

Patents filed by Department of Atomic Energy

[Sorted on the basis of Date of Filing]

(as on October 30, 2014)

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
1	BARC	A method of chemically three dimensionally crosslinking polyvinyl alcohol	325/BOM/1980	29-Oct-1980	153797	India
2	TMC-CRI	Process for preparation of anti-leprosy vaccine	141/BOM/1981	16-May-1981	153031	India
3	BARC	A method of manufacturing mechanically stable three dimensionally cross-linked polyvinyl alcohol by an ionising radiation	171/BOM/1981	16-Jun-1981	153994	India
4	BARC	A device for removing human blood toxins	371/BOM/1983	25-Nov-1983	153999	India
5	BARC	A method of chemically three dimensionally crosslinking polyvinyl alcohol	392/BOM/1983	13-Dec-1983	153801	India
6	BARC	A method & device for in-situ casting of a tubular membrane directly on a porous tubule or capillary for use in reverse osmosis tubular modules.	46/BOM/1985	19-Feb-1985	162173	India
7	BARC	A method and a device for in-situ casting of a tubular membrane directly in a porous support tube for use in reverse osmosis tubular modules	47/BOM/1985	19-Feb-1985	162174	India
8	BARC	A reverse osmosis tubular module for use in a reverse osmosis plant	48/BOM/1985	19-Feb-1985	158830	India
9	BARC	A method for the manufacture of sulphide ion sensitive or selective silver sulphide electrode for use in electrochemical cells	49/BOM/1985	19-Feb-1985	160612	India
10	BARC	An improved reverse osmosis tubular module for use in a reverse osmosis plant	228/BOM/1986	14-Aug-1986	166048	India
11	BARC	A telescopic electrode seal device for use in a completely closed electric arc furnace and such a furnace having the same	297/BOM/1987	23-Sep-1987	166974	India
12	BARC	An improved method for the detoxification of fluorine containing aqueous effluent	258/BOM/1989	19-Sep-1989	167969	India
13	BARC	A porous electrode for use in a filter-press type high pressure alkaline water electrolyser cell module and a method of manufacturing the same.	31/BOM/1991	31-Jan-1991	172456	India
14	BARC	An integral bipolar plate for use in a filter-press type high pressure alkaline water electrolyser cell module and a method of manufacturing the same	32/BOM/1991	31-Jan-1991	172485	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
15	BARC	An improved filter-press type high pressure alkaline water electrolyser cell module	33/BOM/1991	31-Jan-1991	172486	India
16	RRCAT	A birefringent crystal lens light beam polariser	252/BOM/1991	03-Sep-1991	173464	India
17	BARC	A collapsible solar dryer	9/BOM/1992	07-Jan-1992	173519	India
18	BARC	A biocatalyst for the preparation of invert sugar syrup from aqueous sucrose solution and a method of making the same	27/BOM/1994	25-Jan-1994	177144	India
19	BARC	A continuous single step bio catalytic process for the preparation of invert sugar syrup from aqueous sucrose solution and a bioreactor for carrying out the same.	28/BOM/1994	25-Jan-1994	177145	India
20	BARC	A process for the preparation of an aqueous emulsion pressure sensitive adhesive (Also ref. 490/BOM/1997)	390/BOM/1994	12-Aug-1994	181789	India
21	BARC	A process for the preparation of a pectinolytic enzyme complex comprising polygalacturonase pectin Esterase and pectin Llyase from a new microbial strain of Aspergillus niger van Tiegh	208/BOM/1995	02-May-1995	182245	India
22	BARC	A process for enzymatic liquefaction of unconventional fruits	209/BOM/1995	02-May-1995	182962	India
23	BARC	A high angular and spatial resolution phase gradient interferometer	424/BOM/1995	27-Sep-1995	183095	India
24	BARC	A highly cross-linked silicone membrane for liquid support and a method of making the same	220/BOM/1996	19-Apr-1996	185680	India
