

**Patent Applications Details (2020 onwards)**

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-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-output antenna system for interweave and underlay cognitive radio operation	Filed	17.08.2021
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 the 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 Removal of Fine Particles from Coal Washery Effluent	Granted	10.12.2021
<b>Year-2022</b>						
<b>Sl. No.</b>	<b>Patent Holder (Inventor)</b>	<b>Department of Inventor</b>	<b>Patent Application No. /Patent No.</b>	<b>Title of the Patent</b>	<b>Status (Filed/Published/Granted)</b>	<b>Date of (Filed/Published/Granted)</b>
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 CO <sub>2</sub> 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-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.	Mechanical Engg.	202331032454	Cavity cleaner to remove support structures from 3d printed internal cylindrical cavity and method thereof	Filed	08.05.2023

	Ratnesh Raj/Research Scholar					
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	Mechanical Engg.	202331084799	A system for enhancing evaporation rate of single and multi-component twin drops by acoustic streaming	Filed	12.12.2023

	Jha/JRF, Mr. Vikram/B.Tech					
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
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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
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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/Formar 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.	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



	Abdul Kalam Technical University, Lucknow, U.P					
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 surfactants of non-ionic nature and compositions thereof for enhanced oil recovery application	Granted	07.06.2023
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. Niranjan 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
<b>Year-2024</b>						
1.	Prof. K. K. Singh, Dr. Santosh Kumar.Research Scholar, Mr. Rahul Biswas.M. Tech Student	Mechanical Engg.	202431001437	A brake pad material using hybrid (carbon.basalt.MWCNTs) composite material and a process for the preparation thereof	Filed	08.01.2024
2.	Prof. Alok Kumar Das, Mr. Kumar Ujjwal.Research Scholar, Mr. Mukul Anand.Senior Project Associate, Mr. Robin Singh.M.Tech student	Mechanical Engg.	202431002351	Process of electric arc. based smoothening of wire arc additive manufactured (waam) components	Filed	12.01.2024
3.	Prof. R. N. Hota, Mr. Nandan Kumar Jha.JRF, Mr. Vikram.B.Tech Student	Mechanical Engg.	202431002352	Impedance tube with sound absorbing conical liner backed by conical cavity to measure acoustic impedance	Filed	12.01.2024
4.	Prof. Shikha Singh, Mr. Prateek Sarkar.M.Tech student	Management studies and Industrial Engineering	202431004658	Wearable device for fatigue risk management and method of working the device	Filed	23.01.2024
5.	Prof. S. Narayanan, Prof. Swagata Bhaumik, Mr. Sushil Kumar Singh.SRF,	Mechanical Engg.	202431005021	Airfoil with wavy leading and trailing edge serrations for enhancing the reductions of airfoil broadband noise	Filed	24.01.2024



	Mr. Manish Kant.M.Tech Student					
6.	Prof. A. K. Samanta, Prof. Sandipan Kumar Das, Prof. Soumyajit Sen Gupta, Mr. Tapas Kumar Mondal, Technical Officer.Chemical Engg., Mr. Babuni Prasad, SRF.Chemical Engg., Mr. Chitrang jayantibhai lad, M. Tech.Student.Chemical Engg.	Chemical Engg. & Mechanical Engg.	202431005303	A process for the production of hydrogen from aluminium waste	Filed	25.01.2024
7.	Prof. Satadru Das Adhikary, Mr. Dipanshu Jain.SRF	Civil Engg.	202431006089	A Cement Free Mortar (CFM) composition	Filed	30.01.2024
8.	Prof. Somnath Yadav,Mr. Sachchida Nand Pandey.SRF, Dr. Arunav Sengupta.Institute Post Doctoral Fellow, Mr. Rajib Bera.JRF, Ms. Arundhati Chakraborty. Student, Mr. Sohel Ali.Student	Chemistry & Chemical Biology	202431016821	Monosaccharide derived ligands and their metal complexes for the hydration and oxidation of 1. arylenes, and a process for the manufacture thereof	Filed	08.03.2024
9.	Prof. T. K. Naiya,Ms. Sampa Guin, Research Scholar	Petroleum Engg.	202431028934	A pour point depressant for flow assurance of Indian waxy crude oil, a process for the preparation thereof and the use thereof	Filed	09.04.2024
10.	Prof. A. K. Samanta, Prof. Sandipan Kumar Das, Prof. Soumyajit Sen Gupta, Mr. Babuni Prasad. SRF	Chemical Engg.	202431032179	A fabric.based structured bed gas.solid contactor system for capturing CO2 and process for capturing CO2 therein	Filed	23.04.2024
11.	Prof. Vivek Bajpai, Ms. Abhipsa Kar.PhD. Scholar, Mr. Rajesh Sahoo.PhD. Scholar	Mechanical Engg.	202431037149	Advanced Boring Tool Assembly with multiple rollers for Elongated Cylindrical Boring Operation	Filed	10.05.2024
12.	Prof. Sarat Das, Prof. G. C. Nayak, Dr. Surabhi Jain.Ex Post Doc Research Fellow	Chemistry and Chemical Biology, Civil Engg.	202431041041	A sustainable fiber board material using red mud (bauxite residue) and agricultural biomass	Filed	27.05.2024
13.	Prof. S. Chattopadhyaya, Prof. Sayan Chatterjee, and	Mechanical Engg.	202431041749	Development of Umbrella.like deployable reflector antenna via 3D printing	Filed	29.05.2024

