CLAIMS

1. A method for curing thermosetting polymers on a glass substrate, said method comprising:

depositing a light-absorbing layer on a glass substrate;

depositing a thermosetting polymer precursor on said light-absorbing layer in liquid form;

preheating said thermosetting polymer precursor;

exposing said thermosetting polymer precursor to a light pulse from a flashlamp while simultaneously cooling said thermosetting polymer precursor in order to maintain an average temperature of said thermosetting polymer precursor at below its maximum working temperature;

allowing any gaseous by-products to dissipate from said thermosetting polymer precursor after said exposing step; and

repeating said exposing and allowing steps until a thermosetting polymer thin film is formed.

2. The method of Claim 1, wherein said method further includes removing fluid from said thermosetting polymer precursor.

3. The method of Claim 2, wherein said removing is performed by an oven.

4. The method of Claim 2, wherein said removing is performed by the flashlamp.

5. The method of Claim 1, wherein said method further includes filtering light pulses from said flashlamp to remove bands light that are absorbed by said thermosetting polymer precursor.

6. The method of Claim 1, wherein said thermosetting polymer precursor is polyamic acid.

7. The method of Claim 1, wherein said thermosetting polymer precursor is epoxy.

8. The method of Claim 1, wherein said cooling is performed by a temperature-controlled heat sink.

9. The method of Claim 1, wherein said cooling is performed by an air knife.

10. The method of Claim 1, wherein said method further includes

flipping over said glass substrate; and

exposing said glass substrate to another series of light pulses from said flashlamp in order to release said thermosetting polymer film from said light-absorbing layer.

11. The method of Claim 1, wherein said light-absorbing layer is a metal.

12. The method of Claim 1, wherein said light-absorbing layer is a ceramic.

13. The method of Claim 1, wherein said light-absorbing layer is a semiconductor.

14. The method of Claim 1, wherein said light-absorbing layer is carbon.

15. The method of Claim 1, wherein said light-absorbing layer is less than 300 nm thick.

16. The method of Claim 1, wherein a coefficient of thermal expansion of said light-absorbing layer is withing 50% of a coefficient of thermal expansion of said glass substrate.