

## PATENT DETAILS (2019 onwards)

Year-2023						
Sl. No.	Patent Holder (Inventor)	Department of Inventor	Patent Application No. /Patent No.	Title of the Patent	Status (Filed/Published/Granted)	Date of (Filed/Published/Granted)
1	Prof. Ajit Kumar, Mr. Mathanlal K/M.Tech student	Mechanical Engg.	202331002665	Multi-arm drilling equipment for a blast hole drilling machine used in opencast Mines	Filed	12.01.2023
2	Prof. Sukanta Das, Mr. Goutam Goswami/Research Scholar	Electrical Engg.	202331002547	A system for Volt/hertz Speed control of squirrel Cage induction Motor for Minimum	Filed	12.01.2023
3	Prof. Shibayan Sarkar, Mr. Rakesh Kumar/SRF	Mechanical Engg.	202331002558	An in-pipe Hydrokinetic Turbine (iphkt)Structure	Filed	12.01.2023
4	Prof. Vivek Bajpai, Mr. Arnab Das/SRF	Mechanical Engg.	202331003165	A variable diameter e-shaped rail-clip fastened on rail for uniform stress distribution	Filed	16.01.2023
5	Prof. A. K. Nirala, Mr. Atul Kumar/PhD. Scholar	Physics	202331004043	A high magnification Digital Holographic Nanoscopy (DHN) system and the application thereof	Filed	20.01.2023
6	Prof. Vivel Bajpai, Prof. N. K. Singh, Mr. Rajesh Sahoo/Reaserch Scholar	Mechanical Engg.	202331006063	A laser welding set up with dual focal lens for laser welding of dissimilar materials	Filed	31.01.2023
7	Prof. Sushrut Das, Mr. Sourabh Santosh/SRF	Electronics Engg.	202331006062	A RF sensor antenna to monitor the net Electromagnetic radiation in the ambient caused by various wireless services	Filed	31.01.2023
8	Prof. Pawan Kumar Singh, Ms. Saumya Singh/SRF, Prof. S. K. Bhaumik/Deptt. Of Chemical Engg	Mechanical Engg.	202331006061	A system for measuring thickness of	Filed	31.01.2023
9	Prof. S. K. Gupta, Mr. Suyog Gupta/SRF	ESE	202331012411	Integrated River-Health Investigation System (IRIS)	Filed	23.02.2023
10	Prof. Sandipan Kumar Das, Prof. Siddhartha Sengupta, Prof. Soumyajit Sen Gupta, Prof. Arun Kumar Samanta	Mechanical Engg., Chemical Engineering	202331017619	An integrated fluidized bed reactor system for Ammonia combustion to obtain hydrogen and power and method for the same	Filed	15.03.2023

11	Prof. Biswajit Chowdhury, Prof. Asim Bhaumik, School of Material Sciences, Indian Association for the Cultivation of Science (IACS), Mr. Sudip Bhattacharjee, PhD. Student, (IACS), Mr. Aniruddha Singha, PhD. Student, IIT(ISM)	Chemistry and Chemical Biology	202331021352	A heterogeneous catalyst for the synthesis of acrylic acid	Filed	25.03.2023
12	Prof. Shikha Singh, Mr. Vikram Singh/M. Tech Student, Mr. Shubham Sonwane/M. Tech Student	Management Studies & Industrial Engineering	202331028699	A process for the development of an electric vehicle, collecting its real-time data for predicting the battery's state of health/charge	Filed	20.04.2023
13	Prof. Ajay Suri, Mr. Ankur Singh/Research Scholar	Petroleum Engineering	202331028786	A natural, biodegradable kinetic hydrate inhibitor composition	Filed	20.04.2023
14	Prof. Anil Kumar Nirala, Mr. Atul Kumar, PhD Scholar	Physics	202331034539	Digital Holographic Nanoscopic System for 3-d Super-resolution Imaging of Reflective Surface, defects and cracks	Filed	17.05.2023
15	Prof. Pawan Kumar Singh, Prof. Vivek Bajpai, Mr. Meet Naik/M. Tech Scholar, Ms. Saumya Singh/Research Scholar	Mechanical Engg.	202331032045	An improved micro-channel heat sink device with curved section for efficient cooling of electronic devices	Filed	05.05.2023
16	Prof. Vivek Bajpai, Prof. A. R. Dixit, Mr. Ravi Shankar Rai/Research Scholar, Mr. Ratnesh Raj/Research Scholar	Mechanical Engg.	202331032454	Cavity cleaner to remove support structures from 3d printed internal cylindrical cavity and method thereof	Filed	08.05.2023
17	Prof. T. K. Naiya , Mr. Yogesh Dhandhi/Research Scholar	Petroleum Engineering	202331039244	A green demulsifier for application in the petroleum industry and a process for the preparation thereof	Filed	08.06.2023
18	Prof. Biswajit Chowdhury, Mr. Akash Surajlal Rane/Student, Mr. Aniruddha Singha/Student	Chemistry and Chemical Biology	202331045425	A catalyst for the synthesis of cyclic urea, a process for the preparation thereof	Filed	06.07.2023

