

Patents filed by Department of Atomic Energy

[Sorted on the basis of Date of Filing]

(as on January 15,2018)

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Application
1	BARC	A method of chemically three dimensionally crosslinking polyvinyl alcohol	325/BOM/1980	29-Oct-1980	153797	India
2	TMC	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
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 bio catalyst 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

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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/97)	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 <i>Aspergillus Niger van Tiegh</i>	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 3,4-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] chlorin from 5,10,15,20-tetrakis[3,4-di(carbethoxymethyleneoxy)phenyl] porphyrin 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
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 (<i>Tinospora Sp.</i>)	56/BOM/1998	29-Jan-1998	183805	India
34	IOP	Cadmium Sulfide (CdS) nano crystalline 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

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35	TMC	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	A process for the preparation of the anticancer drug N[4-{2,4diamino-6-pteridiny]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
43	TIFR	Switch useful at superconducting temperatures and comprising superconducting material	09/226299	07-Jan-1999	US 6184765 B1	USA
44	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
45	IGCAR	A modular device for generating high voltage impulses	97/BOM/1999	08-Feb-1999	191318	India
46	IGCAR	A modular device for generating high voltage impulses	98/BOM/1999	08-Feb-1999	191316	India
47	TIFR	A device for transduction of spatially patterned signals to and/or from oral surface	125/BOM/1999	24-Feb-1999	192082	India
48	TIFR	A system for projection and transmission of spatially and temporally patterned signals onto oral surface	126/BOM/1999	24-Feb-1999	191531	India
49	TIFR	A device for detection and acquisition of spatially & temporally patterned signals from oral surface	127/BOM/1999	24-Feb-1999	192719	India
50	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
51	TMC	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
52	BARC	An electronic device for recording blood flow signal variability	468/BOM/1999	28-Jun-1999	195350	India
53	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
54	BARC	A method of making a supported dry asymmetric polyamide membrane for membrane filtration	554/BOM/1999	10-Aug-1999	194101	India
55	BARC	A high pressure vessel for membrane filtration	555/BOM/1999	10-Aug-1999	195317	India

NY Allotted = Patent Granted but Patent No. not yet Allotted

NY Examined = Not yet taken for Examination

U Examination = Under Examination

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56	IGCAR	A device for detecting leaks in tubes	556/BOM/1999	10-Aug-1999	193457	India
57	IGCAR	A split coil probe for steel wire rope inspection	557/BOM/1999	10-Aug-1999	193458	India
58	BARC	A device for dynamic compensation of slow responding transducer	632/BOM/1999	08-Sep-1999	196522	India
59	BARC	An impedance cardio vasograph	635/BOM/1999	09-Sep-1999	196540	India
60	BARC	A one step irradiation process for manufacture of hydrogel dressing free of synthetic plasticizers	731/BOM/1999	27-Oct-1999	192136	India
61	BRIT	An improved process for the preparation of magnetisable cellulose particle	805/BOM/1999	17-Nov-1999	193445	India
62	BRIT	A composition of magnetisable microcrystalline cellulose particle	806/BOM/1999	17-Nov-1999	193912	India
63	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
64	BARC	System for deposition of carbon films and process for the same	94/MUM/2000	31-Jan-2000	204221	India
65	TIFR	A process for manufacture of polymeric films with electro-active patterns printed on them	290/MUM/2000	30-Mar-2000	204360	India
66	TIFR	Preloaded parabolic dish antenna and the method of making it.	721/MUM/2000	01-Aug-2000	207809	India
			10/333967	24-Jan-2003	6911958	USA
			01813511-0	28-Jan-2003	CN100416920C	China
			2001278672	17-Feb-2003	2001278672	Australia
67	TIFR	An apparatus for electro-reflectance and surface photo voltage spectroscopies in soft contact mode	846/MUM/2000	14-Sep-2000	204169	India
68	HWB	An improved process for preparing stabilized biological preparation such as oral polio vaccine (OPV).	158/MUM/2001	12-Feb-2001	197836	India
69	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
70	BARC	Online process instrumentation loop calibrator	282/MUM/2001	27-Mar-2001	197786	India
71	BARC	A process for preparation of banana juice and banana powder from ripe bananas (Musa Cavendish)	336/MUM/2001	11-Apr-2001	189999	India
72	BARC	A process for the preparation of insect communication modifier from <i>Zanthoxylum Alatum</i> seed oil	405/MUM/2001	27-Apr-2001	190566	India
73	BARC	A low cost digital pocket dosimeter	454/MUM/2001	14-May-2001	197797	India
			10/476258	27-Oct-2003	7009182	USA
74	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
75	IGCAR	A process for the preparation of MgO stabilised beta alumina	638/MUM/2001	09-Jul-2001	215156	India
76	TIFR	A compact kit for the rapid detection and estimation of protonophoric pollutants in waste waters	646/MUM/2001	10-Jul-2001	198326	India
77	BARC	A process for production of Zinc Oxide based varistor from Zinc Ore	777/MUM/2001	09-Aug-2001	204633	India

