

# HANDBOOK

DEPARTMENT OF CHEMISTRY

SCHOOL OF ENERGY TECHNOLOGY  
PANDIT DEENDAYAL ENERGY UNIVERSITY



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# About PDEU

Pandit Deendayal Energy University, Gandhinagar promoted by Gujarat State Petroleum Corporation (GSPC) is a domain-specific university in the field of energy education and research with a special focus on the oil and gas sector. The University is recognized by UGC. PDEU currently addresses the need for trained and specialized human resources for all Industries worldwide. It helps to expand the opportunities for students and professionals to develop an intellectual knowledge base with leadership skills to compete in the global arena. All these are accomplished through several specialized and well-planned undergraduate and postgraduate energy education programs and intensive research initiatives.



# Board Of Governors



## **Dr. Mukesh Ambani**

Chairman & MD  
Reliance Industries Ltd & President, PDEU,  
Chairman of the Board



## **Dr. Hasmukh Adhia**

Former Union Finance and Revenue  
Secretary, Govt. of India



## **Dr. R. A. Mashelkar**

FRS Bhatnagar Fellow & President- Global Research  
Alliance, NCL-Pune



## **Prof. S. Sundar Manoharan**

Director General  
Pandit Deendayal Energy University



## **Shri Jinal Mehta**

Managing Director  
Torrent Power Ltd, Ahmedabad



## **Shri Milind Torawane**

IAS, Managing Director  
Gujarat State Petroleum Corporation, Gandhinagar  
Chairman & Managing Director,  
Oil and Natural Gas Corporation (ONGC), New Delhi

# Board Of Governors



**Shri S. J. Haider, IAS (Ex Officio)**

The Secretary to Government In-charge of Technical Education, Govt. of Gujarat



**Mrs. Mamta Verma, IAS (Ex Officio)**

The Secretary to Govt Energy and Petroleum and Petrochemicals Department, Govt. of Gujarat



**Ms. Pallavi Shroff**

Shardul Amarchand Mangaldas & Co., New Delhi



**Shri Jalaj Dani**

Chairman - IIM - Trichy and  
Co-promoter of Asian paints



**Shri Parimal Nathwani**

Reliance Industries Ltd.



**Dr. T. P. Singh**

Dean - Students' Affairs - PDEU



**Prof. Dhaval Pujara**

Director, School of Technology, PDEU

PDEU has developed a vibrant campus with advanced facilities and technologies on its campus. It has set up State of the art Laboratories in each discipline with support of industries, Knowledge partners and internationally renowned University partners. The University has also developed cutting edge digital infrastructure with up to date research and educational curriculum to promote and facilitate research and learnings. Students have shown tremendous talent and innovation in the field of education, learning & research and to build the Institute's reputation and recognition. PDEU also provides international exposure to its students to create values and cultivate their mind towards innovation by collaborating with reputed International universities. Faculty with their experience and immense subject knowledge in specialized fields play a vital role in the student's development. At PDEU, researchers and students collaborate with industry and government to create innovative solutions merging engineering and creativity, theory and practice, and University and society.

University offers liberal scholarships & exposure and facilities to students and faculty compared with the best in academics to nurture all-round talent. I welcome all to this reservoir of knowledge. "As there is a global quest for more efficiency through Industry 4.0, we are prepared with the opportunity of finding innovative solutions to these challenges, and becoming a reservoir of knowledge for radical yet Sustainable societal transformation."

## MESSAGE FROM PATRONS

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PROF. S. SUNDAR MANOHARAN  
DIRECTOR GENERAL  
PANDIT DEENDAYAL ENERGY  
UNIVERSITY





**Prof. Anirbid Sircar**

Director, School of Energy Technology, PDEU

"The School of Energy Technology (SoET) at PDEU is dedicated to fostering career-building by providing opportunities for learning, thinking, and innovation. It offers a range of undergraduate and post-graduate programs in engineering and sciences, and has established Centres of Excellence such as the Geothermal Centre of Excellence and the Centre for Biofuel, Centre for solar energy and Bioenergy Studies. In addition, it has professional associations of students and faculty members that carry out various value-added activities such as workshops, conferences, and expert lectures. The school is determined to become a leading technology school in the world and is inviting partners to join its journey."

**Prof. Manoj Pandey**

Head - Department of Chemistry  
School of Energy Technology, PDEU

"As the Head of the Chemistry Department, I am a firm believer in the significance of industry connection for academia. Our department, in particular, can greatly benefit from such connections as it provides us with the opportunity to collaborate with industry professionals and apply our research findings to real-world problems. Our faculty members are highly qualified and experienced, and they are committed to providing students with a strong foundation in the fundamental principles of chemistry, as well as opportunities to apply their knowledge through hands-on projects and research."