19	Prof. Vivek Bajpai, Mr. Rajesh Sahoo/PhD. Scholar, Mr. Sumit Kumar/M. Tech Student	Mechanical Engg.	202331048632	Smart flow governing system for dielectric circulation and filtration	Filed	19.07.2023
20	Prof. Sagar Pal, Mr Shaon Dey/SRF, Mr. Abhay Shankar Patra, Principal Researcher/Raw Material Division, TATA Steel R&D	Chemistry and Chemical Biology	202331055061	A copolymeric reagent for treatment of coal tailings and a process for the preparation thereof	Filed	17.08.2023
21	Prof. S. Pichiah, Miss Santana Chandra, Dr. Priya Mukherjee, Ms. Ankita Rani	Environmental Science & Engineering	202331057077	Solar and LED based domestic water purification system	Filed	25.08.2023
22	Prof. Sagar pal, Mrs. Arpita Roy/SRF	Chemistry and Chemical Biology	202331064343	An injectable hydrogel with pH sensitivity and a process for the preparation thereof	Filed	25.09.2023
23	Prof. A. K. Samanta, Prof. Sandipan Das, & Prof. Soumyajit Sengupta	Chemical Engg. , Mechanical Engg.	202331073657	Dual Fluidized Bed Chemical Looping Gasification System for hydrogen production and process of production of hydrogen therein	Filed	30.10.2023
24	Prof. Anirban Ghosal, Prof. Sukanta Das, Mr. Amit Kumar Singh/Research Scholar	Electrical Engg.	202331074730	Multi-Phase Synchronous Buck Converter for the Charging Stage of An Off board Electric Vehicle Charger	Filed	02.11.2023
25	Prof. Gajendra K. Vishwakarma and Prof. Atanu Bhattacharjee	Mathematics & Computing	202331075387	Missing data integration using a combination of mean score and inverse probability weighted approaches and multiple imputation	Filed	04.11.2023
26	Dr. Atanu Bhattacharjee, Prof. Gajendra K. Vishwakarma	Mathematics & Computing	202331075388	A Machine learning tool for selecting feature from high dimensional data	Filed	04.11.2023
27	Prof. Mrinal Sen, Mr. Devensh Raj, B.Tech/Mining Engg.	Electronics Engg. and Mining Engg.	202331075967	System and method of remote detection of faults in electronic circuits using hardware-simulation linkup using machine learning	Filed	07.11.2023
28	Prof. R. N. Hota, Mr. Nandan Kumar Jha/JRF and Mr. Vikram/B.Tech Student	Mechanical Engg.	202331077213	System to measure sound attenuation characteristics of cavity backed perforated acoustic liner in presence of grazing and bias flow	Filed	11.11.2023

29	Prof. Sandipan Das, Prof. A. K. Samanta, & Prof. Soumyajit Sengupta	Chemical Engg. & Mechanical Engg.	202331078073	A system for ammonia combustion with two stage coupled combustor	Filed	16.11.2023
30	Prof. Sowmiya Chawla, Prof. Sujit Kumar Dash, Dr. Lalima Banerjee/Former PhD. Scholar, Civil Engg.	Civil Engg.	202331077988	A method of building geocell reinforced railway tracks, over weak subgrade, using recycled coal overburden as subballast	Filed	16.11.2023
31	Prof. Amit Rai Dixit, Mr. Mahip Singh/Head, Innovation Hiub, Dr. A.P.J. Abdul Kalam Technical University, Lucknow, U.P., Dr. Anuj Kumar Sharma/Dept. of Mechatronics, Dr. A.P.J. Abdul Kalam Technical University, Lucknow, U.P	Mechanical Engg.	202331079637	An Isothermal propulsion system of metal cutting operation by Minimum quantity lubrication process maintaining fluid temperature above freezing point	Filed	23.11.2023
32	Prof. Vipin Kumar, Mr. Nishant Pandey, Mr. Ankur Singh	Environmental Science & Engineering	202331080987	An electrochemical reactor for cathodic recovery of copper from wastewater	Filed	29.11.2023
33	Prof. S. Narayanan, Prof. R. N. Hota, Prof. Deepak Kumar Mandal, Mr. Aadil Kureshee/Research Scholar, Mr. Nandan Kumar Jha/JRF, Mr. Vikram/B.Tech	Mechanical Engg.	202331082467	Acoustic driven twin jet injector system for the control of sprays, thermoacoustic oscillations in a combustor	Filed	04.12.2023
34	Prof. S. Narayanan, Prof. R. N. Hota, Prof. Deepak Kumar Mandal, Mr. Aadil Kureshee/Research Scholar, Mr. Nandan Kumar Jha/JRF, Mr. Vikram/B.Tech	Mechanical Engg.	202331084799	A system for enhancing evaporation rate of single and multi-component twin drops by acoustic streaming	Filed	12.12.2023
35	Prof. Vivek Bajpai, Mr. Prince Anand, Mr. Rajesh Sahoo, PhD Scholar	Mechanical Engg.	202331086020	A method of hybrid metal rapid manufacturing by fused filament fabrication and sand casting	Filed	16.12.2023
36	Prof. Kishor Bhaskarrao Nandapurkar, Mr. Shouvik Saha/M. Tech Student	Electrical Engg.	202331087041	System and method to measure magnetic field using gmr sensor and a linearizing faster digitizer	Filed	19.12.2023