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78	BARC	A process for preparation of High Purity Zinc Oxide Powder from Zinc Calcine	778/MUM/2001	09-Aug-2001	204974	India
79	BARC	A process for producing disilicides of Molybdenum, tungsten and their Solid Solution	779/MUM/2001	09-Aug-2001	206958	India
80	BARC	Solvent extraction process for recovery of uranium from phosphoric acid (25-55% P ₂ O ₅)	09/947349	07-Sep-2001	6645453B2	USA
81	TMC	A process for the preparation of a kit comprising recombinant nucleotide sequence comprising 1-2381 base pairs (bp) for early detection of oral cancer (Also Ref 392/BOM/1999 above)	868/MUM/2001	11-Sep-2001	189625	India
82	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
83	IGCAR	Process for in-situ preparation of electrolyte for measuring hydrogen in high temperature fluids	1028/MUM/2001	22-Oct-2001	198013	India
84	IGCAR	A measuring system for online measurement of corrosion rate of metals in an aqueous medium	1029/MUM/2001	22-Oct-2001	204092	India
85	BRIT	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 strands	2004-510475	29-Nov-2004	4457001	Japan
86	IGCAR	An improved apparatus for measuring forces between colloidal particles or droplets	500/MUM/2002	05-Jun-2002	195921	India
87	IGCAR	A Tuneable optical filter	501/MUM/2002	05-Jun-2002	196063	India
88	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
89	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	10/525939	28-Feb-2005	7276226	USA
			3791168.2	28-Feb-2005	<i>U Examination</i>	Europe
90	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
91	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
92	HWB	Ammonia Absorption Refrigeration system with improved coefficient of performance	997/MUM/2002	18-Nov-2002	205574	India
93	BARC	Ultrafiltration Membrane water purification device	1090/MUM/2002	06-Dec-2002	195961	India

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94	BARC	A Process for the treatment of Austenitic stainless steel	1089/MUM/2002	06-Dec-2002	200100	India
95	IGCAR	Stabilised magnetic emulsion and a process of making it	1134/MUM/2002	19-Dec-2002	205114	India
96	IREL	Two-cycle selective counter-current extraction using bis(2-ethylhexyl) phosphate and tri-n-butyl phosphate and refined kerosene as synergistic extractant system on H ₂ O ₂ treated H ₃ PO ₄ , and stripping the loaded extract with strong H ₃ PO ₄ containing metallic iron to lower redox potential.	10/486507	11-Feb-2004	7192563	USA
		A process for recovery of high purity uranium from fertiliser grade weak phosphoric acid	03733002.4-2122	11-Feb-2004	1511869	Europe (validated in UK, Germany, Belgium, Spain, Italy & France)
97	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
98	BARC	An pulser driven, helium-free Transversely Excited Atmospheric (TEA) pressure CO ₂ laser	10/612848	03-Jul-2003	6950453 B2	USA
99	BARC	Process for the preparation of Ceria nano powder suitable for optical polishing	708/MUM/2003	10-Jul-2003	207569	India
100	BARC	A batch reactor for producing metal oxides	707/MUM/2003	10-Jul-2003	207053	India
101	BARC	Device for measuring and quantitative profiling of charged particle beams	3758647.6	05-Jan-2006	1649487	Europe (validated in Germany, Denmark & UK)
102	BARC	A process for treatment of waste water containing nitrate ions	764/MUM/2003	04-Aug-2003	222102	India
103	RRCAT	Apparatus and method for transport of microscopic object(s)	3818275.4	20-Feb-2006	1656680	Europe (validated in Germany, UK, France & Italy)
			204/MUMNP/2006	20-Feb-2006	240966	India
			10/569047	22-Feb-2006	7502107 B2	USA
104	RRCAT	A tuneable 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
105	BARC	A method for maintaining freshness and extension of shelf life of cut-flowers	311/MUM/2004	12-Mar-2004	210507	India
106	TIFR	A novel compound exhibiting magneto-electric coupling and high dielectric constant at room temperature	623/MUM/2004	04-Jun-2004	225691	India
107	NFC	An electro mechanical method for cost effective	753/MUM/2004	14-Jul-2004	198509	India
108	NFC	A furnace for preparing low melting metal granules	894/MUM/2004	18-Aug-2004	231518	India
109	RRCAT	An improved sub-ambient Phase Change composition	1116/MUM/2004	18-Oct-2004	234952	India
110	BRIT	A Kit for the detection of target nucleic acid sequence by nucleic acid amplification	1401/MUM/2004	23-Dec-2004	235792	India

