List of Patent Applications

National

S.No.	Patent No.	Title	Agency
1.	1372/DEL/93	An improvement in the black ash process for the recovery of water soluble strontium sulphide'	C-MET, Pune
2.	519/DEL/96	Glass composition use in a Silver Paste and to a process for the preparation thereof	C-MET, Pune
3.	320/BOM/98	A solderable type double coat ohmic contact conductor compositions	C-MET, Pune
4.	322/BOM/98	Mosquito Repellent Heater PTC Devices from Low Cost Commercial Grade	C-MET, Pune
5.	321/BOM/98	A method for purification of various grade 1,1,1-Trichloroethane	C-MET, Pune
6.	3847/DEL/98	A Process for the preparation of Strontium Titanate	C-MET, Pune
7	3865/DEL/98	A Silver Epoxy Composition	C-MET, Pune
8	05/DEL/99	A ceramic based Gasifire	C-MET, Kerala
9	856/DEL/99	An improved solder paste composition and to a process of the preparation thereof.	C-MET, Pune
10.	861/DEL/99	A process for the preparation of Hydrochloric Acid for Semiconductors	C-MET, Pune
11.	964/DEL/99	A process for the preparation of methanol for semiconductors	C-MET, Pune
12.	965/DEL/99	A process for the preparation of Sulphuric Acid for semiconductor	C-MET, Pune
13.	966/DEL/99	A process for the preparation of acetone for the Semiconductor	C-MET, Pune
14.	440/DEL/2002	Solder Paste with improved shelf life properties	C-MET, Pune
15.	441/DEL/2002	Improved solder paste composition with residue cleanable with non-ods	C-MET, Pune

		solvents	
16.	442/DEL/2002	A process for the preparation of Silica Aerogel	C-MET, Pune
17.	486/DEL/2002	Preparation of Electronics Grade Barium Carbonate	C-MET, Pune
18.	487/DEL/2002	A process for the preparation of electric grade Strontium Carbonate	C-MET, Pune
19.	915/DEL/2002	A novel process for the preparation of nanostructured organo-inorganic hybrid materials as high energy density cathodes	C-MET, Pune
20.	942/DEL/2002	A process related to preparation of high surface hausmannite (Mn_3O_4) powder	C-MET,Pune
21.	1311/DEL/2002	A process for preparation of submicron and Nano sized Cadmium Sulphide	C-MET, Pune
22.	1312/DEL/2002	A process of preparation of nano sized silver – palladium co-powder	C-MET, Pune

PATENT DOCUMENTS SUBMITTED TO IPR CELL OF DIT

1992-1993

1. "A patent on `improvement in the black ash process for the recovery of water soluble strontium sulphide" developed by Scientists in C-MET Laboratory, Pune is being filed.

1996-1997

2. "Thick film Silver Conduction Composition" By P. Sasidharan, K.R. Dayas and P.A. Abraham.

3. "Glaze composition" By P. Sasidharan & P.A. Abraham.

4. "A process for the preparation of Barium Titanate" by V. Kumar.

1997-1998

5. "Mosquito repellent heater PTC devices from commercial grade raw materials" K.R. Dayas et al. (Submitted for filing)

6. "Double coat solderable ohmic contact conduct compositions on PTC thermistors" K.R. Dayas et.al (submitted for filing)

7. "Ceramic based Biomass Gasifier" P. Sasidharan e al. (Submitted for filing)

8. "Process for preparation of high purity strontium titanate" V. Kumar et al.(Submitted for filing)

1998-1999

9. "Improved Solder Paste Compostion Leading to Easily Cleanable Residue" D.P. Amalnerkar, Shany Joseph, M.V.H. Rao, Sunit Rane, Vijaya Kadam.

10 "Lead Free and Low Softening Glass composition for Conducting Silver Paste used in Solar Photovolaic Cell (SPV) Applications", D.P. Amalnerkar, Sunit Rane, M.V.H. Rao, Vijaya Kadam, Shany Joseph.