37	Prof. Sandipan Das, Prof. Aditi Sengupta & Mr. Laltu Chandra/SRF	Mechanical Engg.	202231069382	Method and system for optimum usage of ammonia by generating power using coupled heat exchanger-combustor	Published	06.01.2023
38	Prof. Ajay Suri, Mr. Ankur Singh/ Phd Scholar	Petroleum Engg	202231076188	A natural, biodegradable kinetic hydrate inhibitor composition and a process for the preparation thereof	Published	06.01.2023
39	Prof. Ajay Suri, Mr. Ankur Singh/ PhD Scholar	Petroleum Engg	202231061959	A natural, biodegradable kinetic hydrate inhibitor and a process for the preparation thereof	Published	06.01.2023
40	Prof. Shibayan Sarkar, Mr. Rakesh Kumar/SRF	Mechanical Engg.	202331002558	An in-pipe Hydrokinetic Turbine (iphkt)Structure	Published	20.01.2023
41	Prof. Vivek Bajpai	Mechanical Engg.	202331006063	A laser welding set up with dual focal lens for laser welding of dissimilar materials	Published	10.02.2023
42	Prof. Vivek Bajpai	Mechanical Engg.	202331003165	A variable diameter e-shaped rail-clip fastened on rail for uniform stress distribution	Published	10.02.2023
43	Prof. Aditya Kumar	Chemical Engg.	202231066156	A bio-degradable water-repellent jute for Multipurpose applications and a process for the preparation thereof	Published	10.02.2023
44	Prof. Sandipan Kumar Das, Prof. Siddhartha Sengupta, Prof. Soumyajit Sen Gupta, Prof. Arun Kumar Samanta	Mechanical Engg., Chemical Engineering	202331017619	An integrated fluidized bed reactor system for Ammonia combustion to obtain hydrogen and power and method for the same	Published	31.03.2023
45	Prof. S. K. Gupta, Mr. Suyog Gupta/SRF	ESE	202331012411	Integrated River-Health Investigation System (IRIS)	Published	10.03.2023
46	Prof. Shikha Singh, Mr. Vikram Singh/M. Tech Student, Mr. Shubham Sonwane/M. Tech Student	Management Studies & Industrial Engineering	202331028699	A process for the development of an electric vehicle, collecting its real-time data for predicting the battery's state of health/charge	Published	31.03.2023
47	Prof. Ajay Suri, Mr. Ankur Singh/Research Scholar	Petroleum Engg	202331028786	A natural, biodegradable kinetic hydrate inhibitor composition and a process for the preparation thereof	Published	28.04.2023
48	Prof. Vivek Bajpai, Prof. A. R. Dixit, Mr. Ravi Shankar Rai/Research Scholar, Mr. Ratnesh Raj/Research Scholar	Mechanical Engg.	202331032454	Cavity cleaner to remove support structures from 3d printed internal cylindrical cavity and method thereof	Published	28.04.2023

49	Prof. Sukanta Das, Mr. Goutam Goswami/Research Scholar	Electrical Engg.	202331002547	A system for Volt/hertz Speed control of squirrel Cage induction Motor for Minimum	Published	19.05.2023
50	Prof. Anil Kumar Nirala, Mr. Atul Kumar, PhD Scholar	Physics	202331034539	Digital Holographic Nanoscopic System for 3-d Super-resolution Imaging of Reflective Surface, defects and cracks	Published	23.06.2023
51	Prof. Pawan Kumar Singh, Prof. Vivek Bajpai, Mr. Meet Naik/M. Tech Scholar, Ms. Saumya Singh/Research Scholar	Mechanical Engg.	202331032045	An improved micro-channel heat sink device with curved section for efficient cooling of electronic devices	Published	06.10.2023
52	Prof. T. K. Naiya , Mr. Yogesh Dhandhi/Research Scholar	Petroleum Engg	202331039244	A green demulsifier for application in the petroleum industry and a process for the preparation thereof	Published	06.10.2023
53	Prof. Biswajit Chowdhury, Prof. Asim Bhaumik, School of Material Sciences, Indian Association for the Cultivation of Science (IACS), Mr. Sudip Bhattacharjee, PhD. Student, (IACS), Mr. Aniruddha Singha, PhD. Student, IIT(ISM)	Chemistry and Chemical Biology	202331021352	A heterogeneous catalyst for the synthesis of acrylic acid	Published	06.10.2023
54	Prof. Vivek Bajpai, Mr. Rajesh Sahoo/PhD. Scholar, Mr. Sumit Kumar/M. Tech Student	Mechanical Engg.	202331048632	Smart flow governing system for dielectric circulation and filtration	Published	06.10.2023
55	Prof. Sagar Pal, Mr Shaon Dey/SRF, Mr. Abhay Shankar Patra, Principal Researcher/Raw Material Division, TATA Steel R&D	Chemistry and Chemical Biology	202331055061	A copolymeric reagent for treatment of coal tailings and a process for the preparation thereof	Published	13.10.2023
56	Prof. S. Pichiah, Miss Santana Chandra, Dr. Priya Mukherjee, Ms. Ankita Rani	ESE	202331057077	Solar and LED based domestic water purification system	Published	13.10.2023

