

|                |             |  |  |  |  |  |
|----------------|-------------|--|--|--|--|--|
| <b>Legends</b> | Granted IPR |  |  |  |  |  |
|                | Applied IPR |  |  |  |  |  |

**Total IPR filed till date**

**1995**

| S.No. | Inventors                    | Title  | IPA          | Date       | Grant  | Date       |
|-------|------------------------------|--|--------------|------------|--------|------------|
| 1     | Prof. P K Bhattacharya (ChE) | Process for the Recovery of Inorganic Sodium Compounds from Kraft Black Liquor | 814/DEL/1995 | 03.05.1995 | 189310 | 05.05.2005 |

**1996**

| S.No. | Inventors   | Title   | IPA           | Date       | Grant  | Date       |
|-------|---|---|---------------|------------|--------|------------|
| 1     | Dr. Sudipta Mukherjee (ME), Anupam Nagory (Student, ME) | A Novel Attachment for Affixing to Luggage Articles | 1321/DEL/1996 | 12.08.1996 | 192495 | 28.10.2005 |
| 2     | Prof. Kunal Ghosh (AE)                                  | A Device for Extracting Power from to-and-fro Wind  | 2673/DEL/1996 | 02.12.1996 | 212643 | 10.12.2007 |

**1997**

| S.No. | Inventors                      | Title                            | IPA          | Date       | Grant  | Date       |
|-------|--------------------------------|----------------------------------|--------------|------------|--------|------------|
| 1     | Dr. D Manjunath, Jayesh V Shah | Split-table Atm Multicast Switch | 983/DEL/1997 | 17.04.1997 | 233357 | 29.03.2009 |

**1998**

| S.No. | Inventors | Title | IPA | Date | Grant | Date |
|-------|-----------|-------|-----|------|-------|------|
|       |           |       |     |      |       |      |

**1999**

|   |  |                           |               |            |        |            |
|---|--|---------------------------|---------------|------------|--------|------------|
| 1 | Prof. K. A. Padmanabhan, Dr. Rajat Moona, Mr. Rohit Toshniwal, Mr. Bipul Parua | Portable Computer Prinnet | 1521/DEL/1999 | 06.12.1999 | 212999 | 20.12.2007 |
|---|--|---------------------------|---------------|------------|--------|------------|

**2000**

| S.No. | Inventors                                       | Title   | IPA          | Date       | Grant  | Date       |
|-------|---|---|--------------|------------|--------|------------|
| 1     | Prof. S. SundarManoharan (Chem), Manju Lata Rao | A Magnetic Polymer Composition and Process for the Preparation of the Same                            | 858/DEL/2000 | 22.09.2000 | 216744 | 24.03.2008 |
| 2     | Prof. S. Sundar Manoharan (Chem)                | Magnetic Cro2 &#8211; Polymer Composite Blends  | 933/DEL/2000 | 22.09.2000 | 217159 | 27.03.2008 |
| 3     | Prof. S. Sundar Manoharan (Chem)                | A Magneto Conductive Polymer Compositon for Read and Write Head and a Process for Preparation Thereof | 859/DEL/2000 | 22.09.2000 | 216743 | 19.03.2008 |
| 4     | Prof. S. Sundar Manoharan, Chem                 | Magneto-resistive Polymer Composition   | 934/DEL/2000 | 13.10.2000 | 216966 | 20.03.2008 |

**2001**

| S.No. | Inventors | Title | IPA | Date | Grant | Date |
|-------|-----------|-------|-----|------|-------|------|
|-------|-----------|-------|-----|------|-------|------|

**Financial Year 2001-02**

|   |  |   |              |            |         |            |
|---|--|---|--------------|------------|---------|------------|
| 1 | Prof. S. Sundar Manoharan, Chem  | Magneto-resistive CrO2 Polymer Composite Blend  | 09/829,414   | 09.04.2001 | 6793841 | 21.09.2004 |
| 2 | Prof. S. Sundar Manoharan (Chem)   | A Magneto Conductive Polymer Compositon for Read and Write Head and a Process for Preparation Thereof | 09/829,410   | 09.04.2001 | 6627101 | 30.09.2003 |
| 3 | Prof. S. SundarManoharan, CheM, Ranjan Kumar Shahu, Manju Lata Rao, M. Qureshi, J.prasanna | Method for the Synthesis of Y- FE2O3  | 532/DEL/2001 | 27.04.2001 | 230364  | 26.02.2009 |

**2002**

| S.No. | Inventors | Title | IPA | Date | Grant | Date |
|-------|-----------|-------|-----|------|-------|------|
|       |           |       |     |      |       |      |

**2003**

| S.No. | Inventors | Title | IPA | Date | Grant | Date |
|-------|-----------|-------|-----|------|-------|------|
|-------|-----------|-------|-----|------|-------|------|

|                               |   |   |                |            |         |            |
|-------------------------------|---|---|----------------|------------|---------|------------|
| 1                             | Dr.K.Mahesh Sharma, Dr.Ajai Jain  | A System for Multilingual Machine Translation from English to Hindi and other Indian Languages using Pseudo-interlingua and Hybridized Approach | 59/DEL/2003    | 22.01.2003 | 199912  | 08.10.2007 |
| <b>Financial Year 2003-04</b> |   |   |                |            |         |            |
| 2                             | Prof. D P Rao, GAIL & IITK  | Fixed Bed Hypersorber and a Process for Fractionation of Fluid Mixtures using the Same  | 705/DEL/2003   | 19.05.2003 | 254118  | 20.09.2012 |
| 3                             | Dr. Manindra Agrawal (CSE), Mr. Neeraj Kayal (Student, CSE), Dr. Nitin Saxena (CSE)               | Polynomial Time Deterministic Method for Testing Primality of Numbers   | US- 10/631,346 | 31.07.2003 | 7346637 | 18.03.2008 |
|                               |   |   |                |            |         |            |
| <b>2004</b>                   |   |   |                |            |         |            |
| S.No.                         | Inventors   | Title   | IPA            | Date       | Grant   | Date       |
| 1                             | Prof. G C Ray and Dr. Goutam Das  | Anesthesia Monitor  | 167/DEL/2004   | 05.02.2004 |         |            |
| 2                             | Dr. Abhijit Kushari (AE) Mr. Mahindra Singh Rawat (AE)  | A Twin- Fluid Internally Mixed Swirl Atomizer   | 180/DEL/2004   | 09.02.2004 | 262457  | 22.08.2014 |
| 3                             | Prof. S G Dhande  | Method and System for Automated Punching of Wooden Jacquard Cards   | 375/DEL/2004   | 05.03.2004 |         |            |
| <b>Financial Year 2004-05</b> |   |   |                |            |         |            |
| 4                             | Prof. D.P.Rao ChE   | A Novel Rotating Packed Bed (RPB) Device for Distillation Process   | 358/DEL/2004   | 03.04.2004 | 226874  | 29.12.2008 |
| 5                             | Prof. Y N Singh (EE) and Mr. Manoj Kumar Panda  | Architecture of a Rearrangeably Nonblocking All-optical Cross Connect & the Associated Algorithm Thereof  | 690/DEL/2004   | 08.04.2004 |         |            |
| 6                             | Dr. D.P. Mishra, AE   | An Improved Tandoor   | 1292/DEL/2004  | 14.07.2004 | 251576  | 24.03.2012 |
| 7                             | Prof. Baquer Mazhari (EE), Mr. Himanshu Joshi and Mr. Shashi Bhushan Singh                        | Polysilicon Amoled Self- Biased Cascade Pixel Circuit with Highly Linear Transfer Characteristics   | 1774/DEL/2004  | 20.09.2004 | 274196  | 14.07.2016 |
| 8                             | Dr. Deepak Gupta (MSE), Dr. SSK Iyer, Dr. Monica Katiyar and Mr. Dipti Gupta                      | Organic Thin Film Transistors with Vertical Source and Drain Separation   | 1775/DEL/2004  | 20.09.2004 | 275162  | 24.08.2016 |
| 9                             | Dr. Y N Mohapatra, Mr. Samrendra P Singh, Dr. S Sundar Manoharan, Mr. M Qureshi                   | White Light Emitting Zinc Based Oled  | 1776/DEL/2004  | 20.09.2004 |         |            |
| 10                            | Prof. Animesh Biswas, EE, Mr. Kumar Vaibhav Srivastava, Mr. Vishwa V. Mishra                      | Dielectric Resonator  | 1972/DEL/2004  | 11.10.2004 | 316377  | 18.07.2019 |
| 11                            | Dr.Kamal K. Kar, Mr.Prashant Kumar, Mr.Tinku K. Sah, Mr. S.D. Sharma                              | A Method of Preparing Fiber Reinforced Plastic Articles using Rubber Pressure Moulding Technique  | 2078/DEL/2004  | 25.10.2004 | 250274  | 23.02.2012 |
| 12                            | Prof. Anil Kumar (CHE), Mr. Manohar Lal Malhotra & Mr. Ashish Bhowmick, Jubilant Organosys, Noida | Process for Nitration of Macromolecules   | 2350/DEL/2004  | 23.11.2004 | 239584  | 25.03.2010 |
| 13                            | Dr.K.Mahesh Sharma, Dr.Ajai Jain  | A System for Multilingual Machine Translation from English to Hindi and other Indian Languages using Pseudo-interlingua and Hybridized Approach | 2441/DEL/2004  | 07.12.2004 |         |            |
| 14                            | Dr.Kamal K. Kar, Mr.Pradip Paik   | A Process for Preparation of Micron Sized High Molecular Weight Polymer   | 2503/DEL/2004  | 16.12.2004 | 268253  | 31.08.2015 |
|                               |   |   |                |            |         |            |
| <b>2005</b>                   |   |   |                |            |         |            |
| S.No.                         | Inventors   | Title   | IPA            | Date       | Grant   | Date       |
| 1                             | Dr.Kunal Ghosh  | A Wind Turbine Device   | 570/DEL/2005   | 16.03.2005 | 265417  | 24.02.2015 |
| <b>Financial Year 2005-06</b> |   |   |                |            |         |            |
| 2                             | Dr. Monica Katiyar , Ms. Asha Sharma, Dr. Deepak Gupta, Dr. ShuSeki                               | An Improved Organic Light Emitting Doide, and Improved Light Emitting Doide for Tuning the White Emission and Process for Fabrication Threof    | 1532/DEL/2005  | 14.06.2005 | 306138  | 23.01.2019 |

|    |  |  |               |            |        |            |
|----|--|--|---------------|------------|--------|------------|
| 3  | Dr. Kamal K Kar (ME), Prof. Prashant Kumar (ME), Prof. N.G. R. Iyengar (AE), Mr. Prahbat Kumar (MME) | Carbon Nanotube and Nanoparticle Coated Carbon Fiber Reinforced-polymer Hybrid Nanocomposite with Improved Thermomechanical Properties and a Process for Preparation Thereof | 1813/DEL/2005 | 14.07.2005 | 258293 | 27.12.2013 |
| 4  | Dr. R. Balasubramaniam, MME and Mr. Gadadhar Sahoo, PhD Scholar                                      | Corrosion Resistant Phosphoric Iron for Concrete Embedment and Reinforcement   | 1823/DEL/2005 | 14.07.2005 | 253452 | 23.07.2012 |
| 5  | Dr. V.K. Jain (ME), Dr. Raghu-Ram, SRE (ME), MR. D.K. Singh, PhD Scholar (ME)                        | A Method for Magnetic Abrasive Finishing using a Pulsating Flexible Magnetic Abrasive Brush and a Magnetic Abrasive Finishing Device   | 1990/DEL/2005 | 27.07.2005 | 255664 | 13.03.2013 |
| 6  | Dr. V. K. Jain (ME) and Mr. S. Jha, PhD scholar (ME)   | An Abrasive Flow Finishing Device, an Abrasive Flow Finishing Process and Magnetorheological Polishing Fluid   | 1991/DEL/2005 | 27.07.2005 | 255847 | 26.03.2013 |
| 7  | Dr. S Sundar Kumar Iyer (EE), Dr. Baquer Mazhari (EE), Mr. Chander Pal, Stud (M.Tech)                | A Method of Varying Threshold Voltage in Mosfets   | 2056/DEL/2005 | 02.08.2005 | 258953 | 18.02.2014 |
| 8  | Dr. S Sundar Kumar Iyer, EE  | A Contact-less Smart Card Reader System and a Method for Contact-less Powertransfer in Said Reader System  | 2190/DEL/2005 | 17.08.2005 | 254588 | 22.11.2012 |
| 9  | Dr. Y. N. Singh & Mr. Manoj Panda (EE)   | An Architecture for Rearrangeably Non Blocking All Optical Cross Connect Wavelength Division Multiplexing Switching System   | 2513/DEL/2005 | 16.09.2005 |        |            |
| 10 | Dr. Ashutosh Sharma, Manoj Gonuguntala, PhD student (ChE), & S Subramanian, M.Tech (ChE)             | A Method and Apparatus for the Formation of Patterns on Surfaces and an Assembly and Alignment of the Structure Thereof  | 2787/DEL/2005 | 19.10.2005 | 258688 | 31.01.2014 |
| 11 | Dr. Kamal K Kar (ME), Mr. Prahbat K. Agnihotri (MME), Sanjay Dasgupta, ISRO                          | A Carbon Nanotubes Coated Long Fiber and a Process for Preparation Thereof   | 3061/DEL/2005 | 16.11.2005 | 273503 | 13.06.2016 |
| 12 | Dr. Kamal K Kar (ME), Mr. Prahbat K. Agnihotri (MME), Sanjay Dasgupta, ISRO                          | A Nickel Coated Carbon Fiber Reinforced Polymer Composites and a Method for the Preparation Thereof  | 3062/DEL/2005 | 16.11.2005 | 249343 | 18.10.2011 |
| 13 | Dr. Kamal K Kar (ME), Sanjay Dasgupta, Mr. Prahbat K. Agnihotri (MME)                                | A Method for Preparation of Nanoparticles Coated Carbon Fiber  | 3063/DEL/2005 | 16.11.2005 | 250274 | 21.12.2011 |
| 14 | Dr. K. K. Kar, ME & Mr. Ahankari Sandeep Suresh Rao, PhD Student, MME                                | A Functionally Graded Elastomer Nanocomposites (FGENCS) and a Process for Preparation Thereof  | 3125/DEL/2005 | 23.11.2005 | 294568 | 20.03.2018 |
| 15 | Dr. Kamal K. Kar & Mr. Pradip Paik   | A Process for Preparation of Nanoparticles of Higher Molecular Weight of Polyethylene Polypropylene and Polystyrene  | 3161/DEL/2005 | 25.11.2005 | 260562 | 08.05.2014 |
| 16 | Dr. D.P. Mishra, AE & Mr. S.C. Nayak   | Recuperative Liquefied Petroleum Gas (LPG) Vortex Burner System  | 3197/DEL/2005 | 29.11.2005 | 269392 | 19-10-15   |
|    |  |  |               |            |        |            |
|    |  |  |               |            |        |            |

**2006**

| S.No. | Inventors  | Title  | IPA          | Date       | Grant  | Date       |
|-------|--|--|--------------|------------|--------|------------|
| 1     | Dr. Avinash Kumar Agarwal, Mr. Deepak Agarwal, M.Tech student (CE)       | Design of an Integrated System for using Straight Vegetable Oils as Fuels for Diesel Engines | 587/DEL/2006 | 07.03.2006 | 269719 | 11.03.2015 |
| 2     | Dr. S. Sundar Kumar Iyer (EE) & Mr. Arun Tej Mallajosyulla, PhD Scholar, | A Solar Cell with Improved Light Absorption Capacity   | 933/DEL/2006 | 31.03.2006 |        |            |

**Financial Year 2006-07**

|   |  |   |               |            |        |            |
|---|--|---|---------------|------------|--------|------------|
| 3 | Dr. Anish Upadhyaya (MME) & Mr. G. Swaminathan, Sr. DGM, BHEL, Hybd                                | Tubular Microwave Sintering Furnace   | 1147/DEL/2006 | 09.05.2006 | 304557 | 17.12.2018 |
| 4 | Dr. A. Upadhyaya, Dr. Balasubramaniam (MME) & Mr. J. Shankar, Former M.Tech. student               | Rare Earth Oxide Dispersed Sintered Stainless Steels (Reo-Steels)                           | 1224/DEL/2006 | 18.05.2006 | 255842 | 26.03.2013 |
| 5 | Prof. Ashutosh Sharma, R. Mukharjee, PhD stud't, D. Faruqi (M.Tech), Dual & Ganesh Patil (M. Tech) | A Process for Generating Micro and Sub Macro Patterns on the Surfaces or Layers of Polymers | 1519/DEL/2006 | 28.06.2006 | 263318 | 20.11.2014 |

|    |   |  |               |            |        |            |
|----|---|--|---------------|------------|--------|------------|
| 6  | Dr. Raghbir Singh Anand SRE (EE), Dr. Anjali Giri Sr. Project Asso. (EE) & Mr. Ramesh Prasad, Project Technician (EE) | An Organic/polymer Low Information Content Displays                                  | 1525/DEL/2006 | 28.06.2006 | 290069 | 29.11.2017 |
| 7  | Prof. D. P. Rao, Mr. S. V. Sivakumar & Mr. Praveen Kr (ChE)   | New Duplex Adsorption Process for Fractionation of Gas Mixture                       | 1567/DEL/2006 | 04.07.2006 | 261050 | 30.05.2014 |
| 8  | Dr. AR. Harish, EE & Mr. Ravi Kr. Joshi Ph.D. student (EE)  | Wide Band Loop Antenna   | 1594/DEL/2006 | 07.07.2006 | 312928 | 21.05.2019 |
| 9  | Dr. Ajit K. Chaturvedi, EE & Mr. Ketan Rajawat student (EE)   | A Low Complexity Symbol Timing Estimator for MIMO Modem using Two Samples per Symbol | 1857/DEL/2006 | 18.08.2006 | 272223 | 22.03.2016 |
| 10 | Dr. Avinash Kumar Agarwal, ME   | Conversion of Vegetable Oils to Biodiesel  | 2114/DEL/2006 | 26.09.2006 | 267538 | 22.07.2015 |
|    |   |  |               |            |        |            |
|    |   |  |               |            |        |            |

**2007**

| S.No. | Inventors  | Title   | IPA          | Date       | Grant  | Date       |
|-------|--|---|--------------|------------|--------|------------|
| 1     | Dr. K. Subramaniam, BSBE & Bindhay Chal Yadav, PhD Scholar (BSBE)  | Conferring Plants with Nematode Resistance  | 171/DEL/2007 | 29.01.2007 |        |            |
| 2     | Dr. S.P. Das & Dr. K.S. Venkatesh (EE), Mr. Pankaj Agarwal & Rajendu Choubisa (B.Tech EE class of 2004)  | A Power Supply System for Electronic Devices  | 258/DEL/2007 | 07.02.2007 | 319334 | 29.08.2019 |
| 3     | Dr. Anjan Kumar Gupta Dept. of Physics Mr. Reetesh Kr. Singh & Mr. Rajiv Shankar Sinha, students (Phy)   | Two Dimensional Nano Positioner   | 323/DEL/2007 | 15.02.2007 | 297474 | 07.06.2018 |
| 4     | Dr. Partha Sarathi Sensharma, EE & Rakesh Kr. Sinha, M.Tech student (EE)   | Improved Single Phase Phase-locked Loop   | 349/DEL/2007 | 20.02.2007 | 283338 | 16.05.2017 |
| 5     | Dr. Ashutosh Sharma, ChE, Dr. Animangsu Ghatak, ChE, Apurba Lal Das, Apurba Lal Das, M. Tech. Student (ChE), Vivek KatiyerM. Tech. Student (ChE), Rabibrata Mukherjee, Ph. D student (ChE) & Manish Kulkarni, Post Doctoral Fellow (ChE) | A Process for Generating Miniaturised Replicas of a 2D or 3D Pattern or an Object   | 522/DEL/2007 | 09.03.2007 | 271276 | 12.02.2016 |
| 6     | Dr. Kamal K Kar (ME), Dr. J. Ram Kumar (ME) & Mr. Piyushkumar Bipinchandra Tailor (M.Tech Student-ME)  | A Novel Viscoelastic Media Used for a Nano-finishing of Materials Through Abrasive Flow Machining Process and a Method of Manufacture Thereof                           | 591/DEL/2007 | 19.03.2007 | 268746 | 15.09.2015 |
| 7     | Dr. Prashant Kumar, ME & Dr. J. Ram Kumar, ME  | Butt Joint using Reinforced Adhesives   | 679/DEL/2007 | 28.03.2007 |        |            |
| 8     | Dr. KK Kar, ME & Mr. Ahankari Sandeep Suresh Rao, PhD student (MSP)  | Functionally Graded Magnetic Materials and a Method for Preparation of the Same   | 680/DEL/2007 | 28.03.2007 | 264621 | 12.01.2015 |
| 9     | Dr. Kamal K. Kar, ME & Mr. Ahankari Sandeep Suresh Rao, PhD student Materials Science Programme)   | A Novel Functionally Graded Polymer(s)/polymeric Nanocomposite(s) [FGP(s)]/FGPNC(s) having Glass Transition Temperature Variation and a Process for Preparation Thereof | 681/DEL/2007 | 28.03.2007 | 274813 | 10.08.2016 |
| 10    | Dr. KK Kar, ME & Mr. Ariful Rahaman, PhD Scholar (MSP)   | Carbon Nanotube(s) Coated Cutting Tool(s) and a Method of Manufacture Thereof   | 735/DEL/2007 | 30.03.2007 | 257845 | 12.11.2013 |
| 11    | Dr. Kamal K. Kar, ME & Mr. Ahankari Sandeep Suresh Rao, PhD student Materials Science Programme)   | Functionally Graded Polymer Nanocomposites/composites having Crosslinking Density Variation and Their Manufacture   | 736/DEL/2007 | 30.03.2007 | 275001 | 18.08.2016 |
| 12    | Dr. Kamal K. Kar, ME, Dr. Animesh Biswas, EE & Mr. Ahankari Sandeep Suresh Rao, PhD student Materials Science Programme)   | Functionally Graded Wide-band Polymeric Composites for Microwave Absorbers and Method of Manufacturing Same   | 737/DEL/2007 | 30.03.2007 | 255975 | 10.04.2013 |