25	BARC	A process for the synthesis of 5,10,15,20-tetrakis[3,4-biscarboxymethyleneoxy)phenyl] porphyrin from di(carbethoxymethyleneoxy) benzaldehyde for detection/treatment of tumours.	328/BOM/1996	25-Jun-1996	180992	India
26	BARC	A process for the synthesis of 5,10,15,20-tetrakis[3,4-biscarboxymethyleneoxy)phenyl] porphyrin from di(carbethoxymethyleneoxy) benzaldehyde for detection/treatment of tumours.	329/BOM/1996	25-Jun-1996	180480	India
27	BARC	A process for the manufacture of an unsupported integrally skinned asymmetric semipermeable polyether amide hydrazide polymeric membrane for use in reverse osmosis	397/BOM/1996	02-Aug-1996	186375	India
28	BARC	A solvent exchange cum immersion precipitation process for the manufacture of asymmetric semipermeable aromatic polyamide polymeric membrane for use in reverse osmosis	398/BOM/1996	02-Aug-1996	186210	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
29	IGCAR	A hydrogen sensor for measurement of diffusible hydrogen in weldment	413/BOM/1997	11-Jul-1997	186660	India
30	IGCAR	An optical probe for qualitative evaluation/measurement of defects in a ferromagnetic material component	438/BOM/1997	22-Jul-1997	186620	India
31	IGCAR	An optical probe for quantitative evaluation/measurement of defects in a ferromagnetic material component	439/BOM/1997	22-Jul-1997	186574	India
32	BARC	A process for the preparation of an aqueous emulsion pressure sensitive adhesive label (Divisional to 390/BOM/94)	490/BOM/1997	18-Aug-1997	182181	India
33	BARC	A process for the preparation of an immunomodulator from the Ayurvedic medicinal Plant, Culvel (Tinospora Sp.)	56/BOM/1998	29-Jan-1998	183805	India
34	IOP	Cds Nanocrystalline particulates and thin film thereof particularly for use as luminescent or visible light emitting elements under UV irradiation & a single step process for the preparation of the same	234/BOM/1998	22-Apr-1998	187205	India
35	TMC- ACTREC	A process for isolating podophyllotoxin from the genus podophyllum particularly the plant species Emodi Wall	235/BOM/1998	22-Apr-1998	187287	India
36	TMC- ACTREC	A process for the preparation of the anticancer drug N[4-{2,4diamino-6-pteridinyl}methyl] methylaminobenzoyl]-L-glutamic acid commonly known as methotrexate & pharmaceutically acceptable salts thereof	236/BOM/1998	22-Apr-1998	182947	India
37	IGCAR	An acrylamide based gamma ray dosimeter using ultrasonic	247/BOM/1998	28-Apr-1998	187206	India
38	IGCAR	An ultrasonic device for measuring residual monomer in a polymer solution particularly polyacrylamide	248/BOM/1998	28-Apr-1998	187485	India
39	IGCAR	An apparatus for producing laser based etching on surfaces of articles of metals, alloys and ceramics.	427/BOM/1998	30-Jun-1998	189001	India
40	BARC	A method of preparing a mechanically strong hydrophilic polyvinyl alcohol hydrogel	456/BOM/1998	15-Jul-1998	187486	India
41	TIFR	A Process for the preparation of Anti-sera of protein named PV2 for detection of malaria	729/BOM/1998	20-Nov-1998	192707	India
42	IGCAR	A device for detecting defects such as scratches and cracks on an electrically conductive surface.	779/BOM/1998	02-Dec-1998	190427	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
43	HWB	A method for treating exhaust gas emission produced during combustion of coal in a coal combustion plant for reducing suspended particulate matters	31/BOM/1999	12-Jan-1999	194122	India
44	IGCAR	A modular device for generating high voltage impulses	97/BOM/1999	08-Feb-1999	191318	India
45	IGCAR	A modular device for generating high voltage impulses	98/BOM/1999	08-Feb-1999	191316	India
46	TIFR	A device for transduction of spatially patterned signals to and/or from oral surface	125/BOM/1999	24-Feb-1999	192082	India
47	TIFR	A system for projection and transmission of spatially and temporally patterned signals onto oral surface	126/BOM/1999	24-Feb-1999	191531	India