57	Prof. Amitesh Kumar, Prof. J. Thangaraj & Prof. Vishnu Priye	Electronics Engg.	202131058195	Six Load Cell Structure based All Optical Weighbridge	Published	20.10.2023
58	Prof. Gajendra K. Vishwakarma and Prof. Atanu Bhattacharjee	Mathematics & Computing	202331075387	Missing data integration using a combination of mean score and inverse probability weighted approaches and multiple imputation	Published	08.09.2023
59	Prof.. Atanu Bhattacharjee, Prof. Gajendra K. Vishwakarma	Mathematics & Computing	202331075388	A Machine learning tool for selecting feature from high dimensional data	Published	10.11.2023
60	Prof. Sandipan Das, Prof. A. K. Samanta, & Prof. Soumyajit Sengupta	Mechanical Engg.	202331078073	A system for ammonia combustion with two stage coupled combustor	Published	10.11.2023
61	Prof. R. N. Hota, Mr. Nandan Kumar Jha/JRF and Mr. Vikram/B.Tech Student	Mechanical Engg.	202331077213	System to measure sound attenuation characteristics of cavity backed perforated acoustic liner in presence of grazing and bias flow	Published	01.12.2023
62	Prof. A. K. Nirala, Mr. Atul Kumar/PhD. Scholar	Physics	202331004043	A high magnification Digital Holographic Nanoscopy (DHN) system and the application thereof	Published	01.12.2023
63	Prof. Sowmiya Chawla, Prof. Sujit Kumar Dash, Dr. Lalima Banerjee/Former PhD. Scholar, Civil Engg.	Civil Engg.	202331077988	A method of building geocell reinforced railway tracks, over weak subgrade, using recycled coal overburden as subballast	Published	01.12.2023
64	Prof. Amit Rai Dixit, Mr. Mahip Singh/Head, Innovation Hiub, Dr. A.P.J. Abdul Kalam Technical University, Lucknow, U.P., Dr. Anuj Kumar Sharma/Dept. of Mechatronics, Dr. A.P.J. Abdul Kalam Technical University, Lucknow, U.P	Mechanical Engg.	202331079637	An Isothermal propulsion system of metal cutting operation by Minimum quantity lubrication process maintaining fluid temperature above freezing point	Published	01.12.2023
65	Prof. P. K. Sadhu	Electrical Engg.	201731023466	A high frequency virtual reactor in power system with dispersed generators to control fault current and method of operation	Granted	24.02.2023
66	Prof. Ajay Mandal	Petroleum Engg	201831026697	Process for the preparation of novel sunflower oil-derived gemini	Granted	07.06.2023



				surfactants of non-ionic nature and compositions thereof for enhanced oil recovery application		
67	Prof. Ajay Suri, Mr. Ankur Singh/ PhD Scholar	Petroleum Engg	202231061959	A natural, biodegradable kinetic hydrate inhibitor and a process for the preparation thereof	Granted	13.07.2023
68	Prof- Sagar Pal	Chemistry and Chemical Biology	201831022160	Biopolymeric super absorbent hydrogel and its preparation thereof	Granted	25.07.2023
69	Prof. Ajit Kumar & Prof. Niranjana Kumar	Mechanical Engg.	202231031901	Four-Lobed Swirl-Inducing Pipe	Granted	26.07.2023
70	Prof. Pradip Kumar Sadhu, Prof. N. K. Singh & Prof. Nitai pal	Electrical Engg.	201731035534	Solar based hybrid heating system and method with automatic load impedance matching for low-wattage metallic appliances	Granted	13.09.2023
71	Prof. Pradip Kumar Sadhu	Electrical Engg.	201731041025	Combined solar and thermal system and method for heating metallic appliances under constant load conditions	Granted	14.09.2023
72	Prof. Pradip Kumar Sadhu	Electrical Engg.	201731041196	Solar modules based heating system and method using mirrored current under impedance matched conditions-	Granted	21.09.2023
73	Prof. Pradip Kumar Sadhu	Electrical Engg.	201631000136	A high frequency fly-back multizone resonant inverter with ac input source for multi-area induction heating	Granted	09.10.2023
74	Prof. Pradip Kumar Sadhu	Electrical Engg.	201731040411	Solar induction heating system using high frequency hybrid resonant inverter under csi mode	Granted	26.10.2023
75	Prof. Biswajit Chowdhury	Chemistry and Chemical Biology	201831036761	A process for preparation of cyclic/acyclic alkenes	Granted	10.11.2023
76	Prof. Pradip Kumar Sadhu & Prof. Nitai Pal	Electrical Engg.	201731035228	Solar based hybrid heating system and method with constant load conditions for low-wattage metallic appliances	Granted	20.11.2023
77	Prof. Pradip Kumar Sadhu	Electrical Engg.	201731040782	Solar induction heating system using high frequency modified half bridge series resonant inverter under vsi mode	Granted	04.12.2023



