

ADVANCED HYBRID NANOMATERIALS LABORATORY (AHNL)

Homepage - <https://nclpdeugmail.weebly.com/>

Advanced Hybrid Nanomaterials Laboratory (AHNL) at PDEU! Led by Dr. Nitin Chaudhari works on design and developing methods for synthesis of new class of nanostructured hybrid materials that have promise for application in Energy storage and conversion devices and environmental issues such as Batteries, Supercapacitor, Fuel Cell, Water Splitting and wastewater Treatment



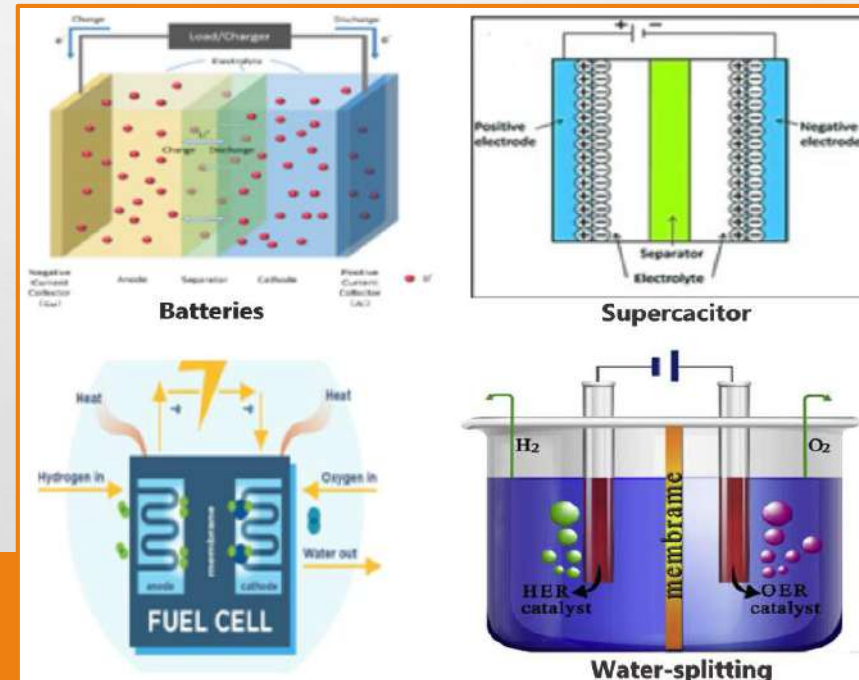
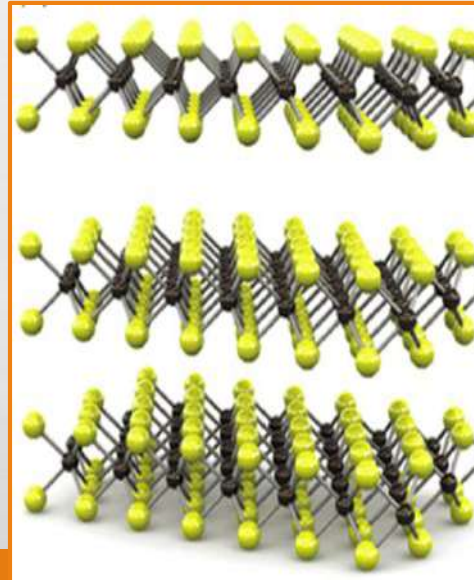
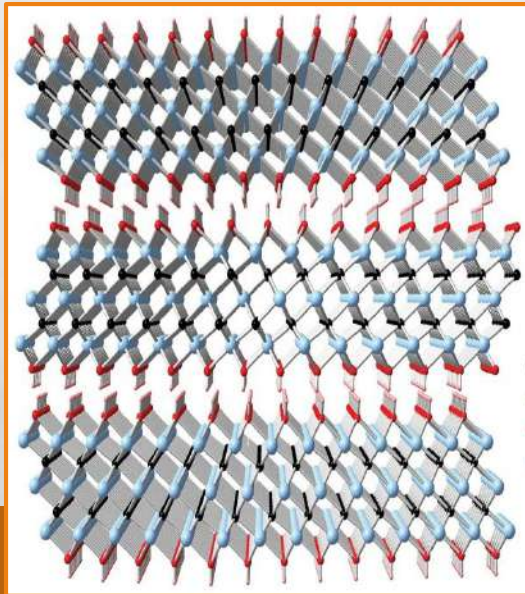
Group Members