**Financial Year 2007-08**

|    |   |  |              |            |        |            |
|----|---|--|--------------|------------|--------|------------|
| 13 | Dr. Ashish Garg, MME, Dr. H.C. Verma, Phy, Mr. Mukesh Roy, Ph. D. student (Phy), Mr. Prem Prakash, M.Tech Student (MME) | Novel Low Temperature Synthesis of Nd-doped Bismuth Titanate Nanoparticles | 804/DEL/2007 | 12.04.2007 | 268078 | 21.08.2015 |
|----|---|--|--------------|------------|--------|------------|

|    |  |  |               |            |        |            |
|----|--|--|---------------|------------|--------|------------|
| 14 | Dr. K. Subramaniam, BSBE & Bindhay Chal Yadav, PhD Scholar (BSBE)  | Pathogen Resistant Transgenic Plants, Associated Nucleic Acids and Techniques Involving the Same         | 11/783,916    | 13.04.2007 |        |            |
| 15 | Dr. Nishith Verma, ChE & Mr. Rupesh Verma, Graduate student  | Novel Liquid-solid Radially Cross-flow Multi-stage Fluidized Bed Contactor                               | 830/DEL/2007  | 16.04.2007 | 258376 | 03.01.2014 |
| 16 | Dr. J. Ram Kumar, ME & Sunil Jha Student (ME)  | Magnetic Float Levitative Finishing  | 883/DEL/2007  | 20.04.2007 | 284310 | 20.04.2017 |
| 17 | Dr. B.K. Mishra (MME), Dr. Sandeep Sangal (MME) & Mr. Debasis Chaira (PhD student, MME)  | Synthesis of Stable Nanocrystalline Iron Carbides by Reaction Milling in a Dual-drive Planetary Mill     | 1021/DEL/2007 | 10.05.2007 | 274931 | 10.01.2016 |
| 18 | Dr. V.K. Jain, ME, Dr. R.Shekhar, MME, Dr. D.S. Bilgi, Mrs. Anjali V. Kulkarni, SRE, ME & Mr. Aatish Chavan, M.Tech (ME)   | Process for Drilling Contoured Deep Hole in Super Alloys using Sted to Enhance Cooling in Turbine Blades | 1134/DEL/2007 | 29.05.2007 | 307582 | 19.02.2019 |
| 19 | Dr. S. Sundar Kumar Iyer, EE, Dr. Ramanathan Gurunath, Chemistry, Arun Tej M. PhD student, (EE), Basanta Kumar Rajbongshi, PhD student, (Chem), Gitalee Bhattacharjya, Graduated PhD student (Chem) & Vibhor Jain, Student MTech Dual (EE) | An Improved Organic Optoelectronic Device  | 1231/DEL/2007 | 07.06.2007 | 271903 | 03.09.2016 |
| 20 | Dr. Abhijit Kushari, AE, Sanjeev Kumar Gupta, Sr. Pro. Asso (AE), Dr. C. Venkatesan, AE & Dr. C.S. Upadhyay, AE  | Profile Measurement Machine  | 1656/DEL/2007 | 03.08.2007 |        |            |
| 21 | Dr. C. Venkatesan, AE, Dr. A. Kushari AE and Dr. C.S. Upadhyay, AE, Mr. Sanjeev Kr. Gupta, Sr. Pro. Asso, AE   | Piston Based Resistor  | 1886/DEL/2007 | 06.09.2007 | 306832 | 05.02.2019 |
| 22 | Dr. Dharendra S. Katti, BSBE, Amit Nandan, Undergraduate student, BSBE & Mr. Riju Mohan Singhal, Undergraduate student (ChE)   | Electrospinning Apparatus for Producing Nanofibers and Process Thereof                                   | 2112/DEL/2007 | 09.10.2007 |        |            |
| 23 | Dr. C. Venkatesan, AE, Dr. A. Kushari, AE, Dr. C.S. Upadhyay, AE & Mr. Sanjeev Kumar Gupta, Sr. Pro. Asso., AE   | Estimation of Inertia Tensor and Centre of Gravity of a Vehicle on the Three Axes Platform               | 2365/DEL/2007 | 13.11.2007 |        |            |
| 24 | Dr. Y.N. Singh, Dept. of EE, Rajiv Srivastava Research Scholar(EE), & Rajat Kumar Singh, Research Scholar(EE)  | WDM Optical Packet Switch Incorporating Fiber Bragg Gratings and Circulator                              | 2706/DEL/2007 | 26.12.2007 | 318571 | 21.08.2019 |
| 25 | Dr. Y.N. Singh, Dept. of EE, Rajiv Srivastava Research Scholar(EE), & Rajat Kumar Singh, Research Scholar(EE)  | All Optical Reflectors Based Wdm Optical Packet Switch   | 2707/DEL/2007 | 26.12.2007 |        |            |
| 26 | Mr. Ashish Kumar Agarwal, Anil Bawa, both M.Tech student (EE) & Dr. Baquer Mazhari, Dept. of EE  | A Dynamic Logic Family using only N or P-type Enhancement Mode-mosfet                                    | 2708/DEL/2007 | 26.12.2007 | 325232 | 18.11.2019 |

**2008**

| Sr. No. | Inventors   | Title  | IPA          | Date       | Grant  | Date       |
|---------|---|--|--------------|------------|--------|------------|
| 1       | Dr. Dharendra Katti, BSBE, Neha Arya, Ph.D. student (BSBE) & Syandan Chakraborty M.Tech. (BSBE)                             | A Process for Synthesis of Polymeric Micro/nano-particles for Drug (Bioactive Agent) Delivery Applications | 645/DEL/2008 | 14.03.2008 | 285405 | 19.07.2017 |
| 2       | Dr. Debabrata Goswami, Chemistry and students Sumit Ashtekar, M. Sc. (Integrated-Chemistry) & Amit Nag, Graduate, Chemistry | Optical Enhancement of Two-photon Absorption Process   | 704/DEL/2008 | 19.03.2008 | 294338 | 15.03.2018 |
| 3       | Dr. Ashish Garg, MME, Dr. B.K. Mishra, MME & Tapendu Mandal, PhD student (MME)  | Process for Synthesis of Nanocrystalline Hydroxyapatite  | 828/DEL/2008 | 28.03.2008 | 310802 | 03.04.2019 |

**Financial Year 2008-09**

|   |  |                              |              |            |  |  |
|---|--|------------------------------|--------------|------------|--|--|
| 4 | Dr. S. Qureshi, EE, Mr. Mayank Raj & Gopesh Mittal, both students, B. Tech, EE | Remote Service Machine (RSM) | 932/DEL/2008 | 09.04.2008 |  |  |
|---|--|------------------------------|--------------|------------|--|--|

| 5                             | Dr. Rajat Moona, CSE, and Abhishek Gaurav, Ankit Sharma & Vikas Gelara, all B.Tech (CSE) student   | Using Personal Devices for Authentication and Service Access at Service Outlets  | 1018/DEL/2008 | 21.04.2008 |         |            |
|-------------------------------|--|--|---------------|------------|---------|------------|
| 6                             | Dr.Ashish Garg, MME, Dr.D.C. Agarwal,MSP, Ms.Soumya Kar, M. Tech, MME, Dr.Dhananjai Pandey, School of Materials Science & Technology, IT (BHU), Varanasi | BFPT Thin Films Hetrostructure and Process Thereof   | 1198/DEL/2008 | 14.05.2008 |         |            |
| 7                             | Dr. Nitin Kaistha (CHE), Mr. Davuluri Prahlada (PIC Hyderabad)   | A Method for Pipeline Transporting Hydrocarbon Fuels   | 1281/DEL/2008 | 27.05.2008 |         |            |
| 8                             | Dr. Rashmi Sanghi, FEAT Lab, Ms. Preeti Verma, Feat Lab  | A Method for Preparing Auto Capped Nano Particles Such as CDS in Continuous Flow Columns   | 1395/DEL/2008 | 12.06.2008 | 293606  | 28.02.2018 |
| 9                             | Dr. B. Basu, MME, Dr. Shantanu Bhattacharya, ME & Rajeev Kumar Singh (PhD scholar ME)  | A Method for Creation of 2 and 3-dimensional Micro Channels of Varied Dimensions using Replication and Molding Around a Wire     | 1455/DEL/2008 | 18.06.2008 | 295640  | 10.04.2018 |
| 10                            | Dr. S.S.K.Iyer, EE, Dr.S.Quersh, EE, Mr.Sajad A.Lone,Ph.D student (EE)   | An Improved Lateral Bipolar Junction Transistor (BJT) on Selective Buried Oxide (selbox) and a Method for Manufacturing the Same | 1478/DEL/2008 | 20.06.2008 | 300909  | 10.09.2018 |
| 11                            | Dr. J RamKumar, Dept of ME, Dr. Prashant Kumar, Dept of ME   | Fabrication of Jute Fiber Sandwich Composites  | 1688/DEL/2008 | 16.07.2008 | 306920  | 06.02.2019 |
| 12                            | Dr. Kamal K. Kar, ME, Sk Ariful Rahman & Mr. Niranjana Patra, both PhD students & Mr. Sanjay Dasgupta, Group Director, ISRO                              | Controlled Growth of Carbon Nanocones on Carbon Fiber(s) /fabric and Method of Synthesis Thereof                                 | 1900/DEL/2008 | 12.08.2008 | 319669  | 02.09.2019 |
| 13                            | Dr. Kamal K. Kar, ME & Sumit Pramanik, PhD student   | Spherical Crystalline Nano Hydroxyapatite and Method of Manufacture from Calcium Oxide   | 1901/DEL/2008 | 12.08.2008 | 290045  | 28.11.2017 |
| 14                            | Dr. Jamuna R. Subramaniam, Senior Research Scientist, BSBE & Upasna Arya, Graduate Student, BSBE   | A Composition & Mechanism to Extend Life Span of an Organism and Protection Against Neo Degenerative Diseases                    | 1971/DEL/2008 | 20.08.2008 | 281643  | 22.03.2017 |
| 15                            | Prof. K Muralidhar , ME & Mcgregor Robert, Switzerland, Szczerba Dominik, Poland, Szekeley Gabor, Switzerland  | Method, System and Device for Enhancing Flow Field Data  | 13/059,328    | 25.08.2008 | 8898022 | 25.11.2014 |
| 16                            | Dr. Kamal K. Kar, ME & S.K. Ariful Rahman, PhD student   | Method of Manufacturing of Carbon Nano Tube Coated Glass Fiber/ Fabric and its Hybric Nanocomposites                             | 1996/DEL/2008 | 22.08.2008 | 311758  | 29.04.2019 |
| 17                            | Dr. Sounak Kumar Choudhury, ME & Mr. Sourabh Kumar Saha, Student (ME)  | Modular Unit Attachment for Performing Dry and Near Dry Electric Discharge Machining (EDM)                                       | 2082/DEL/2008 | 04.09.2008 |         |            |
| 18                            | Dr. Deepak gupta, MME, Mr.K.N. Narayanan Unni, Team Leader (Samtel), SCDT, MS.Girija S.Samal, Samtel Employee (resigned), SCDT                           | A Blue Organic Light Emitting Diode and Method of Fabrication Thereof  | 2214/DEL/2008 | 22.09.2008 |         |            |
| 19                            | Dr. S. Sundar Manoharan, Dept. of Chem, Ms. Sonia Arora, Dept. of chemistry  | Method of Polymerization and the Polymers Formed Thereby   | 2308/DEL/2008 | 06.10.2008 |         |            |
| 20                            | Dr. Sunil Jha, Project Engineer, Dept. of ME, Dr.J.Ram Kumar Dept. of ME, Mr.Sandeep Nair, M.Tech (Student)  | A Device for Magnetic Abrasive Finishing of Multiple Workpieces and Magnetic Abrasive Finishing Process                          | 2309/DEL/2008 | 06.10.2008 | 288690  | 06.10.2017 |
| 21                            | Dr. Dharendra S. Katti, BSBE, Amit Nandan, Undergraduate student, BSBE & Mr. Riju Mohan Singhal, Undergraduate student (ChE)                             | Electrospinning Apparatus for Producing Nanofibers and Process Thereof   | 12/246,744    | 07.10.2008 |         |            |
| 22                            | Dr. Ashok Kumar, BSBE, Mr.Anuj Tripathi, Senior Project Associate, BSBE  | Polymer Matrix Scaffold and Process for Preparation Thereof  | 2851/DEL/2008 | 16.12.2008 | 276276  | 14-10-16   |
|                               |  |  |               |            |         |            |
| <b>2009</b>                   |  |  |               |            |         |            |
| <b>Financial Year 2009-10</b> |  |  |               |            |         |            |
| S.No.                         | Inventors  | Title  | IPA           | Date       | Grant   | Date       |

|   |  |   |               |            |        |            |
|---|--|---|---------------|------------|--------|------------|
| 1 | Dr. J. Ramkumar, ME, Prof. V. K. Jain, ME, Mr. M Ravi Sankar, Ph.D. Student, ME                                | Rotatory Abrasive Flow Finishing Process for Finishing and Texturing of Internal and External Surfaces of Hard and Composite Materials and an Apparatus Therefore | 811/DEL/2009  | 20.04.2009 |        |            |
| 2 | Dr. S. Sundar Manoharan (CHM), Dr. T. R. Muralidharan (Cardiologist, Sri Ramachandra Medical College, Chennai) | A Coronary Stent with Nano Coating of Drug Free Polymer and a Process for Preparation Thereof   | 1197/DEL/2009 | 11.06.2009 | 291502 | 08.01.2018 |
| 3 | Prof. Nishith Verma, ChE & Prof. Ashutosh Sharma, ChE  | Process for Synthesis of Sonicated Hierarchal Web of Carbon Micro-nano-fiber and Applications Thereof   | 1157/DEL/2009 | 05.06.2009 | 289550 | 14.11.2017 |
| 4 | Dr. Ashok Kumar, BSBE & Ms. Era Jain, PhD student (BSBE)   | Macroporous Polymeric Matrix and Process of Preparation Thereof   | 2275/DEL/2009 | 05.11.2009 | 271673 | 29-02-16   |
| 5 | Dr.D.P. Mishra, AE, Mr.S.Y.Jeurkar, Doctoral student, AE   | A Heat Recurperating Microcombustor   | 2257/DEL/2009 | 03.11.2009 |        |            |
| 6 | Dr. D P Mishra, AE   | Low Emission and Energy Efficient CNG Burner  | 2347/DEL/2009 | 13.11.2009 |        |            |
| 7 | Dr. K S Venkatesh, EE, Mr. Durga Prasad Kethineedi, M.Tech Student, EE   | A Process for Compression of Surveillance Video Data for Long Storage in Smaller Storage Medium   | 2438/DEL/2009 | 26.11.2009 | 303133 | 15.11.2018 |
|   |  |   |               |            |        |            |
|   |  |   |               |            |        |            |

**2010**

| S.No. | Inventors  | Title  | IPA          | Date       | Grant  | Date       |
|-------|--|--|--------------|------------|--------|------------|
| 1     | Dr. Siddhartha Panda, ChE, Mr. Abhishek Agarwal, M.Tech student, ChE | A Lithography Based Two Stage Reservoir in an Electrolyte Insulator Semiconductor Device | 219/DEL/2010 | 01.02.2010 | 331541 | 07.02.2020 |
| 2     | Prof. Anil Kumar, ChE, Dr. Nitin Kaishtha, ChE                       | Superior and Cost Effective Grease Feedstock from Polyethylene Mixed Waste               | 614/DEL/2010 | 16.03.2010 | 300779 | 06.09.2018 |

**Financial Year 2010-11**

|    |  |   |               |            |        |            |
|----|--|---|---------------|------------|--------|------------|
| 3  | Prof. B. K. Mishra, MME, Prof. Sandeep Sangal, MME, Debasis Chaira, PhD, MME, Prem Prakash, Research Associate, MME.   | Nanocrystalline Titanium Carbide and Process of Preparation   | 892/DEL/2010  | 13.04.2010 |        |            |
| 4  | Dr. K. S. Venkatesh, EE, Ms. Armin Mustafa, M.Tech student, EE   | Finger Gesture Recognition in Dynamic Projecting Upon Arbitrary Background using Reflectance Modeling   | 974/DEL/2010  | 23.04.2010 |        |            |
| 5  | Prof. Kunal Ghosh, AE  | Device for Power Control and Storm Security for Savonius Wind Turbine   | 1217/DEL/2010 | 26.05.2010 |        |            |
| 6  | Dr. Dharendra Katti (BSBE), Dr. Anupam Pal (BSBE), Mr. Shaunak G. Pandya (M.Tech Student, BSBE)  | Image Based Structural Characterization of Fibrous Materials  | 1287/DEL/2010 | 02.06.2010 |        |            |
| 7  | Dr. Siddhartha Panda (ChE), Mr. Hakeem Abrar Ahmed (M.Tech Student, ChE)   | Flexible Temperature Sensor and Sensor Array  | 1520/DEL/2010 | 29.06.2010 |        |            |
| 8  | Prof. V K Jain, ME, Prabhat Ranjan, Scientific of ficer-C, BARC, Trombay, Dr. V K Suri, Head, Precision Engg. Section CTG, BARC, Trombay, Dr. R Balasubramaian, Scientific of ficer-F, BARC, Trombay | A Finishing Device  | 1541/DEL/2010 | 01.07.2010 |        |            |
| 9  | Prof. Sanjay G Dhande, ME, CSE, Mr. Brij Mohan Shukla, PRE, CSE  | Signal Detection System   | 1617/DEL/2010 | 09.07.2010 | 331531 | 07.02.2020 |
| 10 | Dr. Kamal Krishna Kar (ME), Mr. Sumit Pramanik (PhD Student, MSP)  | Hydroxyapatite Poly (Etheretherketone) Nanocomposites and Method of Manufacturing Same  | 1614/DEL/2010 | 09.07.2010 |        |            |
| 11 | Prof. Sanjay G Dhande, Director, ME, Dr. Nachiketa Tiwari, ME, Joshima V M, M.Design Programm  | A System for Providing the Users a Secured Service Relating to Deposit, with drawal and Transfer of One of Inputted and Processed Data Including Financial Instrument | 1629/DEL/2010 | 12.07.2010 |        |            |

| 12          | Prof. Sabyasachi Sarkar, Chem, Sharboni Ghoshal, M.Sc student, Chem, Sumit Kumar Sonkar, PhD Scholar, Chem.                    | Carbon Nanocomposite Preparation and Uses Thereof  | 1647/DEL/2010     | 14.07.2010 | 322641    | 11.10.2019 |
|-------------|--|--|-------------------|------------|-----------|------------|
| 13          | Dr. Bikramjit Basu, MME, Mr. K Madhav Reddy, M.Tech student, MME, K Pavani   | Advanced Sintering System  | 1792/DEL/2010     | 30.07.2010 | 304051    | 05.12.2018 |
| 14          | Dr. Siddhartha Panda, CHE, Subham Datidar, M.Tech student, CHE   | Nanotextured Dielectric in Electrolyte Insulator Semiconductor Devices for Enhanced Sensitivity in Electrolyte-insulator-semiconductor Devices | 1852/DEL/2010     | 05.08.2010 |           |            |
| 15          | Dr. Manas Kumar Ghorai, Chem, Deo Prakash Tiwari, Research Scholar, Chem   | Process for Preparation of Chiral $\alpha$ Lactams   | 1870/DEL/2010     | 10.08.2010 | 308652    | 06.03.2019 |
| 16          | Prof. Vinod Tare, CE   | Toilet Waste Treatment System and Device   | 1996/DEL/2010     | 24.08.2010 |           |            |
| 17          | Dr. Dharendra Katti, BSBE, Dr. Anupam Pal, BSBE, Mr. Shaunak G Pandya, M.Tech student, BSBE                                    | Image Based Structural Characterization of Fibrous Materials   | 12/870,569        | 27.08.2010 | 85,71,267 | 29.10.2013 |
| 18          | Dr. Kallol Mondal, MME, Mr. Tapendu Mandal, Research Scholar, MME, Mr. Prem Prakash, MD, Cenogen Materials Pvt. Ltd            | Powder Coating System and Method   | 2151/DEL/2010     | 10.09.2010 |           |            |
| 19          | Dr. Anupam Pal (BSBE), Mr. Sreep Banerjee, Sudeepa Dikshit   | Four Dimensional Reconstruction and Characterization System  | 12/883,649        | 16.09.2010 | 8,463,021 | 11.06.2013 |
| 20          | Dr. Kamal K. Kar (ME), Mr. Ariful Rahman (PhD Student, ME), Mr. Raghunandan Sharma & Mr. Sanjay Agarwal                        | Incandescent Lamp  | 2276/DEL/2010     | 23.09.2010 |           |            |
| 21          | Dr. Kamal Krishna Kar (ME), Mr. Ariful Rahman (PhD Student, ME)  | Carbon Nanofiber/carbon Nanocoil Coated Substrate and Nano Composites  | 2272/DEL/2010     | 23.09.2010 |           |            |
| 22          | Dr. Manas K. Ghorai (CHM), Mr. Sandipan Halder (Research Scholar, CHM)   | Process for the Synthesis of Highly Functionalized Racemic and Non-racemic Piperidines   | 2403/DEL/2010     | 07.10.2010 | 321,744   | 27.09.2019 |
| 23          | Dr. Satyajit Banerjee (Physics), Mr. Shyam Mohan (Research Scholar, Physics), Mr. Jaivardhan Sinha (Research Scholar, Physics) | Systems and Methods for Imaging Characteristics of a Sample and for Identifying Regions of Damage in the Sample                                | 2433/DEL/2010     | 12.10.2010 |           |            |
| 24          | Dr. Bharat Lohani, CE, Mr.Susham Biswas, PhD student, CE   | Soundscapes Generation   | 2642/DEL/2010     | 04.11.2010 |           |            |
| 25          | Dr. Kamal K Kar, ME, Mr. Ariful Rahman, PhD student, ME  | Carbon Nanofiber/carbon Nanocoil Coated Substrate and Nano Composites  | 2013-528775 Japan | 09.11.2010 | 6106086   | 10.03.2017 |
| 26          | Dr. J Ramkumar, ME, Mr. Sathish Sekar  | A Multipurpose Transporter with Modular Configuration  | 232708            | 18.11.2010 | Design    | 26.08.2011 |
| 27          | Dr. Bishakh Bhattacharya (ME), Mr. Atul R Sultane  | A Green Harvesting Device for Low Power Electronic Equipment   | 232707            | 18.11.2010 | Design    | 26.08.2011 |
| 28          | Dr. Animangshu Ghatak, CHE, Ms. Susmita Das, PhD student, CHE  | A Design of a Hypodermal Needle  | 3053/DEL/2010     | 21.12.2010 |           |            |
| 29          | Prof. Sanjay G Dhande, Director, Dr. Nachiketa Tiwari, ME, Ms. Joshima V M, M.Design Programm                                  | A System and Method for Transmitting Mails from a First Location to a Second Location  | 3100/DEL/2010     | 27.12.2010 |           |            |
| 30          | Dr. K S Venkatesh (EE), Ms. Preeti Dubey   | Convergent Matrix Factorization Based Entire Frame   | 3119/DEL/2010     | 28.12.2010 |           |            |
| 31          | Dr. J Ramkumar, ME, Mr. Sathish Sekar  | A Multipurpose Transporter with Modular Configuration  | 3157/DEL/2010     | 29.12.2010 | 326730    | 04.12.2019 |
| <b>2011</b> |  |  |                   |            |           |            |
| S.No.       | Inventors  | Title  | IPA               | Date       | Grant     | Date       |
| 1           | Dr. Kamal K Kar, ME, Mr. Ariful Rahman, PhD student, ME, Mr. Raghunandan Sharma, Mr. Sanjay Agarwal                            | Filament Including Carbon Nanotubes And Method Of Making A Filament Including Carbon Nanotubes   | 13/017,303        | 31.01.11   | 8,853,932 | 07.10.2014 |
| 2           | Prof. Kunal Ghosh, AE  | A Horizontal Axis Wind Turbine for Augmenting Torque   | 212/DEL/2011      | 31.01.2011 | 330293    | 27.01.2020 |
| 3           | Dr. S Sundar Manoharan, CHM  | Zinc Chalcogenides, Doped Zinc Chalcogenides and Methods of Making   | 384/DEL/2011      | 14.02.2011 |           |            |
| 4           | Prof. Sundar Manohar   | Doped Aluminum Oxides  | 385/DEL/2011      | 14.02.2011 |           |            |