	Ms. Jaya Kori. Research Scholar					
14.	Prof. Tanmay Dutta, Mr. Rahul Ranjan. Research Scholar, Mr. Devesh kumar. Research Scholar, Mr. Ram Babu Gupta. Research Scholar	Mechanical Engg.	202431044685	An Air-cooled Thermal Management System of Lithium Ion Battery Pack using Synergistic Integration of Conduction and Convection	Filed	10.06.2024
15.	Prof. Sumanta Kumar Padhi, Mr. Aman Mishra. Research Scholar	Chemistry and Chemical Biology	202431048508	A process for the hydrogenation of carbon dioxide (CO <sub>2</sub> ) to methanol.	Filed	25.06.2024
16.	Prof. Sumanta Kumar Padhi, Mr. Aman Mishra. Research Scholar	Chemistry and Chemical Biology	202431048509	A process for the preparation of methanol by the hydrogenation of bicarbonate and carbon dioxide (CO <sub>2</sub> ) captured from air	Filed	25.06.2024
17.	Prof. Vivek Bajpai, Mr. Rajesh Sahoo; PhD Scholar, Mr. Prakhar Shukla; B.Tech Student	Mechanical Engg.	202431055777	Adaptive pulse width control system by actuating tool position for electro-discharge machine	Filed	22.07.2024
18.	Prof. Vivek Bajpai, Prof. Rabindra Kumar Sinha, Dhiraj Bajpai/ Research Scholar, Prince Anand/ Research Scholar	Mechanical Engg.	202431058252	A rock drilling equipment for transverse drilling in a tunnel	Filed	31.07.2024
19.	Prof. Rajeev Upadhyay, Mr. Yash Gupta/ Post Graduate Student, Mr. Shashank Suman/ B. Tech Student	Petroleum Engg.	202431058525	A method of Coalbed Methane (CBM) reservoir simulation for characterizing CBM reservoirs at individual well level	Filed	01.08.2024
20.	Prof. S. Narayanan, Prof. Swagata Bhaumik, Mr. Manish Kant/ M.Tech Student, Dr. Sushil Kumar Singh/ Research Scholar, Mr. Aadit Narayanmurthy/ Research Scholar	Mechanical Engg.	202431058901	Design and development of a low noise next generation air-foil with conventional wavy leading edge and curved wavy trailing edge tubercles for enhancing the mitigation of broadband noise	Filed	03.08.2024
21.	Prof. Arun Dayal Udai, Prof. Ajay Bhandari, Mr. Ashish Siddharth/ Research Scholar	Mechanical Engg.	202431060703	An equipment and method for ocular surgery and drug delivery with needle with robotic-assisted techniques	Filed	09.08.2024

22.	Prof. Vivek Bajpai, Mr. Prince Anand/PhD Scholar, Miss. Abhipsa Kar/PhD Scholar	Mechanical Engg.	202431060704	A system of hybrid reverse osmosis	Filed	09.08.2024
23.	Prof. Anup Krishna Prasad, Ms. Sameeksha Mishra/SRF, Mr. Arya Vinod/SRF, Mr. Anubhav Shukla/EX-SRF, Ms. Shailayee Mukherjee/JRF, Mr. Bitan Purkait/JRF, Prof. Atul Kumar Varma/Ex-Professor (HAG), Prof. Bhabesh Chandra Sarkar/Ex-Professor (HAG)	Applied Geology	202431065336	Multi-model method and system of estimation of ash yield in coal using mid-infrared Fourier transform infrared spectroscopy	Filed	29.08.2024
24.	Prof. Ashis Mallick, Mr. Vivek Sharma/SRF	Mechanical Engg.	202431066132	A hydraulic back pressure attachment for equal channel angular pressing (ECAP) for magnesium and its alloys and the method of working	Filed	31.08.2024
25.	Prof. Prashant Kumar Sharma, Mr. Priyanshu Chaubey/SRF	Physics	202431066933	A multi-interface heterostructure SnO <sub>2</sub> -Co <sub>3</sub> O <sub>4</sub> -Mo <sub>2</sub> S <sub>3</sub> nanocomposite for water splitting application and a process for the preparation thereof	Filed	04.09.2024
26.	Prof. Alok Kumar Das, Mr. Kumar Ujjwal/Research Scholar, Mr. Mukul Anand/Senior Project Associate, Mr. Robin Singh/M.Tech student	Mechanical Engg.	202431067209	A laser-based process for topography correction of Wire-Arc Additive Manufactured components	Filed	05.09.2024
27.	Prof. Tanmoy Maity, Mr. Mayank Sharma, Soumyadip Banerjee; EX-JRF	Electrical Engineering	202431068014	Portable Enhanced Gas Hazard Prediction system for Underground Coal Mines using DSET filter and 1D CNN classifier	Filed	09.09.2024
28.	Prof. A. R. Dixit, Mr. Mahip Singh, Dr. Anuj Kumar Sharma	Mechanical Engg.	202431068865	Dynamic cutting fluid supply system and method to maintain a constant cutting zone temperature during a workpiece operation	Filed	11.09.2024
29.	Prof. Aditya Kumar, Ms. Srishthi/Research Scholar	Chemical Engg.	202431069395	A water-repellent and biodegradable-polymer enhanced stiff jute-cotton	Filed	13.09.2024

