CLAIMS

I/We claim:

1. A light-curable artificial nail, comprising:

an adhesive section comprising a light-curable composition in a semi-cured state, wherein the light-curable composition is configured to transition from the semi-cured state to a cured state based on exposure to at least one wavelength of electromagnetic radiation;

a strengthening section disposed above the adhesive section; and

a polish section disposed above the adhesive section.

2. The light-curable artificial nail of claim 1, wherein the light-curable composition of the adhesive section is a first light-curable composition, wherein the polish section comprises a second light-curable composition in the semi-cured state.

3. The light-curable artificial nail of claim 2, wherein the first light-curable composition is different than the second light-curable composition.

4. The light-curable artificial nail of claim 1, wherein the adhesive section is designed to secure the light-curable artificial nail to a natural nail with an application of pressure and the at least one wavelength of electromagnetic radiation.

5. The light-curable artificial nail of claim 1, further comprising:

a decorative section disposed above the polish section, the decorative section comprising one or more decorations.

6. The light-curable artificial nail of claim 1, further comprising:

a top coat section disposed above the polish section.

7. The light-curable artificial nail of claim 6, wherein the light-curable composition of the adhesive section is a first light-curable composition, wherein the top coat section comprises a third light-curable composition in the semi-cured state, and wherein the first light-curable composition is different than the third light-curable composition.

8. The light-curable artificial nail of claim 6, wherein the top coat section is transparent.

9. The light-curable artificial nail of claim 1, wherein the strengthening section comprises a fabric material comprising at least one of fiberglass, silk, or linen.

10. The light-curable artificial nail of claim 1, wherein the polish section comprises a colorant.

11. The light-curable artificial nail of claim 1, wherein the light-curable composition comprises at least one component that is curable by ultraviolet (UV) light radiation, visible light radiation, or a combination thereof.

12. The light-curable artificial nail of claim 1, wherein the light-curable composition comprises at least one of a polymer, a film forming agent, a plasticizer, an additive, a dispersant, a photoinitiator, silicone, silicon, keratin, an ethylenically unsaturated monomer, an oligomer, an unreactive solvent or a colorant.

13. The light-curable artificial nail of claim 12, wherein the polymer comprises at least one of a polyurethane, a (meth)acrylic polymer, poly(methyl methacrylate), ~~a copolymer,~~ a vinyl polymer, a vinyl copolymer, a cellulose polymer or a styrene butadiene polymer.

14. The light-curable artificial nail of claim 12, wherein the film forming agent comprises at least one of an epoxy resin, a (meth)acrylic resin, a styrene resin, an acrylate-styrene resin, a vinyl resin, a polyester, an alkyd resin, a cellulose ester or a resin resulting from condensation of formaldehyde with an arylsulphonamide.

15. The light-curable artificial nail of claim 12, wherein the plasticizer comprises at least one of tributyl phosphate, tributoxyethyl phosphate, tricresyl phosphate, triphenyl phosphate, glycerol triacetate, butyl stearate, butyl glycolate, benzyl benzoate, butyl acetyltricinoleate, glyceryl acetyltricinoleate, dibutyl phthalate, diisobutyl phthalate, dioctyl phthalate, dimethoxyethyl phthalate, diamyl phthalate, triethyl citrate, tributyl citrate, tributyl acetylcitrate, tri(2-ethylhexyl)acetylcitrate, dibutyl tartrate or camphor.

16. The light-curable artificial nail of claim 12, wherein the additive comprises at least one of silica, fumed silica, diatomaceous earth, bentonite clay, kaolinite, pyrophyllite, sericite, a smectic, a vermiculite, montmorillinite, beidillite, nontronite, hectorite, talc, mica, zirconium

oxide, zinc oxide, magnesium oxide, saponite, calcium stearate, zinc stearate, aluminum stearate, stearalkonium, distearalkonium, an organic modified clay, a hydrogenated castor oil, a hydrogenated castor oil wax, an inorganically modified castor oil, an organically modified castor oil, a triglyceride, glyceryl tri-12-hydroxy stearate, a polyamide, a polyamide wax, 12-hydroxystearic acid diamide of ethylene diamine, 12-hydroxystearic acid diglycolamide, N-stearyl ricinoleamide, N-stearyl stearamide, a polyethylene oxide wax, a urea urethane, an acrylic resin, an amine salt of a polymeric polyester, salts of linear polyaminoamide ~~and~~ salts of polymeric polyester, an amide solution of polycarboxylic acid, alkyl sultanate, alkylallyl sultanate, colloidal ester, polyester resin, phenol resin, melamine resin, epoxy resin, urethane resin, a polyimide resin or a polyester amide.

17. The light-curable artificial nail of claim 12, wherein the dispersant comprises at least one of a non-surface active polymer, a surface-active component added to a gel or a surfactant.

18. The light-curable artificial nail of claim 1, wherein the light-curable composition comprises about 1 weight percentage (wt%) to about 50 wt% of a resin, about 1 wt% to about 50 wt% of a photoinitiator and about 1 wt% to about 90 wt% of a polymer.

19. The light-curable artificial nail of claim 1, wherein in the semi-cured state, the light-curable composition ~~-~~comprises a modulus of elasticity of about 100 x 10^{-6} gigapascals (GPa) to about 2.50 GPa, and in the cured state the light-curable composition comprises a Rockwell hardness of about 1gram per cubic centimeter (g/cc) to about 110 g/cc.

