

Claims

1. A photovoltaic (PV) device comprising:
 - a solar cell;
 - a sealing member for sealing the solar cell;
 - 5 - a first cover member disposed on the sealing member at one side of the solar cell;
 - a second cover member disposed on the sealing member at another side of the solar cell;
 - a non-homogeneous pattern layer for providing a patterned PV device,
10 the non-homogeneous pattern layer provided on or adjacent a surface of the solar cell; and
 - a homogeneous base layer adjacent the non-homogeneous pattern layer, the homogenous base layer being closer to the solar cell as compared to the non-homogeneous pattern layer.
- 15 2. The PV device according to claim 1, wherein the non-homogeneous pattern layer is provided on a surface of the first cover member.
3. The PV device according to claim 2, wherein the non-homogeneous pattern
20 layer is provided on a surface of the first cover member facing the sealing member.
4. The PV device according to claim 1, wherein the non-homogeneous pattern layer is provided on a surface of the sealing member adjacent the first cover member.
- 25 5. The PV device according to any preceding claim, wherein the homogeneous base layer is provided on a surface of the sealing member.
6. The PV device according to any preceding claim, wherein the non-homogeneous pattern layer is formed by: screen printing, digital printing, frit printing, or
30 a combination thereof.
7. The PV device according to any preceding claim, wherein the homogeneous base layer is formed by: interference coating, sputter coating, scattering, or a combination thereof.

8. The PV device according to any preceding claim, wherein the homogeneous base layer comprises spectrally selective reflective material.
- 5 9. The PV device according to any preceding claim, wherein the first cover member is made of: glass, thermoplastic polymer, poly(methyl methacrylate), polycarbonate, or a combination thereof.
- 10 10. The PV device according to any preceding claim, wherein the solar cell comprises: perovskite solar cell, copper indium gallium selenide (CIGS) solar cell, copper indium gallium selenide selenium (CIGSSe) solar cell, silicon solar cell, or a combination thereof.
- 15 11. A building-integrated photovoltaic (BIPV) module comprising a PV device according to any preceding claim.