				blended (Juco) fabric and a process for the preparation thereof		
30.	Prof. Aditya Kumar, Mr. Sapan Kumar Pandit/Research Scholar	Chemical Engg.	202431069866	A Biodegradable Water-Repellent Coating for Paperboard Packaging Materials and a process for the preparation thereof	Filed	16.09.2024
31.	Prof. Sumanta Kumar Padhi, Thillai Natarajan. M/Research Scholar	Chemistry and Chemical Biology	202431070872	A catalyst for green hydrogen generation, a process for the preparation thereof and the use thereof for green hydrogen generation from ammonia	Filed	19.09.2024
32.	Prof. Vivek Bajpai, Mr. Dhiraj Bajpai; PhD Scholar, Mr. Rajesh Sahoo; PhD Scholar	Mechanical Engg.	202431070877	A robotic vacuum cleaner with an integrated exhaust air guidance system to enhance drying of mopped area	Filed	19.09.2024
33.	Prof. Vivek Bajpai, Ms. Abhipsa Kar/Research Scholar	Mechanical Engg.	202431071314	A Fall arrester system with shock absorption to prevent accidental falls from the ladder	Filed	20.09.2024
34.	Prof. Avinash Kumar Singh	Civil Engg.	202431071315	An equipment with advanced testing facility for precise characterization of pavement materials under repeated longitudinal wheel movement	Filed	20.09.2024
35.	Prof. Kaushik Mazumdar, Ms. Chumki Das/Research Scholar	Electronics Engg.	202431071797	In <sub>0.22</sub> Al <sub>0.2</sub> Ga <sub>0.58</sub> As/In <sub>0.63</sub> Ga <sub>0.37</sub> As metal–oxide–semiconductor high-electron-mobility transistor (HEMT) with TiO <sub>2</sub> passivation for RF application	Filed	23.09.2024
36.	Prof. Amit Rai Dixit, Mr. Annada Prasad Moharana, Research Scholar, Dr. Ratnesh Raj, Post-Doctoral Fellow	Mechanical Engg.	202431071798	System and method of automatic fibre placement during vat-photopolymerization additive manufacturing for composite material fabrication	Filed	23.09.2024
37.	Prof. S. R. Samadder, Ms. Rima Kumari, Research Scholar	Environmental Science & Engineering	202431072102	An integrated process for copper extraction from waste printed circuit boards	Filed	24.09.2024
38.	Prof. Gauri Shankar, Prof. Vedantham Lakshmi Srinivas, Prof. Kartick Chandra Jana, Mr. Suryakant Kumar/Research	Electrical Engg.	202431073196	A System for Voltage Stabilization Control with Hybrid Renewable Power Sources in DC Microgrid	Filed	27.09.2024

	Scholar, Mr. Khalid Raza Khan/Research Scholar, Dr. Ram Khelawan Saket/Department of electrical engineering, IIT (BHU), Varanasi					
39.	Prof. Tanmoy Maity, Mr. Soumyadip Banerjee/SRF, Mr. Mihir Datta/Technical Superintendent	Electrical Engg.	202431076064	A small-scale straight-blade hybrid Darrieus-Savonius vertical axis wind turbine for urban power generation	Filed	08.10.2024
40.	Prof. Anup K. Prasad, Ms. Sameeksha Mishra, Mr. Arya Vinod; SRF, Mr. Anubhav Shukla; Ex-SRF, Mr. Bitan Purkait, Ms. Shailayee Mukherjee; JRF, Prof. Atul Kumar Varma, Prof. Bhabesh Chandra Sarkar; Ex-Professor (HAG)	Applied Geology	202431076911	A method of multi-model estimation of carbon in coal using mid-infrared Fourier transform infrared spectroscopy	Filed	10.10.2024
41.	Prof. S. R. Samadder, Ms. Pratima Kumari, Research Scholar	Environmental Science & Engineering	202431079756	A Process of Discharging Spent-Lithium Cobalt Oxide Batteries using Ultrasonic-Assisted Partial Immersion Method	Filed	21.10.2024
42.	Prof. Tanmay Dutta, Mr. Ram Babu Gupta, Mr. Devesh Kumar, Mr. Rahul Ranjan; Reserach Scholar	Mechanical Engg.	202431081150	Thermal Management System for Lithium-Ion Battery Pack Using Curved Strips or Rings or Rings with Fins	Filed	24.10.2024
43.	Prof. Alakesh Kalita	Mathematics and Computing	202431081152	An internet of thing (IoT)enabled system and process for real time monitoring of an infant to prevent falling off a surface above ground level	Filed	24.10.2024
44.	Mr. Satyam Prem/M. Tech student, Mr. Vaibhav Pal/M.Tech Student	FMME	202431082275	System and method for charging a back-up battery of a running two-wheeler with wind turbine	Filed	28.10.2024
45.	Prof. Soumitra Maity, Mr. Apurba Samanta, Research Scholar	Chemistry and Chemical Biology	202431083569	A novel bifunctional phosphoaminating agent, a process for the preparation thereof and the application thereof in the synthesis of	Filed	30.10.2024

				aminophosphonates/aminophosphonic acids		
46.	Prof. Tarun Kumar Naiya, Ms. Sampa Guin, Research Scholar	Petroleum Engg.	202431083740	A biodegradable pour point depressant from coconut oil for flow assurance of Indian waxy crude oil, a process for the preparation thereof and the use thereof in flow assurance of Indian waxy crude oil	Filed	01.11.2024
47.	Prof. Ashok Kumar, Mr. Sanjay Kumar Sena; Research Scholar	Electrical Engg.	202431087391	A Single-Stage Single-Phase Non-isolated Microinverter for Residential Rooftop Photovoltaic Application	Filed	12.11.2024
48.	Prof. Vivek Bajpai, Mr. Dhiraj Bajpai, Research Scholar	Mechanical Engg.	202431089892	A machine to generate micro-cracks in the rock using a sonic vibrator to enhance subsequent deep drilling operation and a process for the same	Filed	20.11.2024
49.	Prof. Aditya Kumar, Mr. Sapan Kumar Pandit; Research Scholar	Chemical Engineering	202431092143	A biodegradable water-repellent PLA coated jute and a process for the preparation thereof	Filed	26.11.2024
50.	Prof. Madan Lal Chandravanshi, Prof. Rakesh Kumar, Mr. Divya Mohan; M.Tech student	Mechanical Engineering	202431092363	A Ferrous particle collector machine	Filed	26.11.2024
51.	Prof. A. K. Samanta, Prof. Sandipan Kumar Das, Prof. Soumyajit Sen Gupta, Mr. Babuni Prasad; SRF	Chemical Engg. Mechanical Engg.	202431092364	An adsorbent/catalyst support material from the byproduct of hydrolysis of aluminium waste or scrap and a process for the preparation thereof	Filed	26.11.2024
52.	Prof. Kartick Chandra Jana, Mr. Bikramaditya Chandan, Prof. Pradipta Kumar Pal; Research Scholar,	Electrical Engineering	202431093206	A multi-level switched-capacitor-based single source inverter generating boosted output voltage	Filed	28.11.2024
53.	Prof. Ravi Kumar Gangwar, Mr. Nikesh Kumar Sahu, Mr. Sachin Maithani; Research Scholar	Electronics Engineering	202431093704	Multiband ceramic right hand circularly polarised dielectric resonator antenna for navigation and positioning applications	Filed	29.11.2024
54.	Prof. Brijesh Kumar Mishra, Prof. Ganesh Chandra Nayak, Dr. Sourav	ESE & Chemistry and Chemical Biology	202431094763	An adsorbent from cow dung for the removal of metal ions from waste water and further use as an electrode	Filed	02.12.2024