# ABOUT SOET



## VISION

"To emerge as a world-class Institution of Excellence in Energy Education, Research and Innovation which will prepare and sensitize the youth and ultimately the society for radical yet sustainable societal transformation."

## MISSION

"To emerge as a world-class Institution of Excellence in Energy Education, Research and Innovation which will prepare and sensitize the youth and ultimately the society for radical yet sustainable societal transformation."

## OBJECTIVES

- To provide formal educational programs leading to Bachelor, Master, and Doctoral Degrees in Energy Technology and allied areas.
- To develop and evolve new degree and diploma programs in response to the needs of the industry.
- To manage the content, design, and continuous innovation of its program offering in a manner that earns accreditation of international status.
- To provide certificate programmes that serve the on-going needs of practicing professionals for continuing education in the frontiers of oil, gas, and petrochemicals.
- To operate as an educational and research hub that interconnects with regional and international practitioners in the oil, gas, and petrochemical industries and with international partners in education.
- To provide customized programs that bridge the gaps between the knowledge prerequisite of the field and academic inputs for pursuing the domain-specific engineering graduate and post-graduate curricula.
- To promote strong, effective, and mutually beneficial Industry-University Partnerships.
- To provide transparent, speedy, result-oriented, and student-centered e-governance.

# ABOUT DEPARTMENT OF CHEMISTRY



The Department of Chemistry is committed to excellence in teaching-learning and research in Chemistry and allied fields. The department consists of dynamic and dedicated faculties from premier institutes like IITs, IISc, CSIR laboratories, Central Universities, and Foreign Universities with excellent research credentials. The department is well-equipped with state-of-the-art research laboratories and high-end instrumental facilities.

The department offers programs such as Four years B.Sc. (Hons.) in Chemistry with a blend of Science and Liberal Arts courses and a two-year M.Sc. In Chemistry with Industry oriented specialization with one-year exposure to high-end research and a Ph.D. in Chemistry (Full time & Part-time).

The department covers a broad spectrum of research, including Synthetic Organic Chemistry, Asymmetric Synthesis, Materials Chemistry, Heterogeneous Catalysis, Nanomaterials & Photocatalysis, Fuel Cell Technology, Materials for Energy Storage and Conversion, Soft Matter, Medicinal and Environmental Chemistry, Geochemistry, Computer-Aided Drug Design, etc.

The students in the department have access to state-of-art library with a collection of textbooks and journals of national and international repute. Besides, students also have access to various digital and e-resources such as the web of science, science direct, Sci-finder, etc.

Department organize various training programs, seminars, workshops, conferences, and colloquia, at the national and international levels to sensitize the student about the latest development in the thrust areas of Chemistry. During the last five years, the department has published more than 300 research papers in Scopus and SCI-indexed journals. Currently, 50 students are pursuing Ph.D., and 11 students have been awarded Ph.D. from 2010-2023. The department has been awarded a DST-FIST grant of approximately 4.0 Crore for NMR and BET surface analyzer. There are 15 completed and ongoing projects of roughly 15 Crore from various national funding agencies like SERB, DST, ICMR, etc.

## AIM

“To be a department of academic excellence by nurturing students with fundamental and applied knowledge of chemistry augmented with state of the art research, innovation and technology.”

## GOALS

- To offer well-designed programs that provide in-depth knowledge of chemistry and inculcate scientific temper amongst graduating students to become skilled professionals in nation-building.
- To impart experiential learning, strengthen the basics, and excel in high-end research.
- The overall development of students as solution providers and skilled professionals for the chemical industries, academia, and societal growth.

## DISTINCTIVE FEATURES

- Highly qualified faculty members.
- Curriculum based on JAM/NET/GATE/GSET and equivalent examination.
- Hands-on experiment instate-of-the-art laboratories.
- Research/Industrial Project-based Learning.
- Worldwide academic and Industrial Collaborations.
- Department of Chemistry provides its students with the latest scientific knowledge, technology, and innovative thinking approach.
- Offers undergraduate and postgraduate courses in Chemistry.
- Highly active in diverse areas of research.
- Highly skilled faculty and equipped with high-profile instruments.
- Department puts excellent efforts into bringing the best in its students

# PROGRAMES OFFERED



## **B.Sc.(Hons) Chemistry**

4 years program



## **M.Sc. Chemistry**

2 years program

● **Organic Chemistry**

● **Analytical Chemistry**

● **Industrial Chemistry**

● **Pharmaceutical Chemistry**



## **Ph.D.**

● Full time

● Part Time





# FACULTY PROFILES



## **Prof. S. Sundar Manoharan**

Director General

Ph.D. IISc Bangalore (1991), M.Sc., B.Sc.