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111	BARC	Calcium Potassium Ferric amide prophylactic mixture comprising this compound and the use thereof for decorporation of Radiocesium in subjects affected by nuclear radiation	11/794781	05-Jul-2007	7935366 B2	USA
			5736305.3	07-Jul-2007	1838617	Europe (<i>validated in Belgium, Germany, France, UK & Sweden</i>)
			2007-550020	10-Jul-2007	4885877	Japan
112	TIFR	Fluorescence Correlation microscopy with real-time alignment readout	05736243.6-2204	14-Aug-2007	1848983	Europe (<i>validated in UK & Germany</i>)
			11/816387	15-Aug-2007	7705987	USA
113	TIFR	Prism Mount Adapter	504/MUM/2005	21-Apr-2005	244151	India
114	RRCAT	A system for Precision angular motion mechanism for alignment and positioning of optical elements	881/MUM/2005	25-Jul-2005	209080	India
115	BARC	Process for direct somatic embryogenesis from immature inflorescence segments of sugarcane	1178/MUM/2005	23-Sep-2005	243371	India
116	SINP	Separation of no-carrier-added thallium radionuclides from no-carrier-added lead & mercury radionuclides by dialysis	6711367	01-Apr-2007	1842207B1	Europe (<i>validated in UK & Germany</i>)
			2592374	20-Apr-2007	2592374	Canada
			11/794793	03-Jul-2007	7799226	USA
117	BARC	Enzymatic process for debittering of protein hydrolyate using immobilised peptidases	1435/MUMNP/2008	09-Jul-2008	252516	India
			12/160517	10-Jul-2008	***	USA
			11/405061	17-Apr-2006	7524639	USA
118	TIFR	A Novel assay for screening anti-psychotic drugs	4769641.4	17-May-2006	1692503	Europe (<i>validated in Germany, UK, Italy, France & Sweden</i>)
119	BARC	Emergency leak arresting device for a collared pipe	0-2,545,993	08-May-2006	2545993	Canada
			10-2006-0044404	17-May-2006	10-1202131	South Korea
120	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
121	IGCAR	A penetration enhancing flux formulation for Tungsten Inert Gas (TIG) welding of austenitic Stainless steel and its application	1851/MUMNP/2007	05-Nov-2007	266346	India
			GB 0721629.4	02-Nov-2007	GB 2446905	UK
			2007-14987	28-Dec-2007	95076	Ukraine
			12/063664	12-Feb-2008	8097826	USA
122	BARC	A method for non-intrusive on line detection of turbine blade condition	12/525358	31-Jul-2009	9557210	USA
			1447/MUMNP/2009	30-Jul-2009	<i>U Examination</i>	India
123	BRNS	Zinc fertilizer formulation and process for producing the same	757/MUM/2007	19-Apr-2007	239929	India
124	BRNS	A Phosphorus fertilizer formulation and a process of making it	758/MUM/2007	19-Apr-2007	238485	India