48	TIFR	A device for detection and acquisition of spatially & temporally patterned signals from oral surface	127/BOM/1999	24-Feb-1999	192719	India
49	BARC	A process for the preparation of Europium activated red emitting Yttrium phosphate vanadate phosphor with boron	222/BOM/1999	26-Mar-1999	194131	India
50	TMC- ACTREC	A process for the isolation of Recombinant nucleotide sequence comprising 1-2381 base pairs (bp) for early detection of oral cancer (Also Ref. 868/MUM/2001)	392/BOM/1999	24-May-1999	188744	India
51	BARC	An electronic device for recording blood flow signal variability	468/BOM/1999	28-Jun-1999	195350	India
52	BARC	A spiral wound dry polyamide element for membrane filtration and a method of making the same	553/BOM/1999	10-Aug-1999	194106	India
53	BARC	A method of making a supported dry asymmetric polyamide membrane for membrane filtration	554/BOM/1999	10-Aug-1999	194101	India
54	BARC	A high pressure vessel for membrane filtration	555/BOM/1999	10-Aug-1999	195317	India
55	IGCAR	A device for detecting leaks in tubes	556/BOM/1999	10-Aug-1999	193457	India
56	IGCAR	A split coil probe for steel wire rope inspection	557/BOM/1999	10-Aug-1999	193458	India
57	BARC	A device for dynamic compensation of slow responding transducer	632/BOM/1999	08-Sep-1999	196522	India
58	BARC	An impedance cardio vasograph	635/BOM/1999	09-Sep-1999	196540	India
59	BARC	A one step irradiation process for manufacture of hydrogel dressing free of synthetic plasticizers	731/BOM/1999	27-Oct-1999	192136	India
60	BRIT	An improved process for the preparation of magnetisable cellulose particle	805/BOM/1999	17-Nov-1999	193445	India
61	BRIT	A composition of magnetisable microcrystalline cellulose particle	806/BOM/1999	17-Nov-1999	193912	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
62	IGCAR	An improved process for producing mixed oxide coated titanium electrodes having enhanced life in electrochemical applications and the electrodes so prepared	807/BOM/1999	17-Nov-1999	195371	India
63	BARC	System for deposition of carbon films and process for the same	94/MUM/2000	31-Jan-2000	204221	India
64	TIFR	A process for manufacture of polymeric films with electro-active patterns printed on them	290/MUM/2000	30-Mar-2000	204360	India
65	TIFR-NCRA	Preloaded parabolic dish antenna and the method of making it.	721/MUM/2000 10/333,967 01813511-0 2001278672	01-Aug-2000 24-Jan-2003 28-Jan-2003 17-Feb-2003	207809 6911958 CN100416920C 2001278672	India, USA, China & Australia
66	TIFR	An apparatus for electro-reflectance and surface photo voltage spectroscopies in soft contact mode	846/MUM/2000	14-Sep-2000	204169	India
67	HWB	An improved process for preparing stabilized biological preparation such as oral polio vaccine (OPV).	158/MUM/2001	12-Feb-2001	197836	India
68	TIFR	A process for depositing electronic ceramic oxide thin films with controlled oxygen stoichiometry on different substrate materials	210/MUM/2001	27-Feb-2001	205887	India
69	BARC	Online process instrumentation loop calibrator	282/MUM/2001	27-Mar-2001	197786	India
70	BARC	A process for preparation Of banana juice and banana powder from ripe bananas (Musa Cavendish)	336/MUM/2001	11-Apr-2001	189999	India
71	BARC	A process for the preparation of insect communication modifier from zanthaxylum Alatum seed oil	405/MUM/2001	27-Apr-2001	190566	India
72	BARC	A low cost digital pocket dosimeter	454/MUM/2001 10/476,258	14-May-2001 27-Oct-2003	197797 7009182	India & USA
73	IGCAR	An improved process for providing hard chromium nitride coating on substrates and a coated substrate so obtained.	637/MUM/2001	09-Jul-2001	198325	India
74	IGCAR	A process for the preparation of MgO stabilised beta alumina	638/MUM/2001	09-Jul-2001	215156	India
