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**Keyword Listing**

1. **Materials**

   aluminum nitride (AlN)
   amorphous
   amorphous carbon
   amorphous hydrogenated carbon
   amorphous alloys
   boron nitride (BN)
   carbides
   carbon nitride
   composites
   cubic boron nitride (c-BN)
   diamond crystal
   diamond film
   diamond-like carbon
   fibres
   fullerenes
   gallium nitride (GaN)
   graphite
   glassy carbon
   metastable phases
   nanocrystalline
   nanofibers
   nanoparticles
   nanostructures
   nanotubes
   natural diamond
   nitrides
   polytypes
   silicon carbide (SiC)
   synthetic diamond
   tetrahedral amorphous carbon

2. **Growth and Synthesis**

   bias growth
   buffer layer
   cathodic arc discharge
   chemical vapor deposition
   chemisorption
   combustion synthesis
   simulation
single crystal growth
gas phase reactions
heteroepitaxy
heterojunction
high pressure crystal growth
high pressure high temperature (HTHP)
homoepitaxy
hot filament CVD
ion assisted deposition
ion beam deposition
ion bombardment
molecular beam epitaxy (MBE)
nucleation
physical vapor deposition
plasma CVD
pulsed laser deposition (PLD)
reactor modelling
solution growth
sputtering
sublimation growth
vapour growth

3. Processes and Phenomena

abrasion
absorption
adhesion
adsorption
catalytic processes
corrosion
desorption
diffusion
etching
field emission
friction
impact ionization
implantation
isotopic effects
oxidation
optical emission
passivation
polishing
radiation induced effects
reactive ion etching (RIE)
wear

4. Characterization

defect characterization
electrical properties characterization
grain boundary characterization
high resolutions electron microscopy
impurity characterization
interface characterization
mechanical properties characterization
optical properties characterization
scanning probe techniques
surface characterization
surface microscopy
vibrational properties characterization
5. Properties

- acoustic properties
- band structure
- biocompatibility
- bonding configurations
- n-type doping
- p-type doping
- defects
- electrical conductivity
- electrical properties
- electron affinity
- electronic states
- excitons
- grain boundaries
- hardness
- impurities
- interface structure
- interface electronic properties
- mechanical properties
- microstructure
- morphology
- Ohmic contacts
- optoelectronic properties
- optical properties
- phonons
- sound waves
- strain
- surface energy
- surface structure
- surface electronic properties
- thermal properties
- thermal stability
- tribology
- vibrational properties
- work function

6. Applications

- actuators
- biomaterials
- biomedical applications
- coatings
- cutting tools
- device modeling
- detectors
- display technologies
- electrodes
- electrochemical
- electronic device structures
- high power electronics
- high frequency electronics
- light emission
- laser materials
- membranes
- micro electro-mechanical systems (MEMS)
- nanotechnology
- Schottky diodes
- sensors
surface acoustic wave devices
superhard materials
windows

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