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125	BRNS	Process for preparing metal complexes of 1,3 diketones using ultrasound	1975/MUM/2007	04-Oct-2007	236638	India
126	BARC	Single stage purification for uranium refining	2007356815	08-Jan-2010	2007356815	Australia
			2707460	22-Jan-2010	2707460	Canada
			2010/01122	16-Feb-2010	2010/01122	South Africa
127	BARC	Stabilised natural circulation system with nano particles	2010-519567	03-Feb-2010	5555625	Japan
128	IGCAR	Non-ionic, porous, solid resin with chemically bonded crown ether	2010-526426	24-Mar-2010	5297462	Japan
			7870504.3	26-Apr-2010	2205672	Europe (<i>validated in France</i>)
129	IGCAR	A Process for Producing Body Centered Cubic (B2) Nickel Aluminide (NiAl) Coating of Controlled Thickness on Nickel-base Alloy Surfaces	2010121170	25-May-2010	2452791	Russia
			7870514.2	25-Apr-2010	<i>U Examination</i>	Europe
			860/MUMNP/2010	27-Apr-2010	288175	India
130	RRCAT	A Method of qualifying Niobium and/or other super conducting materials for reliable fabrication of Superconducting Radio Frequency (SCRF) Cavities	11/978163	26-Oct-2007	8673820	USA
131	BARC	A hydraulic micrometer system for remote measurement of inside diameter of pipes and tubes and a method of such measurement	2690491	10-Dec-2009	2690491	Canada
			2309/MUMNP/2009	11-Dec-2009	<i>U Examination</i>	India
			12/668107	07-Jan-2010	8327556	USA
132	IGCAR	Process for Development of a High resistance Austenitic Stainless Steel	893/MUM/2008	21-Apr-2008	272698	India
		Development of a very high resistance to sensitisation in austenitic stainless steel through a special heat treatment resulting in grain boundary microstructural modification	8159613.2	03-Jul-2008	2112237	Europe (<i>validated in France, Germany & Sweden</i>)
133	IGCAR	An innovative 'cut-and-feed' operation for enhancing the performance of ion-exchange chromatographic separation.	8874274.7	10-May-2010	2274075	Europe (<i>validated in France</i>)
			12/747465	10-Jun-2010	7976708B2	USA
134	IGCAR	Wash Solution suitable for use in Continuous Reprocessing of Nuclear Fuel and a System thereof	2011-503550	21-Jul-2010	5643745	Japan
			8875988.1	16-Jun-2010	2223305	Europe (<i>validated in France</i>)
135	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
136	IGCAR	A method and apparatus for "block encryption" and "Synchronous Stream Cipher (SSC).	892/MUMNP/2011	03-May-2011	<i>NY Examined</i>	India
137	BARC	Colour indicator dosimeter for measurement of ionising radiation	12/250981	14-Oct-2008	7884339	USA
138	RRCAT	Generator of Collimated variable diameter hollow laser beam	2333/MUM/2008	03-Nov-2008	269505	India
139	TMC	A liquid based thin layer cytopreparation for liquid based cytology	2376/MUM/2008	10-Nov-2008	282981	India
140	IGCAR	Single Fibre grid with improved spatial resolution in distributed optical fibre sensor system	696/MUM/2009	24-Mar-2009	280741	India

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141	BARC	A polymer composite for extracting caesium from Nuclear waste and / or other inorganic wastes / solutions	13/382905	06-Jan-2012	8828532	USA
			9764906.5	24-Jan-2012	<i>U Examination</i>	Europe
142	BARC	Dialkyldiaza-tetraalkyl acetone diamide derivatives useful for the separation of trivalent actinide from lanthanide and process for the preparation thereof	2012-522336	27-Jan-2012	5497174	Japan
			13/388000	30-Jan-2012	8785691	USA
			ZL 200980160702.3	30-Jan-2012	201406100046200	China
			9804152.8	13-Feb-2012	2459522	Europe (validated in France)
143	RRCAT	Niobium based superconducting radiofrequency (SCRF) cavities comprising niobium components joined by laser welding	1177/MUMNP/2011	09-Jun-2011	<i>U Examination</i>	India
			13/377597	12-Dec-2011	9352416	USA
			9812469.6	29-Dec-2011	2496379	Europe (validated in France, Germany & Italy)
			2012-536015	23-Feb-2012	5632924	Japan
			15/013474	02-Feb-2016	<i>NY Examined</i>	USA
144	TIFR	Biological laser plasma X-ray point source	1421/MUMNP/2012	07-Jun-2012	<i>NY Examined</i>	India
145	IGCAR	Improved path length fibre optic probe for on-line and off-line spectrophotometric assay	2801/MUM/2009	03-Dec-2009	<i>U Examination</i>	India
146	BRNS	Fire Retardant Intumescent High Density Rigid Polyurethane Foam for Specialty Applications	76/KOL/2010	28-Jan-2010	277138	India
147	BARC	A Flexible Magnetic Membrane based Actuation System and Devices Involving the same	13/582084	31-Aug-2012	9579434	USA
			2089/MUMNP/2012	13-Sep-2012	***	India
			10745016.5	28-Sep-2012	2542271	Europe (validated in France & Germany)
148	IREL	An improved process for production of high grade synthetic rutile from titaniferrous ores	782/CHE/2010	24-Mar-2010	289211	India
149	TIFR	An optical source, its method of preparation and its application thereof	1182/MUM/2010	09-Apr-2010	285356	India
150	BARC	A Finishing Device	1541/DEL/2010	01-Jul-2010	<i>NY Examined</i>	India
151	BRNS	A single layer irradiated functional clay-polymer nanocomposite film and its method of preparation	2325/MUM/2010	18-Aug-2010	286015	India
152	NFC	A TBP nitrate solvent extraction process for producing high purity nuclear grade rare earth metal oxide	13/877184	01-Apr-2013	9174855	USA
153	BARC	Micromachined metal diaphragm based Fabry-Perot fibre optics sensor system and data processing involving the same	1321/MUMNP/2013	08-Jul-2013	<i>NY Examined</i>	India
154	IREL	An improved process for production of high pure submicron yttria stabilized zirconia powder from zircon	3592/MUM/2010	31-Dec-2010	286134	India
155	BARC	A booster device for handling high volumetric fluid at low pressure	1206/MUM/2011	12-Apr-2011	<i>U Examination</i>	India