	Acharya/Research Associate, Dr. Sonalika/Research Associate			in supercapacitor, and a process for the preparation thereof		
55.	Prof. Aditya Kumar, Ms. Preeti Kumari, Research Scholar	Chemical Engineering	202431095100	A transparent anti-dust and corrosion-resistant spray coating for the protection of copper artifacts and a process for the preparation thereof	Filed	03.12.2024
56.	Prof. Sekhar Chandra Dutta, Dr. Ishan Jha; Post-doctoral fellow, Mr. Vikash Kumar, Mr. Subrat Kumar Sahu; Research scholar	Civil Engineering	202431097321	A concrete-filled quadruple steel tubular (CFQST) column for enhanced strength and ductility in seismic condition and the process of construction	Filed	10.12.2024
57.	Prof. Ejaz Ahmad, Dr. Afaq Ahmad Khan/Institute-Postdoctoral Fellow, Mr. Aakash Rajpoot/Research Scholar	Chemical Engineering	202431097535	Stoichiometrically tuned Fe <sub>5</sub> -Co-Zn/?-Al <sub>2</sub> O <sub>3</sub> nanocatalysts, a process for the preparation thereof and use of the same for methane (CH <sub>4</sub> ) cracking	Filed	10.12.2024
58.	Prof. Kaushik Mazumdar, Ms. Chumki Das; Research Scholar	Electronics Engineering	202431097530	N-Polar AlGa <sub>N</sub> /Ga <sub>N</sub> High Electron Mobility Transistor (HEMT) using Al <sub>N</sub> Cap Layers and HfO <sub>2</sub> Dielectrics with enhanced DC and RF performance	Filed	10.12.2024
59.	Prof. Ashok Kumar, Mr. Chandan Verma, Mr. Sanjay Kumar Sena; Research Scholar	Electrical Engineering	202431100461	Photovoltaic based single dc input hybrid output converter	Filed	18.12.2024
60.	Prof. Manodipan Sahoo, Mr. Saptarshi Neogi; Master's Student	Electronics Engineering	202431100980	2D dual gate biosensor FET device and method of performance evaluation of the device in nanometric scale through multiscale simulation approach	Filed	19.12.2024
61.	Prof. Ejaz Ahmad, Dr. Afaq Ahmad Khan/Institute-Postdoctoral Fellow, Mr. Aakash Rajpoot; Research Scholar	Chemical Engineering	202431103966	A process for the preparation of nitrogen-doped multilayer graphene nanopowder	Filed	28.12.2024
62.	Prof. Sagar Pal, Mr. Kalipada Manna; SRF	Chemistry & Chemical Biology	202431103949	A new light responsive polymeric micelle for real time monitored	Filed	28.12.2024



				delivery of therapeutics and a process for the preparation thereof		
63.	Prof. Rabindra Nath Hota, Mr. Nitish Kumar Sah, Mr. Nandan Kumar Jha;JRF, Mr. Vikram;B. Tech Student	Mechanical Engineering	202431104915	A system and method for acoustic pressure measurement in hot combustion ducts to protect microphone from heat using an acoustically tuned shorter waveguide	Filed	31.12.2024
64.	Prof. P. K. Sadhu, Mr. Bidrohi Bhattacharjee, Mr. Riyaz Ahmed, Mr. Ankur Ganguly, Mr. Ashok Kumar Naskar, Mr. Atif Iqbal	Electrical Engineering	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	Granted	17.01.2024
65.	Prof. Amit Rai Dixit, Mr. Mahip Singh; Research Scholar, Dr. Anuj Kumar Sharma	Mechanical Engineering	202111033458	Method and device for optimizing cutting fluid in metal cutting operations	Granted	31.01.2024
66.	Prof. Sagar Pal, Mr. A. Sarkar, Ms. Soumita Ghorai	Chemistry & Chemical Biology	931/KOL/2014	AMPHOTERIC XANTHAN GUN/SIO2 HYBRID NANOCOMPOSITE (AMP. XG/SIO2); DEVELOPMENT AND APPLICATION OF A NOVEL ADSORBENT FOR REMOVAL OF CONGO RED DYE (CR DYE) FROM AQUEOUS SOLUTION	Granted	28.02.2024
67.	Prof. Pankaj Jain, Prof. Kesavan Ravi	FMME	202131012695	A device to clean ambient air with filter cloth and a method of recovery thereof	Granted	08.02.2024
68.	Prof. Subrata Kumar Ghosh, Mr. Santosh Kumar	Mechanical Engineering	202031005648	Composite material for brake pads	Granted	21.02.2024
69.	Prof. Sandipan Das, Prof. Aditi Sengupta, Mr. Laltu Chandra	Mechanical Engineering	202231069382	Method and system for optimum usage of ammonia by Generating power using coupled heat exchanger-Combustor	Granted	21.02.2024
70.	Prof. V.P. Sharma, Prof. Vikas Mahto, Ms. Shivanjali Sharma	Petroleum Engg.	5/KOL/2015	Synthesis and characterization of acrylate esters as pour point depressants in Indian waxy crude oils	Granted	21.02.2024