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|-------------------------------|---|--|---------------|------------|---------|------------|
| 5                             | Dr. Sri Sivakumar, ChE, Dr. Ashok Kumar, BSBE , Mr. Haider Sami, Ph. D student, BSBE  | Nanoparticles Loaded Polymer Capsules, Process for Synthesis and Application Thereof                     | 409/DEL/2011  | 17.02.2011 | 319724  | 03.09.2019 |
| 6                             | Dr. P S Sensarma (EE) , Vasav Gautam, Student, EE   | Power Extraction from Direct Current Power Source  | 512/DEL/2011  | 24.02.2011 |         |            |
| 7                             | Prof. Sanjay G Dhande, ME/CSE, Mr. Brij Mohan Shukla, PRE, CSE  | Safety System for Vehicles   | 589/DEL/2011  | 04.03.2011 |         |            |
| 8                             | Dr. S S K Iyer, EE, Mr. Anirban Bagui, Research Scholar, Physics  | Manufacturing of Organic Photovoltaic Device   | 654/DEL/2011  | 09.03.2011 |         |            |
| 9                             | Prof. K Muralidhar , ME & Mcgregor Robert, Switzerland, Szczesba Dominik, Poland, Szekeley Gabor, Switzerland                             | Method, System and Device for Enhancing Flow Field Data  | 797/DEL/2011  | 22.03.2011 |         |            |
| 10                            | Dr. Arnab Bhattacharya, Palvali Teja B  | Multiple Criteria Decision Analysis  | 13/072,916    | 28.03.2011 | 8504581 | 06.08.2013 |
| <b>Financial Year 2011-12</b> |   |  |               |            |         |            |
| 11                            | Dr. Santanu K Mishra, EE  | Power Supply System  | 1053/DEL/2011 | 11.04.2011 |         |            |
| 12                            | Dr. Animangsu Ghatak, CHE, Ms. Anindita Sengupta Ghatak, Post Doctoral Fellow, CHE  | A System for Generating Crystal of Desired Size and Number Density of a Biomolecule, and Process Thereof | 1054/DEL/2011 | 11.04.2011 | 306053  | 22.01.2019 |
| 13                            | Prof. Sundar Manohar  | Doped Aluminum Oxides  | 13/321,146    | 15.04.2011 | 8524178 | 03.09.2013 |
| 14                            | Prof. K Muralidhar,(ME), Mr. Manoj Sharma (ME), Mr. Ankit Jain (ME) & Mr. Ras Dwivedi (ME), Mr. Prateek Khanna, Mr. a Rama Rao            | Functional Pump Generator  | 1557/DEL/2011 | 01.06.2011 |         |            |
| 15                            | Dr. S S K Iyer, EE ,Mr. Anukul Prasad Parhi, Dr. Satyendra Kumar  | Method of Fabricating Organic Thin Film and Organic Thin Film Thereof                                    | 1585/DEL/2011 | 03.06.2011 |         |            |
| 16                            | Dr. P S Sensarma (EE), Vasav Gautam, Student, EE  | Power Extraction from Photovoltaic Power Sources   | 1769/DEL/2011 | 22.06.2011 |         |            |
| 17                            | Dr. Ashok Kumar (BSBE)  | PVA-boronic Acid Containing Copolymer Compositions for Protein Delivery                                  | 1773/DEL/2011 | 23.06.2011 |         |            |
| 18                            | Dr. Ashok Kumar (BSBE)  | Hydrogel Scaffolds for Tissue Engineering  | 1774/DEL/2011 | 23.06.2011 |         |            |
| 19                            | Dr. Ashok Kumar (BSBE)  | Cryogels of PVA-boronic Acid Containing Co-polymers For Cell Culture                                     | 1775/DEL/2011 | 23.06.2011 |         |            |
| 20                            | Dr. Siddhartha Panda (ChE), Mr. Hakeem Abrar Ahmed (M.Tech Student, ChE)  | Flexible Temperature Sensor and Sensor Array   | 13/142,843    | 29.06.2011 | 8783948 | 22.07.2014 |
| 21                            | Dr. J Ramkumar, ME, Dr. Satyaki Roy,HSS,Design Programme, Mr. Sathish Sekar, Student  | The Drift-battery Operated Campus Vehicle  | 234987        | 03.07.2011 | Design  | 01.01.2010 |
| 22                            | Prof. Ashutosh Sharma and Ankur Verma (Student)   | Miniature Lenses, Systems and Methods of Making the Same   | 13/176,565    | 05.07.2011 | 8587881 | 19.11.2013 |
| 23                            | Ms. Shanu Sharma (Student, DP), Dr. Shatarupa Thakur Roy (DP), Dr. Satyaki Roy (DP), Dr. J Ramkumar (ME), Mr. Sathish Sekar (Student, DP) | A Self Propelled Stair Climbing Wheel Chair  | 2097/DEL/2011 | 25.07.2011 |         |            |
| 24                            | Dr. Bishakh Bhattacharya, (Mechanical Engg.), Mr. Ankur Agarwal, Student, (Mechanical Engg.)  | A Modular Robotic System   | 2307/DEL/2011 | 08.08.2011 |         |            |
| 25                            | Dr. K S Venkatesh (EE), Ms. Preeti Dubey  | Convergent Matrix Factorization Based Entire Frame   | 13/ 264,712   | 14.10.2011 | 9311897 | 12.04.2016 |
| 26                            | Prof. K Muralidhar,(ME), Mr. Manoj Sharma (ME), Mr. Ankit Jain (ME) & Mr. Ras Dwivedi (ME), Mr. Prateek Khanna, Mr. A Rama Rao            | Multi Drug Delivery Medical Pump   | 238757        | 08.11.2011 | Design  | 10.08.2012 |
| 27                            | Ms.Shanu Sharma (Student), Prof. Shatarupa Thakur Roy (DP),Prof. Satyaki Roy (DP), Dr. J Ramkumar (ME), Mr. Sathish Sekar (Student)       | Stair Climbing Wheel Chair   | 238758        | 09.11.2011 | Design  | 13.07.2012 |
| 28                            | Dr. S S K Iyer, Mr. Arvind Singh Student, Mr. Sk Asif Iqbal Student, Prof. S P Rath   | Magnesium Inserted Porphyrin Compound, its Blends and Devices Thereof                                    | 3272/DEL/2011 | 17.11.2011 |         |            |

|    |  |   |               |            |  |  |
|----|--|---|---------------|------------|--|--|
| 29 | Prof. Utpal Das (EE) , Mr. Tathagata Bhowmick                                    | Automation of Rapid Thermal Anneal for Specific Refractive Index or Absorption Coefficient of Intermixing Multi Quantum Wells | 3440/DEL/2011 | 29.11.2011 |  |  |
| 30 | Dr. Siddartha Panda, CHE   | Breast Cancer Detection System  | 3348/DEL/2011 | 23.11.2011 |  |  |
| 31 | Dr. Kamal K Kar, ME, Mr. Ariful Rahman, PhD student, ME                          | Carbon Nanofiber/carbon Nanocoil Coated Substrate and Nano Composites   | 13/375,730    | 01.12.2011 |  |  |
| 32 | Dr. Abhijit Kushari, (AE), Mr. Mukul Atri, Student , Mr. Sriram Ganesan, Student | An Arrangement for Jet Engine to Reduce Noise   | 3603/DEL/2011 | 12.12.2011 |  |  |
| 33 | Dr. Ashutosh Sharma (ChE), Mr. Sandip Patil (Research Sacholar, ChE)             | Composite Reusable Adhesives  | 3719/DEL/2011 | 19.12.2011 |  |  |

### 2012

| S.No. | Inventors  | Title  | IPA                   | Date       | Grant   | Date       |
|-------|--|--|-----------------------|------------|---------|------------|
| 1     | Dr. Ashutosh Sharma (ChE), Mr. Ankur Verma (Student), Mr. G. U. Kulkarni (JNCASR)          | Micropattern Generation with Pulsed Laser Diffraction              | 13/359,798            | 27.01.2012 | 8545945 | 01.10.2013 |
| 2     | Dr. S Sundar Manoharan, CHM  | Zinc Chalcogenides, Doped Zinc Chalcogenides and Methods of Making | 13/371,063            | 10.02.2012 | 8801972 | 12.08.2014 |
| 3     | Prof. Ashutosh Sharma (Chemical Engg), Mr. Sandip Patil, Research Sacholar,(Chemical Engg) | Composite Reusable Adhesives                                       | 13/982,458            | 09.03.2012 | 9540546 | 10.01.2017 |
| 4     | Prof. Ashutosh Sharma (Chemical Engg), Mr. Sandip Patil, Research Sacholar,(Chemical Engg) | Composite Reusable Adhesives                                       | CHINA - CN20128057431 | 09.03.2012 |         |            |
| 5     | Prof. Ashutosh Sharma (Chemical Engg), Mr. Sandip Patil, Research Sacholar,(Chemical Engg) | Composite Reusable Adhesives                                       | JAPAN - 2014-546674   | 09.03.2012 | 5914692 | 08.04.2016 |

### Financial Year 2012-13

|    |   |  |                |            |         |            |
|----|---|--|----------------|------------|---------|------------|
| 6  | Mr. Saumen Mandal, Mr. Rahul Sharma & Prof. Monica Katiyar, MSE & SCDD  | A Hybrid Ink Formulation and a Method for Preparing the Same   | 1161/DEL/2012  | 16.04.2012 | 317139  | 30.07.2019 |
| 7  | Dr. Amitabha Bandyopadhyay (BSBE), Mr. Paritosh Prashar (Student, BSBE), Mr. Prem Swaroop Yadav (BSBE)  | A Method of Measuring BMP Signaling using BMP Responsive Reported Cell Line  | 1180/DEL/2012  | 17.04.2012 | 325545  | 21.11.2019 |
| 8  | Dr. Sudeep Bhattacharjee, Physics, Mr. Samit Paul, PhD Student, Physics   | System and Method for Characterizing Focused Charged Beams   | 1301/DEL/2012  | 27.04.2012 |         |            |
| 9  | Dr. Kamal Krishna Kar (ME), Mr. Pradip Paik   | A Process for Preparation of Nanoparticles of Higher Molecular Weight of Polypropylene   | 1352/DEL/2012  | 03.05.2012 |         |            |
| 10 | Dr. Kamal Krishna Kar (ME), Mr. Pradip Paik   | A Process for Preparation of Nanoparticles of Higher Molecular Weight of Polypropylene   | 1353/DEL/2012  | 03.05.2012 |         |            |
| 11 | Prof. B K Mishra, MME , Prof. Sandeep Sangal, MME, Dr. Ashish Garg, MME, Prem Prakash, Manging Director, Cenogen Materials, Mr. Tapendu Mandal, Research Scholar, MME | Ball Mill  | 1405/DEL/2012  | 07.05.2012 |         |            |
| 12 | Dr. Harshwardhan Wanare, (Phy), Ms. Neha Singh, (Student), Dr. K K Dokania,   | Vein Visualization Device  | 1525/DEL/2012  | 18.05.2012 |         |            |
| 13 | Dr. Ajit Kr Sharma, (Chemical Engg.), Prof. Ashutosh Sharma, (Chemical Engg.), Prof. Nishith Verma, (Chemical Engg.)  | Bi-metal Nanoadsorbents and Methods for Their Preparation and Use  | 13/482,564     | 29.05.2012 | 9809466 | 07.11.2017 |
| 14 | Mr. Govind Dayal Singh, Dr. S Anantha Ramakrishna, Physics, Dr. J Ramkumar  | Systems and Methods for Dry Processing Fabrication of Binary Masks with Arbitrary Shapes for Ultra-violet Laser Micromachining | US- 14/408,721 | 17.06.2013 |         |            |
| 15 | Mr. Govind Dayal Singh (Student, Physics), Dr. S Anantha Ramakrishna (Physics), Dr. J. Ramkumar (ME)  | Systems and Methods for Dry Processing Fabrication of Binary Masks with Arbitrary Shapes for Ultra-violet Laser Micromachining | 1858/DEL/2012  | 18.06.2012 |         |            |

| 16          | Dr. Kamal K Kar, ME, Mr. Sumit Pramanik, PhD student, MSP   | Hydroxyapatite Poly (Etheretherketone) Nanocomposites and Method of Manufacturing Same                             | 13/147,502    | 02.08.2011 | 8652373 | 18.02.2014 |
|-------------|---|--|---------------|------------|---------|------------|
| 17          | Mr. Ankur Solanki, (SCDT), Ms. Asha Awasthi, (SCDT), Dr. K N Narayanan Unni, (SCDT), Prof. Deepak Gupta, (MSE)                      | New Processing Technique of Photolithography to Make Defect Free Organic Light Emitting Diode Display              | 2538/DEL/2012 | 16.08.2012 |         |            |
| 18          | Ms. Shanu Sharma, Student (DP), Dr. Bishakh Bhattacharya, (DP), Mr. Arvind Shanmuga Sundaram M, Student, (DP) & Dr. J Ramkumar (DP) | A Versatile Tube-well Hand Pump with Energy Harvested Water Filtration   | 2727/Del/2012 | 04.09.2012 |         |            |
| 19          | Prof. D S Katti, BSBE, Ms. Neha Arya, Mr. Viren Sardana, Mr. Prashant Jha   | A Method for Tumoroid Generation using 3-D Chitosan-gelatin Scaffolds for Anti-cancer Drug Screening               | 2841/DEL/2012 | 11.09.2012 |         |            |
| 20          | Dr. Siddhartha Panda, (Chemical), Mr. Satyendra Kumar (Complete)  | A Nanotextured Surface Immobilized Structure-modified Enzyme Biocatalyst   | 2966/DEL/2012 | 24.09.2012 | 332019  | 14.02.2020 |
| 21          | Dr Arnab Bhattacharya, (CSE), Ms. Avani Nandini, Student (CSE)  | Multiple Criteria Decision Analysis  | 3027/DEL/2012 | 27.09.2012 |         |            |
| 22          | Dr. Ajit K. Sharma (ChE), Dr. Jayant K. Singh (ChE), Dr. Nishith Verma (ChE)  | Polymeric Nanocomposites and Methods for their Preparation and Use   | 3233/DEL/2012 | 17.10.2012 |         |            |
| 23          | Mr. Ajay Dashora, (Student, CE), Dr. Bharat Lohani, (CE), Dr. Deb Kalyanmoy, (ME)   | Flight Planning for Airborne Data Acquisition  | 3392/DEL/2012 | 03.11.2012 |         |            |
| 24          | Dr. S. Anantha Ramakrishna (Physics), Mr. Govind Dayal Singh (Physics)  | Metamaterial Structures for Q-switching in Lasers  | 3706/DEL/2012 | 03.12.2012 |         |            |
| 25          | Ms. Shanu Sharma, Student (DP), Dr. Bishakh Bhattacharya, (DP), Mr. Arvind Shanmuga Sundaram M, Student, (DP) & Dr. J Ramkumar (DP) | Hand Pump  | 249921        | 05.12.2012 | Design  | 19.06.2018 |
| 26          | Mr. L V Sairam Jagatani, Student, Dr. Nirmalya Guha, HSS, Dr. J Ramkumar, ME  | Interactive Board Game   | 249922        | 05.12.2012 | Design  | 22.11.2018 |
| 27          | Dr. Baquer Mahari (EE), Ms. Ankita Gangwar (Student, EE)  | Thin Film Transistor with a Current- Induced Channel   | 3997/DEL/2012 | 24.12.2012 |         |            |
| 28          | Prof. V K Jain (ME), Mr. Pawan Basera   | Finishing Apparatus  | 4074/DEL/2012 | 31.12.2012 |         |            |
| <b>2013</b> |   |  |               |            |         |            |
| S.No.       | Inventors   | Title  | IPA           | Date       | Grant   | Date       |
| 1           | Mr. Govind Dayal Singh (Student, Physics), Dr. S. Anantha Ramakrishna (Physics), Dr. J. Ramkumar (ME)                               | A Green Process for Fabrication of Binary Masks with Isolated Features for Micromachining and Photolithography     | 79/DEL/2013   | 10.01.2013 |         |            |
| 2           | Mr. Abhinav Parashar (ME), Mr. Rahul Singh (ME), Mr. Manoj Sharma (ME), Prof. P K Panigrahi (ME), Prof. K Muralidhar (ME)           | Identification of Vascular Deformation   | 363/DEL/2013  | 08.02.2013 |         |            |
| 3           | Mr. Ajay Sidpara, PhD Student, (ME), Prof. V K Jain, (ME), Dr. V K Suri, (BARC), Dr. R Balasubramaaniam                             | System and Method for Nanofinishing of a Workpiece   | 380/DEL/2013  | 08.02.2013 |         |            |
| 4           | Dr. Bharat Lohani (CE), Mr. Salil Goel (RA, CE), Mr. Raghvendra Natrajan (Joint Patent with DRDO)                                   | A Method and System for Generating Correct 3d Geometry of Moving Object using Laser Scanning                       | 638/DEL/2013  | 05.03.2013 |         |            |
| 5           | Mr. a Madhavan, Student, DP, Dr. J Ramkumar, Dp, Mr. Aravind Shanmuga, Ms. Shanu Sharma   | A Millimetre Level Measuring Ruler for Measuring by Touch  | 650/DEL/2013  | 06.03.2013 |         |            |
| 6           | Mr. Ravi Sankar, Student (ME), Prof. V K Jain (ME) & Dr. J Ramkumar (ME)  | A Medium for Nano-finishing of Complex Component's Internal/external Surfaces and a Method for Preparation Thereof | 712/DEL/2013  | 13.03.2013 |         |            |

|                               |  |   |               |            |           |            |
|-------------------------------|--|---|---------------|------------|-----------|------------|
| 7                             | Ms. Nidhi Pashine, Student (Physics), Mr. Akshat Singhal, Student (Mathematics), Mr. Shubham Gupta, Student, (Civil Engg.)   | Affordable In- House Modular Planetarium  | 730/DEL/2013  | 14.03.2013 |           |            |
| 8                             | Dr. Animangsu Ghatak, (Chemical), Dr. Anindita Sengupta Ghatak   | Process for Generation of a Nano-wrinkled Substrate and its Applications Thereof                              | 816/DEL/2013  | 19.03.2013 |           |            |
| 9                             | Prof. Ashok Kumar (BSBE)   | A Biodegradable Smoke Filter Material   | 884/DEL/2013  | 22.03.2013 |           |            |
| 10                            | Prof. Pradip Sinha (BSBE) , Dr. Anjali Bajpai (BSBE)   | Novel Fly Tumor Model and Methods of Screening Drugs Thereon  | 899/DEL/2013  | 25.03.2013 | 332608    | 21.02.2020 |
| 11                            | Dr. Parthasarathi Sensarma, EE, Mr. Soumya Shubra Nag, PhD Student, EE   | Analog Maximum Power Point Tracker for Solar Photovoltaic   | 918/DEL/2013  | 26.03.2013 |           |            |
| 12                            | Dr. Siddhartha Panda (Chemical) and Mr. Ramchander Chepyala (PhD Student)  | Surface Functionalization Unit  | 546/DEL/2013  | 26.02.2013 |           |            |
| 13                            | Dr. Siddhartha Panda (Chemical) and Mr. Ramchander Chepyala (PhD Student)  | Electrolyte- Insulator- semiconductor Based Microfluidic Immunosensor   | 545/DEL/2013  | 26.02.2013 |           |            |
| <b>Financial Year 2013-14</b> |  |   |               |            |           |            |
| 14                            | Mr. Saumen Mandal (Student, MSE), Dr. Monica Katiyar (MSE & SCDT)  | Organic Thin Film Transistors and Methods for Their Manufacturing and Use                                     | 1032/DEL/2013 | 06.04.2013 |           |            |
| 15                            | Dr. Kamal K. Kar & Mr. Pradip Paik   | A Process for Preparation of Nanoparticles of Higher Molecular Weight of Polystyrene                          | 1135/DEL/2013 | 17.04.2013 | 319562    | 30.08.2019 |
| 16                            | Dr. Kamal K. Kar & Mr. Pradip Paik   | A Process for Preparation of Nanoparticles of Higher Molecular Weight of Polystyrene                          | 1136/DEL/2013 | 17.04.2013 | 320069    | 09.09.2019 |
| 17                            | Dr. S. Anantha Ramakrishna, Phy and Mr. Govind Dayal Singh   | Metamaterial Structures for Q-switching in Lasers   | US-14/131,899 | 17.04.2013 | 9627840   | 18.04.2017 |
| 18                            | Dr. Ashok Kumar, BSBE  | Cryogels of PVA-boronic Acid Containing Co-polymers for Cell Culture  | 13/880,020    | 17.04.2013 | 85,69,062 | 29.10.2013 |
| 19                            | Dr. Ashok Kumar, BSBE  | PVA-boronic Acid Containing Copolymer Compositions for Protein Delivery                                       | 13/880,299    | 18.04.2013 | 9345773   | 24.05.2016 |
| 20                            | Prof. Pradip Sinha (BSBE) , Dr. Anjali Bajpai (BSBE),  | Novel Drosophila Tumour Model for Screening Anti-cancer Drugs and Methods Thereof                             | 1265/DEL/2013 | 30.04.2013 |           |            |
| 21                            | Dr. Animangsu Ghatak (Chemical), Ms. Susmita Das (Student) and Mr. Sukumar Laha (Student)                                    | A Method for Estimating Strain at a Location Buried with in a Deformable Object using an Embedded Tracer Grid | 1305/DEL/2013 | 30.04.2013 |           |            |
| 22                            | Dr. Sudeep Bhattacharjee, Physics, Mr. Jose V. Mathew, PhD Student   | Focused Ion Beam Systems and Methods of Operation   | 1452/DEL/2013 | 15.05.2013 |           |            |
| 23                            | Dr. Ashok Kumar, BSBE  | Hydrogel Scaffolds for Tissue Engineering   | 13/885,839    | 16.05.2013 | 88,83,503 | 11.11.2014 |
| 24                            | Prof. a R Harish (EE), Mr. Akshay Jain (for Provisional)   | <b>RFID Tags</b>  | 1467/DEL/2013 | 16.05.2013 |           |            |
| 25                            | Dr. Deepak Gupta (MSE), Dr. Balaji Prakash (BSBE), Ms. Sunita Mehta (Student, MSE), Mr. Saravanan Murugeson (Student, BSBE)  | Microbe-based Masters for Micro Contact Printing and Methods for Their Preparation and Use                    | 1468/DEL/2013 | 17.05.2013 |           |            |
| 26                            | Ms. Meenakshi Singh (Student), Dr. Koumudi Patil (HSS)   | Two Way Volume Adjustable Load Bearing Foldable Unit Pliable Material for Making Furniture                    | 1481/DEL/2013 | 17.05.2013 |           |            |
| 27                            | Dr. D P Mishra (AE), Ms. Manisha B Padwal  | Two- Fluid Atomizer   | 1551/DEL/2013 | 23.05.2013 |           |            |
| 28                            | Prof. Deepak Gupta, Dr. Ashish Garg, Mr. Tapendu Mandal  | Pentacene Deposition in Organic Thin Film Transistors   | 1615/DEL/2013 | 29.05.2013 |           |            |
| 29                            | Mr. Adersh Kumar Singh (EE) Prof. Sumana Gupta (EE), Prof. K S Venkatesh (EE)  | Image Enhancement   | 1761/DEL/2013 | 13.06.2013 |           |            |
| 30                            | Dr. Shantanu Bhattacharya (ME), Prof. Gurunath Ramanathan (Chemistry), Ms. Monalisha Nayak, Mr. Deepak Singh, Mr. Rishi Kant | An Integrated Microchip for the Detection of a Biological Cell  | 1787/DEL/2013 | 17.06.2013 |           |            |