Postdoc – Max Planck Institute for Microstructural Physics, Germany (1995–96)

<https://dg4205.wixsite.com/my-site>

**Research Expertise:** Nanomaterials, Magneto Electronics, Organic Light Emitting, Diode, Thin Film, Nanostructure, Magnetoresistive Polymer, Biodegradable Polymers.

Publication: 136

Patent: 24

Projects: 14

Ph.D. Students: 15



## Prof. Manoj Pandey

Professor & HOD

Ph.D. IIT Kanpur (2007), M.Sc., B.Sc.

Postdoc – NIT, Japan (2007–10), Israel Inst. of Technology (2006–07), Haifa, Israel

[manoj.pandey@sot.pdpu.ac.in](mailto:manoj.pandey@sot.pdpu.ac.in)

09978235337

<https://manojpandey01.wixsite.com/mysite>

**Research Expertise:** Energy materials, Materials for water treatment, Biosensor, Novel catalyst for industrial applications, Novel synthetic methodologies, Supramolecular chemistry for bio application, Natural Product and analogues, Asymmetric synthesis, Synthetic methodology, Drug design etc.

Publication: 35

Patent: – 02

Projects: 06

Ph.D. Students: 12



## Prof. Rajib Bandyopadhyay

Professor

Ph.D. CSIR – NCL Pune (1997), M.Sc., B.Sc.

Postdoc – Gifu Univ., Japan (JSPS & NEDO, 1997–2001), Ruhr Univ. Bochum, Germany (Humboldt fellow, 2001–03)

[rajib.bandyopadhyay@sot.pdpu.ac.in](mailto:rajib.bandyopadhyay@sot.pdpu.ac.in)

09909991602

<https://rajibbandyopadhyay.wixsite.com/my-site>

**Research Expertise:** Heterogeneous catalysis, Materials chemistry, Zeolites and other porous materials, their synthesis and application in fine chemicals and petroleum refining.

Publication: 60

Patent: 01

Projects: 02

Ph.D. Students: 13



## Dr. Anirban Das

Associate Professor

Ph.D. PRL, Ahmedabad (2005), M.Sc., B.Sc.

Postdoc – University of Ottawa, Canada (2006), Hiroshima University, Japan (2007–08), James Cook University, Australia (2010–11), National Cheng Kung University, Taiwan (2011–12)

[anirban.das@sot.pdpu.ac.in](mailto:anirban.das@sot.pdpu.ac.in)

0925273308

<https://anirbandas3.wixsite.com/my-site>

**Research Expertise:** Isotope geochemistry; Environmental geochemistry; Groundwater studies; Weathering–Climate connections.

Publication: 19

Projects: 03

Ph.D. Students: 06



## Dr. Nitin Chaudhari

Associate Professor

Ph.D. Korea University (2013), M.Sc., B.Sc.

Postdoc – Korea Univ., South Korea (2013–19)

[nitin.chaudhari@sot.pdpu.ac.in](mailto:nitin.chaudhari@sot.pdpu.ac.in)

09529780209

<https://nclpdeu.wixsite.com/drnitinchaudhari>

**Research Expertise:** Development of active electrode materials such as porous carbons, nanocomposites, Hybrid structure, oxides, sulphides, hydroxides, 2D MXene for Fuel Cell, Lithium-ion Batteries, Supercapacitors, hydrogen production and Water splitting.

Publication: 44

Patent: 02

Projects: 02

Ph.D. Students: 06





## Dr. Ranjan Kumar Pati

Associate Professor

Ph.D. IIT Kharagpur (2003), M.Sc., B.Sc.

Postdoc – Alfred Univ., NY, USA (2001–03), University of Maryland, USA (2003–05)

[ranjan.pati@sse.pdpu.ac.in](mailto:ranjan.pati@sse.pdpu.ac.in)

7923275306

<https://ranjanpati.wixsite.com/ranjan-pati>

**Research Expertise:** Nanomaterials, Renewable Energy, Water–Gas–Shift (WGS) catalysts, Polymer Electrolyte Membrane Fuel Cell (PEMFC), Solid Oxide Fuel Cell (SOFC), Ionic Conductivity.

Publication: 34

Patent : 05

Projects: 02

Ph.D. Students: 04



## Dr. Tapan Pal

Assistant Professor

Ph.D. IIT Kanpur (June 2016), M.Sc., B.Sc.

Postdoc – CSIR NCL, Pune (August 2016 – January 2018)

[tapan.pal@sot.pdpu.ac.in](mailto:tapan.pal@sot.pdpu.ac.in)

8756009429

<https://tapanpall.wixsite.com/drtapankumarpal>

**Research Expertise:** Supramolecular chemistry and designing of fluorescence materials and their sensing application, metal organic framework, catalysis, liquid crystallography.