78	Prof. Sukanta Das	Electrical Engg.	202131000212	Low-cost 10 kva intelligent-power-module based inverter for ac machines	Granted	18.12.2023
79	Prof. Somnath Yadav	Chemistry and Chemical Biology	202131023578	A process for the preparation of molnupiravir (eidd-2801)	Granted	21.12.2023
80	Prof. Vivek Bajpai	Mechanical Engg.	201931049978	A machine structure to reduce vibration of micro-milling machine	Granted	28.12.2023
81	Prof. Vikas Mahto	Petroleum Engg	202031039791	An additive for depressing the pour point of waxy crude oils	Granted	27.12.2023

### Year-2022

Sl. No.	Patent Holder (Inventor)	Department of Inventor	Patent Application No. /Patent No.	Title of the Patent	Status (Filed/Published/Granted)	Date of (Filed/Published/Granted)
1	Prof. Jhasaketan Nayak	Physics	202231010704	Transition metal oxide ceramic nanoparticles for gas sensors and a process for the preparation thereof	Filed	28.02.2022
2	Prof. Arun Dayal Udai & Prof. Zafar Alam	Mechanical Engg.	202231011033	System and method for flexible honing of internal surface of elongated cylindrical workpiece longitudinally	Filed	01.03.2022
3	Prof. Biswajit Chowdhury	Chemistry	202231013790	Development of heteroatoms doped carbon-based catalyst for CO2 fixation reaction	Filed	14.03.2022
4	Prof. Deepak Kumar Mandal & Prof. S. Narayanan	Mechanical Engg.	202231030421	System and method for enhancing evaporation rate of multi component drops by acoustic streaming	Filed	27.05.2022
5	Prof. Ajit Kumar & Prof. Niranjan Kumar	Mechanical Engg.	202231031901	Four-Lobed Swirl-Inducing Pipe	Filed	03.06.2022
6	Prof. Shibayan Sarkar	Mechanical Engg.	202231031891	A Self-adjustable flap blade Hydrokinetic Turbine	Filed	03.06.2022
7	Prof. P.K. Sadhu, Prof. Nitai Pal, Prof. Arijit Baral, Prof. K. C. Jana, Prof. Anirban Ghosal	Electrical Engg.	202231032196	A hybrid renewable energy driven bidirectional wireless charging system for dynamic and static electric vehicle	Filed	06.06.2022

8	Prof. Vivek Bajpai	Mechanical Engg.	202231032536	Turning insert with lubricating passage along the normal plane for minimization of friction and cutting force	Filed	07.06.2022
9	Prof. Sekhar Chandra Dutta, Prof. Sarat Kumar Panda, Prof. Sanket Nayak, Prof. Lohitkumar Nainegali	Civil Engg.	202231040574	A method of Constructing building structures on backfilled opencast mines	Filed	15.07.2022
10	Prof. Vivek Bajpai	Mechanical Engg.	202231044867	A structure of EDM head for a portable type Maglev EDM	Filed	05.08.2022
11	Prof. Zafar Alam	Mechanical Engg.	202231048536	A system and method to control a pneumatic medical bed through electroencephalography signals	Filed	25.08.2022
12	Prof. Kesavan Ravi	FMME	202231050039	A polymer-based passive day time radiative cooling (PDRC) material and a process for the preparation thereof	Filed	01.09.2022
13	Prof. Ajit Kumar & Prof. Niranjan Kumar	Mechanical Engg.	202231058712	An improved hydraulic steering system for load haul dump vehicles	Filed	14.10.2022
14	Prof. Mahendra Nandanwar	Chemical Engg.	202231061507	A process for the selective removal/recovery of ionic species from aqueous/non-aqueous solution using capacitive de-ionization	Filed	28.10.2022
15	Prof. Ajay Suri	Petroleum Engg.	202231061959	A natural, biodegradable kinetic hydrate inhibitor and a process for the preparation thereof	Filed	31.10.2022
16	Prof. Aditya Kumar	Chemical Engg.	202231066156	A bio-degradable water-repellent jute for Multipurpose applications and a process for the preparation thereof	Filed	18.11.2022
17	Prof. S. Narayanan	Mechanical Engg.	202231068071	An improved Air foil with Dimples for Noise Control	Filed	25.11.2022
18	Prof. Sandipan Das & Prof. Aditi Sengupta	Mechanical Engg.	202231069382	Method and system for optimum usage of ammonia by Generating power using coupled heat exchanger-Combustor	Filed	01.12.2022