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|----|--|---|-----------------|------------|------------|------------|
| 31 | Mr. Jay D Dave and Prof. K S Venkatesh (EE) (Provisional)  | Systems and Methods for Signature Verification  | 1801/DEL/2013   | 18.06.2013 |            |            |
| 32 | Prof. Baquer Mahari, EE, Ms. Ankita Gangwar, Student   | Thin Film Transistor with a Current- Induced Channel  | US - 14/380,726 | 20.06.2013 | 9,515,273  | 06.12.2016 |
| 33 | Mr. Bhoopendra Singh (EE) and Prof. K S Venkatesh (EE)   | Real Time Image Stabilization   | 2041/DEL/2013   | 08.07.2013 |            |            |
| 34 | Dr. Sri Sivakumar, (Chemical), Dr. Raj Ganesh S Pala, (Chemical), Dr. Ragina Ragan, (Chemical & MSE), Mr. Arun Prakash Upadhyay      | Process for the Production of Directed Assembly of Tailored Monolayer and Multilayers of Nanoparticles on a Substrate                                   | 2169/DEL/2013   | 19.07.2013 | 311933     | 30.04.2019 |
| 35 | Dr. Mohd Jaleel Akhtar (EE), Mr. Shaji M (provisional)   | Coplanar Microwave Sensor   | 2232/DEL/2013   | 26.07.2013 |            |            |
| 36 | Dr. Nishith Verma (ChE), Dr. Ashutosh Sharma (ChE), Mr. Prateek Khare (Student, ChE)   | Metal Nanoparticles-doped Antibacterial Agents and Methods of Preparation and Use   | 2463/DEL/2013   | 20.08.2013 |            |            |
| 37 | Dr. Sarang Ingole (MSE), Mr. Rajib Halder and Mr. Bhaskar Dudem  | Ordered Array of Nanopore Formation in Aluminum Thin-films using Self-assembled Monolayer of Polystyrene Microspheres and Two Types of Anodic-oxidation | 2543/DEL/2013   | 27.08.2013 |            |            |
| 38 | Prof. D P Mishra (AE)  | Hydrogen Gas Burner and Method of Combustion in Hydrogen Gas Burner   | 2545/DEL/2013   | 28.08.2013 |            |            |
| 39 | Prof. Ashutosh Sharma (Chemical Engg.), Mr. Ankur Verma (Student), G U Kulkarni, (JNCASR)  | Micropattern Generation with Pulsed Laser Diffraction   | US - 14/016,281 | 03.09.2013 | 9,527,730  | 27.12.2016 |
| 40 | Mr. Rajesh Katoch (Student, MSE), Dr. Ashish Garg (MSE), Dr. Rajeev Gupta (Physics, MSE)   | Thin Film Heterostructures  | 2842/DEL/2013   | 25.09.2013 |            |            |
| 41 | Mr. Ankit Anand, Mr. Arihant Bhandari, Mr. Shivam Prakash, Mr. Manoj Sharma, Dr. Raj Ganesh S Pala (Chemical) and Prof. K Muralidhar | Solar Based Water Purification  | 2894/DEL/2013   | 30.09.2013 |            |            |
| 42 | Dr. Ajit Kr Sharma, (Chemical Engg.), Dr. Jayant K Singh, (Chemical Engg.), Dr. Nishith Verma, (Chemical Engg.)                      | Polymeric Nanocomposites and Methods for their Preparation and Use  | US - 14/435,432 | 01.10.2013 | 10,227,458 | 12.03.2019 |
| 43 | Dr. Sudeep Bhattacharjee, Physics, Mr. Samit Paul, PhD Student, Physics  | System and Method for Characterizing Focused Charged Beams  | US - 14/397,478 | 27.10.2014 | 9733366    | 15.08.2017 |
| 44 | Dr. Avinash Kumar Agarwal (ME) and Mr. Akhilendra Pratap Singh (Student)   | Fuel Vaporizer  | 3196/DEL/2013   | 28.10.2013 |            |            |
| 45 | Dr. B. Mazhari (EE), Mr. Arjit Ashok (Student, EE)   | Four-terminal Gate-controlled Thin- Film Organic Thyristor  | 3218/DEL/2013   | 31.10.2013 |            |            |
| 46 | Mr. Jeyakumar M (Student) and Dr. J Ramkumar (ME)  | Tool for Measuring and Drawing Quadrilateral  | 258028          | 07.11.2013 | Design     | 30.09.2019 |
| 47 | Mr. Jeyakumar M (Student) and Dr. J Ramkumar (ME)  | Angular Clock for Measuring Time and Angle  | 258030          | 07.11.2013 | Design     |            |
| 48 | Mr. Jeyakumar M (Student) and Dr. J Ramkumar (ME)  | Tool for Measuring and Drawing Triangles  | 258029          | 07.11.2013 | Design     | 29.08.2019 |
| 49 | Mr. Amit Goel (CE)   | Wireless Layered Structure Analyzer   | 3386/DEL/2013   | 19.11.2013 |            |            |
| 50 | Prof. K S Venkatesh (EE) and Mr. Anindya Rai, (Student)  | Software Flutter Shutter Imaging System for Blur Removal using a High Speed Camera  | 3488/DEL/2013   | 29.11.2013 |            |            |
| 51 | Dr. Animangsu Ghatak (CHM), Mr. Abhijit Chandra Roy (PhD Student, CHM)   | Methods for Fabricating Optical Lenses  | 3473/DEL/2013   | 29.11.2013 |            |            |
| 52 | Mr. Bharat Sarkar (Student), Dr. J Ramkumar (ME)   | A Hanger to Hang a Plurality of Garments for Drying, Organizing and Exhibition/showcasing   | 3552/DEL/2013   | 06.12.2013 |            |            |
| 53 | Mr. Govind Dayal Singh, Dr. S Anantha Ramakrishna, Physics, Dr. J Ramkumar   | A Green Process for Fabrication of Binary Masks with Isolated Features for Micromachining and Photolithography  | US - 14/760,394 | 11.12.2013 |            |            |
| 54 | Prof. B Mazhari, (EE), Mr. Arjit Ashok, Student, (EE)  | Four-terminal Gate-controlled Thin- Film Organic Thyristor  | US - 15/026,705 | 28.12.2013 | 9,831,453  | 28.11.2017 |

| 55          | Mr. Rajesh Ranjan (M.Des), Mr. Basava Kumar M (M.Des), Prof. Bishakh Bhattacharya (DP)   | Drug Flow Control Device   | 3847/DEL/2013           | 31.12.2013 |           |            |
|-------------|--|--|-------------------------|------------|-----------|------------|
| 56          | Mr. Rajesh Ranjan (M.Des), Mr. Basava Kumar M (M.Des), Prof. Bishakh Bhattacharya (DP)   | Medical Actuator   | 3846/DEL/2013           | 31.12.2013 |           |            |
| <b>2014</b> |  |  |                         |            |           |            |
| S.No.       | Inventors  | Title  | IPA                     | Date       | Grant     | Date       |
| 1           | Mr. Rajesh Ranjan (M.Des), Mr. Basava Kumar M (M.Des), Prof. Bishakh Bhattacharya (DP)   | Methods and Systems for Health Monitoring  | 5/DEL/2014              | 01.01.2014 |           |            |
| 2           | Dr. Arnab Bhattacharya (CSE), Mr. Shashwat Mishra (Student, CSE)   | Multiple Criteria Decision Analysis in Distributed Databases   | 50/DEL/2014             | 07.01.2014 |           |            |
| 3           | Md. Faisal (Student), Mr. Anshul Gupta (Student), Ms. Suboohi Shervani (Student), Dr. Kantesh Balani (MSE) and Dr. a Subramaniam (MSE) | Hydrogen Storage in Magnesium Based Hybrids using Accumulative Roll Bonding  | 119/DEL/2014            | 15.01.2014 |           |            |
| 4           | Dr. Nishith Verma (CHM), Dr. J Ramkumar (ME), Mr. Prateek Khare (PhD Student, CHM)   | Polymeric Nanocomposite Films with Embedded Channels and Methods of Their Preparation and Use  | 264/DEL/2014            | 29.01.2014 |           |            |
| 5           | Dr. Shantanu Bhattacharya (ME), Mr. Ankur Gupta (Student), Mr. Shashank S Pandey (ME)  | A Process for the Production of High Surface Area Nano Metal Oxides  | 472/DEL/2014            | 18.02.2014 |           |            |
| 6           | Dr. Arnab Bhattacharya (CSE) , Mr. Shashwat Mishra   | Multiple Criteria Decision Analysis in Distributed Databases   | US - 14/770,095         | 19.02.2014 | 10198481  | 05.02.2019 |
| 7           | Dr. Arnab Bhattacharya (CSE) , Mr. Shashwat Mishra   | Multiple Criteria Decision Analysis in Distributed Databases   | CHINA - 112014000072395 | 19.02.2014 | 105900057 | 02.10.2018 |
| 8           | Dr. S. A. Ramakrishna (Physics), Ms. Jhuma Dutta (Student, Physics)  | Nanobrushes and Methods of Manufacture and Use   | 548/DEL/2014            | 27.02.2014 |           |            |
| 9           | Dr. Baquer Mazhari (EE), Ms. Ankita Gangwar (Student, EE)  | Organic Thin Film Transistor Merged with a Light Emitting Diode Using an Accumulation Layer as Electrode   | 708/DEL/2014            | 12.03.2014 |           |            |
| 10          | Prof. Satyajit Banerjee (Phy), Shyam Mohan, Research Scholar, Physics, Jaivardhan Sinha, Research Scholar, Physics                     | Systems and Methods for Imaging Characteristics of a Sample and for Identifying Regions of Damage in the Sample                                  | US - 13/878,944         | 12.03.2014 | 9778202   | 03.10.2017 |
| 11          | Prof. Deepak Gupta (MSE), Prof. Balaji Prakash, (BSBE), Ms. Sunita Mehta (MSE), Mr. Saravanan Murugeson, (BSBE)                        | Microbe-based Masters for Micro Contact Printing and Methods for Their Preparation and Use   | US - 14/891,813         | 14.03.2014 |           |            |
| 12          | Dr. Sudeep Bhattacharjee, Physics, Mr. Jose V. Mathew, PhD Student   | Focused Ion Beam Systems and Methods of Operation  | US - 14/891,046         | 18.03.2014 | 9576767   | 21.02.2017 |
| 13          | Dr. Susmit Sen, (SRE), Center for Mechatronics   | A Robotic Cooking System   | 798/Del/2014            | 19.03.2014 |           |            |
| 14          | Mr. Rohit Kumar Singh (Student) and Prof. Bishakh Bhattacharya (ME)  | Vibration Energy Harvesting Device   | 823/DEL/2014            | 21.03.2014 |           |            |
| 15          | Dr. S Anantha Ramakrishna (Phy) and Mr. Dheeraj Pratap   | Nanoporous Microtubes for Anisotropic Optical Fibers   | 850/DEL/2014            | 24.03.2014 |           |            |
| 16          | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | Ferromagnetic Nanoparticle Encapsulated Carbon Nanotubes with High Encapsulation/filling Ratio for High Density                                  | 846/DEL/2014            | 24.03.2014 | 325310    | 19.11.2019 |
| 17          | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | Carbon Nanotube Coated Carbon Fiber Filaments for Incandescent Electric Lamp and Method of Manufacturing the Same                                | 844/DEL/2014            | 24.03.2014 |           |            |
| 18          | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | Multiscale Magnetic Nanocomposites using Ferromagnetic Nanoparticle Encapsulated Carbon Nanotubes and Method of Manufacturing the Same           | 858/DEL/2014            | 25.03.2014 |           |            |
| 19          | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | Ferromagnetic Metal Nanoparticle Encapsulated Carbon Nanotubes as Nano-heaters for Cancerous Cell Treatment and Method of Manufacturing the Same | 859/DEL/2014            | 25.03.2014 |           |            |

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|-------------------------------|--|--|---------------|------------|--------|------------|
| 20                            | Mr. Rajesh Ranjan (Student), Mr. Basava Kumar M (Student), Dr. J Ramkumar (Design ), Dr. S A Ramakrishna (Physics)               | A Phototherapy Unit for Treatment of Hyperbilirubinemia or Neonatal Jaundice of Multiple Babies  | 873/DEL/2014  | 26.03.2014 |        |            |
| 21                            | Mr. Yogesh Nimdeo, Mr. Subhajit Kar, Dr. Yogesh M Joshi (Chemical) and Prof. K Murlidhar (ME)                                    | Mass Diffusivity Measurement System  | 904/DEL/2014  | 28.03.2014 |        |            |
| 22                            | Prof. Kamal K Kar (ME) and Ms. Poonam Benjwal (PhD Student)  | Method for Preparing Zinc-manganese Co-doped Titania Nanoparticles for Improved Photocatalytic Activity  | 910/DEL/2014  | 29.03.2014 |        |            |
| 23                            | Prof. Kamal K Kar (ME) and Ms. Poonam Benjwal (PhD Student)  | One Step Method for the Preparation of Zinc-doped Titania Nanotube Array for Photocatalytic Dye Sensitized Solar Cells, Energy Conversion Devices, and Degradation of Water and Air Pollutants | 909/DEL/2014  | 29.03.2014 |        |            |
| 24                            | Prof. Kamal K Kar (ME) and Ms. Soma Banerjee(Research Scholar)   | Novel Phosphonated Poly Ether Ether Ketone Polymer as an Alternative to Nafion for Polymer Electrolyte Membrane Fuel Cell and the Method of Manufacturing the Same                             | 908/DEL/2014  | 29.03.2014 |        |            |
| 25                            | Dr. Anil Kumar Verma (GSVM), Dr. Manoj Kumar Sharma (GSVM) and Dr. J Ramkumar (ME)   | A Bronchotrainer Device  | 920/DEL/2014  | 31.03.2014 |        |            |
| 26                            | Mr. Raja Choudhary (MSE),Dr. Vandana Singh (MSE), Dr. Neelima Mahto (MSE) and Dr. Kantesh Balani (MSE)                           | Suspension Agitator  | 923/DEL/2014  | 31.03.2014 |        |            |
| <b>Financial Year 2014-15</b> |  |  |               |            |        |            |
| 27                            | Dr. Ashutosh Sharma (ChE), Mr. Kunal Mondal (Student, ChE), Mr. Shishir Katiyar (Proj. Associate, ChE)                           | Hierarchical Porous Monoliths and Methods for Their Preparation and Use  | 1015/DEL/2014 | 10.04.2014 |        |            |
| 28                            | Prof. Pradip Sarkar (EE), Mr. Chandrakant J Gaikwad (Research Scholar)   | An Instrument for Tonic Note Selection & Voice Range Determination for Indian Music Singers  | 1272/DEL/2014 | 12.05.2014 |        |            |
| 29                            | Mr. Ankush Sharma (Student, EE), Mr. P Banerjee (Student, EE), Prof. S C Srivastava (EE), Dr. S Chakrabarti (EE)                 | Remote Monitoring and Control for Power System Network using Mobile Scada Application  | 1322/DEL/2014 | 19.05.2014 |        |            |
| 30                            | Prof. Kamal K Kar (MSP) and Mr. Raghunandan Sharma (PhD Student)   | Coiled Carbon Nanomaterial Coated Carbon Fiber Reinforced High Performance Polymer Nanocomposites for Structural Applications and Method of Manufacturing the Same                             | 1331/DEL/2014 | 20.05.2014 |        |            |
| 31                            | Prof. Kamal K Kar (MSP) and Mr. Raghunandan Sharma (PhD Student)   | One Step Synthesis of Carbon Nanotube-ceramic Nanocomposite Powder for Structural Nanocomposites   | 1332/DEL/2014 | 20.05.2014 |        |            |
| 32                            | Prof. Kamal K Kar (MSP) and Mr. Jayesh Cherusseri (Research Scholar)   | Multi-walled Carbon Nanotube Forest Grown on Carbon Fiber as Supercapacitor Electrodes and the Method of Preparation Thereof   | 1348/DEL/2014 | 22.05.2014 |        |            |
| 33                            | Dr. Animangsu Ghatak (Chemical), Mr. Muhamed Jesbeer K A   | Adhesive Film  | 1386/DEL/2014 | 23.05.2014 |        |            |
| 34                            | Dr. Sri Sivakumar (Chemical), Dr. R G S Pala (Chemical), Mr. Arun Prakas Upadhyay (Chemical), Mr. Prasenjit Sadhukhan (Chemical) | Process for Immobilization of Liquid Crystal on Solid Surface  | 1128/DEL/2014 | 25.05.2014 | 319412 | 29.08.2019 |
| 35                            | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | Electrocatalyst for Oxygen Reduction Reaction in Fuel Cells from Bio-waste Feather Fiber   | 1390/DEL/2014 | 26.05.2014 |        |            |
| 36                            | Prof. Kamal K Kar (ME) and Mr. Raghunandan Sharma  | A Method of Preparing Helically Coiled Carbon Nanotube (CCNT) using Star Shaped Nano Particle  | 1391/DEL/2014 | 26.05.2014 |        |            |

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|----|--|--|------------------------|------------|-----------|------------|
| 37 | Dr. Sri Sivakumar (Che), Dr. Raj Ganesh Pala (Che), Ms. Shilpi Saxena (Student) and Mr. Rupesh Singh (Student)                         | Core -shell Sinter Resistant Nanosphere  | 1440/DEL/2014          | 30.05.2014 | 329228    | 10.01.2020 |
| 38 | Dr. Tarun Gupta (CE) and Mr. Amit Singh Chauhan (Student)  | Air Sampling Device  | 1474/DEL/2014          | 03.06.2014 |           |            |
| 39 | Mr. Viswas S Nair (Student), Prof. Utpal Das (EE)  | Low Loss Fast Electro-optically Tuned Embedded Ring Modulator or Filter  | 1519/DEL/2014          | 06.06.2014 |           |            |
| 40 | Dr. Sri Sivakumar (Che), Dr. Deepak Kunzru (Che), and Mr. Rupesh Singh (Student)   | Process for Synthesis of a Catalyst for Hydrodesulfurization   | 1590/DEL/2014          | 11.06.2014 |           |            |
| 41 | Mr. Govind Dayal Singh (Physics), Dr. S. A. Ramakrishna (Physics)  | Shadow Masks and Methods for Their Preparation and Use   | 1685/DEL/2014          | 24.06.2014 |           |            |
| 42 | Mr. Basav Kumar M and Dr. B Bhattacharya   | Multifunctional Interactive Walking Stick  | 1954/DEL/2014          | 11.07.2014 |           |            |
| 43 | Dr. Anumangsu Ghatak (Chemical), Mr. Abhijit Chandra Roy (Student) and Mr. Edward Peter Arul (Student)                                 | An Optical Lens, Lens Filter and Preparation Thereof   | 1964/DEL/2014          | 12.07.2014 |           |            |
| 44 | Prof. Kamal K Kar (MSP & ME) and Mr. Pankaj Chamoli (Student)  | A Green Approach for Reduction of Graphene Oxide Into Graphene Nanosheets by Urine   | 1969/DEL/2014          | 14.07.2014 |           |            |
| 45 | Prof. Partha Sarathi Sensarma (EE) and Mr. Vasav Gautam  | Photovoltaic Inverter System   | 1978/DEL/2014          | 14.07.2014 | 307744    | 21.02.2019 |
| 46 | Prof. Kamal K Kar (MSP & ME) and Ms. Sowantharya Logapperumal (Student)  | Method for Preparing Highly Conducting and Thermally Stable Pvd-fhp Based Electrolytes for Lithium Ion Battery Application | 1987/DEL/2014          | 15.07.2014 |           |            |
| 47 | Prof. Kamal K Kar (ME), Mr. Amit Kumar Yadav (Student) and Mr. Madhur Kasaudhan (Student)  | Method for Preparing Silicon Based Highly Flexible Smart Battery Micro Fiber in the Form of Lithium Ion Batteries          | 1986/DEL/2014          | 15.07.2014 |           |            |
| 48 | Prof. Kamal K Kar (ME), Mr. Amit Kumar Yadav (Student), Mr. Deepak Pandey (Student) and Ms. Sowantharya Logapperumal (Student)         | Method for Preparing Carbon Based Highly Flexible Smart Battery Micro Fiber in the Form of Lithium Ion Batteries           | 1985/DEL/2014          | 15.07.2014 |           |            |
| 49 | Prof. Kamal K Kar (MSP & ME) and Mr. Pankaj Chamoli (Student)  | A Green Reduction Approach for Scalable Synthesis of Bilayer Graphene  | 2035/DEL/2014          | 18.07.2014 |           |            |
| 50 | Prof. Kamal K Kar (MSP & ME) and Mr. Pankaj Chamoli (Student)  | A Green Approach for Reduction of Graphene Oxide Into Graphene Nanosheets by Leaf Extracts                                 | 2060/DEL/2014          | 21.07.2014 |           |            |
| 51 | Prof. Kamal K Kar (ME) and Mr. Pankaj Chamoli (Student)  | A Green Reduction Approach for Graphene Oxide Into Graphene Nanosheets by Urea   | 2059/DEL/2014          | 21.07.2014 | 330807    | 30.01.2020 |
| 52 | Dr. Tarun Gupta (CE) and Mr. Anand Kumar (Student)   | Multiple Slit Nozzle-based High Volume PM2.5 Impactor Assembly   | 2088/DEL/2014          | 23.07.2014 |           |            |
| 53 | Prof. Nishith Verma, Prof. Ashutosh Sharma and Mr. Prateek Khare   | Metal Nanoparticles-doped Antibacterial Agents and Methods of Preparation and Use  | US - 14/462,580        | 19.08.2014 | 9844222   | 19.12.2017 |
| 54 | Prof. Nishith Verma, Prof. Ashutosh Sharma and Mr. Prateek Khare   | Metal Nanoparticles-doped Antibacterial Agents and Methods of Preparation and Use  | CHINA - 201410410762.9 | 20.08.2014 | 104770395 | 28.11.2017 |
| 55 | Dr. Sameer Khandekar (ME), Dr. B BhattCharya (ME), Mr. Abhishek Srivastava, Mr. Rishav Garg , Mr. Utkarsh Sinha and Mr. Shashank Kumar | Bicycle Mounted Solar Energy Harvesting Unit   | 2420/DEL/2014          | 26.08.2014 |           |            |
| 56 | Dr. S. A. Ramakrishna (Physics), Mr. Dheeraj Pratap (Student), , Dr. Sameer Khandekar (ME) and Dr. J Ramkumar (ME)                     | Microfluidic Devices and Methods for Their Preparation Use   | 2232/DEL/2014          | 06.08.2014 |           |            |
| 57 | Dr. P Sensarma (EE) and Mr. Ashok Kumar  | Single-stage Transformer- Less Photovoltaic Inverter   | 2607/DEL/2014          | 11.09.2014 |           |            |
| 58 | Mr. Rajesh Katoch (Student), Dr. Ashish Garg (MSE) and Dr. Rajeev Gupta (Phy, MSE)   | Thin Film Heterostructures   | US - 14/496,452        | 25.09.2014 |           |            |



|    |  |   |                 |            |  |  |
|----|--|---|-----------------|------------|--|--|
| 59 | Mr. Narasimhachari B (Student), Mr. Saumik Bhattacharya (Student), Ms. Megha Nawhal (Student) and Prof. K S Venkatesh (EE)                                   | Controlled Neutral Density Filter for HDRI                                    | 2804/DEL/2014   | 30.09.2014 |  |  |
| 60 | Prof. Durgesh Chandra Rai (CE) and Mr. Vijay Pal Singh   | Aluminium Core Buckling Restrained Brace for Energy Dissipation               | 3053/DEL/2014   | 27.10.2014 |  |  |
| 61 | Dr. K. S. Venkatesh (EE), Mr. Yogesh Soniwal (Student, EE), Dr. Amit Mitra (Maths-Stats)   | Convergent Monotonic Matrix Factorization Based Entire Frame Image Processing | 3035/DEL/2014   | 24.10.2014 |  |  |
| 62 | Dr. P Sensarma (EE) and Mr. Ashok Kumar  | Single Phase Buck-boost Photovoltaic Micro-inverter                           | 3269/DEL/2014   | 12.11.2014 |  |  |
| 63 | Dr. Sameer Khandekar (ME), Prof. S A Ramakrishna (Phy), Mr. Dheeraj Pratap(Phy), Mr. Ankush Panwar (ME), Mr. Prabhanshu Pavecha (ME), Mr. Shobhit Yadav (ME) | Compact Air Cooler using Nano-structured Surfaces                             | 3246/DEL/2014   | 10.11.2014 |  |  |
| 64 | Dr. Animangsu Ghatak (Chemical), Mr. Abhijit Chandra Roy (Chemical)  | Methods for Fabricating Optical Lenses  | US - 15/100,328 | 17.11.2014 |  |  |
| 65 | Dr. Animangsu Ghatak (Chemical), Mr. Abhijit Chandra Roy (Chemical)  | Methods for Fabricating Optical Lenses  | EP - 14866113   | 17.11.2014 |  |  |
| 66 | Dr. Bishakh Bhattacharya and Mr. Jivtesh Singh Aulakh (Research Scholar)   | Composite Panels with Rice Husk Core  | 3386/DEL/2014   | 20.11.2014 |  |  |
| 67 | Prof. Sudhir Misra (CE), Mr. Abhishek Saraf (Project Associate) and Mr. Aniruddha Baral (Student)  | A New Method to Estimate the Impact Strength of Concrete                      | 3580/DEL/2014   | 08.12.2014 |  |  |
| 68 | Dr. Sameer Khandekar (ME), Mr. Sonawane Ravindra Popat (Student) and Prof. K Muralidhar (ME)   | Unsteady Wall Heat Flux Sensor for Extreme Applications                       | 3977/DEL/2014   | 29.12.2014 |  |  |

