**COOPERATIVE PATENT CLASSIFICATION**

**H**  ELECTRICITY

(NOTE omitted)

**H02**  GENERATION; CONVERSION OR DISTRIBUTION OF ELECTRIC POWER

**H02S**  GENERATION OF ELECTRIC POWER BY CONVERSION OF INFRA-RED RADIATION, VISIBLE LIGHT OR ULTRAVIOLET LIGHT, e.g. USING PHOTOVOLTAIC [PV] MODULES (obtaining electrical energy from radioactive sources G21H 1/12; light sensitive inorganic semiconductor devices H01L 31/00; thermoelectric devices H01L 35/00; pyroelectric devices H01L 37/00; light sensitive organic semiconductor devices H01L 51/42)

10/00  PV power plants; Combinations of PV energy systems with other systems for the generation of electric power

10/10  . including a supplementary source of electric power, e.g. hybrid diesel-PV energy systems (combinations with gas-turbine plants F02C 6/00)

10/12  . Hybrid wind-PV energy systems

10/20  . Systems characterised by their energy storage means (H02S 40/38 takes precedence)

10/30  . Thermophotovoltaic systems (photovoltaic cells specially adapted for conversion or sensing of infra-red [IR] radiation H01L 31/00; thermoelectric devices H01L 35/00)

10/40  . Mobile PV generator systems

20/00  Supporting structures for PV modules

**NOTE**

Supporting structures also intended for use with solar heat collectors should also be classified in groups F24S 25/00-F24S 30/00 or F24S 50/20

20/10  . Supporting structures directly fixed to the ground (H02S 20/30 takes precedence)

20/20  . Supporting structures directly fixed to an immovable object (H02S 20/30 takes precedence)

20/21  . specially adapted for motorways, e.g. integrated with sound barriers

20/22  . specially adapted for buildings

20/23  . specially adapted for roof structures

20/24  . . . specially adapted for flat roofs

20/25  . . . Roof tile elements

20/26  . . . Building materials integrated with PV modules, e.g. façade elements (H02S 20/25 takes precedence)

20/30  . Supporting structures being movable or adjustable, e.g. for angle adjustment

20/32  . specially adapted for solar tracking

30/00  Structural details of PV modules other than those related to light conversion (semiconductor device aspects of modules of electrolytic light sensitive devices H01G 9/20, of inorganic PV modules H01L 31/00, of organic PV modules H01L 51/42)

30/10  . Frame structures

30/20  . Collapsible or foldable PV modules

40/00  Components or accessories in combination with PV modules, not provided for in groups

40/10  . Cleaning arrangements

40/12  . . Means for removing snow

40/20  . Optical components

40/22  . . Light-reflecting or light-concentrating means (directly associated with the PV cell or integrated with the PV cell H01L 31/054)

40/30  . Electrical components

40/32  . . comprising DC/AC inverter means associated with the PV module itself, e.g. AC modules

40/34  . . comprising specially adapted electrical connection means to be structurally associated with the PV module, e.g. junction boxes

40/345  . . . [with cooling means associated with the electrical connection means, e.g. cooling means associated with or applied to the junction box (cooling means for PV cells H01L 31/052, for PV modules H02S 40/42)]

40/36  . . characterised by special electrical interconnection means between two or more PV modules, e.g. electrical module-to-module connection

40/38  . . Energy storage means, e.g. batteries, structurally associated with PV modules

40/40  . Thermal components (H02S 10/30 takes precedence)

40/42  . . Cooling means (cooling means directly associated or integrated with the PV cell H01L 31/052)

40/425  . . . [using a gaseous or a liquid coolant, e.g. air flow ventilation, water circulation]

40/44  . . Means to utilise heat energy, e.g. hybrid systems producing warm water and electricity at the same time (directly associated with the PV cell or integrated with the PV cell H01L 31/0525)

50/00  Monitoring or testing of PV systems, e.g. load balancing or fault identification

50/10  . Testing of PV devices, e.g. of PV modules or single PV cells (testing of semiconductor devices during manufacturing (H01L 22/00/))

50/15  . . using optical means, e.g. using electroluminescence

99/00  Subject matter not provided for in other groups of this subclass