19	Prof. Shibayan Sarkar	Mechanical Engg.	202231069692	An Ellipsoid Cross Flow Hydrokinetic Turbine	Filed	02.12.2022
20	Prof. Vikas Mahto	Petroleum Engg.	202231073800	An additive for improving the flow properties of crude oils and a process for the preparation thereof	Filed	20.12.2022
21	Prof. Ajay Suri	Petroleum Engg.	202231076188	A natural, biodegradable kinetic hydrate inhibitor composition and a process for the preparation thereof	Filed	28.12.2022
22	Prof. Vipin Kumar	ESE	202231076821	An electrode assembly for electrochemical biosensing of heavy metals and a process for the preparation thereof	Filed	29.12.2022
22	Prof. Vikas Mahto	Petroleum Engg.	202031039791	An additive for depressing the pour point of waxy crude oils	Published	18.03.2022
23	Prof. Vikas Mahto	Petroleum Engg.	202031051570	Development of aloe vera quantum dots as low dosage hydrate inhibitor for petroleum industries	Published	27.05.2022
24	Prof. Vivek Bajpai	Mechanical Engg.	202231032536	Turning insert with lubricating passage along the normal plane for minimization of friction and cutting force	Published	08.07.2022
25	Prof. Shibayan Sarkar	Mechanical Engg.	202231031891	A Self-adjustable flap blade Hydrokinetic Turbine	Published	08.07.2022
26	Prof. Sukanta Das	Electrical Engg.	202131000212	Low-cost 10 kva intelligent-power-module based inverter for ac machines	Published	08.07.2022
27	Prof. Vivek Bajpai	Mechanical Engg.	202231044867	A structure of EDM head for a portable type Maglev EDM	Published	12.08.2022
28	Prof. Zafar Alam	Mechanical Engg.	202231048536	A system and method to control a pneumatic medical bed through electroencephalography signals	Published	09.09.2022
29	Prof. Pankaj Jain	FMME	202131012695	A device to clean ambient air with filter cloth and a method of recovery thereof	Published	30.09.2022

30	Prof. Somnath Yadav	Chemistry	202131023578	A process for the preparation of molnupiravir (eidd-2801)	Published	02.12.2022
31	Prof. Vikas Mahto	Petroleum Engg.	202231073800	An additive for improving the flow properties of crude oils and a process for the preparation thereof	Published	23.12.2022
32	Prof. Shibayan Sarkar	Mechanical Engg.	202231069692	An Ellipsoid Cross Flow Hydrokinetic Turbine	Published	30.12.2022
33	Prof. P.K. Sadhu	Electrical Engg.	393014	A high frequency full bridge series resonant inverter with ac input source	Granted	25.03.2022
34	Prof. P.K. Sadhu	Electrical Engg.	395435	Photovoltaic-thermoelectric-photovoltaic (pv-te-pv) multilayer device for enhancing solar electric power generation with reduced area requirement.	Granted	26.04.2022
35	Prof. P.K. Sadhu	Electrical Engg.	399304	Solar induction heating system using high frequency hybrid resonant inverter under vsi mode	Granted	16.06.2022
36	Prof. P. K. Sadhu, Prof. Arijit Baral & Prof. Nitai Pal	Electrical Engg.	400850	A hybrid particulate matter (pm) emission control device having electrostatic precipitator and high frequency induction heating coil for diesel engine and method for the same	Granted	05.07.2022
37	Prof. P.K. Sadhu & Dr. Nitai Pal	Electrical Engg.	403045	A system for induction heated sterilization of surgical instruments and a method for the same	Granted	04.08.2022
38	Prof. P.K. Sadhu	Electrical Engg.	405442	A pacemaker battery recharger for enhancing the service life	Granted	31.08.2022
39	Prof. P.K. Sadhu	Electrical Engg.	405729	A system of photovoltaic-integrated solar induction heating and solar thermal heating using high frequency full bridge series resonant inverter under zsi (z-impedance source inverter) mode for load impedance matching and method for the same	Granted	05.09.2022

40	Prof. P.K. Sadhu & Dr. Nitai Pal	Electrical Engg.	409320	Contactless emergency lighting and communication system with axial portability for underground mines.	Granted	19.10.2022
41	Prof. P.K. Sadhu	Electrical Engg.	409428	A system of photovoltaic integrated solar induction heating and solar thermal heating using high frequency full bridge series resonant inverter under vsi(voltage source inverter) mode and method for the same	Granted	20.10.2022
42	Prof. P. K. Sadhu	Electrical Engg.	409799	A photovoltaic integrated system and method for heating metallic appliances under variable load conditions	Granted	25.10.2022
43	Prof. P. K. Sadhu	Electrical Engg.	413988	A high frequency hybrid resonant inverter with ac input source.	Granted	08.12.2022
44	Prof. Sanjoy Mandal	Electrical Engg.	414659	Breathe analysis device for health assessment	Granted	15.12.2022