75	TIFR	A compact kit for the rapid detection and estimation of protonophoric pollutants in waste waters	646/MUM/2001	10-Jul-2001	198326	India
76	BARC	A process for production of Zinc Oxide based varistor from Zinc Ore	777/MUM/2001	09-Aug-2001	204633	India
77	BARC	A process for preparation of High Purity Zinc Oxide Powder from Zinc Calcine	778/MUM/2001	09-Aug-2001	204974	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
78	BARC	A process for producing disilicides of Molybdenum, tungsten and their Solid Solution	779/MUM/2001	09-Aug-2001	206958	India
79	BARC	Solvent extraction process for recovery of uranium from phosphoric acid (25-55% P ₂ O ₅)	09/947,349	07-Sep-2001	6645453B2	USA
80	TMC- ACTREC	A process for the preparation of a kit comprising recombinant nucleotide sequence comprising 1-2381base pairs (bp) for early detection of oral cancer (Also Ref 392/BOM/99 above)	868/MUM/2001	11-Sep-2001	189625	India
81	TIFR	An improved room temperature chemical vapour deposition process for the deposition of poly(phenylenevinylene) in the manufacture of organic based electronic devices	1025/MUM/2001	19-Oct-2001	215159	India
82	IGCAR	Process for in-situ preparation of electrolyte for measuring hydrogen in high temperature fluids	1028/MUM/2001	22-Oct-2001	198013	India
83	IGCAR	A measuring system for online measurement of corrosion rate of metals in an aqueous medium	1029/MUM/2001	22-Oct-2001	204092	India
84	BRIT JONAKI	An improved method of detection of target nucleic acid sequence by nucleic acid amplification	487/MUM/2002	31-May-2002	196040	India
		MET/FRET based method of target acid detection whereby the donor/acceptor moieties are on complementary stands	2004-510457 3756100.8	29-Nov-2004 30-Nov-2004	4457001 <i>Not Yet Granted</i>	Japan Europe
85	IGCAR	An improved apparatus for measuring colloidal forces	0500/MUM/2002	05-Jun-2002	195921	India
86	IGCAR	A Tunable optical filter	0501/MUM/2002	05-Jun-2002	196063	India
87	BARC	A process for the manufacture of novel composites of austenitic stainless steel and either commercially pure aluminium or any aluminium base alloy of 6 xxx series	643/MUM/2002	12-Jul-2002	241751	India
88	TIFR	A process for manufacture of half metallic ferromagnet with CrO ₂ or Composites of CrO ₂ chromium sesquioxide	783/MUM/2002	29-Aug-2002	204533	India
		Chromium dioxide (CrO ₂) and composites of chromium dioxide and other oxides of Chromium such as CrO ₂ /Cr ₂ O ₃ and CrO ₂ /Cr ₂ O ₅ and process for manufacturing the same	10/525,939 3791168.2-2111	28-Feb-2005 28-Feb-2005	7276226 <i>Not Yet Granted</i>	USA Europe
89	RRCAT	An apparatus and a method for optical tweezer based system for trapping and controlled rotation of trapped microscopic objects.	935/MUM/2002	29-Oct-2002	205080	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
90	TIFR	A liquid phase epitaxy process for manufacturing separately confined strained heterostructure devices such as diode laser emitting at narrow wavelength region within 650-1600 nm	966/MUM/2002	05-Nov-2002	195956	India
91	HWB-Thermax	Ammonia Absorption Refrigeration system with improved coefficient of performance	997/MUM/2002	18-Nov-2002	205574	India
92	BARC	Ultrafiltration Membrane water purification device	1090/MUM/2002	06-Dec-2002	195961	India
93	BARC-IIT, Bombay	A Process for the treatment of Austenitic stainless steel	1089/MUM/2002	06-Dec-2002	200100	India
94	IGCAR	Stabilised magnetic emulsion and a process of making it	1134/MUM/2002	19-Dec-2002	205114	India
95	IREL	A process for recovery of high purity uranium from fertiliser grade weak phosphoric acid	10/486,507 03733002.4-2122	11-Feb-2004 11-Feb-2004	7192563 1511869	USA & Europe (UK, Germany, France, Belgium, Spain & Italy)