Jeny Gosai Monika Patel Dr. Nitin Chaudhari Ranjit Mohili Riddhi Patel

RESEARCH AREA:-

- DESIGN AND DEVELOPMENT OF 2D CARBIDE OR NITRIDE MATERIALS (MXENE)
- ENERGY STORAGE AND CONVERSION DEVICES
- ACTIVE ELECTRODE MATERIALS BASED ON CARBON, NANOCOMPOSITES, OXIDES, SULFIDES, HYDROXIDES
- ELECTRODE MATERIALS FOR FUEL CELL, LITHIUM-ION BATTERIES, SUPERCAPACITORS, WATER SPLITTING AND WASTEWATER TREATMENT



Group Leader

Dr. Nitin K Chaudhari

Associate Professor, Department of Chemistry,
Pandit Deendayal Energy University, Gandhinagar, India.

Email Id.: Nitin.Chaudhari@sot.pdpu.ac.in

Office No.: +9179 2327 5421

Mobile No.: +91 95297 80209

Education.:

- Ph.D. in Material Science, Korea University, Seoul, South Korea, 2013
- M. Sc. Organic Chemistry, North Maharashtra University, Jalgaon, India, 2003
- B. Sc. in Chemistry, North Maharashtra University, Jalgaon, Maharashtra, India, 2001

Professional Position.:

- Associate Professor, Pandit Deendayal Energy University, Gandhinagar, India (02/2020~Present)
- Deputy Director, Nexcoms Ltd. Co., Daejeon, South Korea (05/2019~12/2019)
- Research Professor, Korea University, Seoul, South Korea (02/2015~02/2019)
- Research Professor, Myongji University, Yongin, South Korea (03/2014~01/2015)



Honors, Awards and Memberships:-

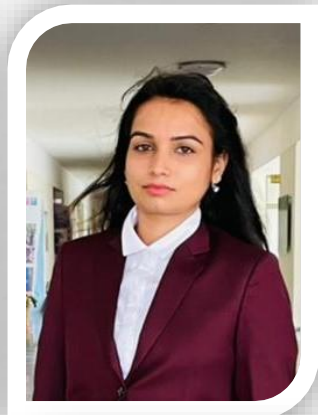
- Elected as a **Young Associate** of Maharashtra Academy of Sciences (MASc)
- **Member (MRSC)** of Royal Chemical Society (RSC)
- **Life Member** of Korean Chemical Society, South Korea (KCS)
- **Life Member** of Materials Research Society of India (MRSI)
- **Korean Government Fellowship** for Ph. D under the Korean Research Foundation (KRF) program
- Serving as an **Expert Reviewer** to evaluate the research proposal submitted under various schemes at national and international level.
- **Reviewer:** Angew Chemie Int ed, Nanoscale, ACS Appl. Mater. Interfaces, Small, CrystEnggComm., Chem. Comm., Chem. Engg. J., RSC Advances, Electrochimica Acta., Adv. Sci., Chemistry Select, Cat. Today, Analytical Methods, Energy and Fuel, etc

Ongoing Projects:-

“Indo -Korean Bilateral Project” funded by Department of Science and Technology (DST), Ministry of Science under Indo-Korean call for Joint Research Proposals of Cooperation. Total joint budget- 1.15 crore from 2021 to 2024.

“Seed Fund” Funded by Pandit Deendayal Energy University (PDEU). Budget – 20 Lakhs from 2021 to 2023

Group Members:-



Monika Patel

PhD Scholar

MSc Chemistry (2018), Gujarat University

Research interest : Development of MXene-based Hybrid Nanostructured Materials

EmailID: monika.pphd20@sot.pdpu.ac.in/ monikapatel1047@gmail.com

Publications: 1 Submitted



Riddhi Patel

PhD Scholar

5 year Integrated MSc Organic Chemistry at Uka Tarsadia University

Email ID-riddhi.pphd21@sot.pdpu.ac.in

Research interest : Design and development of MXene-based Materials for Water Treatment



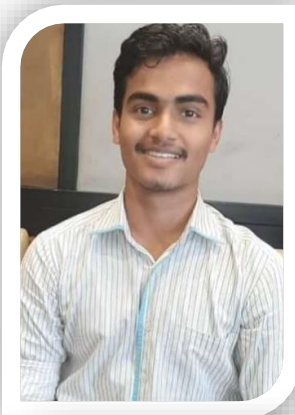
Harsh K. Prajapati

M Sc Environment Science 2020, Gujarat Forensic Science University, Gandhinagar

Research Interest :- Environment Science, Environment, Water Treatment, Water Chemistry, Nano materials, Membranes development

harsh.pphd21@sot.pdpu.ac.in

Publication :- GQD embedded bacterial cellulose nanopaper based multi-layered filtration membranes assembly for industrial dye and heavy metal removal in wastewater, Cellulose, 2021, 28, 10385–10398 (IF-5.044)



Ranjit Mohili

PhD-Junior Research Fellow(JRF)

MSc Physical Chemistry (2021) University of Mumbai
Research interest : Design and development of Energy Materials.