### 2015

| S.No. | Inventors   | Title  | IPA             | Date       | Grant    | Date       |
|-------|---|--|-----------------|------------|----------|------------|
| 1     | Prof. Animangsu Ghatak (Chemical) and Mr. Nitish Singh  | Adhesive Surface and its Process of Fabrication  | 26/DEL/2015     | 05.01.2015 |          |            |
| 2     | Prof. SSK Iyer (EE), Mr. Anirban Bagui (Phy) and Mr. Anukul Prasad Parhi (Phy)  | Utilizing Glove Box Ante-chamber for Electric-field Annealing Purpose  | 33/DEL/2015     | 06.01.2015 |          |            |
| 3     | Prof. Debopam Das (AE) and Mr. Joydeep Bhowmik (PhD Student)  | Ornithopter  | 59/DEL/2015     | 07.01.2015 |          |            |
| 4     | Prof. S Ganesh (BSBE) and Ms. Mamta Upadhyay (PhD Student)  | An Assay System and Process for Drug Screening for Therapy in Lafora Disease   | 121/DEL/2015    | 14.01.2015 |          |            |
| 5     | Prof. Nishith Verma (Chemical), Dr. J Ramkumar (ME) and Mr. Prateek Khare (PhD)   | Polymeric Nanocomposite Films with Embedded Channels and Methods of Their Preparation and Use  | US - 15/115,263 | 20.01.2015 | 10258975 | 16.04.2019 |
| 6     | Mr. Gangadhar Purohit (MSE), Prof. Deepak Gupta and Prof. Monica Katiyar  | A Process for Thermal Stress Induced Nanometer Scale Separation Between Electrodes and Their Use   | 194/DEL/2015    | 22.01.2015 |          |            |
| 7     | Mr. Himanshu Panday, Ms. Vaishnavi Bhope and Prof. Bishakh Bhattacharya (ME & Design)   | Home Automation System Utilizing Digital Waste   | 212/DEL/2015    | 23.01.2015 |          |            |
| 8     | Dr. Sri Sivakumar (Chemical), Dr. Raj Ganesh S Pala (Chemical), Mr. Arun Prakash Upadhyay (Student) and Mr. D K Behara (Student)  | Click Chemistry Based Approach to Improve the Photostability of Dyes for Long Term Stability Dye Sensitized Photoelectrochemical Water Splitting | 109/DEL/2015    | 13.01.2015 |          |            |
| 9     | Prof. Bishakh Bhattacharya (ME), Prof. Nachiketa Tiwari (ME), Mr. Nayan Jyoti Baishya (Project Engineer), Mr. Himanshu Panday (Student), Mr. Vaibhav Verma (Student), Mr. S Barathy (GAIL), Mr. Raj Kumar Kashyap, Mr. Parivesh Chugh (GAIL), Mr. T P Yuvaraj | A Novel Self Powered, Intelligent Pipe Health Monitoring Robot (PHMR) for Inspecting Gas Pipe Line   | 441/DEL/2015    | 16.02.2015 |          |            |

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|-------------------------------|--|--|------------------------|------------|-----------|------------|
| 10                            | Prof. Sri Sivakumar, Prof. Deepak Kunzru (Chemical), Mr. Sachin Pal (Student) and Mr. Rupesh Singh (Student)   | Metallic Nanocatalyst and Process of Preparation Thereof   | 394/DEL/2015           | 11.02.2015 | 314732    | 26.06.2019 |
| 11                            | Prof. Vinod Tare (CE)  | River-pass Through a Dam or Barrage with Reservoir   | 494/DEL/2015           | 20.02.2015 |           |            |
| 12                            | Mr. Tigmanshu Goyal, Mr. David Kumar, Mr. Shyam Kumar Vemuri, Dr. P M Mohite, Prof. Sudhir Kamle (AE)  | Independently Controlled Gull Inspired Bionic Flapping Wing Mechanism for UAVs   | 509/DEL/2015           | 23.02.2015 |           |            |
| 13                            | Prof. S Anantha Ramakrishna (Phy), Ms. Jhuma Dutta   | Nanobrushes and Methods of Manufacture and Use   | US - 15/122,404        | 25.02.2015 |           |            |
| 14                            | Prof. Ashutosh Sharma, Prof. Sri Sivakumar Ms. Amritha Rammohan, Ms. Gargi Mishra and Mr. Lokesh Tayal   | Generic Fabrication of Hydrophobic/hydrophilic Nanoparticle Encapsulated Carbon Capsules for Theranostic Applications                | 570/DEL/2015           | 27.02.2015 |           |            |
| 15                            | Mr. Shiv Singh (Chemical) and Prof. Nishith Verma (Chemical)   | Method for Preparation of Graphitic Carbon Micro-nanofiber-based Electrodes, Asymmetrically Dispersed with Bimetal Nanoparticles     | 654/DEL/2015           | 10.03.2015 |           |            |
| 16                            | Prof. K S Venkatesh (EE) and Mr. Gogineni Bhargava (Student)   | Conversion of Aspect Ratio   | 584/DEL/2015           | 27.02.2015 |           |            |
| 17                            | Mr. Srinivas Karumanchi (RINL), Mr. Satya Venkata Seshukumar Devarakonda (RINL), Mr. Kanan Kumar Sahoo (RINL), Dr. Brahma Deo (MME), Ms. Ishani Shukla (Student), Dr. Deepu Philip (IME), Dr. Kantesh Balani (MSE), Dr. Madhurai Malathi (MME) | Control Signal Processing Device for Raising and Lowering of Lance and a Process Thereof   | 949/CHE/2015           | 27.02.2015 |           |            |
| 18                            | Dr. Ashwani Kumar Thakur (BSBE) and Mr. B. Gunasekhar (Student)  | Disaggregation and Solubilization of Synthetic Polypeptides  | 757/DEL/2015           | 20.03.2015 |           |            |
| 19                            | Mr. Eshan Sadasivan (Student, Design), Prof. Shantanu Bhattacharya (ME) and Prof. Mainak Das (BSBE)  | Carry Bag Making Machine   | 772/DEL/2015           | 20.03.2015 |           |            |
| 20                            | Prof. Baquer Mazhari, (EE), Ms. Ankita Gangwar   | Organic Thin Film Transistor Merged with a Light Emitting Diode Using an Accumulation Layer as Electrode                             | US - 14/644,220        | 11.03.2015 | 9536935   | 03.01.2017 |
| 21                            | Prof. Baquer Mazhari, (EE), Ms. Ankita Gangwar   | Organic Thin Film Transistor Merged with a Light Emitting Diode Using an Accumulation Layer as Electrode                             | CHINA - 201510109094.0 | 12.03.2015 | 104916659 | 26.12.2017 |
| 22                            | Dr Arnab Bhattacharya, (CSE), Ms. Avani Nandini, Student (CSE)   | Multiple Criteria Decision Analysis  | US - 14/429,064        | 18.03.2015 | 10007883  | 26.06.2018 |
| 23                            | Dr. S Khandekar (ME), Dr. B Bhattacharya (ME) and Mr. Ajay Kumar Jain (Student)  | Shape Memory Alloy (SMA) Wire as Sensor for Taylor Bubble Flow Regime of Two-phase Flows   | 903/DEL/2015           | 31.03.2015 |           |            |
| 24                            | Dr. Abhishek (AE), Mr. Palash Jain (Student) and Kirti Bhatnagar (Student)   | High Efficiency Variable-pitch Vertical Axis Wind Turbine (VAWT)   | 904/DEL/2015           | 31.03.2015 |           |            |
| 25                            | Dr. Vivek Verma (MSE) and Mr. Ankur Awadhiya   | A Process for Preparation of Bioplastics   | 906/DEL/2015           | 31.03.2015 |           |            |
| <b>Financial Year 2015-16</b> |  |  |                        |            |           |            |
| 26                            | Prof. Ashish Garg  | A Printing Based Method of Fabricating a Metal Oxide Thin Film and its Device Component Thereof                                      | 1297/DEL/2015          | 08.05.2015 |           |            |
| 27                            | Dr. Ashwani Kumar Thakur (BSBE) and Mr. Virendra Singh   | Prevention of Surface Adsorption of Calmidazolium Chloride to Inhibit Huntingtin Fragment Aggregation Linked to Huntington's Disease | 1182/DEL/2015          | 28.04.2015 |           |            |
| 28                            | Prof. Kamal K Kar, Mr. raghunandan Sharma, Dr. J. Ramkumar, Prof. M. K. Das  | A Hydrogen/methanol Based Low Working Temperature Polymer Electrolyte Membrane Fuel Cell   | 1586/DEL/2015          | 03.06.2015 |           |            |
| 29                            | Prof. K. S. Venkatesh, Garima Jain   | Human Hand Detection from Structure Light Based 3D Sensor  | 1678/DEL/2015          | 05.05.2015 |           |            |

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|----|--|---|-----------------|------------|---------|------------|
| 30 | Prof. V K Jain (ME), Mr. Satish Kumar (IOC), Dr. Ajay M Sidpara (IIT Kharagpur)  | Rotational-magnetoreological Abrasive Flow Finishing (r-mraff) Process for Nano Finishing of Complex Surfaces/knee Joint Implant  | 1730/DEL/2015   | 09.06.2015 |         |            |
| 31 | Prof. Ashutosh Sharma (Che), Mr. Kunal Mondal (Student, Che) and Mr. Shishir Katiyar (Project Ass, Che)                      | Hierarchically Porous Polymer, Carbon, Silica and Composite Carbon/silica Monoliths with Ultra High Bet Surface Area Synthesized by Combined Templated Sol-gel and Micro-phase Separation for Applications in Supported Metal Catalysis | US- 14/683,070  | 09.04.2015 | 9908102 | 06.03.2018 |
| 32 | Mr. Govind Dayal Singh (Phy) and Prof. S A Ramakrishna (Phy)   | Shadow Masks and Methods for Their Preparation and Use  | US - 14/737,409 | 11.06.2015 |         |            |
| 33 | Ms.kavita rathore,Research Scholar,ME, Prof.Prabhat Munshi, ME, Prof.Sudeep Bhattacharjee, Physics                           | Design of Emission Tomographic Measurement Set-up for Plasma Application  | 2292/DEL/2015   | 22.06.2015 |         |            |
| 34 | Dr. Pratik Sen, Miss Arusha Acharya, Ms Baswati Sengupts, Dr. ramesh Rampani   | Fluorescent Marker for Protein Labeling   | 2774/DEL/2015   | 03.08.2015 |         |            |
| 35 | Prof. S A Ramakrishna (Phy), Mr. Dheeraj Pratap (student), Dr. Sameer Khandekar (ME) and Dr. J Ramkumar (ME)                 | Microfluidic Devices and Methods for Their Preparation Use  | US - 14/818,250 | 04.08.2015 |         |            |
| 36 | Mr. Ravi Raj (Student), Mr. Shantanu Agarwal (NGO), Mr. Nilanjan Maiti (Student), Dr. J Ramkumar (ME)                        | Automatic Mechanical Pricking Machine   | 2898/DEL/2015   | 15.09.2015 |         |            |
| 37 | Dr.Ashwani Kumar Thakur,BSBE , Mr.Abhay Raj Joshi,(Student,BSBE), Dr.Avinash Y.Gahane(Student, BSBE)                         | Method of Extraction for a Non-ionic Surfactant Adsorbed on Biodegradable Polymeric Nanoparticles   | 3003/DEL/2015   | 22.09.2015 |         |            |
| 38 | Mr. Bharat Lal Meena (Phy), Ms. Seema Devi (Phy), Dr. Asima Pradhan, (Phy), Dr. Asha Agrawal (GSVM), Dr. Kiran Pandey (GSVM) | System,method and Device for Diagnosis of Cancer Based on Polarized Fluorescence  | 3052/DEL/2015   | 24.09.2015 |         |            |
| 39 | Mr. Saumen Mandal, Prof. Monica Katiyar, MSE & SCDT  | Organic Thin Film Transistors and Methods for Their Manufacturing and Use   | US - 14/782,600 | 05.10.2015 | 9680097 | 13.06.2017 |
| 40 | Prof. K S Venkatesh(EE), Mr. Yogesh Soniwal, Dr Amit Mitra (Maths-Stats)   | Convergent Monotonic Matrix Factorization Based Entire Frame Image Processing   | US - 14/883,645 | 15.10.2015 | 9940868 | 10.04.2018 |
| 41 | Mr. Ramchander Chepyala (Senior Project Engineer) and Prof. Siddhartha Panda (ChE)   | Microvalve for Fluidic Applications   | 3565/DEL/2015   | 02.11.2015 |         |            |
| 42 | Mr. Ramchander Chepyala (Senior Project Engineer) and Prof. Siddhartha Panda (Chemical)                                      | A Portable Microfluidic Chip Holder   | 3643/DEL/2015   | 07.11.2015 |         |            |
| 43 | Dr. Vivek Verma (MSE) and Mr. Sankalp Verma (MSE)  | A Biomolecule Micro-patterning Method and Patterened Substrate Thereof  | 3696/DEL/2015   | 12.11.2015 |         |            |
| 44 | Prof.J.Ramkumar(ME), Prof.Uday S Racherla (IME), Mr.Shivakumar (Student, DP)   | Peltify Wearable Device for Thermoregulation  | 277649          | 18.11.2015 | Design  | 16.09.2016 |
| 45 | Prof.Shantanu Bhattacharya (ME), Dr.Jhumkee Iyengar(Visiting Faculty,DP), Charu(Student,DP)                                  | Design for Disability:a Waist Wearable for Visually Challenged for Indoor Navigation  | 277650          | 18.11.2015 | Design  | 12.09.2016 |
| 46 | Prof.J.Ramkumar(ME), Prof.Uday S Racherla (IME), Mr.Shivakumar (Student, DP)   | Business Purpose Utility Vehicle-vegetable Cart   | 277648          | 18.11.2015 | Design  | 31.08.2016 |
| 47 | Prof.J.Ramkumar(ME), Prof.Uday S Racherla (IME), Mr.Shivakumar (Student, DP)   | Business Purpose Utility Vehicle-ironing Cart   | 277651          | 18.11.2015 | Design  | 31.08.2016 |
| 48 | Prof.J.Ramkumar(ME), Prof.Uday S Racherla (IME), Mr.Shivakumar (Student, DP)   | Business Purpose Utility Vehicle-saloon   | 277652          | 18.11.2015 | Design  | 18.11.2016 |
| 49 | Dr.Nihar Ranjan Patra(Associate Professor),Civil Engineering, Dr. Argaw Asha Ashango(Former PhD Student,Civil Engineering)   | Stabilized Material for Subgrade Pavement   | 3776/DEL/2015   | 18.11.2015 |         |            |

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|-------------|--|---|---------------|------------|--------|------------|
| 50          | Prof.M.K.Ghorai(CHM), Masthanvali Sayyad(CHM), Yerramsetti Nanaji(CHM)   | A One-pot Process for the Synthesis of Indole and Indole Derivatives  | 3880/DEL/2015 | 27.11.2015 |        |            |
| 51          | Mr. Chandrala Lakshmana Dora, Mr. Kuchimanchi K Bharadwaj and Dr. Debopam Das (AE)   | A System for Particle Generator in PIV Applications   | 4130/DEL/2015 | 16.12.2015 |        |            |
| 52          | Dr.Abhishek(Asst Prof.), AE Dr. Mangal Kothari (Asst Prof.), AE Mr.Ramdas (PhD Student, AE) Ms. Nidhi sh Raj (PhD Student, AE)   | High Endurance Quadrotor Helicopter   | 4184/DEL/2015 | 19.12.2015 |        |            |
| 53          | Mr. Shyam Kumar Choudhary (Tata Steel), Mr. PAVAN KUMAR BIJALWAN (Tata Steel), Mr. SUMITESH DAS (Tata Steel), Mr. Subhash Singha (Student, IITK), Ms. Anuradha Kumari (Student, IITK), Dr. Krishnacharya (Physics) | A Process for Making Superhydrophobic Galvanized Steel  | 1341/KOL/2015 | 28/12/2015 |        |            |
| <b>2016</b> |  |   |               |            |        |            |
| 1           | Dr. Kamal K. Kar (ME), Mr. Jayesh Cherusseri (Student, ME)   | Flexible Supercapacitors Utilizing Electrochemically Active Materials Based Nanocomposite Hybrid Electrodes and Method of Manufacturing Thereof | 201611000089  | 01.01.2016 | 318824 | 23.08.2019 |
| 2           | Dr.Sathesh Mariappan(AP,AE) Dr. Anand Singh(AP,Chm), Sai sandeep Dammati(AE,Student), Kuchimanchi K Bharadwaj(PhD Student,AE), Santosh D.Jadhav (Student,Chm)  | Temperature Sensitive Paint for the Usage in Green Spectrum of Light  | 201611001597  | 15.01.2016 | 324934 | 13.11.2019 |
| 3           | Prof.K.S.Venkatesh,EE Mr.Saumik Bhattacharya(Stydent),EE Ms. Megha Nehwal(student),EE  | High Dynamic Range (hdr) Imaging System and Method Thereof'   | 201611001989  | 19.01.2016 |        |            |
| 4           | Prof.Sameer Khandekar,ME and Prof.Bishakh Bhattacharya,ME  | An Integrated Solar Energy Harvesting and Storage   | 201611002574  | 22.01.2016 |        |            |
| 5           | Anukul Prasad Parhi Reseach Scholar Physics ,Prof.S.Sundar Kumar Iyer,EE   | An Apparatus for Shadow-mask Deposition and Method Thereof  | 201611002575  | 22.01.2016 |        |            |
| 6           | Dr.Neeraj Sinha(Assistant Professor,ME), Mr.Sangh Priy (Student,ME),Rakesh Thapliyal (Technical Supdt,ME)  | Seed Sowing Boot for Grain and/or Granular Fertilizer   | 201611002790  | 25.01.2016 |        |            |
| 7           | Dr.Ashwani Kumar Thakur(BSBE) & Mr.Virendra Singh(PhD Student, BSBE)   | Arginine Derivatives as Polyglutamine Aggregation Inhibitors  | 201611003335  | 29.01.2016 |        |            |
| 8           | Dr.Abhishek(AE),Dr.Abhijit Kushari (AE),Mr.Yonas Gebre(AE),Mr. Palash Jain(AE)   | A Device for Power Control and Storm Protection for Wind Turbine  | 201611003599  | 02.02.2016 |        |            |
| 9           | Prof. Bishakh Bhattacharya, Prof. Nachiketa Tiwari, Dr. J Ramkumar, Mr. Girijesh Mathur (Design) , Mr. Shivansh Tandon (Mathematics), Mr. Chetan Lodhi (BSBE)  | Packaging System for Large Caliber Ammunition   | 280638        | 18.02.2016 | Design | 03.12.2018 |
| 10          | Prof.B.Mazhari,EE Ankita gangwar, EE(PhD Student) 9559754253   | A 3D Integrated Universal Digital Gate  | 201611005433  | 16.02.2016 |        |            |
| 11          | Mr. Shobit Gautam, Mr. Rahul Kothari, Mr. Ashwin Gandhi, Mr. Ankit Belchandan and Dr. Nachiketa Tiwari   | Door Latch with Inbuilt Locking System  | 280700        | 22.02.2016 | Design | 27.03.2017 |
| 12          | Prof.Deepak Gupta(MSE&SCDT), Prof.Ashish Garg(MSE&SCDT) & Ms.Deepa Singh(PhD Student)  | A Method of Fabricating High-performance Poly (Vinylidenedifluoride-trifluoroethylene),P(VDF-TRFE) Films  | 201611005439  | 16.02.2016 |        |            |
| 13          | Prof.D.S.Katti(BSBE), Mr.Nadim Ahmad (PhD Student,BSBE)  | Improved Method for Extraction of Lipopolysaccharide  | 201611004883  | 11.02.2016 |        |            |
| 14          | Mr. Rishi Kant (ME), Dr. Shantanu Bhattacharya (ME), Mr. Abhijit Verma (AE), Mr. Naman Kumar Rawal (AE)  | Micropump for Fluidic Applications  | 201611005750  | 18.02.2016 |        |            |

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|-------------------------------|--|--|------------------|------------|--------------|------------|
| 15                            | Dr.Neeraj Sinha(Assistant Professor,ME), Mr.Indveer Singh (Student,ME), Mr.Jose Philip (Student,ME)  | A Prosthetic Assembly with Dynamic Ankle Joint   | 201611005583     | 17.02.2016 |              |            |
| 16                            | Saumik Bhattacharya(EE,Student), Megha Nahwal(EE,Student), Prof. K.S.Venkatesh(EE)   | Apparatus and Method for Real Time Foreground Extraction   | 201611006602     | 25.02.2016 |              |            |
| 17                            | Dr. Chandravalee Iyengar, Ms. Mitali Bhasin, MR. Sachin N P, Ms. Sneha Parhi, Mr. Swayamsidha Panigrahi, Ms. Apoorva Aggarawal   | Project Umbrella<br>Copyright  | 2325/2016-CO/L   | 26.02.2016 | L-64765/2017 | 14/02/2017 |
| 18                            | Ms.Jhumkee (Chandravalee) Iyenger, Visiting Faculty, Design program, Mr.R.Prithvi Raj (Student, Design program) and Mr.M.Kirti Kalyan (Student,Design program)                                     | Career Cards<br>Copyright  | 1525/2016-Co/L   | 05.02.2016 | L-64980/2017 | 06.03.2017 |
| 19                            | Dr.Shikha Prasad,ME, Mr.Shivam Singh(Student,ME)   | System and Method for Absolute Mass Determination  | 201611007427     | 02.03.2016 |              |            |
| 20                            | Prof. Ashok Kumar (BSBE) and Ms. Apeksha Damania (PhD Student, BSBE)   | Integrated Hybrid Bio-artificial Liver Bioreactor Design and Thereof                                     | 201611007880     | 07.03.2016 |              |            |
| 21                            | Abhinav Arya(Student,M.Tech), Nikunj Agarwal (M.Tech,EE), Waseem Ahmed(PhD,EE), Sandeep Anand(EE)  | Method for Monitoring the Health of Aluminium Electrolytic Capacitor                                     | 201611008693     | 12.03.2016 |              |            |
| 22                            | Prof.Kamal K Kar (ME) , Mr. Raghunandan Sharma, MSP  | Solar Hybrid Polymer Electrolyte Membrane Fuel Cell (PEMFC)  | 201611010631     | 28.03.2016 |              |            |
| <b>Financial Year 2016-17</b> |  |  |                  |            |              |            |
| 23                            | Mr.Saumik Bhattacharya (PhD Student,EE), Prof.Sumana Gupta (EE), Prof.KS Venkatesh(EE)   | Method and System for Expansion of Visibility Range of an Image  | 201611011684     | 01.04.2016 |              |            |
| 24                            | Prof.Ashok Kumar(BSBE) and Ms. Apeksha Damania (PhD Student, BSBE)   | Integrated Hybrid Bio-artificial Liver Bioreactor Design and Thereof                                     | UK - 201607061.7 | 22.04.2016 | 2548167      | 04.03.2020 |
| 25                            | Dr.Abhishek,AE, Dr.Mangal Kothari,AE, Ms.Namrata Gupta (Student,AE), Mr.Vishnu Chipade (Student,AE),Mr.Naveen Gupta (Student,AE),Mr.Rushikesh Chaudharu(Student,AE),Mr. Ranvijay Singh(Student,AE) | A VTOL Unmanned Aerial Vehicle   | 201611015384     | 03.05.2016 |              |            |
| 26                            | Mr.Sachin NP, MDES   | Tea Maker  | 283233           | 07.05.2016 | Design       | 05.05.2017 |
| 27                            | Dr. Deepak Gupta (MSE, SCDT), Mr. Ankit Nagar (Student, MSE, SCDT)   | Anti-counterfeiting Mark with 3-D Features   | 201611015765     | 05.05.2016 |              |            |
| 28                            | Dr.Bushra Ateeq(BSBE),Mr.Vipul Bhatia(PhD Student,BSBE), Ms. Anjali Yadav,(PhD Student,BSBE)   | Medicament and Diagnosisfor Spink1 Positive Cancer   | 201611016564     | 12.05.2016 |              |            |
| 29                            | Prof.Animangsu Ghatak (Che)  | A Process of Fabrication of Optical Lenses   | 201611017355     | 19.05.2016 |              |            |
| 30                            | Prof. Deepak Gupta (MSE&SCDT), Prof. Ashish Garg (MSE & SCDT) & Ms. Deepa Singh (PhD Student)  | A Method of Fabricating High-performance Poly (Vinylidenedifluoride-trifluoroethylene),P(VDF-TRFE) Films | 15/198,703       | 30.06.2016 |              |            |
| 31                            | Dr.Kantesh Balani(AP,MSE), Mr. Abdul Rahim Siddiqui(PhD Student, MSE)  | Process for Preparation of Super Hydrophobic Coating   | 201611020049     | 11.06.2016 |              |            |
| 32                            | Prof.Ashutosh Sharma,CHE Srujan Singh,Student CHE Kunal Mondal,Student CHE   | Process for the Synthesis of Monoliths As Flow-through Material Obtained Via Sol-gel Method              | 201611018954     | 03.06.2016 |              |            |
| 33                            | Dr.Tarun Gupta(CE),Mr.Kaniska Biswas(PhD Student,DP), Mr. Santosh Pramanik(J.Tech Superintendent)  | An Impaction Based Air Sampling Apparatus with a Rotatory of F-centric Nozzle and a Method Thereof       | 201611022179     | 28.06.2016 |              |            |
| 34                            | Mr.K Sri harsha,Civil Student (HWRE), Dr.Shivam tripathi(Asst Prof.,CE),Abhijeet Verma,Student AE, Sunil Nishad, Junior Technician, CE   | Automated Interactive Multi-parameter Recorder and Water Sampler   | 201611019268     | 03.06.2016 |              |            |

