COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

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

WARNING
Groups H02S 10/10 - H02S 10/40 are incomplete pending reclassification of documents from group H02S 10/00.

Until reclassification is complete, groups H02S 10/00 should be considered in order to perform a complete search.

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

WARNING
Groups H02S 20/10 - H02S 20/32 are incomplete pending reclassification of documents from groups H02S 20/00, F24S 21/00, F24S 50/20, and H01L 31/048.

Until reclassification is complete, groups H02S 20/00, F24S 21/00, F24S 50/20, and H01L 31/048 should be considered in order to perform a complete search.

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)

WARNING
Groups H02S 30/10 and H02S 30/20 are incomplete pending reclassification of documents from group H02S 30/00.

Until reclassification is complete, group H02S 30/00 should be considered in order to perform a complete search.

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 H02S 10/00 - H02S 30/00

WARNING
Groups H02S 40/10 - H02S 40/44 are incomplete pending reclassification of documents from groups H02S 40/00, F24S 21/00, H01L 31/0232, H01L 31/05 - H01L 31/055.

Until reclassification is complete, groups H02S 40/00, F24S 21/00, H01L 31/0232 and H01L 31/05 - H01L 31/055 should be considered in order to perform a complete search.

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

**WARNING**

Groups H02S 50/10 - H02S 50/15 are incomplete
pending reclassification of documents from group
H02S 50/00.

Until reclassification is complete, group
H02S 50/00 should be considered in order to
perform a complete search.

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