11. "Solder Paste Composition for Producing Good Quality Solder Joints", D.P. Amalnerkar M.V.H. Rao, Vijaya Kadam and U.P. Mulik.

12. "Glass Frit for Producing Resistor Pastes used in Hybrid Microelectronic Circuits" D.P. Amalnerkar, M.V.H. Rao, Vijaya Kadam and A.S. Kawale.

13. "Silver paste Composition for Applications in Active and Passive Components" D.P. Amalnerkar, Ashwini Bhagat, Vijaya Kadam, U.P. Mulik.

14 “A Silver epoxy composition by Hybrid Microelectronic and Chip Bonding”, R. Marimuthu, Vijaya Kadam, U.P. Mulik, D.P. Amalnerkar

15. “ A Process for Making Conducting polymer Based Diodes”, Prakash Somani, D.P. Amalnekar.

16. “Conducting Polymer Based Pressure Sensors” Prakash Somani, D.P. Amalnerkar.

17. “Preparation of Slicon Tetrachloride in Novel Fludized Bed Reactor System”, B.B. Kale, S.K. Apte and R.S. Sonawane.

18. “Preparation of Electronic Grade Barium Carbonate by Novel Technique”, B,B, Kale, R.S. Sonawane and S.K. Apte.

19 “Preparation of C-MET Grade Acetone for Semi-Conductor Industry”, B.B. Kale, R,S. Sonawane and S.K. Apte.

20. “Preparation of C-MET Grade Methanol for Semi-Conductor Industry” B.B. Kale, R.S. Sonawane and S.K. Apte.

21. “Preparation of C-MET Grade Hydrochloric acid for Semi-Conductor Industry” B.B. Kale, R.S. Sonawane and S.K. Apte.

22. “Preparation of Optical Fibre Grade Silicon Tetrachloride”, B.B. Kale.

23. “ Preparation of C-MET grade Sulfuric Acid” U. Rambabu, R.S. Sonawane and P.K. Khanna.

24. “ A Method for purification of various grades of 1,1,1-trichloroethane”, R. Marimuthu and V. Kumar.

1999-2000

25. The following Indian patent applications have been submitted for filing Indian Patents through IPR Cell of DoE:

26. “A Process for preparation of Glass Frit Based Thick Film Pastes”, M.V.H.Rao, Vijaya Kadam, G.J. Phatak and D.P. Amalnerkar.

27. “Conducting Polymer Composite for Rechargeable Battery” K. Gurunathan and D.P. Amalnerkar.

28. “Conducting Polymer Based Pressure Sensor”, Prakash Somani and D.P. Amalnerkar.

29. “Paladium Silver Paste of Thick Film Hybrid Circuits”, G.J. Phatak, S. Rane, V. Kadam, S.Joseph and D.P. Amalnerkar.

2001-2002

30. "A process for the preparation of silica aerogel" P. Sasidharan, R. Ratheesh, S.N. Potty, P.A. Abraham and K.P. Murali.

31. "Solder paste with improved shelf life properties" U.P. Mulik, S.Joseph, G.J. Phatak and D.P. Amalnerkar.

32. "Improved solder paste composition with residue cleanable with non-ODS solvents" G.J. Phatak, S.Joseph, D.P. Amalnerkar and U.P. Mulik.

33. "A Process for preparation of nano sized cadmium sulphide" P.K.Khanna and R.M. Gorte.

34. "A Process for preparation of nano sized silver-palladium co-powder" P.K. Khanna.

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35. A Novel process for the preparation of nano-structured organo-inorganic hybrid materials as high energy density cathode for rechargeable lithium Battery- A.V. Murugan, B.B. Kale, B.K.Das and Vijaymohanan-Indian Patent Application no. 915/DEL/2002.

36. mprovement in process related to preparation of high surfaces area Hausmannite (Mn_3O_4) powder- B.B. Kale, S.K. Apte, R.S. Sonawane, A.V. murugan and B.K. Das-Indian Patent Appl. No. 942/DEL/2002.