### Year-2021

Sl. No.	Patent Holder (Inventor)	Department of Inventor	Patent Application No. /Patent No.	Title of the Patent	Status (Filed/Published/Granted)	Date of (Filed/Published/Granted)
1	Prof. Sukanta Das	Electrical Engg.	202131000212	Low-cost 10 kva intelligent-power-module based inverter for ac machines	Filed	04/01/2021
2	Prof. S. C. Bhowmik, Prof. Tanmay Dutta	Mining Engg. MME	202131029096	Slurry pumping for hoisting of ore from an underground mine	Filed	29.06.2021
3	Prof. Somnath Yadav	Chemistry	202131023578	A process for the preparation of molnupiravir (eidd-2801)	Filed	27.05.2021
4	Prof. Pankaj Jain	FMME	202131012695	A device to clean ambient air with filter cloth and a method of recovery thereof	Filed	24.03.2021
5	Prof. R. K. Chaudhary	Electronics Engg.	202131037215	A substrate integrated waveguide filter based multiple-input-multiple-	Filed	17.08.2021

				output antenna system for interweave and underlay cognitive radio operation		
6	Prof. Amitesh Kumar, Prof. J. Thangaraj & Prof. Vishnu Priye,	Electronics Engg.	202131058195	Six Load Cell Structure based All Optical Weighbridge	Filed	14.12.2021
7	Prof. Vivek Bajpai	Mechanical Engg.	202031054445	A magnet driven servo mechanism for macro/micro electrical discharge machining (edm)	Published	05.02.2021
8	Prof. Subrata Kr. Ghosh	Mechanical Engg.	202031005648	Composite Material for Brake pads	Published	13.08.2021
9	Prof. Nirupama Mandal	Electrical Engg.	201931054793	Method for real time monitoring of liquid level for wireless transmission system	Published	02.07.2021
10	Prof. P.K. Sadhu	Electrical Engg.	359838	Emission control device for diesel engine to reduce the Particulate Matters in exhaust gases and the method for tha same	Granted	26.02.2021
11	Prof. P.K. Sadhu	Electrical Engg.	359490	Solar induction heating system using high frequency modified half bridge series resonant inverter under CSI mode	Granted	25.02.2021
12	Prof. Alok Sinha	ESE	360353	Novel System for regenerating and reusing nZVI/ZVI Particles in waste water treatment.	Granted	05.03.2021
13	Prof. S. K. Gupta	ESE	373169	Apparatus for Rapid treatment of solid organic waste	Granted	29.07.2021
14	Prof. Tanmoy Maity	MME	376686	An arrangement for replacement of bypass diode by relay in a solar photovoltaic system	Granted	08.09.2021
15	Prof. Sagar Pal	Chemistry	378107	A Flocculant for the reduction of Pollutant content from mine process water	Granted	28.09.2021
16	Prof. S. R. Samadder	ESE	384138	A Process for The Preparation of Bio-coagulant Using Moringa Oleifera Seed Defatted Cake for The	Granted	10.12.2021

				Removal of Fine Particles from Coal Washery Effluent		
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**Year-2020**

Sl. No.	Patent Holder (Inventor)	Department of Inventor	Patent Application No. /Patent No.	Title of the Patent	Status (Filed/Published/Granted)	Date of (Filed/Published/Granted)
1	Prof. Subrata Kumar Ghosh	Mechanical Engg.	202031005648	Composite material for brake pads	Filed	10.02.2020
2	Prof. Vikas Mahto	Petroleum Engg.	202031039791	An additive for depressing the pour point of waxy crude oils	Filed	14.09.2020
3	Prof. Pankaj Kumar Jain	FMME	202031045441	A device with an improved design of sharpening blade with application in pencil sharpener	Filed	19.10.2020
4	Prof. S. K. Gupta	ESE	202031046099	Apparatus for rapid treatment of solid organic waste	Filed	22.10.2020
5	Prof. Vikas Mahto	Petroleum Engg.	202031051570	Development of aloe vera quantum dots as low dosage hydrate inhibitor for petroleum industries	Filed	26.11.2020
6	Prof. Vivek Bajpai	Mechanical Engg.	202031054445	A magnet driven servo mechanism for macro/micro electrical discharge machining (edm)	Filed	15.12.2020
7	Prof. Ajay Mandal	Petroleum	201831026697	Process for the preparation of novel sunflower oil-derived gemini surfactants of non-ionic nature and compositions thereof for enhanced oil recovery application	Published	24.01.2020
8	Prof. Pradip Kumar Sadhu, Prof. Arijit Baral, Prof. Nitai Pal	Electrical Engg.	201731025438	A hybrid particulate matter (pm) emission control device having electrostatic precipitator and high frequency induction heating coil for diesel engine and method for the same	Published	31.07.2020
9	Prof. Biswajit Chowdhury	Chemistry	201831036761	A process for preparation of cyclic/acyclic alkenes	Published	03.07.2020



10	Prof. Vivek Bajpai	Mechanical Engg.	201931049978	A machine structure to reduce vibration of micro-milling machine	Published	24.07.2020
11	Prof. Pankaj Kumar Jain	FMME	202031045441	A device with an improved design of sharpening blade with application in pencil sharpener	Published	04.12.2020
12	Prof. S. K. Gupta	ESE	202031046099	Apparatus for rapid treatment of solid organic waste	Published	04.12.2020
13	Prof. Pradip Kumar Sadhu, Prof. Nitai Pal, Prof. Arijit Baral	Electrical Engg.	341969	A high frequency modified half bridge resonant inverter with ac input source.	Granted	20.07.2020
14	Prof. V P Sharma, Prof. Vikas Mahto	Petroleum Engg.	347244	Effectiveness of Sorbiton Mono Oleate as pour point depressant on Indian Waxy crude oil	Granted	21.09.2020
15	Prof. Vikas Mahto	Petroleum Engg.	354715	Soya lecithin quantum dots as anti-agglomerants and methodology of preparing the same	Granted	29.12.2020