96	TIFR	Process for manufacture of Novel compound exhibiting magneto electric coupling and high dielectric constant at room temperature	409/MUM/2003	24-Apr-2003	203429	India
97	BARC	An pulser driven, helium-free Transversely Excited Atmospheric pressure (TEA) CO ₂ laser	10/612,848	03-Jul-2003	6950453B2	USA
98	BARC	Process for the preparation of Ceria nano powder suitable for optical polishing	708/MUM/2003	10-Jul-2003	207569	India
99	BARC	A batch reactor for producing metal oxides	707/MUM/2003	10-Jul-2003	207053	India
100	BARC	A process for treatment of waste water containing nitrate ions	764/MUM/2003	04-Aug-2003	222102	India
101	RRCAT	A tunable laser with a single tuning element and a wavelength selector operating in both side of a dispersive resonator	1056/MUM/2003	10-Oct-2003	198772	India
102	BARC	A method for maintaining freshness and extension of shelf life of cut-flowers	311/MUM/2004	12-Mar-2004	210507	India
103	TIFR	A novel compound exhibiting magneto-electric coupling and high dielectric constant at room temperature	623/MUM/2004	04-Jun-2004	225691	India
104	NFC	A furnace for preparing low melting metal granules	894/MUM/2004	18-Aug-2004	231518	India
105	NFC	A furnace for preparing low melting metal granules	894/MUM/2004	18-Aug-2004	231518	India
106	RRCAT	An improved sub-ambient Phase Change composition	1116/MUM/2004	18-Oct-2004	234952	India
107	BRIT JONAKI	A Kit for the detection of target nucleic acid sequence by nucleic acid amplification	1401/MUM/2004	23-Dec-2004	235792	India
108	TIFR	Prism Mount Adapter	504/MUM/2005	21-Apr-2005	244151	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
109	RRCAT	A system for Precision angular motion mechanism for alignment and positioning of optical elements	881/MUM/2005	25-Jul-2005	209080	India
110	BARC	Process for direct somatic embryogenesis from immature inflorescence segments of sugarcane	1178/MUM/2005	23-Sep-2005	243371	India
111	BARC	Device for measuring and quantitative profiling of charged particle beams	03758647.6	05-Jan-2006	1649487	Europe (UK, Germany & Denmark)
112	RRCAT	Apparatus and method for transport of microscopic object	03818275.4	20-Feb-2006	1656680	Europe (UK, Germany, France & Italy), India & USA
			204/MUMNP/2006 10/569,047	20-Feb-2006 22-Feb-2006	240966 750210732	
113	TIFR-NCBS	A Novel assay for screening anti-psychotic drugs	11/405,061	17-Apr-2006	7524639	USA & Europe (UK, Germany, France, Italy & Sweden)
			4769641.4	17-May-2006	1692503	
114	BARC	Emergency leak arresting device and method for a collared pipe	0-2545993 10-2006-200044404	08-May-2006 17-May-2006	2545993 <i>Not Yet Granted</i>	Canada & South Korea
115	BARC	Biometric technique for personal identification based on multiple patterns on fingers from nail side of the hand	1361/MUM/2006	30-Aug-2006	255627	India
116	SINP	Separation of No-carrier-added thallium radionuclides from No-carrier-added lead & mercury radionuclides by dialysis	06711367	01-Apr-2007	1842207B1	Europe (UK, & Germany), Canada & USA
			2592374 11/794,793	20-Apr-2007 03-Jul-2007	<i>Not Yet Granted</i> 7799226	
117	BARC	Calcium Potassium Ferric amide prophylactic mixture comprising this compound and the use thereof for decorporation of radiocesium in subjects affected by nuclear radiation	11/794,781	05-Jul-2007	7935366 B2	USA Europe (Belgium, France, Germany, Sweden & UK) & Japan
			05736305.3	7-Jul-2007	1838617	
			2007-550020	10-Jul-2007	4885877	
118	TIFR	Fluorescence correlation microscope with real time alignment readout	05736243.6-2204	14-Aug-2007	1848983	Europe (UK & Germany) &
			11/816,387	15-Aug-2007	7705987	USA
119	BARC-BRNS	Zn fertilizer formulation and process for producing the same	757/MUM/2007	19-Apr-2007	239929	India