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|----|--|--|-----------------|------------|------------|------------|
| 35 | Mr.Sachin NP(M.Des Student), Mr. Ashwin Gandhi(M.Des Student)  | Electric Mono Wheel Cycle (Z0-e)   | 284940          | 04.07.2016 | Design     | 20.06.2017 |
| 36 | Ms.Pratiti Srakar(Student,DP), Prof.J.Ramkumar(ME)   | Multicolor Interchangeable Flaps and Convertible Form of Bag   | 201611023368    | 07.07.2016 |            |            |
| 37 | Dr.Sameer Khandekar(ME), Mr. Navneet Singh(Student,ME), Mr. Piyush Jain(Student,ME),Mr.Varun Rai(Student,ME)   | Nano Polishing of Tubes using Magnetorheological Fluid   | 201611025761    | 27.07.2016 |            |            |
| 38 | Prof.Ashok Kumar(BSBE) and Ms. Apeksha Damania (PhD Student, BSBE)   | Integrated Hybrid Bio-artificial Liver Bioreactor Design and Thereof   | US - 15/224,055 | 29.07.2016 | 10,245,368 | 02.04.2019 |
| 39 | Sachin NP(Student,DP), Prof. Shantanu Bhattacharya(ME),Vimal C (Student,DP), Prof.Satyaki Roy (DP)   | An Efficient Writing Tool for Visually Impaired  | 201611026411    | 02.08.2016 |            |            |
| 40 | Prof.Ashutosh Sharma,CHE Kunal Mondal,Student CHE Prof.Bansi D Malhotra (DTU) Md.Azahar Ali (SRA,CE) Chandan Singh (Student,NPL)                     | Silver Nanoparticles Impregnated Nanoporous Carbon Nanofiber Platform for Biosensor Application                                  | 201611026698    | 04.08.2016 |            |            |
| 41 | Dr.Ashok Kumar,BSBE & Ms.Jyoti Kumari (SRF,BSBE)   | Integrated System of Transportation and Storage of Mammalian Cells using Cryotropic Polymeric Matrix and Thereof                 | 201611021878    | 27.06.2016 |            |            |
| 42 | Dr.Sandeep Anand(EE),Mr.Anup Anurag(EE),Mr.Arun Singh(BT-MT Dual Degree Student)   | A Method for Monitoring of Bond Wire Degradation in Insulated Gate Bipolar Transistor  | 201611029236    | 27.08.2016 |            |            |
| 43 | Dr.Nishchal Kumar Verma(EE), Mr. Rahul Kumar Sevakula(Student,EE) and Mr.Thirukovalluru Raghuvveer (Student,EE)                                      | Condition Monitoring Setup for Long Term Reliability in Fault Recognition  | 201611029228    | 27.08.2016 |            |            |
| 44 | Dr.Ashutosh Sharma (CHE),Mr. Rudra Kumar(Student,CHE) & Ms. Shilpa(Student,CHE)  | Enhanced Electrochemical Performance of Waste Tyre Recycled Activated Carbon as an Anode in Li-ion Battery                       | 201611031120    | 12.09.2016 |            |            |
| 45 | Prof.B.Mazhari,EE Ankita gangwar, EE (PhD Student) 9559754253  | A Thin Film Transistor with High Drain Current Induced by a Trap-assisted Electric Double Layer                                  | 201611031394    | 14.09.2016 |            |            |
| 46 | Mr.Shivakumar(Student), Prof. Uday.S.Racherla(IME),Prof.J. Ramkumar, ME  | A Wearable Device for Maintaining Body Temperature   | 201611031350    | 14.09.2016 |            |            |
| 47 | Dr.Kamal K Kar(ME), Mr.Chhatrasal Gayner (Research Scholar,MSE), Mr.Raghunandan Sharma (Post Doc,ME), Dr.Malay K Das(ME)                             | High Performance Thermoelectric Material with High Electrical Conductivity and Power Factor and Method of Manufacturing the Same | 201611031952    | 20.09.2016 |            |            |
| 48 | Dr.P.Sensarma,EE & Dr.Sridhar Joshi(PhD Student,EE)  | Hybrid Controlled Arrangement to Achieve Linear Electrical to Acoustic Conversion and Method Thereof                             | 201611032621    | 23.09.2016 |            |            |
| 49 | Dr.Sandeep Anand(EE),Mr.Anup Anurag(Research Associate, EE), Mr.Nachiketa Deshmukh (Research Associate, EE), Mr.Maguluri Avinash (M.Tech Student,EE) | A Single-phase Grid Connected Transformerless Photovoltaic Inverter  | 201611036171    | 22.10.2016 |            |            |
| 50 | Mr. Eshan Sadasivan (DP), Prof. Shantanu Bhattacharya (ME), Prof. Mainak Das (BSBE), Prof.Toshib Bagde (DP), Mr. Abhinav Basak (DP)                  | School Bag Convertible to Study Table  | 287945          | 24.10.2016 | Design     | 06.09.2017 |
| 51 | Dr.J.G.Rao (BSBE)  | Micro-RNA and Methods to Improve AAV Gene Expression and Vector Production   | 201611036719    | 26.10.2016 |            |            |
| 52 | Mr. Mritunjay Kumar (Student), Mr. Aboobacker Siddique (Student) and Dr. J Ramkumar (ME)   | Samaritan (Phototherapy Unit)  | 287986          | 03.11.2016 | Design     | 18.09.2017 |
| 53 | Dr.Debopam Das(AE), Mr.Gaurav Seth(Student,AE), Mr.Joydeep Bhowmik(PhD Student,AE)   | A Foldable Wing Design of an Improved Flapping Wing Aerial Vehicle   | 201611038098    | 08.11.2016 |            |            |

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|----|---|--|--------------|------------|--|--|
| 54 | Ms.Aditi Pandey (PhD Student, MSE),Dr.Swati Midha (Post Doc, IITD),Dr.Sourabh Ghosh (ASP Prof., IITD), Dr.Vinod Kumar Nigam (BIT, Mesra), Dr.Kantesh Balani(IITK) | Ha-CeO <sub>2</sub> -Ag Composite for Bone Tissue Implant                  | 201611038479 | 10.11.2016 |  |  |
| 55 | Dr.Siddhartha Panda (ChE), Ms. Mousumi Sinha (PhD Student,ChE)  | Breathalyzer for Disease Detection   | 201611039541 | 19.11.2016 |  |  |
| 56 | Dr.Siddhartha Panda (ChE), Ms. Mousumi Sinha (PhD Student,ChE)  | Polyaniline Linked Metal Phthalocyanines Based Flexible Gas Sensors        | 201611039574 | 21.11.2016 |  |  |
| 57 | Dr.Pradeep Kumar K(EE), Mr.Akash S.Dixit(Student,EE)  | Trench-assisted Fiber for Ftth Applications                                | 201611040999 | 30.11.2016 |  |  |
| 58 | Mr. Sahil Kalra (Research Scholar, ME), Dr. Bishakh Bhattacharya, (ME), Dr. B. S. Munjal, (ISRO)  | A Self Locking Actuation System  | 201611042761 | 15.12.2016 |  |  |
| 59 | Dr.Animangsu Ghatak(ChE), Mr. Abhijit Chandra Roy(PhD Student, ChE),Mr.Mridul Yadav(M.Tech Student,ChE)   | A Method of Fabrication of Bi-convex Optical Lens and Optical Lens Thereof | 201611043743 | 21.12.2016 |  |  |
|    |   |  |              |            |  |  |

**2017**

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|----|---|--|--------------|------------|--------|------------|
| 1  | Dr.J.Ramkumar(ME), Dr. Raman Saxena(ISB), Mr. Shailendra Kumar (DP)   | Bicycle for Carrying Food Articles   | 289821       | 04.01.2017 | Design | 04.12.2017 |
| 2  | Dr.J.Ramkumar(ME), Dr. Raman Saxena(ISB), Mr. Shailendra Kumar (DP)   | Milkman Bicycle  | 289822       | 04.01.2017 | Design | 10.03.2017 |
| 3  | Dr.J.Ramkumar(ME), Dr. Raman Saxena(ISB), Mr. Shailendra Kumar (DP)   | Bicycle for Vegetable Transport  | 289823       | 04.01.2017 | Design | 23.03.2018 |
| 4  | Prof.K.S.Venkatesh(EE),Prof.J. Ramkumar (ME) and Mr.Hitendra Kumar(Student,ME)  | Parametric Anisotropic BRDF for 3D Surface Reconstruction and Micro Texture Evaluation   | 201711001182 | 11.01.2017 |        |            |
| 5  | Prof.Ashutosh Sharma(CHE), Mr. Manish Kulkarni (Senior Scientific of ficer,Center for Nanosciences), Ms.Priyanka Sachan (CHE)   | A Method for Fabricating Microlens Array of SU-8 Photoresist and Microlens Array Thereof   | 201711001428 | 13.01.2017 |        |            |
| 6  | Dr.Md Jaleel Akhtar (EE), Dr.Kamal K Kar (ME), Mr.Prakrati Azad (Student,MSP), Mr.Sandeep Kumar Singh (PhD Student,MSP)   | RF Gas Sensor for the Detection of Hazardous Gases in the Environment  | 201711000102 | 02.01.2017 |        |            |
| 7  | Dr. Ashwani K Thakur (BSBE), Dr. Rituraj Niranjana (BSBE), Mr. Kaushal Prasad Mishra (Project Associate,BSBE)   | Fullerene Nanoparticles and Compositions Thereof for Inhibiting Autophagy  | 201711004577 | 08.02.2017 |        |            |
| 8  | Dr.Sandeep Sangal (MSE), Dr.Kallol Mondal(MSE), Mr.K. Chandrashekhar(Technical of ficer), Mr.Abhinav Varshney (PhD Student, MSE), Ms. Swati Sharma (Former PhD Student)   | A Process for Manufacturing Horseshoes   | 201711004727 | 09.02.2017 |        |            |
| 9  | Mr.Bharat Bhushan(PhD Student), Dr.K.Mondal (MSE), Dr.B.S.Murthy (MME,IIT Madras)   | A Two-step Method for Preparation of Micron Sized, Nanoporous Powder Particles   | 201711004877 | 10.02.2017 |        |            |
| 10 | Mr. Prabhat Kumar Rai (Student, MSE), Mr.Sanjay Chaoudhary (Student,MSE), Dr.Shashank Shekhar(MSE), Dr.Kallol Mondal (MSE)  | Method of Fabrication Based on Controlled Microstructure with Refined and Coarse Grains  | 201711004918 | 10.02.2017 |        |            |
| 11 | Dr. Kallol Mondal(MSE),Mr.V. Venkatesh(IITK), Mr. Nilanjan Mahata(IITK), Mr.Abhishek Pathak (Tata Steel), Mr. Pavan Bijalwan (Tata Steel), Mr.Atanu Banerjee (Tata Steel) | Iron Based Amorphous Alloys using High-phosphorous Blast Furnace Grade Hot Metal   | 201731008474 | 10.03.2017 |        |            |
| 12 | Dr. Sri Sivakumar (Chemical), Dr. Raj Ganesh S Pala (Chemical), Dr. Suresh Valiyaveetil (Associate Prof., NUS), Mr. Sayantan Sasmal (Student, Chem, NUS)                  | Self-assembling Hydrophobic Encapsulating Layer for Perovskites for Enhancing Water and for Enhancing Water and Moisture Stability | 201711008737 | 14.03.2017 |        |            |

|                               |   |  |              |            |        |            |
|-------------------------------|---|--|--------------|------------|--------|------------|
| 13                            | Dr. Sameer Khandekar(ME), Mr. Vikas Marmat(Student,ME), Mr. Archit Tripathi (Student,ME), Mr. Abhinav Kumar Singh (Student, ME), Mr. Siddhartha Paralikar (Student, ME) | A Solar Energy Harvester System  | 201711008821 | 15.03.2017 |        |            |
| 14                            | Mr. Kaniska Biswas(PhD Student, DP), Dr.Tarun Gupta (CE), Mr. Santosh Pramanik (JTS, 4i Lab)  | Air Sampler  | 291998       | 23.03.2017 | Design | 05.06.2018 |
| 15                            | Mr. Kaniska Biswas(PhD Student, DP), Dr.Tarun Gupta (CE), Mr. Santosh Pramanik (JTS, 4i Lab)  | Air Sampler  | 291999       | 23.03.2017 | Design | 30.03.2018 |
| 16                            | Mr. Kaniska Biswas(PhD Student, DP), Dr.Tarun Gupta (CE), Mr. Santosh Pramanik (JTS, 4i Lab)  | Sensor for Black Carbon Determination of Air Sampler   | 292000       | 23.03.2017 | Design | 26.01.2018 |
| 17                            | Dr.Krishnacharya(PHY), Mr.Sanjeev Kumar Ujjain(Project Scientist)   | A Super Hydrophobic Coating Composition and Coating Methods  | 201711009532 | 20.03.2017 |        |            |
| <b>Financial Year 2017-18</b> |   |  |              |            |        |            |
| 18                            | Dr. Ashutosh Sharma (ChE), Dr. Sri Sivakumar (ChE), Mrs. Gargi Mishra (PhD Student),Mr. Souryadeep Bhattacharyya (Student),   | Polydimethylsiloxane (PDMS) Nanoparticles and Process of Synthesizing the Same for Ligand Free Intra-nuclear Delivery of Drugs | 201711012363 | 07.04.2017 |        |            |
| 19                            | Mr.Kaniska Biswas(PhD Student, DP), Ms.Esha Ray(PhDStudent, Earth Science) & Dr.Tarun Gupta, CE   | Drinking Straw   | 201711012717 | 10.04.2017 |        |            |
| 20                            | Dr.Pradipt Sircar(EE), Mr.Arun Singh (Dy Director, Prasar Bharti), Mr. Deshraj Singh (IPS)  | Low-rate Speech Coding Based on Complex Am and Fm Signal Models  | 201711012795 | 10.04.2017 |        |            |
| 21                            | Dr.J.Ramkumar, ME, Mr. Vimal C (Student,Design)   | Irilla (Lamp)  | 292052       | 17.04.2017 | Design | 07.02.2018 |
| 22                            | Dr. Abhishek (AE), Mr. Rahul R(PhD Student,AE)  | Coaxial Rotor System with Asymmetric Rotor Arrangement and Method Thereof  | 201711013049 | 11.04.2017 |        |            |
| 23                            | Dr. Animangsu Ghatak (ChE), Mr. Nitish Singh (Student, ChE)   | Reusable Polymeric Writing Surface or Media and Processes Thereof  | 201711015292 | 01.05.2017 |        |            |
| 24                            | Prof.Vinod Tare(CE)   | Waste Separation System  | 201711016229 | 08.05.2017 |        |            |
| 25                            | Mr. Vishvendra Rustagi (Student, AE), Dr. Anindya Chatterjee(ME), Dr. Mangal Kothari(AE)  | Angular Momentum Device for Stabilization and Control for Tailless Aircraft  | 201711017649 | 19.05.2017 |        |            |
| 26                            | Mr. Kaniska Biswas (Student, DP), Anirudh Kurup(RA, DP), Anurag Yadav (RA, CE), Dr. Tarun Gupta (CE)  | Torchchucks, a New Type of Nunchucks Designed with Two Inbuilt Torch   | 293892       | 19.05.2017 | Design | 20.03.2018 |
| 27                            | Dr. Koumudi Patil (HSS), Mr. Ashish Mohandas (DP, Student)  | Hand Lamp  | 293893       | 19.05.2017 | Design | 15.03.2018 |
| 28                            | Mr. Nitesh Kumar(Student, MSE), Dr. Vivek Verma(MSE), Dr. Laxmidhar Behera(EE), Dr. Kaustubh Kulkarni(MSE), Dr. Bushra Ateeq(BSBE), Mr. Nishat Manzar(Student, BSBE)    | Iron Oxide Nanoparticles and Method of its Production  | 201711016919 | 15.05.2017 |        |            |
| 29                            | Dr. Manas Ghorai (Chem), Mr. Chandan Kumar Shahi(Student, Chem), Mr. Sajan Pradhan(Chem Student), Dr. Aditya Bhattacharyya (Post Doc, Chem)                             | Process for The Synthesis of Quinoxalines  | 201711016754 | 12.05.2017 |        |            |
| 30                            | Mr.Rama Satya Sandilya V (Student,MSE), Mr.Subhankar Khara(Student,MSE),Dr.Shashank Shekhar(MSE),Dr.Kallol Mondal (MSE), Dr.Sandeep Sangal(MSE)                         | Method of Producing Multi-layered Steel with Variable Compositions   | 201711017031 | 15.05.2017 |        |            |
| 31                            | Mr. Ashish Mohandas(DP), Mr. Gautham TR(DP), Dr. Koumudi Patil(HSS),Mr. Ram sajeevan Vishwakarma(Technical Assistant)   | A Workpiece Holding Device   | 201711018637 | 26.05.2017 |        |            |



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|----|--|---|---|------------|--------------|------------|
| 32 | IIT Kanpur   | IIT Kanpur Logo   | 3555543, 3555546,<br>3555542, 3555544,<br>3555540, 3555541 &<br>3555545<br><br>In 7 Classes | 23.05.2017 | Trademark    | 31.05.2018 |
| 33 | Mr. Karthik PB (Student,DP), Dr. Koumudi Patil (HSS)   | Aligno, A Multi Layered Physical Map<br><br>Copyright   | 9009/2017-CO/L  | 30.05.2017 | L-74356/2018 | 10.04.2018 |
| 34 | Mr. Ashish Mohandas (DP), Mr. Gautham TR (DP), Dr. Koumudi Patil(HSS), Mr.Karthik PB(Student, DP), Ms. Pratiti Sarkar(DP)  | 2 Shades, a Collaborative/cooperative Board Game<br><br>Copyright   | 8827/2017-CO/L  | 30.05.2017 | L-68449/2017 | 09.09.2017 |
| 35 | Dr.J.G.Rao(BSBE) & Ms.Nistha Purohit (Sr Project Associate)  | Method of Detecting Adeno-associated Virus (AAV) Sequences  | 201711020338  | 09.06.2017 |              |            |
| 36 | Dr. Abhishek (AE), Mr. R. Rama Krishna (B.tec Student),Mr. Sourav Sinha(B.Tech Student), Mr. Joydeep Bhowmick(PhD Student, AE), Dr. Debopam Das(AE), Dr. Mangal Kothari(AE)                        | Quadrotor Convertiplane Air Vehicle   | 201711020832  | 14.06.2017 |              |            |
| 37 | Ms. Ritika Singh (Student, DP), Dr. Koumudi Patil (HSS)  | Katha<br><br>Copyright  | 9621/2017-CO/L  | 16.06.2017 | L-71516/2017 | 19.12.2017 |
| 38 | Auhin Kumar Maparu(Student,CE), Dr. Sri Sivakumar(ChE), Ms.Beena Rai (TCS), Dr. Ashutosh Sharma (ChE)  | Polydimethylsiloxane (PDMS) Nanostructures and Process of Synthesis Thereof   | 201711021885  | 22.06.2017 |              |            |
| 39 | Dr. Abhishek(AE), Mr. Rajat Tripathi(Student,AE), Mr. M. Rama Krishna (Student, AE), Mr. Sourav Sinha(Student, AE)   | Unmanned Aerial Vehicle System having Vertical Takeoff, Vertical Landing, and Hovering Flight Capabilities  | 201711021886  | 22.06.2017 |              |            |
| 40 | Dr. Vivek Verma (MSE), Mr. Sankalp Verma (PhD Student, MSE)  | Biodegradable Substrates for Flexible Electronics and Manufacturing Method  | 201711028088  | 08.08.2017 |              |            |
| 41 | Dr.Animangsu Ghatak,CHE, Mr. Abhijit Chandra Roy,CHE & Mr. Ravindra Vishwakarma,CHE  | A Smartphone Based Microscope   | 201711028373  | 10.08.2017 |              |            |
| 42 | Dr. Md. Jaleel Akhtar (EE), Mr. Md. Shafi KT (M.Tech Student), Mr. Abhishek Kumar Jha (PhD Student, EE), Mr. Nilesh Kumar Tiwari (PhD Student,EE)  | Metamaterial Inspired Planar Rf Sensor for Simultaneous Measurement of Permittivity and Permeability of Magneto-dielectric Samples and Method Thereof | 201711028351  | 09.08.2017 |              |            |
| 43 | Mr. Nisheeth Kumar Prasad (Student,MSE), Dr. Kallol Mondal (MSE), Mr. Sanjay Choudhary (Tata Steel), Dr. Saurabh Chatterjee (Tata steel), Dr. Saurabh Kundu (Tata Steel)                           | High Phosphorus Pig Iron as Sacrificial Anode for Cathodic Protection of Underground Mild Steel Structures  | 201731029652  | 22.08.2017 |              |            |
| 44 | Mr. Jay Patrikar (Student, AE), Mr. M. Rama Krishna (Student, AE), Mr. Chirag Jha (Student, AE), Mr. Rachit Agarwal (Student, AE), Dr. A.K . Ghosh (AE)  | A Portable Unmanned Aerial Vehicle and Method Thereof   | 201711029820  | 23.08.2017 |              |            |
| 45 | Dr. Satyaki Roy(HSS), Dr. Deepu Philip(IME),Mr.Alkesh Sinha(ME), Mr.Ashwani Roy(ME), Mr. Karthik PB(DP),Mr. Ashish Mohandas(DP)  | Portable Beverage Dispenser   | 201711032866  | 16.09.2017 |              |            |
| 46 | Dr. Animangsu Ghatak (ChE), Mr. Abhijit Chandra Roy (ChE), Mr. Ravindra Vishwakarma (Tech Supt., ChE)  | Microscope System & Method  | 201711034629  | 29.09.2017 |              |            |
| 47 | Dr.Nachiketa Tiwari(ME), Mahendra Kumar Gohil(Student, ME), Saurabh Zajam(Student,ME), Sandep Kumar(Student,ME),Ankur Dwivedi(Student,ME),Madhavrao Londhe(Student,ME),Shalab Vaishnav(Student,DP) | A Device for Measuring the Amount of Fuel Introduced Into a Vehicle   | 201711034630  | 29.09.2017 |              |            |

