WHAT IS CLAIMED IS:

1. A method for inhibiting light-induced degradation of a photovoltaic device made from a boron-doped, oxygen containing silicon substrate, comprising steps of:

a) subjecting the photovoltaic device to an illumination treatment using a light having a wavelength not less than 300 nm to heat the photovoltaic device in the absence of ambient light; and

b) maintaining the temperature of the photovoltaic device above 230℃ and below 500℃ for at least 0.5 minute.

2. The method according to Claim 1, wherein the step of maintaining is aided by a thermal-conditioning.

3. The method according to Claim 2, wherein the thermal-conditioning is implemented by thermal-heating, cooling, or a combination thereof.

4. The method according to Claim 1, further comprising using a sensor to detect the temperature of the photovoltaic device when the step b) is performed.

5. The method according to Claim 1, wherein the light for the illumination treatment has a wavelength ranging from 450 nm to 1000 nm.

6. The method according to Claim 1, wherein the photovoltaic device includes a light-illuminated surface having a light intensity of at least 0.5 Sun.

7. The method according to Claim 1, wherein the light intensity ranges from 0.9 Sun to 5 Sun.

8. The method according to Claim 1, wherein the light for the illumination treatment is emitted from an infrared lamp, a halogen lamp, a semiconductor light-emitting device, an organic light-emitting device, or combinations thereof.