### Year-2019

Sl. No.	Patent Holder (Inventor)	Department of Inventor	Patent Application No. /Patent No.	Title of the Patent	Status (Filed/Published/Granted)	Date of (Filed/Published/Granted)
1	Prof. Vivek Bajpai	Mechanical Engg.	201931049978	A machine structure to reduce vibration of micro-milling machine	Filed	04.12.2019
2	Prof. Nirupama Mandal	Electronics Engg.	201931054793	Method for real time monitoring of liquid level for wireless transmission system	Filed	31.12.2019
3	Prof. P. K. Sadhu	Electrical Engg.	201731035534	Solar based hybrid heating system and method with automatic load impedance matching for low-wattage metallic appliances	Published	12.04.2019

4	Prof. P. K. Sadhu	Electrical Engg.	201731041196	Solar modules based heating system and method using mirrored current under impedance matched conditions.	Published	24.05.2019
5	Prof. P. K. Sadhu Prof. S. K. Panda	Electrical Engg. Civil Engg.	201731040658	Solar Induction heating system using high frequency hybrid resonant inverter under VSI Mode.	Published	17.05.2019
6	Prof. P. K. Sadhu Prof. Nitai Pal	Electrical Engg.	201731040664	Solar Induction heating system using high frequency hybrid resonant inverter under ZSI Mode.	Published	17.05.2019
7	Prof. P. K. Sadhu Prof. S. K. Panda	Electrical Engg. Civil Engg.	201731041025	Combined Solar and thermal systems method for heating metallic appliances under constant load conditions.	Published	17.05.2019
8	Prof. P. K. Sadhu	Electrical Engg.	201731040782	Solar Induction heating system using high frequency modified half bridge series resonant inverter under VSI Mode	Published	17.05.2019
9	Prof. P. K. Sadhu	Electrical Engg.	201731040675	Solar Induction heating system using high frequency modified half bridge series resonant inverter under CSI mode.	Published	17.05.2019
10	Prof. P. K. Sadhu	Electrical Engg.	201731040937	A Photovoltaic integrated system and method for heating metallic appliances under variable load conditions.	Published	17.05.2019
11	Prof. P. K. Sadhu,	Electrical Engg.	201731040764	Solar Induction heating system using high frequency modified half bridge series resonant inverter under ZSI mode.	Published	17.05.2019
12	Prof. Sagar Pal	Chemistry	201731038017	A Flocculant for the reduction of Pollutant content from mine process water	Published	03.05.2019
13	Prof. P. K. Sadhu	Electrical Engg.	201731034927	Solar based hybrid heating system and method with variable load conditions for low-wattage metallic appliances	Published	05.04.2019
14	Prof. P. K. Sadhu	Electrical Engg.	201731035228	Solar based hybrid heating system and method with constant load	Published	05.04.2019

				conditions for low-wattage metallic appliances		
15	Prof. P. K. Sadhu	Electrical Engg.	201731040411	Solar Induction heating system using high frequency hybrid resonant inverter under CSI Mode.	Published	17.05.2019
16	Prof. Alok Sinha	ESE	201831008017	Novel System for regenerating and reusing nZVI/ZVI Particles in waste water treatment.	Published	06.09.2019
17	Prof. Vikas Mahto	Petroleum Engg.	201831022071	SOYA LECITHIN QUANTUM DOTS AS ANTIAGGLOMERANTS AND METHODOLOGY OF PREPARING THE SAME	Published	20.12.2019
18	Prof. Sagar Pal	Chemistry	201831022160	Biopolymeric Super absorbent hydrogel and its preparation thereof	Published	20.12.2019
19	Prof. P. K. Sadhu	Electrical Engg.	201731023466	A high frequency virtual reactor in power system with dispersed generators to control fault current and method of operation	Published	11.01.2019
20	Prof. P. K. Sadhu	Electrical Engg.	201731025244	A system of photovoltaic integrated solar induction heating and solar thermal heating using high frequency full bridge series resonant inverter under vsi(voltage source inverter) mode and method for the same	Published	11.01.2019
21	Prof. P. K. Sadhu	Electrical Engg.	201731028010	A system of photovoltaic-integrated solar induction heating using high frequency full bridge series resonant inverter under csi (current source inverter) mode and solar thermal heating and method for the same	Published	08.02.2019
22	Prof. Sukanta Das	Electrical Engg.	201731030886	Model-predictive-current-control for speed regulation of brushless doubly-fed reluctance generator	Published	01.03.2019
23	Prof. P. K. Sadhu	Electrical Engg.	201731033087	A system of photovoltaic-integrated solar induction heating and solar thermal heating using high frequency full bridge series resonant inverter under zsi (z-impedance source	Published	22.03.2019

				inverter) mode for load impedance matching and method for the same		
<b>Granted Patent-NIL</b>						