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|-------------|---|--|--------------|------------|--------|------------|
| 48          | Mr. karthik PB (Student, DP), Dr. Jayesh Sardhara(SGPGI), Dr. N. Tiwari(ME), Dr. Sanjay Behari (SGPGI)  | C1/C2 Distractor and Reducer   | 201711035521 | 06.10.2017 |        |            |
| 49          | Mr. Sanghamitro Chatterjee(Phd Student, Phy), Dr. Sudeep Bhattacharjee(Phy), Mr. Sanjeev K Maurya(Phd student, Phy), Mr. Vyas Srinivasan(Phd student, ME), Dr. Krishnacharya Khare(Phy), Dr. Sameer Khandekar(ME)                                     | A Method for Transforming the Wettability of a Surface   | 201711036788 | 17.10.2017 |        |            |
| 50          | Dr. S. S.K.Iyer (EE), Mr. Eswaran J (Senior Associate, SCDT)  | Portable Charger for Electronic Devices  | 201711038757 | 31.10.2017 |        |            |
| 51          | Dr. Ashok Kumar(BSBE), Mr. Parvaiz Ahmad Shiekh (PhD Student, BSBE)   | Oxygen Releasing Antioxidant Scaffold for Tissue Engineering   | 201711040202 | 10.11.2017 |        |            |
| 52          | Mr. Aditya Choudhary(Dual student,MSE), Ms. Deepa Singh (Student, MSE), Dr. Deepak Gupta (MSE)  | Process for Fabricating POLY (VINYLIDENEDIFLUORIDE-TRIFLUOROETHYLENE) P(VDF-TRFE) Polymer Films  | 201713040466 | 13.11.2017 |        |            |
| 53          | Dr.Ashok Kumar,BSBE & Mr. Parvaiz Ahmad Sheikh(PhD Student,BSBE)  | Elastomeric Biodegradable Antioxidant Polymer and Polymeric Film as Cardiac Tissue Patch and Thereof                                   | 201711041706 | 21.11.2017 |        |            |
| 54          | Mr.Santosh Pramanik(Jr. Tech Superintendent,4i), Mr.Kaniska Biswas(DP), Mr.Abhijit Chandra Roy(PhD Student, ChE)  | Method for Fabricating Micro Structures  | 201711042059 | 23.11.2017 |        |            |
| 55          | Dr. Kamal K Kar (ME), Dr. Nirmal Kumar Gupta (SGPGI), Mr. Mridul Bharadwaj (ME), Mr. Meraj Ahmed (ME), Dr. Malay Kumar Das (ME), Dr. Krishnamurthy Muralidhar (ME), Mrs. Sutapa Mondal (HC, IITK)   | Spherical Tri-leaflet Heart Valve  | 201711043075 | 30.11.2017 |        |            |
| 56          | Prof. Bishakh Bhattacharya, Prof. Nachiketa Tiwari, Dr. J Ramkumar, Mr. Girijesh Mathur (Design) , Mr. Shivansh Tandon (Mathematics), Mr. Chetan Lodhi (BSBE)   | A Packing Case for One or More Large-caliber Ammunition Shells   | 201711043201 | 01.12.2017 |        |            |
| 57          | Dr. Bishakh Bhattacharya (ME), Mr. Shubham Kumar(Student, ME), Mr. Dhruval R Shah(Student, ME), Mr. Harshit Kumar Sankhla(Student, LNMIIT, Jaipur)  | Smart Stick  | 201711043515 | 05.12.2017 |        |            |
| 58          | Dr. Tanmoy Maiti(MSE), Mr. Pinku Roy(M.Tech, MSE), Mr. Pritam Dey (M.Tech, MSE)   | SrTiO <sub>3</sub> :nb Based Nanocomposites with Graphene Oxides and Process of Preparation Thereof                                    | 201711044640 | 12.12.2017 |        |            |
| 59          | Dr.Priyanka Ghosh,CE,Dr.Krishanu Biswas,MSE & Mr.Sreyashrao S (Student,CE)  | Pond Ash-kaolinite Based Geopolymer Brick and Process for Manufacturing the Same   | 201711045206 | 15.12.2017 | 330194 | 24.01.2020 |
| <b>2018</b> |   |  |              |            |        |            |
| 1           | Dr.Shantanu Bhattacharaya(ME) Mr.Akshay Purwar(Student), Mr. Sandip Kumar Jain(Student), Mr. Kuldeepak Mahto(Student),Mr. Nishant Kumar Mr.Swagatam Mitra(Student),Mr.Shishir Kumar Singh(Student),Mr.Virendra Singh, Junior Technical Superintendant | Commode on Wheels  | 301001       | 04.01.2018 |        |            |
| 2           | Mr. Tushar D. Deshpande (PhD, ChE), Mr. Yogesh R.G. Singh (Sr. Proj. Associate, Nanoscience), Dr. Sandip S. Patil (Project Scientist, Nanoscience), Dr. Yogesh M. Joshi (ChE), Dr. Ashutosh Sharma (ChE)  | Method of Fabricating Microporous Elastomer Thin Films with Controllable Surface Pore Morphology and Monomodal Pore Size Distributions | 201811000964 | 09.01.2018 |        |            |
| 3           | Dr.Vivek Verma (MSE), Dr. Ramanathan Gurunath (Chem), Mr. Amit Kumar Sonker(Research Scholar,MSE),Mr.Mezigebu Belay (Research Scholar,MSE), Mr. KousarJahan(Research Scholar, MSE)  | Development of Agar Based Bioplastics by Cross-linking with Diisocyanates  | 201811002306 | 19.01.2018 |        |            |

|                               |   |   |              |            |        |            |
|-------------------------------|---|---|--------------|------------|--------|------------|
| 4                             | Dr.Pradeep Kumar K(EE), Mr. Akash Pandey(M.Tech Student, EE)  | Random Bit Generation System using Optical Chaos in Symmetric Erbium-doped Fiber Lasers and Method Thereof                        | 201811004054 | 02.02.2018 |        |            |
| 5                             | Mr. Kaniska Biswas (PhD Student, DP), Mr. Pushpal Dey (RA,DP), Ms. Esha Ray (Student, Earth Sciences), Dr. B. Bhattacharya (ME), Dr. Tarun Gupta (CE)                 | Ergonomic Retractable Novel Stair<br>(open View)  | 301960       | 02.02.2018 |        |            |
| 6                             | Mr. Kaniska Biswas (PhD Student, DP), Mr. Pushpal Dey (RA,DP), Ms. Esha Ray (Student, Earth Sciences), Dr. B. Bhattacharya (ME), Dr. Tarun Gupta (CE)                 | Ergonomic Retractable Novel Stair<br>(closed View)  | 301961       | 02.02.2018 |        |            |
| 7                             | Dr. D.S. Katti (BSBE), Mr. Nadim Ahamad (Student, BSBE), Ms. Namrata Baruah (PhD Student, BSBE)   | A Simple And cost-effective Protein Purification System and Method Thereof  | 201811006361 | 20.02.2018 |        |            |
| 8                             | Mr. Bharat Bhushan (PhD Student, MSE), Mr. Animesh Dutta (MSE), Dr. B.S. Murty (MSE), Dr. K. Mondal (MSE)   | Process for Preparing Zno Nano-rod Flowerets Supported by Ni Substrate and free-standing Pure Zno Nanorods                        | 201811008439 | 07.03.2018 |        |            |
| 9                             | Ashish Mohandas (Student, DP), Dr. Nachiketa Tiwari (ME), Dr. Sanjay Behari (SGPGI)   | A Patient Transfer System   | 201811009157 | 13.03.2018 |        |            |
| 10                            | Dr. Abhishek Dubey (RA, KGMU), Mr. Vimal C. (Student, DP), Dr. J. Ramkumar (ME), Dr. Balendra Pratap Singh (AP, KGMU), Dr. Kantesh Balani (MSE), Dr. Suryakant (KGMU) | System, Method and Device for Responsive Advancement of Mandible  | 201811009344 | 14.03.2018 |        |            |
| 11                            | Mr. Pushpal Dey (DP), Dr. J. Ramkumar (ME), Dr. Vinita Agarwal (SGPGIMS)  | A Sample Extraction Device and Operator Thereof   | 201811009657 | 16.03.2018 |        |            |
| 12                            | Mr. Shyam Sunder nishad (PhD Student, ME), Mr. Anirban Choudhary (PhD Student, ME), Dr. Ashish Dutta(ME), Dr. Anupam Saxena(ME)                                       | Hand Exoskeleton for Assisting Stroke Patients in Full Extension Exercise of Three Fingers and Grasping/ball-squeezing Exercising | 304112       | 27.03.2018 | Design | 08.01.2020 |
| <b>Financial Year 2018-19</b> |   |   |              |            |        |            |
| 13                            | Mr. Santosh Pramanik (JTS, 4iLab), Mr. Kaniska Biswas (Student, DP), Dr. Pratik Sen, Chem   | Designing Improvement and Implementing New Features to Conventional Ro(reverse Osmosis) Water Purifier Sytems                     | 304338       | 03.04.2018 | Design | 05.03.2019 |
| 14                            | Dr. Ashok Kumar (BSBE), Mr. Arun Kumar Teotia (PhD Student, BSBE)   | Nano-hydroxyapatite Based Porous Polymer Composite Scaffolds for Bioactive Molecule Delivery in Musculoskeletal Regeneration      | 201811015012 | 20.04.2018 |        |            |
| 15                            | Dr. B. Mazhari (EE), Mr. Syed M. H. Rizvi (Student, DP)   | An Organic Thermistor   | 201811015509 | 24.04.2018 |        |            |
| 16                            | Mr. Dhananjay Dubey (Student, MSP), Dr. J. Ramkumar (ME), Dr. V. K. Jain (Retired Prof., ME), Mr. Sanjeev Verma (Tech. Supt.)   | Apparatus for Finishing of Ball using Abrasive Flow Finishing   | 201811016131 | 28.04.2018 |        |            |
| 17                            | Dr. J. Ramkumar (ME), Mr. Amal Sudheendran Kumar (Student, DP), Dr. Mohan Gurjar (SGPGIMS, LKO)   | Automated Subglottic Aspiration Device  | 201811016906 | 04.05.2018 |        |            |
| 18                            | Dr. Sri Sivakumar (ChE), Dr. Raj Ganesh S. Pala (ChE), Ms. Shilpi Saxena (ChE)  | A Method for Synthesis of Metal Nanoparticle encapsulated with a Plurality of Shells of Zeolite                                   | 201811020842 | 04.06.2018 |        |            |
| 19                            | Dr. Tanmoy Maiti (MSE), Ms. Megha Acharya (M.Tech. Student, MSE)  | A Method for Synthesis of N-type Oxide-based Nanocomposite with Graphite for Thermoelectric Application                           | 201811021100 | 06.06.2018 |        |            |
| 20                            | Dr. Manas Ghorai (Chem), Dr. Chandan Kumar Shahi (Post Doc, SCDT), Mr. Sajjan Pradhan (Student, Chem), Dr. Aditya Bhattacharyya (Post Doc, Chem)                      | Process for the Synthesis of 3-spiropiperidino Indolenines  | 201811022519 | 15.06.2018 |        |            |
| 21                            | Mr. Nishant Agarwal (Student, ME), Dr. Niraj Sinha (ME), Dr. Pankaj Wahi (ME)   | Bionici: Affordable Bionic Prosthetic Hand for Transradial Amputee  | 201811024019 | 27.06.2018 |        |            |

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|----|---|---|--------------|------------|-----------|------------|
| 22 | Dr. Aswani Kumar Thakur (BSBE), Mr. Abhayraj S. Joshi (PhD Student, BSBE)   | Peptide Encapsulated Biodegradable Nanoparticles for Treatment of Neurodegenerative Diseases and Preparation Method Thereof       | 201811024748 | 03.07.2018 |           |            |
| 23 | Mr. Parvraj Pachore (Student), Ms. Akansha Jain (Student), Dr. Sandeep Anand (EE), Dr. Saikat Chakrabarti (EE), Mr. Ajay Kumar Verma (NTPC), Mr. Shish Pal Singh Pundir (NTPC), Mr. Subrata Sarkar (NTPC) | Control Device  | 201811024706 | 03.07.2018 |           |            |
| 24 | Ms. Gagandeep Kaur (PhD Student, Chem.), Ms. Savita Kumari (ESNPL), Ms. Piyali Saha (Student, BSBE), Mr. Sandip Patil (ESNPL), Dr. Subramaniam Ganesh (BSBE), Dr. Sandeep Verma (Chem.)                   | Electrospun Fibrous Nanomat Composition and a Method of Synthesizing the Same for Cancer Cell Detection                           | 201811025128 | 05.07.2018 |           |            |
| 25 | Mr. Himanshu Kumar (Student,EE), Mr. Saumik bhattacharya (Student, EE), Dr. Sumana Gupta (EE), Dr. K. S. Venkatesh (EE)   | Method and System for Dehazing Videos and Images in Real-time   | 201811027075 | 19.07.2018 |           |            |
| 26 | Dr. Sandeep Anand (EE), Mr. Pratik Deshmukh (Student, EE), Mr. Abhinav Arya (PhD Student, EE)   | A Voltage Measurement Circuit and Method Thereof  | 201811028927 | 01.08.2018 |           |            |
| 27 | Mr. Santosh Pramanik (JTS, 4i Lab), Mr. Afraz Khan (Alumni, AE), Mr. Ravi Pandey (REO, IPR Cell)  | A Flow Cell and Method Thereof for Optical Measurement of Micro/nano Structure  | 201811029094 | 02.08.2018 |           |            |
| 28 | Dr. A.K. Chaturvedi (EE), Mr. Abhay Kumar Sah (Student,EE)  | A Neighborhood Search Based Large Multiple Input Multiple Output Detector and a Method Thereof                                    | 201811029143 | 02.08.2018 |           |            |
| 29 | Dr. A.K. Chaturvedi (EE), Mr. Abhay Kumar Sah (Student,EE)  | Low Complexity Detection in Multiple Input Multiple Output Systems and A detector Thereof   | 201811029113 | 02.08.2018 |           |            |
| 30 | Mr. Santosh Pramanik (JTS, 4i Lab), Mr. Ravi Pandey (REO, IPR Cell)   | Antibacterial Nano Breathing Nasal Filter   | 201811032893 | 01.09.2018 |           |            |
| 31 | Dr. Jayandharan Giridhara Rao (BSBE), Mr. Shubham Maurya (BSBE)   | Process for Modifying Neddylaton Site of an AAV Vector and Product Thereof  | 201811035192 | 18.09.2018 |           |            |
| 32 | Dr. Siddhartha Panda (ChE), Ms. Kusumita Dutta (PhD Student, CHE/SCDT)  | A Process of Synthesizing a Composite of Aniline, Nphenylglycine and Graphene Oxide and Product Thereof for Sensing of Metal Ions | 201811036105 | 25.09.2018 |           |            |
| 33 | Dr. Jayandharan Giridhara Roa (BSBE), Mr. Bertin Mary (PhD Student, BSBE)   | Glycoengineered Adeno-associated Virus Vectors for Hepatic and Ocular Gene Therapy  | 201811037384 | 03.10.2018 |           |            |
| 34 | Mr. Gaganpreet Singh(R Scholar, ME), Dr. S. A. Ramakrishna (Phy), Dr. J. Ramkumar (ME), Mr. Kumar Vaibhav Srivastava(EE)  | Controlled Micro-texturing of Transparent Conducting Oxide Thin Films for Uniform Transparency                                    | 201811038031 | 08.10.2018 |           |            |
| 35 | Mr. Gaganpreet Singh (Student, ME), Ms. Kajal Chaudhary (PhD Student, MSP), Dr. Kumar Vaibhav Srivastava (EE), Dr. J. Ramkumar (ME), Dr. S. Anantha Ramakrishnan (Physics)                                | A Microwave Absorbing Metamaterial Based Wearable and a Preparation Method Thereof  | 201811038763 | 12.10.2018 |           |            |
| 36 | DORA  | Alumni Association, IIT Kanpur  | 3975358      | 16.10.2018 | Trademark |            |
| 37 | DORA  | Social Entrepreneurs & enterprises, an Alumni Association IITK Initiative   | 3976709      | 17.10.2018 | Trademark |            |
| 38 | DORA  | Startup Master Class, Alumni Association, IIT Kanpur  | 3980554      | 23.10.2018 | Trademark |            |
| 39 | DORA  | SMC Logo  | 3980574      | 23.10.2018 | Trademark | 17.04.2019 |
| 40 | Dr. Srisivakumar (ChE), Dr. Raj Ganesh Pala (ChE), Ms. Shilpi Saxena (ChE)  | Process of Preparing Metal Nanoparticle Clicked Zeolite   | 201811041047 | 30.10.2018 |           |            |
| 41 | Dr. Animansgu Ghatak, ChE, Mr. Nitish Singh (PhD Student, ChE), Mr. Anuj Tiwari (Ex-Dual Degree Student, ChE)   | A Process for Dispersing Metallic Nanoparticles on a Template Surface   | 201811042159 | 08.11.2018 |           |            |
| 42 | Mr. Aman Garg (Sr. Proj. Associate, ME), Mr. Chinthulal V. S. (Proj. Engineer, ME), Dr. Bishakh Bhattacharya (ME), Dr. Devender Gupta (SGPGI)   | A Wireless Pressure Sensor Node for an Inflatable Structure   | 201811042160 | 08.11.2018 |           |            |

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|----|--|--|--------------|------------|--|--|
| 43 | Dr. Jayandharan Giridhara Rao (BSBE), Mr. Shubham Maurya (PhD Student, BSBE)   | Sumoylation Target-site Modified AAV Vector, Methods and Sequence for Gene Therapy               | 201841042550 | 13.11.2018 |  |  |
| 44 | Mr. Bharat Bhushan (PhD Student, MSE), Mr. Prvan Kumar Katiyar (PhD Student, MSE), Dr. Kailol Mondal (MSE), Dr. B.S. Murty (MME, IIT Madras) | Nickel-vanadium Nitride Hydrophobic Alloy Powder   | 201811045364 | 30.11.2018 |  |  |
| 45 | Dr. Manas K. Ghorai (CHM), Mr. Gaurav Goswami (PhD Student, CHM)   | The Synthesis of Tolterodine from Activated Azetidine  | 201811046497 | 08.12.2018 |  |  |
| 46 | Mr. Aman Garg (Sr. Proj. Associate, ME), Dr. Bishakh Bhattacharya (ME), Dr. Anil Agarwal (SGPGI), Dr. Sujeet Gautam (SGPGI)                  | A Sensing-Based Guidance Device for Endotracheal Intubation and a Method for Operating the Same  | 201811046913 | 12.12.2018 |  |  |
| 47 | Dr. J. G. Rao (BSBE), Mr. Sathyanthithan Arumugam, (Student, BSBE), Ms. Bertin Mary (PhD Student, BSBE), Mr. Mohit Kumar (Student, BSBE)     | Identification of Micro-RNA and Methods to Improve Gene Expression from AAV Vector               | 201811047263 | 13.12.2018 |  |  |
| 48 | Dr. S.S.K. Iyer (EE), Mr. Anirban Bagui (PhD Student, Physics)   | A Method of Manufacturing an Organic Semiconductor Film having Improved Conductivity             | 201811047532 | 15.12.2018 |  |  |
| 49 | Ms. Surekha Yadav (PhD Student, MSE), Dr. Krishanu Biswas (MSE), Dr. Arvind Kumar (ME)   | A Multicomponent High-entropy Alloy Composite, a Preparation Method and Characterization Thereof | 201811047924 | 18.12.2018 |  |  |

### 2019

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|----|--|---|--------------|------------|--------|--|
| 1  | Dr. Kamal Krishna Kar (ME & MSP), Dr. J. Ramkumar (ME & MSP), Mr. Yaswanth Kumar Penke (Student, MSP), Mr. Amit Kumar Yadav (PhD Student, MSP), Ms. Iram Malik (PhD Student, MSP), Ms. Alekha Tyagi (PhD Student, MSP) | Mn-Al-Fe Impregnated RGO Hybrid Composite for Arsenic Adsorption and its Sludge as Super-capacitor  | 201911002684 | 22.01.2019 |        |  |
| 2  | Ms. Madhu Rawat (NCFE), Mr. Eswaran Jayaraman (NCFE), Dr. S.S.K. Iyer (EE)   | A Method for Coating on Lignocellulosic Fibrous Material Substrate to Facilitate Building Electronics                                       | 201911004465 | 05.02.2019 |        |  |
| 3  | Dr. Baquer Mazhari (EE), Mr. Biswanath Panda (REO, Samtel), Mr. Suraj Malik (Samtel)   | A Sensor System and Method Thereof  | 201911004819 | 07.02.2019 |        |  |
| 4  | Dr. Siddhartha Panda (ChE), Mr. Narendra Kumar (PhD Student, MSP)  | Development of A-IGZO Based Dual Gate ISFET using Al <sub>2</sub> O <sub>3</sub> as Top Gate/sensing Dielectric                             | 201911005381 | 11.02.2019 |        |  |
| 5  | Mr. Pankaj Singh (PhD Student, Physics), Dr. Asima Pradhan (Physics), Dr. Naren Naik (EE)  | A Spatially Resolved Reflectance Based Bevelled Optical Fibre Probe for Epithelium Layer Diagnostics  | 201911006646 | 20.02.2019 |        |  |
| 6  | Dr. Joydeep Bhowmik (AE), Dr. Debopam Das (AE)   | Novel Spring Induced Ornithopter Wing Design with a Bent Bar  | 314953-001   | 19.02.2019 | Design |  |
| 7  | Dr. D. S. Katti (BSBE), Mr. Binapani Mahaling (PhD Student, BSBE), Mr. Dadi A Srinivasrao (PhD Student, BSBE)  | A Non-invasive Nanoparticle Based Sustained Release Ocular Drug Delivery System for the Treatment of Anterior and/or Posterior Eye Diseases | 201911008173 | 01.03.2019 |        |  |
| 8  | Mr. Auhin Kumar Maparu (Student, ChE), Dr. Sri Sivakumar (ChE), Ms. Beena Rai (TCS)  | Process for Synthesis of Polydimethylsiloxane (PDMS) Nanoparticles  | 201911009242 | 09.03.2019 |        |  |
| 9  | Dr. Abhijit Kushari (AE), Mr. M.C. Keerthi (PhD Student, AE)   | A Traverse System and Method Thereof  | 201911009661 | 13.03.2019 |        |  |
| 10 | Mr. Eswaran Jayaraman (NCFE), Dr. S.S.K. Iyer (EE)   | A Mechanical Scribe to Isolate Solar Cells During Monolithic Fabrication of Organic Solar Cell Modules on Substrates                        | 201911012276 | 28.03.2019 |        |  |

