization product of a composition comprising (1) about 60% or less by weight of one or more reactive vinylic monomers and (2) one or more non-reactive hydrophilic vinylic monomers, wherein said one or more reactive vinylic monomers are vinylic monomers having a carboxyl, primary amino, or secondary amino group, wherein said one or more non-reactive vinylic monomers are selected from the group consisting of a phosphorylcholine-containing vinylic monomer, (meth)acrylamide, N,N-dimethyl (meth)acrylamide, N-vinylpyrrolidone (NVP), N-vinyl formamide, N-vinyl acetamide, N-vinyl isopropylamide, N-vinyl-N-methyl acetamide, N,N-dimethylaminoethyl (meth)acrylate, N,N-dimethylaminopropyl (meth)acrylamide, glycerol (meth)acrylate, N-2-

hydroxyethyl (meth)acrylamide, N-2-hydroxypropyl (meth)acrylamide, N-3-hydroxypropyl (meth)acrylamide, N,N-bis(hydroxyethyl) (meth)acrylamide, N-2,3-dihydroxypropyl (meth)acrylamide, *N*-tris(hydroxymethyl)methyl (meth)acrylamide, N-methyl-3-methylene-2-pyrrolidone, 1-ethyl-3-methylene-2-pyrrolidone, 1-methyl-5-methylene-2-pyrrolidone, 1-ethyl-5-methylene-2-pyrrolidone, 5-methyl-3-methylene-2-pyrrolidone, 5-ethyl-3-methylene-2-pyrrolidone, 2-hydroxyethyl (meth)acrylate, hydroxypropyl (meth)acrylate, C_1-C_4-alkoxy polyethylene glycol (meth)acrylate having a weight average molecular weight of up to 1500 Daltons, allyl alcohol, vinyl alcohol, and combinations thereof; or

a combination thereof.

15. The colored contact lens of claim 14, wherein the colored contact lens has a water content of from about 15% to about 80% by weight (at room temperature, about 22°C to 28°C) and/or an elastic modulus of from about 0.2 MPa to about 1.5 MPa when being fully hydrated.
16. The colored contact lens of claim 15, wherein the coating has a thickness of at least 0.1 µm.