120	BARC-BRNS	A P fertilizer formulation and a process of making it	758/MUM/2007	19-Apr-2007	238485	India
121	RRCAT	A Method of qualifying Niobium and/or other super conducting materials for reliable fabrication of Superconducting Radio Frequency (SCRF) Cavities	11/978,163	26-Oct-2007	8673820	USA & Europe (France & Germany)
			07119433.6	26-Oct-2007	<i>Not Yet Granted</i>	

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
122	IGCAR	A penetration enhancing flux formulation for Tungsten Inert Gas welding of austenitic Stainless steel and its application	1851/MUMNP/2007 GB 0721629.4 200714987 12/063,664	05-Nov-2007 02-Nov-2007 28-Dec-2007 12-Feb-2008	<i>Not Yet Granted</i> GB 2446905 95076 8097826	India, UK, Ukraine & USA
123	IGCAR	Development of a very high resistance to sensitisation in austenitic stainless steel through a special heat treatment resulting in grain boundary microstructural modification	893/MUM/2008 8159613.2	21-Apr-2008 03-Jul-2008	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India & Europe (<i>France, Germany & Sweden</i>)
124	BARC	Enzymatic process for debittering of protein hydrolysate using immobilised peptidases	1435/MUMNP/2008 12/160,517	09-Jul-2008 10-Jul-2008	252516 <i>Not Yet Granted</i>	India & USA
125	IGCAR	A process for the treatment of cellulose based waste for removal of hazardous materials and recovery of valuables.	2017/MUM/2008	22-Sep-2008	256258	India
126	BARC	Colour indicator dosimeter for measurement of ionising radiation	12/250,981	14-Oct-2008	7884339	USA
127	RRCAT	Generator of Collimated variable diameter hollow laser beam	2333/MUM/2008	03-Nov-2008	<i>Not Yet Granted</i>	India
128	TMC	A liquid based thin layer cytopreparation for liquid based cytology	2376/MUM/2008	10-Nov-2008	<i>Not Yet Granted</i>	India
129	IGCAR	Single Fibre grid with improved spatial resolution in distributed optical fibre sensor system	696/MUM/2009	24-Mar-2009	<i>Not Yet Granted</i>	India
130	BARC	A method for non-intrusive on line detection of turbine blade condition	12/525,358 1447/MUMNP/2009	30-Jul-2009 30-Jul-2009	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India & USA
131	IGCAR	Improved path length fibre optic probe for on-line and off-line spectrophotometric assay	2801/MUM/2009	03-Dec-2009	<i>Not Yet Granted</i>	India
132	BARC	A hydraulic micrometer system for remote measurement of inside diameter of pipes and tubes and a method of such measurement	2690491 2309/MUMNP/2009 12/668,107	10-Dec-2009 11-Dec-2009 07-Jan-2010	2690491 <i>Not Yet Granted</i> 8327556	Canada, India & USA
133	BARC	Single stage purification for uranium refining	2007356815 2707460 2010/01122	08-Jan-2010 22-Jan-2010 16-Feb-2010	<i>Not Yet Granted</i> <i>Not Yet Granted</i> <i>Not Yet Granted</i>	Australia, Canada & South Africa
134	BARC	Stabilised natural circulation system with nano particles	2010-519567 12/672,090 7870496.2	03-Feb-2010 04-Feb-2010 22-Feb-2010	5555625 <i>Not Yet Granted</i> <i>Not Yet Granted</i>	Japan, USA & Europe
135	IGCAR	Non-ionic, porous, solid resin with chemically bonded crown ether	2010-526426 7870504.3	24-Mar-2010 26-Apr-2010	5297462 2205672	Japan, Europe (<i>France</i>)
136	IREL	An improved process for production of high grade synthetic rutile from titan ferrous ores	782/CHE/2010	24-Mar-2010	<i>Not Yet Granted</i>	India
137	TIFR	An optical source, its method of preparation and its application thereof	1182/MUM/2010	09-Apr-2010	<i>Not Yet Granted</i>	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
138	IGCAR	A Process for Producing Body Centered Cubic (B2) Nickel Aluminide (NiAl) Coating of Controlled Thickness on Nickel-base Alloy Surfaces	2010-121170 07870514.2 860/MUMNP/2010	25-Apr-2010 25-Apr-2010 27-Apr-2010	2452791 <i>Not Yet Granted</i> <i>Not Yet Granted</i>	Russia, Europe (<i>France, Germany & Italy</i>) & India
