CLAIMS

1. A floating photovoltaic power plant comprising a pliable mat (2), the mat (2) being made at least partly of a buoyant material and / or having floatation elements (3', 31) fixed thereto or incorporated therein, such that the mat (2) is capable of floating on a surface of a body of water, the mat (2) having a plurality of photovoltaic modules (1) fixed thereon, each module (1) laying with a back side (1b) thereof on top of the mat (2) and each module (1) comprising a solar cell (13) encapsulated by a laminate (12), wherein each module (1) is arranged to be substantially stiff by means of a supporting frame (8) and/or a stiffening element (6,7,11,14,15).

2. A floating photovoltaic power plant according to the preceding claim, wherein the module is arranged to be substantially stiff by means of a stiffening element, (6, 7, 11, 14, 15) and the stiffening element (6,7,11,15) comprises at least one of: a stiffening core material (6), heat sink elements (7), heat sink plates (11), or a support plate (14,15).

3. A floating photovoltaic power plant according to any preceding claim, wherein the mat (2) comprises connectors (9) fixing the modules (1) to the mat (2).

4. A floating photovoltaic power plant according to any preceding claim, comprising a heat transfer element (6,7,11) arranged between the laminate (12) and a back side (1b) of the module (1).

5. A floating photovoltaic power plant according to claim 4, wherein the heat transfer element (6,7,11) comprises corrugated cooling plates (11).

6. A floating photovoltaic power plant according to claim 5, wherein the module (1) comprises a first plate (14) fixed to the laminate (12) and a second plate (15) forming a back side (1b) of the module (1), and wherein the corrugated cooling plates (11) are arranged between the first plate (14) and the second plate (15).

7. A floating photovoltaic power plant according to any preceding claim, wherein the mat (2) is fixed to a floatation element (3,3').

8. A floating photovoltaic power plant according to the claim 7, wherein the floatation element (3,3') is an endless, elongated floatation element which surrounds the mat (2).

9. A floating photovoltaic power plant according to any of claims 1-7, wherein an elongate string of interconnected modules (1) is fixed on the pliable mat (2).

10. A method of installing a floating photovoltaic power plant, comprising the step of deploying a floating photovoltaic power plant according to any of claims 1-9 onto a body of water.

11. A method according to claim 10, wherein the step of deploying the floating photovoltaic power plant is carried out from a vessel.

12. A method according to claim 11, further comprising transporting the floating photovoltaic power plant folded and stacked onboard the vessel.

13. A method according to claim 10, wherein the step of deploying the floating photovoltaic power plant is carried out from a land-based location.