**List of patents granted/filed**

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| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Patent Title** | **Name of Applicant(s)** | **Patent No.** | **Award Date** | **Agency/Country** | **Status** |
| 35 | NiCoLDH DERIVED NiCoPSE/NF POROUS NANOFLOWER HETEROSTRUCTURE CATALYST COMPOSITION AND METHOD FOR SYNTHESIS THEREOF | Kulamani Parida,  Dipti Prava Sahoo,  Kundan kumar Das | 443366 | 07.08.2023 | India | Granted  Application. No-  202231029869 |
| 34 | Ti3C2/TiO2 NANOCOMPOSITE AND METHOD FOR PREPARATION THEREOF | Kulamani Parida, Lijarani Biswal, Bhagyashree Priyadarshini Mishra, Sarmistha Das and Susanginee Nayak | 440715 | 26.07.2023 | India | Granted Application No. 202231044284 |
| 33 | NixPy ON MOF DERIVED C/N CO-DOPED ZnO PHOTOCATALYST COMPOSITE AND METHOD FOR SYNTHESIS THEREOF | Kulamani Parida, Asheli Ray, Satyabrata Subudhi and Suraj Prakash Tripathy | 439831 | 21.07.2023 | India | Granted Application No. 202231044282 |
| 32 | Copper loaded mesoporous ZrO2-MCM-41 photocatalyst and a process for the preparation thereof for Cr (VI) reduction. | Kulamani Parida, Binita Nanda, Amaresh Chandra Pradhan | 309432 | 19.03.2019 | India | Granted Application No. 1326/KOL/2015 |
| 31 | Exfoliated MgCr-LDH nano sheet; A multifunctional photocatalyst for visible light driven oxidation reactions and a process for the preparation thereof. | Kulamani Parida,  SusangineeNayak | 322331 | 04.10.2019 | India | Granted Application No. 1327/KOL/2015 |
| 30 | BiOI microplates modified Zn/Cr layered double hydroxide for enhanced H2 production under visible light irradiation. | Kulamani Parida,  DebasmitaKandi,  Satyabadi Martha | 324503 | 05.11.2019 | India | Granted Application No. 1299/KOL/2015 |
| 29 | Gold loaded graphene oxide modified Zn-Cr layered Double Hydroxide photocatalyst and a process for the preparation thereof. | Kulamani Parida,  SriramMansingh,  Satyabadi Martha,  Prakash Chandra Sahoo,  Rashmi Acharya | 325210 | 18.11.2019 | India | Granted Application No. 785/KOL/2015 |
| 28 | Ag3PO4/NiFe-LDH/RGO composite materials; A robust adsorbent for excellent adsorption capability and a process for the preparation thereof. | Kulamani Parida,  SusangineeNayak | 326248 | 28.11.2019 | India | Granted Application No. 201631011440 |
| 27 | Copper incorporated graphitic carbon nitride modified MCM-41 preparation thereof for photo catalytic application. | Kulamani Parida,  DiptiPravaSahoo,  DharitriRath,  SulagnaPatnaik | 326938 | 06.12.2019 | India | Granted Application No. 1300/KOL/2015 |
| 26 | Reduced graphene oxide modified sphere like lanthanum ferrate photocatalysts for hexavalent chromium reduction and a process for the preparation. | Kulamani Parida,  SaumyapravaAcharya,  DipakkumarPadhi | 331818 | 12.02.2020 | India | Granted Application No. 201631029480 |
| 25 | Fabrication of ZnFe2O4 @Al2O3-MCM-41; A suitable photocatalyst and a process for the preparation thereof. | Kulamani Parida,  Kundan Dash,  Binita Nanda | 342336 | 23.07.2020 | India | Granted Application No. 201731029518 |
| 24 | Exfoliating layered materials : A bithermal aqueous method for delamination of layered compounds. | Kulamani Parida,  S.P.Pattnaik,  A.Behera,  Satyabadi Martha,  RashmiAcharya | 342544 | 27.07.2020 | India | Granted Application No. 201831029676A |
| 23 | α-Fe2O3 /ZnCr-LDH composite: A proactive photocatalysts for visible light driven photocatalytic degradation of textile dyes, phenol and process for the preparation thereof. | Kulamani Parida,  Susanginee Nayak | 343165 | 03.08.2020 | India | Granted Application No. 201631011439 |
| 22 | Activated red mud/mesoporous MCM-41 composite: A suitable photocatalyst and a process for the preparation thereof for Cr (VI) reduction. | Kulamani Parida,  Binita Nanda,  Dharitri Rath | 355077 | 31.12.2020 | India | Granted Application No. 201731001635 |