71.	Prof. Nirupama Mandal, Mr. Sayyed Faizan Ali	Electronics Engineering	201931054793	Method for real time monitoring of liquid level for wireless transmission system	Granted	29.02.2024
72.	Prof. Vivek Bajpai	Mechanical Engineering	202231044867	A structure of EDM head for a portable type Maglev EDM	Granted	29.02.2024
73.	Prof. Pradip Kumar Sadhu, Mr. Avijit Chakraborty, Mr. Aniruddha Bhattacharjee, Mr. Pipul Roy, Mr. Niladri Das, Prof. Nitai Pal	Electrical Engineering	201731040664	SOLAR INDUCTION HEATING SYSTEM USING HIGH FREQUENCY HYBRID RESONANT INVERTER UNDER ZSI MODE-	Granted	08.03.2024
74.	Prof. Vivek Bajpai, Mr. Arnab Das	Mechanical Engineering	202231032536	Turning insert with lubricating passage along the normal plane for minimization of friction and cutting force	Granted	15.03.2024
75.	Prof. Sukanta Das, Ms. Karuna Kiran	Electrical Engineering	201731030886	MODEL-PREDICTIVE- CURRENT-CONTROL FOR SPEED REGULATION OF BRUSHLESS DOUBLY-FED RELUCTANCE GENERATOR	Granted	15.03.2024
76.	Prof. Satish Kumar Sinha, Prof. D. C. Panigrahi, Prof. Haider Banka	Mining Engg. , CSE	305/KOL/2015	A practical approach for coal fire prevention and its prediction integrating machine learning and statistics in opencast mines working over developed pillars	Granted	19.03.2024
77.	Prof. Shibayan Sarkar, Mr. Aditya Kumar Nag	Mechanical Engineering	202231031891	A Self-adjustable flap blade Hydrokinetic Turbine	Granted	02.04.2024
78.	Prof. P. K. Sadhu, Mr. Rahul Raman, Mr. Chayan Chakraborty, Mr. Palash Pal, Mr. Bidrohi Bhattacharjee, Mr. Swapan Kumar Bakshi	Electrical Engineering	201731040764	SOLAR INDUCTION HEATING SYSTEM USING HIGH FREQUENCY MODIFIED HALF BRIDGE SERIES RESONANT INVERTER UNDER ZSI MODE-	Granted	05.04.2024
79.	Prof. Sagar Pal, Mr. Priyapratim Patra, Mr. Abhayashankar Patra, Mr. Biswajit Saha, Mr. Asim Kumar Mukherjee	Chemistry & Chemical Biology	202131014760	Carboxymethyl cellulose based polymer as an organic binder in iron ore pelletization	Granted	08.04.2024

80.	Prof. Pankaj Kumar Jain	FMME	202031045441	A device with an improved design of sharpening blade with application in pencil sharpener	Granted	12.04.2024
81.	Prof. Kaushik Mazumdar	Electronics Engg.	202131040896	Design and Investigation of IN0.52AL0.48AS/IN0.53GA0.47AS MOSFET with optimized switching efficiency.	Granted	20.05.2024
82.	Prof. Sandipan Kumar Das, Prof. Siddhartha Sengupta, Prof. Soumyajit Sen Gupta, Prof. Arun Kumar Samanta	Mechanical Engineering	202331017619	An integrated fluidized bed reactor system for Ammonia combustion to obtain hydrogen and power and method for the same	Granted	14.06.2024
83.	Prof. Vivel Bajpai, Prof. N. K. Singh, Mr. Rajesh Sahoo/Reaserch Scholar	Mechanical Engineering	202331003165	A variable diameter e-shaped rail-clip fastened on rail for uniform stress distribution	Granted	28.06.2024
84.	Prof. Sagar Pal, Mr. Priyapratim Patra, Mr. Abhayashankar Patra, Mr. Biswajit Saha, Mr. Asim Kumar Mukherjee	Chemistry & Chemical Biology	202131014773	Alginate acid/sodium alginate based polymer as an organic binder in iron ore pelletization	Granted	28.08.2024
85.	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	Granted	19.11.2024
86.	Prof. P. K. Sadhu, Mr. Bidrohi Bhattacharjee, Mr. Riyaz Ahmed, Mr. Ankur Ganguly, Mr. Ashok Kumar Naskar, Mr. Atif Iqbal	Electrical Engineering	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	Granted	17.01.2024
<b>Year-2025</b>						
1.	Prof. Rabindra Nath Hota, Mr. Nandan Kumar Jha;SRF, Mr. Nitish Kumar Sah;JRF	Mechanical Engineering	202531000504	Acoustic filter of multiple chambers in series as resonators for specific broadband sound attenuation with or without mean flow	Filed	02.01.2025
2.	Prof. Ashis Mallick, Mr. Vivek Sharma;SRF	Mechanical Engineering	202531000505	A solid solution phase high-entropy alloy with ultra-high strength, strong plasticity and wear resistance and a process for the preparation thereof	Filed	02.01.2025