20. The light-curable artificial nail of claim 1, wherein the light-curable artificial nail is free of at least one of a pre-formed hard plastic or an acrylic polymer.

21. The light-curable artificial nail of claim 1, wherein the light-curable artificial nail is in a shape of a natural nail, wherein said shape is ~~an~~ ovular ~~nail~~, ~~a~~ rectangular ~~nail~~, ~~a~~ pointed ~~nail~~, or ~~a~~ rounded ~~nail~~.

22. The light-curable artificial nail of claim 1, wherein the polish section is disposed above the strengthening section.

~~23. A kit comprising:~~

~~a light-curable artificial nail configured for an application to a natural nail using pressure and at least one wavelength of electromagnetic radiation, comprising:~~

~~an adhesive section comprising a light-curable composition in a semi-cured state, wherein the light-curable composition is configured to transition from the semi-cured state to a cured state based on exposure to the at least one wavelength of electromagnetic radiation;~~

~~a strengthening section disposed above the adhesive section;~~

~~a polish section disposed above the adhesive section; and~~

~~a removable layer removably attached to the adhesive section.~~

~~24. The kit of claim 23, further comprising a light emitting device configured to emit the at least one wavelength of electromagnetic radiation to transition the light-curable composition from the semi-cured state to the cured state.~~

~~25. The kit of claim 24, wherein the light emitting device is configured to emit at least one of ultraviolet radiation or visible light radiation, wherein the light emitting device is configured to emit the at least one wavelength of electromagnetic radiation at a wavelength of about 100 nanometers (nm) to about 780 nm inclusive, wherein the light emitting device comprises a light emitting diode (LED).~~

~~26. The kit of claim 24, wherein the light emitting device comprises one or more pressure members configured to apply pressure to a top side of the light-curable artificial nail while emitting the at least one wavelength of electromagnetic radiation.~~

~~27. The kit of claim 23, further comprising at least one stencil comprising an opening in a shape of a nail and a solid portion surrounding the opening, wherein the stencil is configured to overlay the light-curable artificial nail and to pass the at least one wavelength of electromagnetic radiation through the opening to the light-curable artificial nail and to block the at least one wavelength of electromagnetic radiation at the solid portion.~~

~~28. The kit of claim 24, further comprising at least one stencil, wherein the at least one stencil is (a) removably attached to the light emitting device, (b) in a form of a glove~~

~~comprising openings configured in shapes of nails, (c) an opaque sticker, or (d) a fingerette comprising an opening configured in a shape of a nail.~~

~~29. The kit of claim 27, wherein the at least one stencil is designed to apply pressure to a top side of the light-curable artificial nail when the light-curable artificial nail is positioned on a natural nail.~~

~~30. The kit of claim 23, wherein the polish section is disposed above the strengthening section.~~

~~31. The kit of claim 23, wherein the strengthening section comprises a fabric material.~~

~~32. The kit of claim 31, wherein the fabric material comprises at least one of fiberglass, silk, or linen.~~

~~33. A method of preparing a light-curable artificial nail, comprising:~~

~~extracting from an adhesive film in a semi-cured state a portion of the adhesive film in a shape of a human nail, the portion of the adhesive film comprising a light-curable composition in the semi-cured state;~~

~~extracting, from a polish film, a portion of the polish film in the shape of the human nail; and~~

~~combining the portion of the adhesive film and the portion of the polish film with a strengthening material into layers of the light-curable artificial nail.~~

~~34. The method of claim 33, wherein the light-curable composition of the adhesive film is a first light-curable composition, wherein the polish film comprises a second light-curable composition configured in the semi-cured state.~~

~~35. The method of claim 34, wherein the first light-curable composition is different than the second light-curable composition.~~

~~36. The method of claim 34, further comprising:~~

~~exposing the combined layers to first electromagnetic radiation for a first predetermined time period to bond respective adjacent layers of the combined layers together.~~

37. The method of claim 36, wherein exposing the combined layers to the first electromagnetic radiation for the first predetermined time period transitions one or more of the combined layers from a first semi-cured state to a second semi-cured state.

38. The method of claim 34, further comprising:

disposing the first light-curable composition in an uncured state onto a first substrate to form the adhesive film; and

exposing the adhesive film to second electromagnetic radiation for a second predetermined time period to transition the adhesive film from the uncured state to the semi-cured state.

39. The method of claim 38, further comprising:

disposing the second light-curable composition in the uncured state onto a second substrate to form the polish film; and

exposing the polish film to third electromagnetic radiation for a third predetermined time period to transition the polish film from the uncured state to the semi-cured state.

40. The method of claim 33, further comprising:

disposing one or more decorations above the polish film.

41. The method of claim 33, further comprising

extracting from a top coat film a portion of the top coat film in the shape of the human nail; and

combining the portion of the top coat film with the layers of the light-curable artificial nail.

42. The method of claim 41, wherein the top coat film comprises a third light-curable composition, the method further comprising:

disposing the third light-curable composition in an uncured state onto a third substrate to form the top coat film; and

exposing the top coat film to fourth electromagnetic radiation for a fourth predetermined time period to transition the top coat film from the uncured state to the semi-cured state.

~~43. The method of claim 41, wherein at least one of the polish film or the top-coat film is formed from a non-light-curable composition.~~

~~44. The method of claim 33, wherein the portion of polish film is disposed above the strengthening material.~~

~~45. The method of claim 33, wherein the strengthening material comprises a fabric material.~~

~~46. The method of claim 45, wherein the fabric material comprises at least one of fiberglass, silk, or linen.~~