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S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Application
156	TIFR	Novel plasmodium protein as malarial vaccine and drug target	1773/MUM/2011	17-Jun-2011	<i>U Examination</i>	India
157	BRNS	Improved process for the electrochemical synthesis of Palladium nanoparticles in ionic liquid as an electrolyte	1978/MUM/2011	08-Jul-2011	280179	India
158	BARC	Conformal hydrodynamic nano-polishing machine and process	1929/MUM/2012	04-Jul-2012	<i>NY Examined</i>	India
159	IREL	A process for producing ultrapure titanium dioxide from titan ferrous ore and slag sample	3704/MUM/2011	29-Dec-2011	277309	India
160	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>U Examination</i>	Canada
161	BARC	Design of algorithm and method of development of 6-axis parallel kinematic manipulator	1146/MUM/2012	09-Apr-2012	<i>NY Examined</i>	India
162	BARC	Process for production of Biofungicides, such as <i>Trichoderma Sp.</i> Using Tamarind Seeds	1236/MUM/2012	09-Apr-2012	<i>U Examination</i>	India
163	IGCAR	A novel method of Synthesis of Rhodium Metal Foam using room temperature ionic liquids	2271/MUM/2012	08-Aug-2012	279100	India
164	IGCAR	A method of preparation of Potassium Fluoroborate (KBF ₄)	2270/MUM/2012	08-Aug-2012	<i>U Examination</i>	India
165	BARC	A storage stable microbial decontaminated Litchi (<i>Litchi Chinensis</i>) with extended shelf life retaining pericarp colour and a process thereof	2484/MUM/2012	27-Aug-2012	<i>NY Examined</i>	India
166	BRNS	Innovative, inexpensive and viable method for the isolation of novel antioxidant flavonoids from the weed, <i>Coronopus Didymus</i>	3135/MUM/2012	29-Oct-2012	<i>NY Examined</i>	India
167	IGCAR	Apparatus and method for authenticating hard copy documents with images	2/MUM/2013	01-Jan-2013	<i>NY Examined</i>	India
168	BARC	A dual purpose atomic device for realising atomic frequency standard and magnetic field measurement	151/MUM/2013	17-Jan-2013	<i>NY Examined</i>	India
			13/924580	23-Jun-2013	9097750	USA
169	BARC	System and Method for nano-finishing of a work peice	380/DEL/2013	08-Feb-2013	<i>NY Examined</i>	India
170	BARC	A method for large-scale synthesis of optically stimulated luminescence grade polycrystalline ceramic material	252/MUM/2013	29-Jan-2013	<i>NY Examined</i>	India
			13/925809	24-Jun-2013	9523033	USA
171	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>U Examination</i>	India
172	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>NY Examined</i>	India
173	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>NY Examined</i>	India
174	BARC	A method for synthesis of resol beads with good control over their size	3986/MUM/2013	20-Dec-2013	<i>NY Examined</i>	India
175	BARC	Thermal Plasma process for 'inflight' Dissociation of Zircon Mineral	616/MUM/2013	01-Mar-2013	<i>U Examination</i>	India
176	IREL	A device used for electrostatic separation of minerals based on their electrical resistivity	1005/MUM/2014	25-Mar-2014	<i>NY Examined</i>	India
			2014203144	03-Jun-2014	<i>NY Examined</i>	Australia
177	IREL	An improved electrostatic plate separator for mineral separation based on the difference in electrical resistivity and size of minerals	1006/MUM/2014	25-Mar-2014	<i>NY Examined</i>	India
			2014203014	03-Jun-2014	<i>NY Examined</i>	Australia