3.	Prof. Ajay Mandal, Mr. Rohit Kumar Saw/Research Scholar	Petroleum Engineering	202531001027	A surfactant stabilized green nano emulsion for application in petroleum industries and a process for the preparation thereof	Filed	04.01.2025
4.	Prof. Ashok Kumar, Mr. Chandan Verma; Research Scholar	Electrical Engineering	202531003225	Hybrid Input Electric Vehicle Charging System	Filed	14.01.2025
5.	Prof. Vivek Bajpai, Prof. Nirmal Kumar Singh , Mr. Rajesh Sahoo; Research Scholar	Mechanical Engineering	202531003748	Dual synchronous suction-ejection portable dielectric flushing system and method for electro-discharge machining process	Filed	16.01.2025
6.	Prof. Vivek Bajpai, Mr. Rajesh Sahoo, Mr. Dhiraj Bajpai; PhD Scholar	Mechanical Engineering	202531004102	An Online Dielectric Deionization system for Electrical discharge machining (EDM) process	Filed	17.01.2025
7.	Prof. Kalyan Chatterjee, Dr. Prashant Mani Tripathi; Research Associate	Electrical Engineering	202531004108	Compact Three-Phase Saturated Core Fault Current Limiter (SCFCL) for Grid-Connected DFIG Systems	Filed	17.01.2025
8.	Prof. Ravi Kumar Gangwar, Mr. Kundan Kumar Suman, Ms. Tripta Kumari; Research Scholar	Electronics Engineering	202531004486	A mmWave transmitter system configuring CDRA array and load modulator for generating and transmitting 256-QAM signals in 5G and beyond networks	Filed	20.01.2025
9.	Prof. Sumanta Kumar Sahu, Ashok Kumar; Research Scholar	Chemistry and Chemical Biology	202531004840	Fluorescence carbon dots for WLED applications and a process for the preparation thereof	Filed	21.01.2025
10.	Prof. Umakanta Tripathy, Mr. Nitesh Kumar Pathak, Mr. Priyadarshi Sahoo; SRF	Physics	202531005520	A nonlinear optical tool to measure hemoglobin concentration in human ABO blood types	Filed	23.01.2025
11.	Prof. Satadru Das Adhikary, Mr. Dipanshu Jain; Research Scholar	Civil Engineering	202531006117	A composition for the development of Paver Block utilising cement-free concrete with waste aggregates and a process for the preparation thereof	Filed	24.01.2025
12.	Prof. Aditya Kumar, Dr. Dibya Ranjan Rout; Post Doc Fellow	Chemical Engineering	202531006118	A GO-supported Mn <sub>2</sub> O <sub>3</sub> and MoS <sub>2</sub> ternary composite for green hydrogen generation and a process for the preparation thereof	Filed	24.01.2025
13.	Prof. Sukha Ranjan Samadder, Ms. Rima Kumari; Research Scholar	Environmental Science and Engineering	202531006628	A Process of valorization of waste-printed circuit boards through debromination and metal enrichment	Filed	27.01.2025

14.	Prof. Ashok Kumar, Mr. Sanjay Kumar Sena, Research Scholar	Electrical Engineering	202531007740	A single-stage single-phase non-isolated buck boost microinverter	Filed	30.01.2025
15.	Prof. Vivek Bajpai, Mr. Dhiraj Bajpai; Research Scholar, Dr. Madhav Raturi; Institute Post Doctoral Fellow	Mechanical Engineering	202531007742	A system for adaptive electromagnetic load application to enhance frictional force at rail wheel-track interface	Filed	30.01.2025
16.	Prof. Arun Dayal Udai, Ms. Maulik Shukla, M. Tech. student	Mechanical Engineering	202531009912	An overlaid orthogonal oscillator for Robot-Assisted assembly	Filed	06.02.2025
17.	Prof. Amitesh Kumar, Mr. Randhir Kumar Sah; Senior Research Fellow	Electronics Engineering	202531011041	A Temperature Independent 2-D optical tilt sensor	Filed	10.02.2025
18.	Prof. Ravi Kumar Gangwar, Ms. Tripta Kumari, Mr. Kundan Kumar Suman; Research Scholar	Electronics Engineering	202531010883	A COMPACT 2D 3D MATERIAL-BASED CP MIMO ANTENNA SYSTEM WITH RADOME INTEGRATION FOR UAV VIDEO TRANSMISSION	Filed	10.02.2025
19.	Prof. Subrata Kumar Ghosh, Prof. Niranjana Kumar, Dr. Sikta Panda; Institute Post Doctoral Fellow, Mr. Gaurab Kumar Ghosh; Research Scholar	Mechanical Engineering	202531011416	A gear oil based nanolubricant for heavy-load-bearing mechanical systems and a process for the preparation thereof	Filed	11.02.2025
20.	Prof. Ejaz Ahmad, Mr. Khwaja Alamgir Ahmad, Mr. Shariq Farhan Elahi; Research Scholar, Dr. Afaq Ahmad Khan; Institute-Postdoctoral Fellow	Chemical Engineering	202531011865	A Process for the Preparation of Butyl Levulinate using ZSM-5 Supported Phosphomolybdic Acid Catalyst	Filed	12.02.2025
21.	Prof. Anup Krishna Prasad, Prof. Atul Kumar Varma, Prof. Bhabesh Chandra Sarkar; Ex-Professor (HAG), Mr. Arya Vinod, Ms. Sameeksha Mishra, Mr. Bitan Purkait, Ms. Shailayee Mukherjee; SRF, Mr.	Applied Geology	202531012376	A novel multi-model method of estimation of the gross calorific value (GCV) in coal using mid-infrared fourier transform infrared spectroscopy	Filed	13.02.2025

	Anubhav Shukla; Ex-Senior Research Fellow					
22.	Prof. Somnath Chattopadhyaya, Dr. Nishant; Post-Doctoral Fellow	Mechanical Engineering	202531014718	A method to determine the optimal rotation speed of the tool for defect free welding of underwater Friction stir welding of dissimilar aluminum alloys	Filed	20.02.2025
23.	Prof. Vivek Bajpai, Ms. Abhipsa Kar; Research Scholar	Mechanical Engineering	202531017892	An apparatus to create secondary colours from primary colours in 3D printing	Filed	28.02.2025
24.	Prof. Devendra Chack, Ms. Rajarshi Guchhait; BTech Student, Ms. Diksha Maurya; Research Scholar	Electronics Engineering	202531019344	Two-stage wavelength selective filter with MWG-based CDC and SWG-assisted adiabatic dual mode converter for higher order backward mode conversion	Filed	04.03.2025
25.	Prof. Sagar Pal, Mr. Kalipada Manna, Mr. Shaon Dey, Ms. Arpita Roy; Research Scholar	Chemistry & Chemical Biology	202531019066	A Nanocomposite Hydrogel Adhesive and a Process for the Preparation thereof	Filed	04.03.2025
26.	Prof. Ejaz Ahmad, Dr. Indra Mohan; Institute Postdoctoral Fellow, Mr. Aakash Rajpoot; Research Scholar	Chemical Engineering	202531019258	A Process for obtaining liquid fuel by High-Temperature thermal degradation of Phoenix Dactylifera seeds and waste LDPE	Filed	04.03.2025
27.	Prof. Amit Rai Dixit, Prof Alok Kumar Das, Prof Sukumar Mishra, Prof Ejaz Ahmad, Mr. Piyush Kumar and Mr. Annada Prasad Moharana; Research Scholar	Mechanical Engineering	202531019574	A system and method for controlled disintegration-based recovery of components from EOL solar panels using submerged liquid jet	Filed	05.03.2025
28.	Prof. Alok Sinha, Dr. Dharmendra Singh Ken; Resesrach Scholar	Environmental Science and Engineering	202531020216	A hybrid heterogeneous 3D electro-Fenton based electro-oxidation system supported with Catalytic particle electrodes (nZVI/GAC) for treatment of Coke-oven	Filed	06.03.2025
29.	Prof. Prashant Kumar Sharma, Mr. Priyanshu Chaubey; Research Scholar (SRF)	Physics	202531020217	A Co3S4-MoO2 hollow nanocomposite for water splitting application and a process for the preparation thereof	Filed	06.03.2025