Email-id : Ranjit.Mohili@sot.pdpu.ac.in/
ranjit.mphd21@sot.pdpu.ac.in

Publications: 1 Submitted

[LINKEDIN](#)



Abhishek Ajay Kagalkar

PhD Scholar

M.Tech Chemical Engineering in 2021, PDEU

Research interest: Development of Advanced MXene-based materials for removal of Emerging Pollutants



Jeny D Gosai

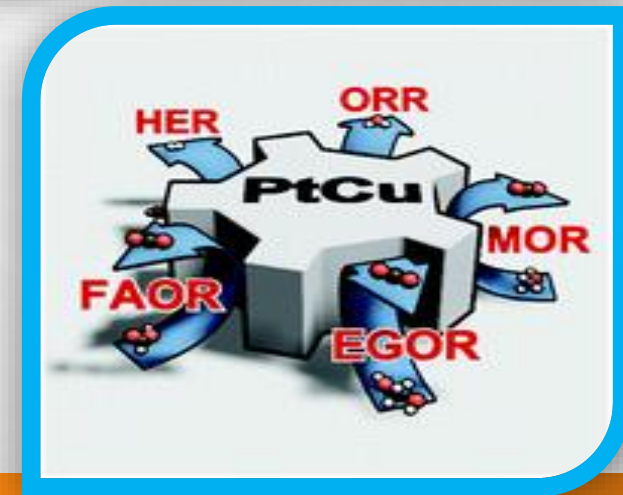
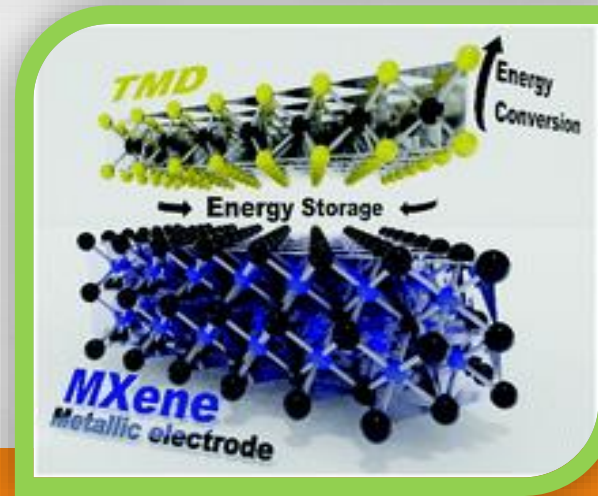
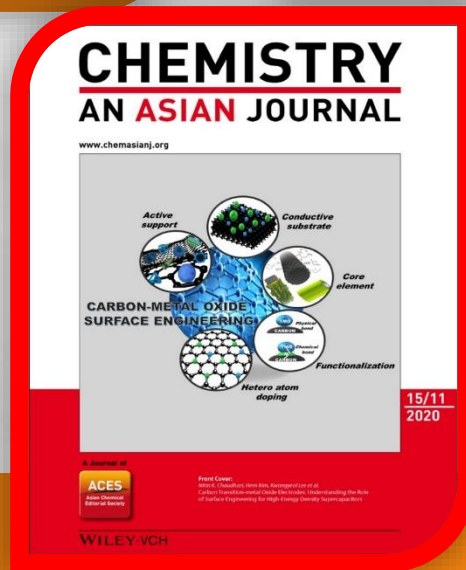
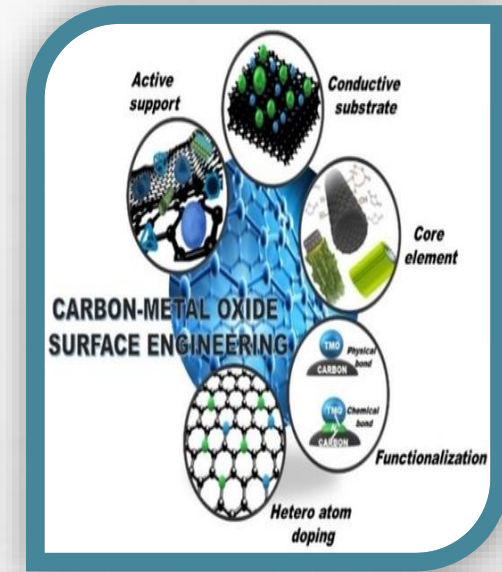
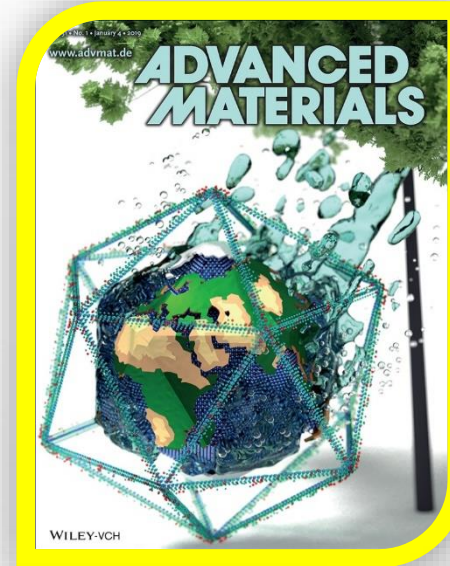
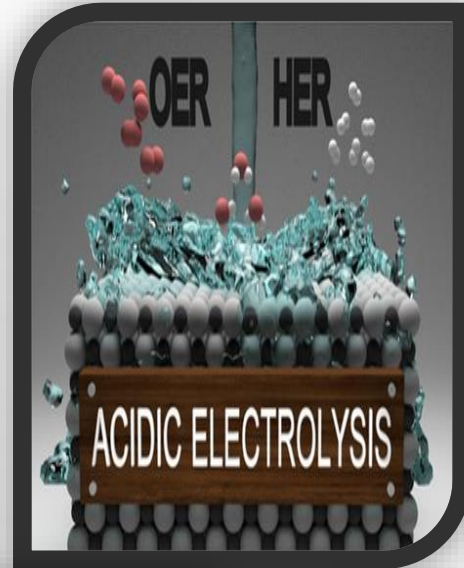
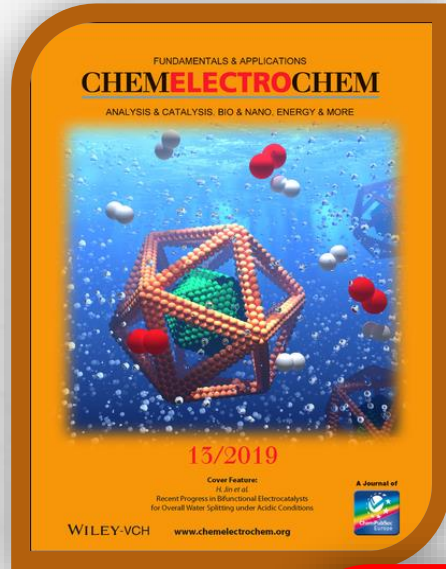
Masters project student, PDEU, Gandhinagar