| 21 | Boron nitride nano sheets (BNNS) from hexagonal boron nitride by aqueous bi-thermal exfoliation protocol. | Kulamani Parida,  Sambhu Prasad Patanaik,  Pradeepta Babu,  Lopamudra Acharya,  Rashmi Acharya | 357087 | 29.01.2021 | India | Granted Application No. 201931049465 |
| 20 | Cadmium Sulphide modified floral like lanthanum ferrate photocatalyst and a process for the preparation thereof. | Kulamani Parida,  SaumyapravaAcharya,  Debasmita Kandi | 362781 | 23/03/2021 | India | Application No. 1301/KOL/2015  Filing Dt. 16.12.2015 |
| 19 | BiVO4/MCM-41 nanocomposite photocatalysts for enhanced visible light activity and a process for the preparation thereof. | Kulamani Parida,  Brundaban Nayak,  Binita Nanda | 362251 | 26/03/2021 | India | Application No. 1325/KOL/2015  Filing Dt. 23.12.2015 |
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| 17 | Synthesis of a novel ruthenium bipyridyl complex intercalated N,S-codoped titania pillared montmorillonite, a multifunctional photocatalysts for various light driven readox reactions. | Kulamani Parida | US2012/0178614A1 | 12.07.2012 | US |  |
| 16 | A hydrothermal fabrication of a novel photocatalysts, BiVO4 pillared zirconium titanium phosphate. | Kulamani Parida |  |  | India | 0360DEL2011 |
| 15 | Synthesis of a novel N-doped TiV mixed oxide for overall water splitting., Dated.. | Kulamani Parida |  | 09.03.2010 | India | 0536DEL2010 |
| 14 | A novel N-doped GaInZn mixed oxide photocatalyst and a process for the preparation thereof. | Kulamani Parida |  |  | India | 0024NF2010 |
| 13 | Synthesis of CdS-ZnS pillared zirconium-titanium phosphate: A novel photocatalytic material., | Kulamani Parida |  | 18.11.2009 | India | 2377DEL2009PP |
| 12 | A thermal plasma process for the preparation of SIC from rice husk (hull) for use as catalyst support. | Kulamani Parida | 190724 | 15.03.2004 | India | 1101/DEL/95 |
| 11 | Encapsulation of trinuclear manganese (III) acetato complex inside the silicate layer and its conversion to manganese oxide pillared montmorillonite. | Kulamani Parida |  |  | India | 1103/DEL/95 |
| 10 | A process for the dissolution of the blue dust in hydrochloric acid in presence of promoters. | Kulamani Parida  R.P Das |  |  | India | 193/DEL/95 |
| 9 | A process for the oxidation of carbon monoxide and hydrocarbon to carbon dioxide using lanthanum doped Indian Ocean manganese nodules. | Kulamani Parida | 184105 | 29.12.2000 | India |  |
| 8 | A process for the utilisation of Indian Ocean manganese nodules as catalyst for oxidation of carbon monoxide. | Kulamani Parida,  B.B Nayak, S.B Rao | 184971 | 27.03.2002 | India |  |
| 7 | An improved process for dissolution of manganese dioxide ores in sulphuric acid medium by using pyrite as the reductant. | Kulamani Parida, BB Nayak,SB Rao | 186399 | 18.8.2001 | India |  |
| 6 | A process for the preparation of platinum on alumina catalysts useful for the catalytic reforming of gasoline. | J.R.Rao, K.m Parida, S.B Rao, R.S Thakur, S.N Das, B.R Sant | 184972 | 12.02.1991 | India |  |
| 5 | Thermal treatment of vanadium sludge for preparation of vanadium pentoxide and zeolite for use as catalyst. | RC Thakur,SB Rao,Kulamani Parida, BR Sant | 162912 | 23.07.88 | India |  |
| 4 | A process for the preparation of lead salts directly from lead sulphide ores/concentrates. | Kulamani Parida, SR Rao | 179523 | 11.10.97 | India |  |
| 3 | A process for the preparation of zinc sulphate from zinc sulphide ores/concentrates and manganese dioxide/manganese ores. | Kulamani Parida, S B Rao | 178324 | 29.03.97 | India |  |
| 2 | A process for the preparation of copper sulphate directly from its sulphide ores/concentrates | Kulamani Parida, S B Rao | 179095 | 23.08.97 | India |  |
| 1 | An improved process for the preparation of manganese sulphate. | Kulamani Parida, SB Rao, RS Thakur, JR Rao , BR Sant | 161411 | 28.11.87 | India |  |