

Search Strategy: Advanced Materials

Database searched

Search conducted on 4 April 2014 using Thomson Innovation.

Major CPC subgroups searched

Carbon – Nanotech, graphene, fibre

C01B31/04*	Graphite, including modified graphite, e.g. graphite oxides, intercalated graphite, expanded graphite or graphene
C01B2204/00*	Structure or Properties of Graphene
B82Y30/00*#	Nano-technology for materials or surface science, e.g. nano-composites
Y02E60/00*#	Enabling technologies or technologies with a potential or indirect contribution to GHG emissions mitigation

Meta-Materials

Keyword search only

Gas Storage

Y02C10/06#	CO2 capture or storage > Capture by absorption
Y02C10/08#	CO2 capture or storage > Capture by adsorption
Y02C20*#	Capture or disposal of greenhouse gases other than CO2

Renewable Technologies advances in materials

Y02E10/10*#	Energy Generation through renewable sources > Geothermal Energy
Y02E10/30*#	Energy Generation through renewable sources > Energy from the sea.
Y02E10/40*#	Energy Generation through renewable sources > Solar Thermal Energy
Y02E10/54*#	Energy Generation through renewable sources > Photovoltaic [PV] Energy > Material technologies
Y02E10/721	Energy Generation through renewable sources > Wind Energy > Wind Turbines > Blades or Rotors
Y02E10/722	Energy Generation through renewable sources > Wind Energy > Wind Turbines > Components or gearbox

Wearable Technology

A41D2600/10*# Materials for garments > Uses of garments specially adapted for specific purposes > for sport activities

A41D2400/00*# Functions or special features of garments

* Subsidiary subgroups also included

Combined with selected keywords

Search undertaken using CPC version 2014.02

Major IPC subgroups searched

Carbon – Nanotech, graphene, fibre

H01L29/00*# Semiconductor devices specially adapted for rectifying, amplifying, oscillating or switching and having at least one potential-jump barrier or surface barrier; Capacitors or resistors with at least one potential-jump barrier or surface barrier, e.g. PN-junction depletion layer or carrier concentration layer; Details of semiconductor bodies or of electrodes thereof

C01B31/04*# Carbon: compound thereof > Graphite

C08K3/04*# Use of inorganic ingredients > carbon

C04B35/52*# Shaped ceramic products characterised by their composition > based on non-oxide ceramics > based on carbon, e.g. graphite

Meta-Materials

Keyword Search only

Gas Storage

C01B31/24# Methods for the preparation of carbonates or bicarbonates in general

C04B7/00*# Hydraulic Cements

Renewable Technologies advances in materials

F03D11/00*# Wind Motors > Details, component parts, or accessories not provided for in, or of interest apart from, the other groups of this subclass

F03D1/06*# Wind Motors with rotation axis substantially parallel to the air flow entering the rotor > Rotors

F03D3/06# Wind Motors with rotation axis substantially perpendicular to the air flow entering the rotor > Rotors

B60I8/00# Electric propulsion with power supply from force of nature, e.g. sun, wind

E02B9/08# Tide or wave power plants

Wearable Technology

A61B5/00*#	Measuring for diagnostic purposes
A41B 17/00*#	Selection of special materials for underwear
A41D31/00*#	Selection of special materials for outerwear
A41D13/00*#	Professional, industrial or sporting protective garments

* Subsidiary subgroups also included

Combined with selected keywords

Search undertaken using IPC version 2014.01

Example words searched

Carbon – Nanotech, graphene, fibre

Graphene, carbon, nano-tube, nanoribbon

Meta-Materials

Meta-material

Gas Storage

Greenhouse gas, carbon dioxide, sulphur dioxide, CO₂, SO₂, material, Ceramic, concrete, cement, crystal, membrane, nano, ionic liquid, zeolite, talcite, carbonate, MOM, MOF

Renewable Technologies advances in materials

Material, alloy, ceramic, composite, nano, steel, sinter, hydrophobic, hydroscopic, manufacture, process, chalcogenic, hydrophilic, malleable

Wearable Technology

Monitor, assess, diagnostic, analysis, sensor, detect, quantify, cloth, text, suit, sport, cycle, vest, layer

Date limitations applied

Publication years 2004-2013 inclusive.

Notes

Classification schemes change regularly. The terms listed above were correct at the time of searching.

A limited selection of example keywords are listed above but other relevant synonyms were also used. The actual search performed has taken account of differences in wording, for example due to the use of plural form or American/British spellings.

Additional manual cleaning of the extracted data was performed as appropriate.