30.	Prof. Tarun Kumar Naiya, Ms.Sampa Guin; Research Scholar	Petroleum Engineering	202531021015	Modified cellulose nanocrystals from agricultural waste as effective pour point depressant for waxy crude oil and a process for the preparation thereof	Filed	08.03.2025
31.	Prof. Subrata Kumar Ghosh, Mr. Gaurab Kumar Ghosh, Mr. Ritesh Kumar Patel; Research Scholar, Ms. Sikta Panda; Institute Post Doctoral Fellow	Mechanical Engineering	202531021040	Bio- nanolubricant for heavy-load-bearing applications and a process for the preparation thereof	Filed	08.03.2025
32.	Prof. Umakanta Tripathy, Manika Dandapat; DST Women Scientist, Priyadarshi Sahoo;SRF	Physics	202531021632	A method based on self-focusing and self-defocusing effects to study protein aggregation in real-time	Filed	11.03.2025
33.	Mr. Rajen Dasgupta, Executive Officer, NVCTI, Mr. Vivek Kumar; B.Tech., Mining Engineering, Mr. Satwik Mohan; B.Tech.;Electrical Engineering	NVCTI, Mining Engineering, Electrical Engineering	202531021958	Braille Interface Keyboard device for the visually impaired	Filed	11.03.2025
34.	Prof. Raj Kumar Dishwar, Mr. Burada Shravani, Mr. Navneet Kumar Mishra; M.Tech Student	Department of Fuel, Minerals and Metallurgical Engineering	202531021963	A Process to Enrich the Carbon Content and End-Value of Coal Washery Tailings by Dual Beneficiation	Filed	11.03.2025
35.	Prof. B. Rajasekhar, Prof. Raj Kumar Dishwar, Mr. Burada Shravani, Mr. Navneet Kumar Mishra; M. Tech Student	Department of Fuel, Minerals and Metallurgical Engineering	202531021628	A process for the Synthesis of Carbon Nanomaterials from Coal Washery Rejects through Microwave heating	Filed	11.03.2025
36.	Prof. Kesavan Ravi, Dr. Chaitanya Gullipalli; Post-Doctoral Fellow	Department of Fuel, Minerals and Metallurgical Engineering	202531022622	A novel deposition method of cold spray aluminum coating for improved wear resistance	Filed	13.03.2025
37.	Prof. Raj Kumar Dishwar, Ms. Khushi Rathore and Mr. Vaibhav Pal; M. Tech student	Department of Fuel, Minerals and Metallurgical Engineering	202531023488	A binder from egg-shell powder for sustainable steel production and a process for the preparation thereof	Filed	17.03.2025



38.	Prof. Partha Sarathi Paul, Paul Prasanna Kumar S;Former Research Scholar, Mr. Debashis Chatterjee; Research Scholar, Mr. Chethan. S;Computer Vision & Machine Learning Engineer, Ayati Devices Pvt. Ltd, Bangalore	Mining Engineering	202531023486	IoT-Enabled Underground Gas Monitoring and Communication System for Enhanced Safety in Coal Mines	Filed	17.03.2025
39.	Prof. Vishwas Nandkishor Khatri, Mr. Subham Jena; Research Scholar	Civil Engineering	202531023473	An improved modified small direct shear box for assessing the interface characteristics of geotextile- reinforced soil	Filed	17.03.2025
40.	Prof. Sukha Ranjan Samadder, Dr. Gaurav Vilas Kapse; Ex-Research Scholar, Dr. Khalid Ansari; Postdoctoral Research Fellow	Environmental Science & Engineering	202531024226	A Process for the Preparation of a Natural Preservative to Inhibit Microbial Growth in Bio-Coagulant	Filed	18.03.2025
41.	Prof. Sukha Ranjan Samadder, Dr. Gaurav Vilas Kapse; Ex-Research Scholar, Dr. Khalid Ansari; Postdoctoral Research Fellow	Environmental Science & Engineering	202531024221	Bio- coagulant from Brassica nigra seed defatted cake for the treatment of coal washery effluents and a process for the preparation thereof	Filed	18.03.2025
42.	Prof. Sukha Ranjan Samadder, Mr. Khalid Ansari; Postdoctoral Research Fellow, Mr. Gaurav Vilas Kapse; Research Scholar	Environmental Science & Engineering	202531024222	Design and Fabrication of Lab-Scale Prototype for Real-Time Application of Bio-Coagulant for Coal Washery Effluent	Filed	18.03.2025
43.	Prof. Ejaz Ahmad, Prof. Suman Dutta, Mr. Shivshankar Prasad,Mr. Aakash Rajpoot; Research Scholar, Dr. Afaq Ahmad Khan;Postdoctoral Fellow	Chemical Engineering	202531025043	A Process for the Preparation of Ascorbic Acid-Ni-Co-O Nanocomposite Catalysts and the Use Thereof for the Synthesis of 2,5- Furandicarboxylic acid	Filed	20.03.2025
44.	Prof. Sukha Ranjan Samadder, Dr. Gaurav Vilas Kapse; Ex-Research	Environmental Science & Engineering	202531025028	Bio- coagulant from Moringa oleifera and Linum usitatissimum for the Treatment of Coal Washery	Filed	20.03.2025