139	IGCAR	An innovative 'cut-and-feed' operation for enhancing the performance of ion-exchange chromatographic separation	12/747,465 8874274.7	10-Jun-2010 10-May-2010	7976708B2 <i>Not Yet Granted</i>	USA & UK
140	IGCAR	Wash Solution suitable for use in Continuous Reprocessing of Nuclear Fuel and a System thereof	08875988.1 2011-503550	16-Jun-2010 21-Jul-2010	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	France & Japan
141	BARC-ICT	A single layer irradiated functional clay-polymer Nano composite film and its method of preparation	2325/MUM/2010	18-Aug-2010	<i>Not Yet Granted</i>	India
142	IREL	An improved process for production of high pure submicron yttria stabilized zirconia powder from zircon	3592/MUM/2010	31-Dec-2010	<i>Not Yet Granted</i>	India
143	BARC	A booster device for handling high volumetric fluid at low pressure	1206/MUM/2011	12-Apr-2011	<i>Not Yet Granted</i>	India
144	IGCAR	A method and apparatus for "block encryption" and "Synchronous Stream Cipher (SSC).	892/MUMNP/2011	03-May-2011	<i>Not Yet Granted</i>	India
145	RRCAT	Niobium based superconducting radiofrequency (SCRF) cavities comprising niobium components joined by laser welding	1177/MUMNP/2011 13/377,597 09812469.6 2012-536015	09-Jun-2011 12-Dec-2011 29-Dec-2011 23-Feb-2012	<i>Not Yet Granted</i> <i>Not Yet Granted</i> <i>Not Yet Granted</i> 5632924	India USA Europe Japan
146	TIFR	Novel plasmodium protein as malarial vaccine and drug target	1773/MUM/2011	17-Jun-2011	<i>Not Yet Granted</i>	India
147	IREL	A process for producing ultrapure titanium dioxide from titan ferrous ore and slag sample	3704/MUM/2011	29-Dec-2011	<i>Not Yet Granted</i>	India
148	BARC	A polymer composite for extracting caesium from Nuclear waste and/or other inorganic wastes/solutions	13/382,905 9764906.5	06-Jan-2012 01-Jan-2012	8828532 <i>Not Yet Granted</i>	USA Europe
149	BRIT	A system for automatically separating ^{99m} Tc radionuclide from low-medium specific activity ⁹⁹ Mo and a process for the same.	2764086	12-Jan-2012	<i>Not Yet Granted</i>	Canada
150	BARC	Dialkyldiaza-tetraalkylacetone diamide derivatives useful for the separation of trivalent actinide from lanthanide and process for the preparation thereof	2012-522336 13/388,000 200980160702-3 09804152.8	27-Jan-2012 30-Jan-2012 30-Jan-2012 13-Feb-2012	5497174 8785691 201406100046200 2459522	Japan USA China Europe (<i>validated in France</i>)
151	BARC	Design of algorithm and method of development of 6-axis parallel kinematic manipulator	1146/MUM/2012	09-Apr-2012	<i>Not Yet Granted</i>	India
152	BARC	Process for production of Biofungicides, such as trichoderma Spp. Using Tamarind Seeds	1236/MUM/2012	09-Apr-2012	<i>Not Yet Granted</i>	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
153	TIFR	Biological laser plasma X-ray point source	13/508,840 1421/MUMNP/2012	09-May-2012 07-Jun-2012	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	USA India
154	IGCAR	A method of preparation of Potassium Fluoroborate (KBF ₄)	2270/MUM/2012	08-Aug-2012	<i>Not Yet Granted</i>	India
155	IGCAR	A novel method of synthesis of rhodium metal foam using room temperature ionic liquids	2271/MUM/2012	08-Aug-2012	<i>Not Yet Granted</i>	India
156	BARC	A storage stable microbial decontaminated Litchi (Litchi Chinensis) with extended shelf life retaining pericarp colour and a process thereof	2484/MUM/2012	27-Aug-2012	<i>Not Yet Granted</i>	India
157	BARC	A flexible magnetic membrane based actuation system and devices involving the same	13/582,084 2089/MUMNP/2012 10745016.5	31-Aug-2012 13-Sep-2012 28-Sep-2012	<i>Not Yet Granted</i> <i>Not Yet Granted</i> 2542271	USA India Europe (validated in Germany & France)
