

PATENT DETAILS (2018 onwards)

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. Niranjana 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	Filed	29.12.2022

				preparation thereof		
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	Granted	26.04.2022

				power generation with reduced area requirement.		
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-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

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	Published	24.01.2020

				thereof for enhanced oil recovery application		
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 system ans 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 conditions for low-wattage metallic appliances	Published	05.04.2019
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 vsr(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	Published	22.03.2019

				series resonant inverter under zsi (z-impedance source inverter) mode for load impedance matching and method for the same		
Year-2018						
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. Alok Sinha	ESE	201831008017	Novel system for regenerating and reusing nzvi/zvi particles in waste water treatment	Filed	05.03.2018
2	Prof. Sagar Pal	Chemistry	201831022160	Biopolymeric super absorbent hydrogel and its preparation thereof	Filed	13.06.2018
3	Prof. Vikas Mahto	Petroleum	201831022071	Soya lecithin quantum dots as anti-agglomerants and methodology of preparing the same	Filed	13.06.2018
4	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	Filed	17.07.2018
5	Prof. Biswajit Chowdhury	Chemistry	201831036761	A process for preparation of cyclic/acyclic alkenes	Filed	28.09.2018
6	Prof. S. R. Samadder	ESE	201631037159	A process for the preparation of bio-coagulant using Moringaoleifera seed biomass for the removal of fine particles from coal washery effluent	Published	05-04-2018
7	Prof. Sagar Pal, Prof. N. R. Mandre	Chemistry	201631037148	Selective flocculation of iron ore from mixture of inorganic gangues using carboxymethyl amylopectin functionalized with poly (acrylic acid)	Published	05-04-2018
8	Prof. Somnath Chattopadhyay	Mechanical	201731004136	Friction Stir welding joint sample machining apparatus & method	Published	08-10-2018
9	Prof. Tanmoy Maity	MME	201731017005	Low Power ,portable smart device for real time monitoring of mine environment and methods thereof	Published	16-11-2018
10	Prof. Tanmoy Maity	MME	201731047389	An arrangement for replacement of bypass diode by relay in a solar photovoltaic system.	Published	07.12.2018

11	Prof. Tanmoy Maity	MME	201731017005	Low power, portable smart device for real-time monitoring of mine environment and methods thereof	Published	16.11.2018
12	Prof. Pankaj Kumar Jain	FMME	Patent No. 293820	A method and device for concentration of solar radiation and obtaining concentrated plane beam	Granted	05.03.2018