### Financial Year 2019-20

|    |   |  |              |            |  |  |
|----|---|--|--------------|------------|--|--|
| 11 | Dr. S. Qureshi (EE), Ms. Shruti Mehrotra (PhD Student, EE)        | Potential Well Based FDSOI MOSFET (PWFDOSI MOSFET)   | 201911014942 | 13.04.2019 |  |  |
| 12 | Dr. Joydeep Bhowmik (AE), Dr. Debopam Das (AE)                    | A Spring Induced Ornithopter Wing Design   | 201911016240 | 24.04.2019 |  |  |
| 13 | Mr. Aarsh Prakash Agarwal (B. Tech, EE), Dr. K. S. Venkatesh (EE) | A Method for Classifying Touch Response on a Capacitive Touch Screen Panel and Apparatus Thereof             | 201911016923 | 29.04.2019 |  |  |
| 14 | Mr. Gopinath G R (PhD Student, EE), Dr. Shyama P Das (EE)         | Sensorless Permanent Magnet Synchronous Motor Drive with Online Stator Resistance and Load Torque Estimation | 201911017519 | 02.05.2019 |  |  |

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|----|--|---|---------------------------------------|------------|-----------|--|
| 15 | Dr. Ashok Kumar (BSBE), Mr. Syed Muntazir Andrabi (BSBE), Ms. Prerna Singh (BSBE)  | Community Based Integrated Water Filter System for Clean Drinking Water   | 201911018305                          | 08.05.2019 |           |  |
| 16 | Mr. Bishwanath Panda (REO, SCDT), Mr. Muralidharan Balakrishnan (Sr. REO, SCDT), Dr. Monica Katiyar (MSE), Dr. Mazhari Baquer (EE)   | A Hybrid Large Area Display Device  | 201911018821                          | 10.05.2019 |           |  |
| 17 | Dr. J. G. Rao (BSBE), Mr. Shubham Maurya (PhD Student, BSBE), Ms. Bertin Mary (PhD Student, BSBE)  | Recombinant AAV Vector, Post Translational Modification During Packaging, Sequences and Methods   | 201911018990                          | 13.05.2019 |           |  |
| 18 | Mr. Dharendra Kumar Chaudhary (Proj. Scientist, NCFlexi), Dr. S S K Iyer (EE)  | Electron Transport Layer Based on Doped ZnO Layer and Method Thereof  | 201911019219                          | 14.05.2019 |           |  |
| 19 | SIIC Logo  | Startup Incubation & Innovation Centre<br>4 Classes   | 4177624, 4177625,<br>4177626, 4177627 | 15.05.2019 | Trademark |  |
| 20 | Dr. J. G. Rao (BSBE), Ms. Nusrat Khan (PhD Student, BSBE)  | Cytotoxic AAV Vector, Pro-apoptotic Gene, Hepatocellular Carcinoma and Methods  | 201911019997                          | 21.05.2019 |           |  |
| 21 | Mr. Anuj Ram Baittha (Post Doc, Physics), Dr. Sudeep Bhattacharjee (Physics)   | A Compact Table Top Plasma System in a Dipole Magnetic Field for Confinement of Hot Electrons: A Unique Device for Plasma Processing to Simulating Magnetospheres in the Laboratory | 201911020452                          | 23.05.2019 |           |  |
| 22 | Ms. Prerana Singh (Student, BSBE), Mr. Auhin Kumar Maparu (Student, BSBE), Dr. Sri Sivakumar (ChE), Dr. Beena Rai (Principal Scientist, TCS)   | Tissue Engineering Scaffold Derived from Plant Based Material   | 201911021185                          | 29.05.2019 |           |  |
| 23 | Dr. Baquer Mazhari (EE), Mr. Biswanath Panda (REO, SMTTEL), Mr. Vignesh Tirumalai Govindasamy (Sr. Proj. Associate, SAMTEL), Mr. Suraj Malik (Proj. Engg. SAMTEL)  | Device for Calibration Free Monitoring of Fluid Level and Method Thereof  | 201911022436                          | 06.06.2019 |           |  |
| 24 | Dr. Abhijit Kushari (AE), Dr. C.S. Upadhyay (AE), Mr. Rajat Arora (PhD Student, AE), Mr. Chandra Sekar T. (PhD Student, AE), Mr. Keerthi M.C. (PhD Student, AE), Mr. Ramraj H. Sundararaj (PhD Student, AE)  | Force Measurement Arrangement   | 201911022443                          | 06.06.2019 |           |  |
| 25 | Mr. Divyansh Patel (Student, ME), Dr. J. Ramkumar (ME), Dr. V. K. Jain (Professor Retired, ME)   | Large Area Micro-Texturing on Free-Form Surfaces by Flexible-Electrode Through-Mask Electrochemical Machining   | 201911022950                          | 10.06.2019 |           |  |
| 26 | Mr. Avinash Yashwant Gahane (PhD Student, BSBE), Dr. Ashwani Kumar Thakur (BSBE)   | Combination of Fluorenylmethyloxycarbonyl Conjugated Amino Acids (Fmoc-AA) and Membrane Permeabilizing Agents against Gram-negative Bacteria  | 201911023031                          | 11.06.2019 |           |  |
| 27 | Dr. M. L. Rao (Proj. Scientist, NCFlexi), Dr. Y. N. Mohapatra (Physics), Dr. Ashish (Sr. R E, NCFlexi)   | Conductive Aqua Nano-ink Formulation for a Range of Writing Instruments   | 201911023898                          | 17.06.2019 |           |  |
| 28 | Dr. Sddhartha Panda (ChE), Ms. Deepa Bhatt (PhD Student, MSP), Mr. Narendra Kumar (Former PhD Student MSP)   | An IGZO Based Dual Gate Ion Sensitive Field Effect Transistor   | 201911024882                          | 22.06.2019 |           |  |
| 29 | Dr. Jitendra Kumar Bera (CHEM), Dr. Sidharth Chopra (CDRI Lucknow), Dr. Saravanan Matheshwaran (BSBE), Ms. Mandeep Kaur (PhD Student, CHEM), Mr. Ritesh Thakare (CDRI Lucknow), Mr. Arindom Bhattacherya (PhD Student, CHEM), Mr. Prem Anand Murugan (PhD Student, BSBE) | Antibacterial Platinum-N-Heterocyclic Carbene Compounds and Process of Preparation Thereof  | 201911025087                          | 24.06.2019 |           |  |
| 30 | Dr. Dharendra S. Katti (BSBE), Ms. Namrata Baruah (PhD Student, BSBE), Dr. Nadim Ahamad (BSBE)   | A Highly-stable Therapeutic Protein Antigen having Vaccine Application against Shigellosis, and a Simple and Cost-effective Method for Preparing the same                           | 201911026648                          | 03.07.2019 |           |  |

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|----|--|---|------------------|------------|--------|------------|
| 31 | Dr. Jayant K. Singh (ChE), Dr. Preeti (Research Scientist, ChE), Mr. Chandra Shekhar Sahu (M Tech Student, ChE), Mr. Ankit Srivastava (M Tech Student, ChE), Mr. Tek Chand (M Tech Student, ChE), Mr. Vineet Kumar (M Tech Student, ChE)   | A System for Measuring Nutrient in the Soil and Method Thereof                                    | 201911027470     | 09.07.2019 |        |            |
| 32 | Dr. Kamal Krishna Kar (ME & MSP), Dr. J. Ramkumar (ME & MSP), Mr. Gopal Ashok Gupta (Student, MSP)   | Surface Finishing Composition For AFM Process and AFM Process Using the Same                      | 201911029291     | 19.07.2019 |        |            |
| 33 | Dr. Pradeep Kumar K (EE), Mr. Abhishek Anchal (PhD Student, EE), Dr. Pascal Landais (Lecturer, Dublin University, Ireland)   | Frequency and Polarization Shift Free Optical Phase Conjugator                                    | 201911029557     | 22.07.2019 |        |            |
| 34 | Mr. Avisor Bhattacharya (PEO, IITK), Mr. Prabhat Kumar Rai (PhD Student, MSE), Ms. Neetu (PhD Student, MSE), Dr. Kallol Mondal (MSE), Dr. Sandeep Sanghal (MSE), Dr. Shashank Shekhar (MSE), Dr. Chandra Shekhar Upadhyay (AE), Mr. Shubhendu Garg (Student, MSE), Dr. Sankaran S. (IIT Madras), Dr. Bhattacharya Somnath (IIT Madras), Dr. Chandan Srivastava (IISc Bangalore), Dr. Satyam Suwas (IISc Bangalore) | High Strength Steel Composition and Method Thereof  | 201911030090     | 25.07.2019 |        |            |
| 35 | Dr. J. G. Rao (BSBE), Ms. Nusrat Khan (PhD Student, BSBE)  | Targeted AAV Vector, Pro-apoptotic Gene And Therapeutic Applications                              | 201911030910     | 31.07.2019 |        |            |
| 36 | Dr. Tarun Gupta (CE), Mr. Roshna Kumar (Student, CHM), Mr. Ankur Bajaj (Student, BSBE), Dr. Pooja Ramakant (KGMU), Dr. Kul Ranjan Singh (KGMU), Dr. Anand K. Mishra (KGMU)   | Electrosurgical Cautery with Suction Inbuilt  | 320342-001       | 01.08.2019 | Design | 30.09.2019 |
| 37 | Mr. K. Vishwanath (PhD Student, MSE), Dr. Sudhanshu Shekhar Singh (MSE), Dr. Kallol Mondal (MSE)   | Simulated Marine Environment Device for Corrosion Testing   | 201911033731     | 21.08.2019 |        |            |
| 38 | Dr. Nishith Verma (ChE), Mr. Arun Kumar (PhD Student, ChE)   | Use of Carbon Fibers for Removing Soil Toxic Metals and Increasing Micronutrient Supply to Plants | 201911033953     | 22.08.2019 |        |            |
| 39 | Dr. Ramprasad Potluri (EE), Mr. Amit Katheria (EE)   | An Automatic Page Turning Device and Method Thereof   | 201911035640     | 04.09.2019 |        |            |
| 40 | Dr. Braj Bhushan (HSS), Dr. Alok Bajpai (Regency Hospital Pvt. Ltd.), Dr. Shatarupa Thakurta Roy (HSS)   | Assistive Application for Children with Dyslexia and Dysgraphia (AACDD)<br>Copyright              | 14256/2019-CO/SW | 09.09.2019 |        |            |
| 41 | Mr. Shubhankar Khara (M.Tech Student, MSE), Mr. Jayesh Zambre (B.Tech Student, MSE), Dr. Sandeep Sangal (MSE), Dr. Kallol Mondal (MSE), Dr. Bishakh Bhattacharya (ME), Mr. Ashim Bose (Dr. Virendra Swarup Education Centre)   | Art of Making Earthenware with Variable Porosity and High Damping Capacity                        | 201911038028     | 20.09.2019 |        |            |
| 42 | Mr. Surajit Ghosh (M. Tech Student, CSE), Dr. Nisheeth Srivastava (CSE)  | Language-agnostic, Limited Vocabulary Speech Recognition  | 201911038128     | 21.09.2019 |        |            |
| 43 | Ms. Afifa (Proj. Engg., Design Programme), Dr. Koumudi Patil (HSS)   | SPATIA<br>Copyright   | 15118/2019-CO/L  | 25.09.2019 |        |            |
| 44 | Ms. Prerana Singh (Student, BSBE), Mr. Auhin Kumar Maparu (Student, ChE), Dr. Sri Sivakumar (ChE), Ms. Beena Rai (Scientist, TCS)  | An Improved Tissue Engineering Scaffold and a Method for Fabrication Thereof                      | 201911038980     | 26.09.2019 |        |            |
| 45 | Mr. Pawandeep Singh Matharu (Sr. Proj. Engg., ME), Dr. Bishakh Bhattacharya (ME)   | Apparatus and Method for Real-time, in Situ Monitoring of Water Quality                           | 201911041227     | 11.10.2019 |        |            |
| 46 | Mr. Auhin Kumar Maparu (Student, ChE), Ms. Prerana Singh (Student, BSBE), Dr. Sri Sivakumar (ChE), Ms. Beena Rai (Scientist, TCS)  | Polydimethylsiloxane Nanoparticles Coated Scaffolds for Culturing Cells and Tissue Engineering    | 201911043062     | 23.10.2019 |        |            |
| 47 | Mr. Tushar Goswamy (Student, AE), Mr. Priyanshu Gupta (Student, CSE), Mr. Himanshu Kumar (PhD Student, EE), Dr. K. S. Venkatesh (EE)   | A System and Method for Detection of Keystroke using Defocus                                      | 201911044242     | 31.10.2019 |        |            |

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|----|---|---|------------------|------------|---------------|------------|
| 48 | Dr. P. Sensarma (EE), Mr. Vignesh Pogaku (Student, EE)  | Super Buck for High Voltage Step Down Applications  | 201911044392     | 01.11.2019 |               |            |
| 49 | Mr. Akrit Pran Jaswal (PhD. Student, BSBE), Dr. Amitabha Bandyopadhyay (BSBE), Mr. Praveen Kumar Vemula (Associate Investigator, InStem), Mr. Manohar Mahato (Post Doc, InStem)   | Disease Modifying Agents, Drug Delivery System and Method Thereof for the Management of Osteoarthritis                    | 201911044840     | 05.11.2019 |               |            |
| 50 | Mr. Shubham Sharma (M.Tech Student, EE), Dr. Santanu K. Mishra (EE)   | A Noise Decoupling Method for Power PCBs in Low Power Converter Design<br>Copyright                                       | 18061/2019-CO/A  | 15.11.2019 | A-132628/2020 | 07.01.2020 |
| 51 | Mr. Naveen Balaji N (B.Tech Student, AE), Dr. Mangal Kothari (AE), Dr. Abhishek (AE)  | System and Method for Estimation of Yaw Angle for Mobile Objects  | 201911048789     | 28.11.2019 |               |            |
| 52 | Dr. Jubin Mitra (Post-Doc Fellow, CSE), Dr. Sandeep K. Shukla (CSE), Dr. Manindra Agrawal (CSE)   | Hardware Acceleration System, Device And Method for Cryptographic Transactions  | 201911049236     | 29.11.2019 |               |            |
| 53 | Dr. Kamal Krishna Kar (ME & MSP), Dr. J. Ramkumar (ME & MSP), Mr. Kiran Kumar Surthi (PhD. Student, MSP)  | A Process for Synthesis of Nano Particles of LiNi <sub>0.5</sub> Co <sub>0.5</sub> PO <sub>4</sub> (LNCP) and Use Thereof | 201911049732     | 03.12.2019 |               |            |
| 54 | Ms. Kajal Chaudhary (PhD Student, MSP), Dr. J. Ramkumar (ME), Dr. S. A. Ramakrishna (Physics), Dr. K. V. Srivastava (EE), Dr. Praveen C. Ramamurthy (MSE, IISC Bangalore)   | Protective Layer for Microwave Metamaterial Absorbers and Method Thereof  | 201911050380     | 06.12.2019 |               |            |
| 55 | Mr. Siddharth J. Singh (Student, EE), Ms. Vidya Mohan (Proj. Engg., EE), Dr. K. S. Venkatesh (EE)   | Computational Orthographic Image Generator  | 201911050565     | 07.12.2019 |               |            |
| 56 | Dr. Pranav Joshi (ME), Dr. Archana Raichur (ME)   | An Espresso Emulsification Method for Synthesis of Uniform Hollow Polymer Nanoparticles                                   | 201911050823     | 09.12.2019 |               |            |
| 57 | NcFlexe Centre  | FLEXE<br>Trademark  | 4373252          | 10.12.2019 |               |            |
| 58 | Ms. Ekta Surender (Student, Design Prog.), Dr. Koumudi Patil (HSS & Design Prog.)   | The Tinker Bull<br>Design   | 324803-001       | 17.12.2019 |               |            |
| 59 | Ms. Ekta Surender (Student, Design Prog.), Dr. Koumudi Patil (HSS & Design Prog.)   | The Tinker Rhino<br>Design  | 324805-001       | 17.12.2019 | Design        | 24.01.2020 |
| 60 | Ms. Ekta Surender (Student, Design Prog.), Dr. Koumudi Patil (HSS & Design Prog.)   | The Tinker Elephant<br>Design   | 324802-001       | 17.12.2019 |               |            |
| 61 | Dr. Debi Prasad Mishra (AE), Mr. Vishnu Hariharan (Research Scholar, AE)  | Low Nox Fuel Port Array Burner for Emission Control   | 201911052615     | 18.12.2019 |               |            |
| 62 | Dr. Baquer Mazhari (EE), Mr. Nadeem Firoz (Student, EE)   | Current-driven Active Matrix Sensor Array and Method to Measure Sensor Resistance in the Same                             | 201911052830     | 19.12.2019 |               |            |
| 63 | mooKIT Logo   | mooKIT<br>Trademark   | 4385322, 4385323 | 21.12.2019 |               |            |
| 64 | Dr. Siddhartha Panda (ChE), Ms. Deepa Bhatt (PhD. Student, MSP), Mr. Satyendra Kumar (Sr. Proj. Scientist, SCDT)  | A Process for Fabrication of Electrolytic Gated Field-effect Transistor-based Sensors                                     | 201911053908     | 26.12.2019 |               |            |
| 65 | Mr. Siddhant Srivastava (PhD. Student, Design Prog.), Mr. Ayush Gupta (B.Tech Student, BSBE), Dr. Arshad Ahmad (KGMU), Dr. J. Ramkumar (ME & Design Prog.)  | Multipurpose Proctoscope: Nested Type<br>Design   | 325057-001       | 27.12.2019 |               |            |
| 66 | Mr. Siddhant Srivastava (PhD. Student, Design Prog.), Mr. Ayush Gupta (B.Tech Student, BSBE), Dr. Arshad Ahmad (KGMU), Dr. J. Ramkumar (ME & Design Prog.), Dr. K. S. Venkatesh (EE), Mr. Virendra Singh (Technician, ME) | Multipurpose Proctoscope: Hinge Type<br>Design  | 325093-001       | 27.12.2019 |               |            |
| 67 | Mr. Rajarshi Dutta (PhD Student, EE), Dr. Saikat Chakrabarti (EE), Dr. Ankush Sharma (EE)   | A Method for Parameter Estimator of Untransposed Distribution Cable and System Thereof                                    | 201911054415     | 30.12.2019 |               |            |
| 68 | Mr. Vijay Shankar Dwivedi (Student, AE), Dr. A. K. Ghosh (AE), Dr. G. M. Kamath (AE)  | A Novel Control Surface "Auxiron" to Optimize Solar Power Collection of Solar Aircraft                                    | 201911054467     | 30.12.2019 |               |            |



|             |   |   |              |            |  |  |
|-------------|---|---|--------------|------------|--|--|
| 69          | Mr. Shivam Srivastava (Proj. Engg., EE), Dr. Parthasarathi Sensarma (EE)  | Frame Less Automatic Solar Panel Cleaning System<br>Design  | 325177-001   | 30.12.2019 |  |  |
| 70          | Mr. Shivam Srivastava (Proj. Engg., EE), Dr. Parthasarathi Sensarma (EE)  | Frame Less Automatic Solar Panel Cleaning System with Rotating Cleaning Brushes<br>Design             | 325178-001   | 30.12.2019 |  |  |
| 71          | Mr. Shivam Srivastava (Proj. Engg., EE), Dr. Parthasarathi Sensarma (EE)  | Frame Less Automatic Solar Panel Cleaning System with Rotating Cleaning Brushes by Pulley<br>Design   | 325179-001   | 30.12.2019 |  |  |
| 72          | Mr. Shivam Srivastava (Proj. Engg., EE), Dr. Parthasarathi Sensarma (EE)  | Frame Less Automatic Solar Panel Cleaning System for Snow Cleaning<br>Design                          | 325175-001   | 30.12.2019 |  |  |
| 73          | Dr. J. Ramkumar (ME), Mr. Ravi Raj (Student, ME), Mr. Om Prakash (Tech Superintendent, Physics), Mr. Shantanu Agarwal (Research Engineer, Matribhoomi), Mr. Sunil Kumar (Student, ME)   | Amla Grating Machine<br>Design  | 325203-001   | 30.12.2019 |  |  |
| 74          | Mr. Mandeep Singh Rana (PhD Student, EE), Dr. Santanu K. Mishra (EE), Ms. Sneha Suresh (Student, EE)  | A Circuit And A Method for A DC – DC Converter  | 201911054549 | 30.12.2019 |  |  |
| 75          | Ms. Saumya Bohra (M.Tech, EE), Mr. Arnab Sarkar (PhD Student, EE), Dr. Sandeep Anand (EE)   | Regenerative Snubber Circuit for Flyback and Other Converters and Method Thereof                      | 201911054644 | 31.12.2019 |  |  |
| 76          | Mr. Vishwaraj Srivastava (M.Tech Student, MSP), Dr. Siddhartha Panda (ChE)  | A Wearable Device for Assisting a Visually Impaired User  | 201911054738 | 31.12.2019 |  |  |
| <b>2020</b> |   |   |              |            |  |  |
| 1           | Ms. Ekta Surender (Student, Design Prog.), Dr. Koumudi Patil (HSS & Design Prog.)   | Adu – Huli<br>Trademark   | 4415129      | 21.01.2020 |  |  |
| 2           | Dr. Jayandharan Giridhara Rao (BSBE), Ms. Nusrat Khan (PhD. Student, BSBE)  | Exosome-associated AAV (vexosome) Vector in Suicide Gene Therapy, Compositions and Methods Thereof    | 202011003360 | 24.01.2020 |  |  |
| 3           | Dr. Vaibhav Arghode (AE),   | A Peripheral Vortex Reverse Flow Combustor with Coaxial Fuel Injection (PVRF-COAX) And Method Thereof | 202011004332 | 31.01.2020 |  |  |
| 4           | Mr. Devanshu Makani (Netcore tech. Pvt.Ltd.), Dr. Monica Katiyar (MSE), Mr. Madhu Seetharaman (Sr. Proj. Engg., NcFlexi), Mr. Krishnamanohara ((Sr. Proj. Associate, NcFlexi), Dr. Muralidharan Balakrishnan (Sr. REO, NcFlexi) | An Organic Light Emitting Diode based Cluster Display   | 202011004431 | 31.01.2020 |  |  |
| 5           | Dr. Sandeep Verma (CHM), Dr. Ashok Kumar (BSBE), Ms. Apurva Panjla (PhD Student, CHM), Mr. Irfan Qayoom (PhD Student, BSBE)   | Taurine Functionalized Diketopiperazine and Process to Synthesise the Same                            | 202011004783 | 04.02.2020 |  |  |
| 6           | Mr. Ashutosh Kumar Tripathi (Sr. Research Engg., SCDT), Mr. Pradeep Kumar Mahato (Proj. Engg., SCDT), Dr. Deepak Gupta (MSE)  | Methods for High Throughput Fabrication of Devices Based on Piezo, Pyro, and Ferroelectric Polymers   | 202011005025 | 05.02.2020 |  |  |
| 7           | Dr. Nishith Verma (ChE), Mr. Pallab Kumar (PhD. Student, ChE), Ms. Surabhi Shrivastava (M. Tech Student, ChE)   | A System for Simultaneous Detection of Cholesterol, Creatinine and Glucose                            | 202011005115 | 06.02.2020 |  |  |
| 8           | Ms. Prerana Singh (Student, BSBE), Mr. Auhin Kumar Maparu (Student, ChE), Dr. Sri Sivakumar (ChE), Ms. Beena Rai (Scientist, TCS)   | Paper Based Multi-layered Epidermal Equivalent and Methods for the Production Thereof                 | 202011005818 | 11.02.2020 |  |  |
| 9           | Mr. Karan Singh (Managing Director, Force Fit Gym), Mr. Ashok Kumar Prajapati (Junior Tech, Imagineering Lab), Mr. Shivam Sachan (Junior Tech, Central Workshop), Dr. J. Ramkumar (ME)  | Weight Training Device for Cramps, Medical Injury & Exercise in Leg                                   | 327146-001   | 13.02.2020 |  |  |

