CLAIMS:

1. A laminate structure comprising:

an encapsulant layer having a major surface, wherein the major surface of the encapsulant layer is treated to increase adhesion; and

a thermoplastic polymer layer having a melting point temperature or glass transition temperature greater than about 165°C, wherein the thermoplastic layer has a major surface that is treated to increase adhesion and is disposed on the treated major surface of the encapsulant layer.

2. The laminate structure of claim 1, wherein the thermoplastic polymer layer is a fluoropolymer.

3. The laminate structure of any one of claims 1-2, wherein the thermoplastic polymer layer includes polymethyl pentene, polyimide, polyester, polyamide, polycarbonate, polyethylene, polyetherimide, polyethylene terephthalate, polyetheretherketone, or combinations thereof.

4. The laminate structure of any one of claims 1-3, wherein the encapsulant layer includes a homopolymer, a copolymer, a terpolymer, an ionomer, an alloy, or any combination thereof formed from a monomer of an ethylene, a propylene, a butene, a pentene, a methyl pentene, an octene, a norbornene, or any combination thereof.

5. The laminate structure of any one of claims 1-4, wherein the encapsulant layer is an ethylene vinyl acetate.

6. The laminate structure of any one of claims 1-5, wherein the encapsulant layer includes a functional group to increase the surface functionality of the major surface.

7. The laminate structure of any one of claims 1-6, wherein the thermoplastic polymer layer and the encapsulant layer have an adhesion that increases over time.

8. The laminate structure of any one of claims 1-7, wherein the laminate structure is a protective sheet for an electronic device or a laminate for a sign.

9. A laminate structure comprising:

an ethylene vinyl acetate layer having a major surface, wherein the major surface of the ethylene vinyl acetate is corona treated to increase adhesion; and

a copolymer of ethylene and tetrafluoroethylene (ETFE) layer having a major surface, wherein the major surface of the fluoropolymer layer is C-treated to increase adhesion and is disposed on the treated major surface of the ethylene vinyl acetate layer.

10. A method of forming a laminate structure comprising:

providing a thermoplastic polymer layer having a melting point temperature or glass transition temperature greater than about 165°C, wherein the thermoplastic polymer layer has a major surface;

treating the major surface of the thermoplastic polymer layer to increase adhesion of the major surface;

providing an encapsulant layer having a major surface;

treating the major surface of the encapsulant layer to increase adhesion of the major surface; and

disposing the treated major surface of the thermoplastic polymer layer on the treated major surface of the encapsulant layer.

11. The method of claim 10, where disposing the treated major surface of the thermoplastic polymer layer on the treated major surface of the encapsulant layer includes laminating the thermoplastic polymer layer to the encapsulant layer.

12. The method of claim 11, wherein the encapsulant layer is not substantially cured during laminating of the thermoplastic polymer layer to the encapsulant layer.

13. The method of any one of claims 10-12, wherein treating the major surface of the thermoplastic polymer layer includes surface treatment, chemical treatment, sodium etching, plasma treatment, or any combination thereof.

14. The method of any one of claims 10-13, wherein treating the major surface of the encapsulant layer includes surface treatment, chemical treatment, sodium etching, plasma treatment, or any combination thereof.

15. The method of any one of claims 10-14, further including autoclaving the laminate structure at a temperature greater than about 300°F.

CLAIMS:

1. A laminate structure comprising:

an encapsulant layer comprising a polymeric material that is not substantially thermally deformed, the encapsulant layer having a surface, wherein the surface of the encapsulant layer is treated to increase adhesion; and

a thermoplastic polymer layer having a melting point temperature or glass transition temperature greater than 165°C, wherein the thermoplastic polymer layer has a surface that is treated to increase adhesion and is disposed on the treated surface of the encapsulant layer.

2. The laminate structure of claim 1, wherein the thermoplastic polymer layer is a fluoropolymer.

3. The laminate structure of claim 1, wherein the thermoplastic polymer layer includes polymethyl pentene, polyimide, polyester, polyamide, polycarbonate, polyethylene, polyetherimide, polyethylene terephthalate, polyetheretherketone, or combinations thereof.

4. The laminate structure of any one of claims 1-3, wherein the encapsulant layer includes a homopolymer, a copolymer, a terpolymer, an ionomer, an alloy, or any combination thereof formed from a monomer of an ethylene, a propylene, a butene, a pentene, a methyl pentene, an octene, a norbornene, or any combination thereof.

5. The laminate structure of any one of claims 1-3, wherein the encapsulant layer is an ethylene vinyl acetate.

6. The laminate structure of any one of claims 1-5, wherein the encapsulant layer includes a functional group to increase the surface functionality of the surface.

7. The laminate structure of any one of claims 1-6, wherein the thermoplastic polymer layer and the encapsulant layer have a peel strength that increases over time.

8. The laminate structure of any one of claims 1-7, wherein the laminate structure is a protective sheet for an electronic device or a laminate for a sign.

9. A laminate structure comprising:

an ethylene vinyl acetate layer having a surface, wherein the surface of the ethylene vinyl acetate is corona treated to increase adhesion; and

a copolymer of ethylene and tetrafluoroethylene (ETFE) layer having a surface, wherein the surface of the fluoropolymer layer is C-treated to increase adhesion and is disposed on the treated surface of the ethylene vinyl acetate layer.

10. A method of forming a laminate structure comprising:

providing a thermoplastic polymer layer having a melting point temperature or glass transition temperature greater than 165°C, wherein the thermoplastic polymer layer has a surface;

treating the surface of the thermoplastic polymer layer to increase adhesion of the surface;

providing an encapsulant layer having a surface;

treating the surface of the encapsulant layer to increase adhesion of the surface; and

disposing the treated surface of the thermoplastic polymer layer on the treated surface of the encapsulant layer.

11. The method of claim 10, where disposing the treated surface of the thermoplastic polymer layer on the treated surface of the encapsulant layer includes laminating the thermoplastic polymer layer to the encapsulant layer.

12. The method of claim 11, wherein the encapsulant layer is not substantially cured during laminating of the thermoplastic polymer layer to the encapsulant layer.

13. The method of any one of claims 10-12, wherein treating the surface of the thermoplastic polymer layer includes surface treatment, chemical treatment, sodium etching, plasma treatment, or any combination thereof.

14. The method of any one of claims 10-13, wherein treating the surface of the encapsulant layer includes surface treatment, chemical treatment, sodium etching, plasma treatment, or any combination thereof.

15. The method of any one of claims 10-14, further including autoclaving the laminate structure at a temperature greater than 149°C.