	Scholar, Dr. Khalid Ansari; Postdoctoral Research Fellow			Effluent and a process for the preparation thereof		
45.	Prof. Kalyan Chatterjee, Kartick Chandra Jana, Mr. Pradipta Kumar Pal, Ms. Mansi Singh; Research Scholar	Electrical Engineering	202531025381	Multilevel Step-Down AC-to-DC Converter with Active Power-Factor Correction and Leakage Current Mitigation	Filed	20.03.2025
46.	Prof. Kaushik Mazumdar, Mr. Swastik Kumar Sahu; Research Scholar	Electronics Engineering	202531025042	A multi-layer quantum chip packaging process integrating meta-material shielding, cryogenic enclosure, and superconducting interconnects	Filed	20.03.2025
47.	Prof. Vivek Bajpai, Mr. Prince Anand; Research Scholar	Mechanical Engineering	202531025555	A Novel Coating strategy with two step method to improve sharpness of single point cutting tool	Filed	20.03.2025
48.	Prof. Ejaz Ahmad, Mr. Shariq Farhan Elahi; Research Scholar, Dr. Afaq Ahmad Khan; Institute-Postdoctoral Fellow	Chemical Engineering	202531027145	A Process for the Preparation of Butyl Butyrate as an Aviation Fuel Additive Using Sulfonated-Graphene Oxide Catalyst	Filed	24.03.2025
49.	Prof. Vivek Bajpai, Prof. Pawan Kumar Singh, Deepak Kumar Mandal, Mr. Dhiraj Bajpai; Research Scholar	Mechanical Engineering	202531029315	A system to enhance cooling performance of split air conditioners by leveraging water outlet from indoor unit for evaporation near outdoor unit	Filed	27.03.2025
50.	Prof. Arun Dayal Udai, Mr. Maulik Shukla, M. Tech. student, Mr. Himanshu Varshney; Research Scholar	Mechanical Engineering	202531029704	A Variable Stiffness Adapter for a Compliant Robot-Assisted Assembly Utilizing Electromagnetic Actuation to Adjust Stiffness and Compliance	Filed	27.03.2025
51.	Prof. Alakesh Kalita	Mathematics and Computing	202531029706	A System and Method for Improving the Performance of IEEE 802.15.4 and IEEE 802.15.4e standardized Internet of Things Networks	Filed	28.03.2025
52.	Prof. Dushyant Sharma, Mr. Arvind Kumar, Ms. Prakirty Kumari; Research Scholar	Electrical Engineering	202531032513	A system and method for stable power sharing in microgrids with PV voltage and current sensor-less self-limiting three-phase autonomous PV generator	Filed	02.04.2025



53.	Prof. Somnath Chattopadhyaya, Dr. Mohd Ahtesham Hussain Siddiqui, Dr. Piyush Raj	Mechanical Engineering	202531033390	A method for performance optimization and heat management in worn-out external gear hydraulic pump of load head dumper (LHD)	Filed	04.04.2025
54.	Prof. Anup Krishna Prasad , Prof. Bhabesh Chandra Sarkar, Prof. Atul Kumar Varma; Ex-Professor (HAG), Mr. Anubhav Shukla, Nirasindhu Desinayak; Ex- Senior Research Fellow, Mr. Arya Vinod, Ms. Sameeksha Mishra, Mr. Bitan Purkait, Ms. Shailayee Mukherjee; Senior Research Fellow	Applied Geology	202531033924	A method for rapid estimation of phosphorous content in coal and ash using mid-infrared Fourier transform spectroscopy and application of machine learning techniques	Filed	07.04.2025
55.	Prof. Vivek Bajpai, Dr. Madhav Raturi; Institute Post Doctoral Fellow, Mr. Prince Anand, Research Scholar	Mechanical Engineering	202531036943	An inbuilt reverse osmosis filter with concentrate water management system	Filed	16.04.2025
56.	Prof. Kalyan Kumar Singh, Mr. Adhiraj Pratap Singh, Mr. Aditya Mukherjee; BTech Student, Mr. Hemant Priyadarshi; PhD Student	Mechanical Engineering	202531038644	A composite material for high performance friction linings for drum brakes and a process for the preparation thereof	Filed	22.04.2025
57.	Prof. Aditya Kumar, Mr. Himanshu Kushwaha; Project Assistant, Mr. Debasish Mahato; Research Scholar	Chemical Engineering	202531040934	A borax-based fire-retardant coating for jute fabric and a process for the preparation thereof	Filed	28.04.2025
58.	Prof. Amitesh Kumar, Prof. Jaisingh Thangaraj, Mr. Deep Pal; SRF, Mr. Ashish Ranjan Yadav; JRF	Electronics Engineering	202531041270	Fiber Bragg Grating(FBG) temperature-based optical spirometer to detect pulmonary disease	Filed	29.04.2025
59.	Prof. Deepak Kumar Mandal, Prof. S. Narayanan, Mr. Suraj Prasad	Mechanical Engineering	202231030421	System and method for enhancing evaporation rate of multi component drops by acoustic streaming	Granted	15.01.2025

60.	Prof. Vikas Mahto, Dr. Barasha Deka, Mr. Polara Subhash	Petroleum Engineering	202031051570	Development of aloe vera quantum dots as low dosage hydrate inhibitor for petroleum industries	Granted	10.02.2025
61.	Prof. Vivek Bajpai, Mr. Rajesh Sahoo; PhD Scholar, Mr. Prakhar Shukla; B.Tech Student	Mechanical Engineering	202431055777	Adaptive pulse width control system by actuating tool position for electro-discharge machine	Granted	28.02.2025
62.	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	Granted	07.03.2025
63.	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	Granted	12.03.2025