BSc in Chemistry in 2020 at Kadi Sarva Vishwavidyalaya, Gandhinagar.

Email ID- jeny.Gmscc20@sot.Pdpu.Ac.In

Research interest : Design & development of Nano-Materials for Energy Applications.

Publications Highlights



COLLABORATIONS



1. Prof. Kwangyeol Lee

Korea University, Seoul, South Korea

Associate Editor, CrystEnggCoom & Editorial board member, ChemNanoMat (Wiley).

LINK- <http://nanolab.korea.ac.kr/>

2. Dr. Baizeng Fang

Senior Scientist, University of British Columbia, Canada

Associate Editor, RSC Advances



3. Prof. Jong-Sung Yu

Senior Editor, Scientific Reports

Daegu Gyeongbuk Institute of Science and Technology (DGIST), South Korea

Link : <https://jsylab.wixsite.com/jsylab>





4. Dr. Arvind Jadhav

Assistant Professor, Jain University, Bangalore

Link : <https://cnms.jainuniversity.ac.in/Faculty-Arvind-Jadhav.htm>

5. Dr. Mohendra Roy

Assistant Professor, Information and Communication Technology, PDEU

Link : <https://sites.google.com/view/mohendraroylab/home?authuser=0>



6. Dr. Ankur Solanki

Assistant Professor, Physics, PDEU

Link

: <https://sites.google.com/view/ankursolanki>

