CPC  COOPERATIVE PATENT CLASSIFICATION

G  PHYSICS
(NOTES omitted)

NUCLEONICS

G21  NUCLEAR PHYSICS; NUCLEAR ENGINEERING

G21K  TECHNIQUES FOR HANDLING PARTICLES OR IONISING RADIATION NOT OTHERWISE PROVIDED FOR; IRRADIATION DEVICES; GAMMA RAY OR X-RAY MICROSCOPES

NOTE
In this subclass, the following term is used with the meaning indicated:
“particle” means a molecular, atomic or subatomic particle

WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   G21K 3/00 covered by G21K 1/10
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Arrangements for handling particles or ionising radiation, e.g. focusing or moderating (production or acceleration of neutrons, electrically-charged particles, neutral molecular beams or neutral atomic beams H05H 3/00 - H05H 15/00)

1/003 . (Manipulation of charged particles by using radiation pressure, e.g. optical levitation (acceleration of charged particles H05H 5/00, H05H 7/00, H05H 9/00, H05H 11/00, H05H 13/00))

1/006 . (Manipulation of neutral particles by using radiation pressure, e.g. optical levitation (production or acceleration of neutral particles H05H 3/00))

1/02 . using diaphragms, collimators

1/025 . . (using multiple collimators, e.g. Bucky screens; other devices for eliminating undesired or dispersed radiation)

1/04 . . using variable diaphragms, shutters, choppers

1/043 . . . (changing time structure of beams by mechanical means, e.g. choppers, spinning filter wheels)

1/046 . . . (varying the contour of the field, e.g. multileaf collimators)

1/06 . using diffraction, refraction or reflection, e.g. monochromators (G21K 1/10, G21K 7/00 take precedence)

1/062 . . (Devices having a multilayer structure)

1/065 . . (using refraction, e.g. Tomie lenses)

1/067 . . (using surface reflection, e.g. grazing incidence mirrors, gratings (multilayer mirrors G21K 1/062; crystal optics G21K 1/066))

1/08 . Deviation, concentration or focusing of the beam by electric or magnetic means (electron-optical arrangements in electric discharge tubes H01J 29/46; (details, e.g. electric or magnetic deviating means for direct voltage accelerators or in accelerators using single pulses H05H 5/02; arrangements for injecting particles into orbits H05H 7/08; arrangements for ejecting particles from orbits H05H 7/10))

1/087 . . by electrical means

1/093 . . by magnetic means

1/10 . Scattering devices; Absorbing devices; Ionising radiation filters

1/12 . . Resonant absorbers or driving arrangements therefor, e.g. for Moessbauer-effect devices (motors with reciprocating, oscillating or vibrating magnet, armature or coil system in general H02K 33/00))

1/14 . using charge exchange devices, e.g. for neutralising or changing the sign of the electrical charges of beams (producing or accelerating neutral particle beams H05H 3/00)

1/16 . using polarising devices, e.g. for obtaining a polarised beam (ion sources, ion guns H01J 27/02; polarised targets for producing nuclear reactions H05H 6/005)

4/00 Conversion screens for the conversion of the spatial distribution of X-rays or particle radiation into visible images, e.g. fluoroscopic screens (photographic processes using X-ray intensifiers G03C 5/17; discharge tubes comprising luminescent screens H01J 1/62; cathode ray tubes for X-ray conversion with optical output H01J 31/50)

2004/02 . (characterised by the external panel structure)

2004/04 . (with an intermediate layer)

2004/06 . (with a phosphor layer)
2004/08 { with a binder in the phosphor layer }
2004/10 { with a protective film }
2004/12 { with a support }

5/00 Irradiation devices (discharge tubes for irradiating H01J 37/00)
  5/02 . having no beam-forming means
  5/04 . with beam-forming means
  5/08 . Holders for targets or for other objects to be irradiated
  5/10 . with provision for relative movement of beam source and object to be irradiated

7/00 Gamma- or X-ray microscopes

2201/00 Arrangements for handling radiation or particles
  2201/06 . using diffractive, refractive or reflecting elements
  2201/061 . . characterised by a multilayer structure
  2201/062 . . the element being a crystal
  2201/064 . . having a curved surface
  2201/065 . . provided with cooling means
  2201/067 . . Construction details
  2201/068 . . specially adapted for particle beams

2207/00 Particular details of imaging devices or methods using ionizing electromagnetic radiation such as X-rays or gamma rays
  2207/005 . Methods and devices obtaining contrast from non-absorbing interaction of the radiation with matter, e.g. phase contrast