S. No.	Unit	Title of the Invention	Application No.	Date of Filing	Patent No.	Type of Application
178	BARC	Compact Pulse Transformer with Transmission Line Embodiment	1295/MUM/2014	07-Apr-2014	NY Examined	India
			15/301802	04-Oct-2016	NY Examined	USA
			14888741.7	04-Oct-2016	NY Examined	Europe
179	BARC	Charged thin film composite nanofiltration membranes and their use for water purification and effluent management	1902/MUM/2014	10-Jun-2014	NY Examined	India
180	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	NY Examined	India
181	IGCAR	High Density Self Compacting Concrete and the method of preparing the same	2046/MUM/2014	25-Jun-2014	NY Examined	India
182	IREL	A method and equipment for separating non-conducting and non-magnetic minerals	2600/MUM/2014	12-Aug-2014	NY Examined	India
			2014253491	22-Oct-2014	NY Examined	Australia
			2014/08875	03-Dec-2014	2014/08875	South Africa
183	IGCAR	An innovative Auto cut system for ¹⁰ B Isotope of Boron enrichment using continuous Ion Exchange Chromatography	14/462975	19-Aug-2014	U Examination	USA
184	RRCAT	A method and device for tuning SCRF Cavity	15/022358	16-Mar-2016	NY Examined	USA
			2016-528072	06-May-2016	NY Allotted	Japan
			15712694.7	05-May-2016	NY Examined	Europe
			201627027768	14-Aug-2016	NY Examined	India
185	IREL	A process for production of pure Zirconium oxide from Zircon	1972/MUM/2015	19-May-2015	NY Examined	India
186	BARC	Nanofiltration membranes with surface negative charge for fractional separation of mono and multivalent ionic species	2095/MUM/2015	29-May-2015	NY Examined	India
187	TIFR	A decentralized information flow security model for multilevel security and privacy domains	14/733285	08-Jun-2015	9507929	USA
188	BARC	Energy Harvest System	1805/MUM/2015	06-May-2015	NY Examined	India
189	BRNS	A micro-trench based biochip device for screening of infectious diseases using Gold nanoparticles / nano coating	3620/MUM/2015	23-Sep-2015	NY Examined	India
190	BARC	Suppression of condensation induced water hammer by Al ₂ O ₃ nanoparticles suspended in water	PCT/IN2015/000413	09-Nov-2015	U Examination	PCT
191	RRCAT	Metal complex of chlorophyll derivative for magnetic resonance imaging and photodynamic therapy	4912/MUM/2015	29-Dec-2015	NY Examined	India
192	BARC	A System, a Device and a Method for Passive Decay Heat Transport	16704275.3	15-Mar-2017	NY Examined	Europe
			15/517077	05-Apr-2017	NY Examined	USA
			2017-521143	13-Apr-2017	NY Examined	Japan
193	TIFR	Synthesis of Fibrous Nano-Silica Spheres with controlled Particle Size, Fibre Density, and Various Textural Properties	201621004089	04-Feb-2016	NY Examined	India
			PCT/IB2016/051870	01-Apr-2016	U Examination	PCT
194	BRNS	A System and Method for Micro-Drilling with Microwaves through Metallic Concentrator	201621004759	10-Feb-2016	NY Examined	India
195	BRNS	Mechanical Grippers for handling Plurality of Micro-Components	201641005129	15-Feb-2016	NY Examined	India
196	BARC	A Method for preparing Chlorine-dioxide releasing polymer	201621010449	28-Mar-2016	NY Examined	India