37. Removal of oxides during the purification of Cadmium, N.R. Munirathnam, D.S. Prasad, Ch. Sudheer and T.L. Prakash (Indian patent application)

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38. A process for preparation of nano sized cadmium suphide, P.K. Khanna and R.M. Gorte, Ind. Patent (filed) 2003.

39. A process for preparation of nano sized silver – palladium co-powder, P.K. Khanna, Ind. Patent (filed) 2003.

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41. Development of poled polymer films based on m-itroaniline doped PMMA and their second harmonic generation for optoelectronic device applications, Y.S. Negi, R.K. Goyal, S.R. Damakale, P.V. Adhyapak and R.C. Aiyer, Indian Patent (filed) 2004.

42. Development of optical grade m-nitroaniline and PMMA doped single crystals for optoelectronic applications, Y.S. Negi, P.V. Adhyapak, R.K. Goyal, S.R. Damakale and R.C. Aiyer, Indian Patent (filed) 2004.

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43. Development of new Claus process for photocatalytic decomposition of H_2S using novel metal oxide photocatalysts, J.S. Yoo, J.O. Baeg, C.W. Lee, B.B. Kale and W. Dong, Korea Patent No. 04-0083366 (October 19,2004)
44. Preparation method of indium nano particles, K.W.Jun, P.K.Khanna, J-O Baeg and K-B Hong, ,Korean Patent applied 2004-96837 (24, 11. 2004)
45. Preparation method of indium phosphide nano particles quantum dot, K.W.Jun, P.K.Khanna, J-O Baeg and K-B Hong, Korean Patent applied 2004-110740 (22.11.2004)
46. Preparation method of indium phosphide nano particles quantum dot, K.W.Jun, P.K.Khanna, J-O Baeg and K-B Hong, Korean Patent applied 2004- 110740 (22. 12. 2004)
47. TOP mediated one-step preparation of nanocrystalline silver powder for application in electronics, P.K.Khanna, S. Charan and N. Singh, Ind.Patent (applied),Jan. 2005
48. Process Development for Optical Grade Poled Polymer Films Based on m-Nitroaniline doped PMMA as Frequency Doubler Material for Optical Devices, Y.S. Negi, R.K. Goyal, S.R. Damkale, P. V. Adhyapak and R.C. Aiyer, International Patent Applied (2004)
49. Preparation of New m-Nitroaniline Doped Recycled Polystyrene Free Standing Films as Frequency Converter for Optical Devices, International Patent,Y.S. Negi, R.K. Goyal, S.R. Damkale, P. V. Adhyapak and R.C. Aiyer, International Patent Applied (2004)
50. m-Nitroaniline (m-NA) Doped Polycarbonate(PC) based Free Standing Films for Frequency Converter for Optical Devices, Y.S. Negi, R.K. Goyal International Patent Applied (2004).
51. PMMA Coated m-Nitroaniline Single crystals with Improved SHG useful as Frequency Doubler Material, Y.S. Negi, P.V. Adhyapak, R.K. Goyal, S.R. Damakale and R.C. Aiyer, International Patent applied (2004).
52. Process Development and Characterization of NLO Active m-Nitroaniline Doped Recycled Polystyrene Films as Low Cost Material for Optoelectronics Applications, Y.S. Negi and R.K. Goyal, Indian Patent Applied (2004).

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53. Process development of nano-sized silver powder by double reduction method, P.K. Khanna, S. Charan, S. Deshmukh and Y. Gokhale , Ind. Patent (filed), 2006.
54. Photoproduction of hydrogen under visible light using Q-CdS-glass nanocomposite, B.B. Kale, S.K. Apte, R.S. Sonawane, S.D. Naik, US Patent-Filed- 2005.
55. Preparation of CdS/CdSSe doped glasses for optical cut off filters, Sanjay K. Apte, Ravindra S. Sonawane, Sonali D. Naik and Bharat B. Kale, Indian Patent-Filed 2005.