CLAIMS:

1. A dielectric film-forming composition, comprising:

a) at least one resin selected from the group consisting of:

i) a fully imidized polyimide polymer;

ii) a polyamic acid ester;

iii) a cyclized polydiene resin; and

iv) a mixture of a cyclized polydiene resin and a cyanate ester compound; and

b) at least one additive selected from the group consisting of:

i) PBO particles; and

ii) a mixture of PBO particles and silica particles.

2. The composition of claim 1, wherein the at least one resin is from about 50 wt% to about 95 wt% of the composition.

3. The composition of claim 1 or 2, wherein the at least one additive is from about 5 wt% to about 50 wt% of the composition.

4. The composition of any one of claims 1-3, further comprising at least one cross-linker, at least one catalyst, at least one adhesion promoter, or at least one solvent.

5. A process of preparing a dielectric film, comprising:

a) coating the dielectric film-forming composition of any one of claims 1-4 on a substrate to form a film; and

b) optionally baking the film at a temperature from about 50°C to about 150°C for about 20 seconds to about 240 seconds.

6. The process of claim 5, further comprising exposing the film to radiation, heat, or a combination thereof without a mask.

7. A process for preparing a dry film, comprising:

a) coating a carrier substrate with the dielectric film-forming composition of any one of claims 1-4 to form a coated composition;

b) drying the coated composition to form a dielectric film; and

c) optionally, applying a protective layer to the dielectric film.

8. A dielectric film, comprising:

(a) at least one resin selected from the group consisting of:

i) a fully imidized polyimide polymer;

ii) a polyamic acid ester;

iii) a cyclized polydiene resin; and

iv) a mixture of a cyclized polydiene resin and a cyanate ester compound; and

b) at least one additive selected from the group consisting of:

i) PBO particles; and

ii) a mixture of PBO particles and silica particles.

9. The dielectric film of claim 8, wherein the dielectric film has a dissipation factor (Df) at 5 GHz of at most 0.01 after curing.

10. The dielectric film-forming composition of claim 1, wherein the PBO particles silica particles coated with PBO.

11. The dielectric film-forming composition of claim 10, wherein the at least one additive comprises the silica particles coated with PBO.

12. The dielectric film of claim 8, wherein the PBO particles silica particles coated with PBO.

13. The dielectric film of claim 12, wherein the at least one additive comprises the silica particles coated with PBO.