158	BARC-BRNS	Innovative, inexpensive and viable method for the isolation of novel antioxidant flavonoids from the weed, Coronopus didymus	3135/MUM/2012	29-Oct-2012	<i>Not Yet Granted</i>	India
159	IGCAR	Apparatus and method for authenticating hard copy documents with images	2/MUM/2013	01-Jan-2013	<i>Not Yet Granted</i>	India
160	BARC	A dual purpose atomic device for realising atomic frequency standard and magnetic field measurement	151/MUM/2013 13/924,580	17-Jan-2013 23-Jun-2013	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India USA
161	BARC	A method for large-scale synthesis of optically stimulated luminescence grade polycrystalline ceramic material	252/MUM/2013 13/925,809	29-Jan-2013 24-Jun-2013	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India USA
162	BARC	Thermal Plasma process for 'inflight' Dissociation of Zircon Mineral	616/MUM/2013	01-Mar-2013	<i>Not Yet Granted</i>	India
163	NFC	A TBP nitrate solvent extraction process for producing high purity nuclear grade rare earth metal oxide	13/877,184	31-May-2013	<i>Not Yet Granted</i>	USA
164	BARC	Micromachined metal diaphragm based Fabry-Perot fibre optics sensor system and data processing involving the same	13/977,263 1321/MUMNP/2013	28-Jun-2013 08-Jul-2013	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	USA India
165	BARC	A wound dressing capable of in-situ NO _x release and a process for manufacturing the same	3026/MUM/2013	19-Sep-2013	<i>Not Yet Granted</i>	India
166	TMC	A method for Ex-Vivo separation of apoptotic chromatin fragments from blood or plasma for prevention and treatment of diverse human disease	14/100,950	12-Oct-2013	<i>Not Yet Granted</i>	USA (Divisional Application)
167	BARC	An improved ground fault protection mechanism for quick detection and isolation of a ground fault to prevent damages in parallel or upstream circuits associated with electrical power supply system	3710/MUM/2013	26-Nov-2013	<i>Not Yet Granted</i>	India

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Patent
168	IGCAR	Design of unique Creep machine for conducting creep tests in flowing liquid sodium with enhanced safety features	3776/MUM/2013	02-Dec-2013	<i>Not Yet Granted</i>	India
169	BARC	A method for synthesis of resol beads with good control over their size	3986/MUM/2013	20-Dec-2013	<i>Not Yet Granted</i>	India
170	IREL	A device used for electrostatic separation of minerals based on their electrical resistivity	1005/MUM/2014	25-Mar-2014	<i>Not Yet Granted</i>	India
171	IREL	An improved electrostatic plate separator for mineral separation based on the difference in electrical resistivity and size of minerals	1006/MUM/2014 2014-203014	25-Mar-2014 03-Jun-2014	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India Australia
172	BARC	Compact Pulse Transformer with Transmission Line Embodiment	1295/MUM/2014 PCT/IN2014/396	07-Apr-2014 12-Jun-2014	<i>Not Yet Granted</i> <i>Not Yet Granted</i>	India PCT
173	BARC	Charged thin film composite nanofiltration membranes and their use for water purification and effluent management	1902/MUM/2014	10-Jun-2014	<i>Not Yet Granted</i>	India
174	BARC	A transitional joint comprising of dissimilar metal joint and a diffusion bonding shrink fit process for producing the same	1992/MUM/2014	19-Jun-2014	<i>Not Yet Granted</i>	India
175	IGCAR	A novel method for preparing High density self-compacting concrete	2046/MUM/2014	25-Jun-2014	<i>Not Yet Granted</i>	India
176	IREL	A method and equipment for separating non-conducting and non-magnetic minerals	2600/MUM/2014	12-Aug-2014	<i>Not Yet Granted</i>	India
177	IGCAR	An innovative Auto cut system for ¹⁰ B Isotope of Boron enrichment using continuous Ion Exchange Chromatography	14/462,975	19-Aug-2014	<i>Not Yet Granted</i>	USA