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197	BARC	A Method of adjuvant treatment with Chlorophyllin containing therapeutic preparation including for Radioprotection of normal tissues during radiation therapy and kit thereof	15/094679	08-Apr-2016	<i>U Examination</i>	USA
198	BARC	System comprising Sun Ray Collimating Central Mirror and Heliostat to increase efficiency	PCT/IB2016/052056	12-Apr-2016	<i>U Examination</i>	PCT
199	RRCAT	High Voltage DC Power Supply with full range 24 pulsed input and ripple free output for RF Amplifiers	201621014164	22-Apr-2016	<i>NY Examined</i>	India
			15/226620	02-Aug-2016	<i>NY Examined</i>	USA
			16182878.5	04-Aug-2016	<i>NY Examined</i>	Europe
200	BARC	A Method for making single integrated cut-through artistic design on metallic foil	201621014814	28-Apr-2016	<i>NY Examined</i>	India
201	IREL	A process for the Production of Thorium Phosphate	2937621	02-Aug-2016	<i>NY Examined</i>	Canada
		A process for the Production of Thorium Phosphate from Thorium Oxalate and recovery of Oxalic Acid	2016210678	03-Aug-2016	<i>NY Examined</i>	Australia
202	RRCAT	Optical Rare-Earth doped fibre long period grating based ionizing radiation dose Sensor device	15/234064	11-Aug-2016	<i>NY Examined</i>	USA
203	BARC	Method for recovering gold using hollow-fibre membranes and dispersion based back extraction	P200801301	25-Apr-2008	2327202	Spain
204	BRNS	A process for depositing hard, hydrophobic, mechanically, thermally and chemically stable polymer films on bell metal	1313/KOL/2010	19-Nov-2010	268130	India
205	BRNS	A novel method of depositing corrosion resistant metal nitride hard coating with nano particle strengthened nickel-based composite coatings as interlayer on steel substrates	359/DEL/2011	14-Feb-2011	290986	India
206	BRNS	Protein Biomarkers for Falciparum and Vivax Malaria	2195/MUM/2012	31-Jul-2012	<i>NY Examined</i>	India
207	BRNS	Ceramic Filler, Method of preparing the Ceramic Filler and Applications as Resonator and Laminate thereof	14/228342	28-Mar-2014	9505902	USA
208	IREL	Solvent Extraction process for Rare Earths Separation through Partial Reflux of Rare Earths in Solvent based on Separation Factor	201621039660	21-Nov-2016	<i>NY Examined</i>	India
		Process of Solvent Extraction for Separation of Rare Earth Elements (REEs) through Partial Reflux of Rare Earths in Solvent based on Separation Factor	15/649902	14-Jul-2017	<i>NY Examined</i>	USA
209	BARC	A pH Measurement System for Slurries in Batch Application	201721004748	09-Feb-17	<i>NY Examined</i>	India
210	BRNS	A process and System for Manufacturing of Formed Sheets and / or Components thereof with Offset Contours	201721006539	23-Feb-17	<i>NY Examined</i>	India
211	BARC	Air Plasma Torch	201721012999	11-Apr-17	<i>NY Examined</i>	India
212	BARC	A Process for making Carbon Nanotube Incorporated Ballistic Resistant Armour Panels	201721015925	05-May-17	<i>NY Examined</i>	India
213	BRNS	Process for Preparing Cucurbituril in High Yield	4510/MUM/2015	01-Dec-15	<i>NY Examined</i>	India
214	BARC	A process for the removal of ⁹⁹ Tc from liquid intermediate level waste of spent fuel reprocessing	PCT/IN2017/050170	09-May-17	<i>NY Examined</i>	PCT

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215	BARC	A Coupling Device for joining Solid / Hollow Shafts	201721019536	03-Jun-17	<i>NY Examined</i>	India
216	IPR	An improved Method of Manufacturing Actively Cooled Accelerator Grid with full penetration Weld Configuration	201721023589	05-Jul-17	<i>NY Examined</i>	India
			17188542.9	30-Aug-17	<i>NY Examined</i>	Europe
		Method of Manufacturing Actively Cooled Accelerator Grid with Full Penetration Weld Configuration	15/709706	20-Sep-17	<i>NY Examined</i>	USA
217	AMD	A Filter with Developed Sorbent Composite Material for removing Toxic Metal Contaminants for Aqueous Systems	201721029532	21-Aug-17	<i>NY Examined</i>	India
218	SINP	A Method of Fabricating Metal Nanoparticle embedded MOS capacitor and a Metal Nanoparticle embedded MOS capacitor thereof for Non-Volatile Memory Applications	201831001324	11-Jan-2018	<i>NY Examined</i>	India