Publication: 42

Patent: 01

Projects: 02

Ph.D. Students: 07





## Dr. Kalisadan Mukherjee

Assistant Professor

Ph.D. IIT Kharagpur (2012), M.Sc., B.Sc.

Postdoc - DST Inspire Faculty Fellow, CSIR - CMERI (2012-17),  
GWU, USA (Fullbright-Nehru postdoctoral fellow, 2018-19)

[kalisadan.mukherjee@sot.pdpu.ac.in](mailto:kalisadan.mukherjee@sot.pdpu.ac.in)

09775552143

<https://mukherjeekalisadha.wixsite.com/kali>

**Research Expertise:** Chemiresistive and electrochemical sensor for the detection of gas and liquid phase analytes. Adsorbents for water purification. Organic/ Inorganic photo-sensitizer based solar cells.

Publication: >50

Patent : 05

Projects: 02

Ph.D. Students: 05



## Dr. Balanagulu Busupalli

Assistant Professor

Ph.D. CSIR-NCL Pune (2009 -2016), M.Sc., B.Sc.

Postdoc - Harvard Univ., Cambridge, MA, USA (2016-18), University  
of Massachusetts, Boston, USA (June 2018 - Nov 2018)

[busupalli.balanagulu@sot.pdpu.ac.in](mailto:busupalli.balanagulu@sot.pdpu.ac.in)

06300491137

<https://busupallibalanagul.wixsite.com/my-site-6>

**Research Expertise:** Energy harvesting from soft materials such as polymer and lipid-based vesicular systems forms the core research interest. Electricity generation from shape fluctuations induced in such soft material systems through external agents such as temperature and osmotic pressure.

Electrochemical hydrogen generation from metal-based layered and molecular materials.

Publication: 13

Patent : 03

Ph.D. Students: 02



## Dr. Prakash Chandra

Assistant Professor

Ph.D. CSIR-NCL Pune (2014), M.Sc., B.Sc.

Postdoc - UCL IMCN, Belgium (2016-18)

[prakash.chandra@sot.pdpu.ac.in](mailto:prakash.chandra@sot.pdpu.ac.in)

07383047242

<https://pchandra1001.wixsite.com/prakash-chandra>

**Research Expertise:** Homogeneous catalysis, Heterogeneous catalysis, Nano catalysis, Materials Chemistry and Electrochemistry.

Publication: 40

Patent: 01

Ph.D. Students: 04



## Dr. Rama Gaur

Assistant Professor

Ph.D. IIT Roorkee (2017), M.Sc., B.Sc., B.Ed.

[rama.gaur@sot.pdpu.ac.in](mailto:rama.gaur@sot.pdpu.ac.in)

08266907756

<https://ramagaur.wixsite.com/my-site-1>

**Research Expertise:** Synthesis of nanoscale materials with interesting and unique morphologies by simple and economical chemical approaches. Shape and size-dependent optical, magnetic and electrochemical properties. Application in photocatalysis. Optoelectronics, electrochemical sensing, electrocatalytic reduction/oxidation, solar energy conversion, energy storage devices, supercapacitors, water splitting and environmental remediation.

Publication: 34

Patent: 01

Projects: 02

PhD. Students: 03





## Dr. Syed Shahabuddin

Assistant Professor

Ph.D. University of Malaya (2016), M.Sc., B.Sc.

Postdoc – Senior Research fellow, Sunway University, Malaysia (Sept. 2017 – Nov. 2019)

[syed.shahabuddin@sot.pdpu.ac.in](mailto:syed.shahabuddin@sot.pdpu.ac.in)

0858593238

<https://syedshahabuddin29.wixsite.com/syedshahabud>

**Research Expertise:** Synthesis of Nanomaterials, 2D-MXene, Graphene, conducting polymer nanocomposites for water treatment, photocatalysis, supercapacitors, DSSCs, nanofluids for solar thermal applications and phase change materials.

Publication : 138

Patent : 01

Ph.D. Students: 04



## Dr. Nandini Mukherjee

Assistant Professor

Ph.D IISc Bangalore (2020), M.Sc., B.Sc.

[nandini.mukherjee@sot.pdpu.ac.in](mailto:nandini.mukherjee@sot.pdpu.ac.in)

08762218623

<https://nandinimukherjee.wixsite.com/my-site>

**Research Expertise:** Synthesis of organic compounds that have applications in the field of chemo-sensing of toxins and monitoring biological phenomena. Development of cost-effective nano-formulations for application in medicinal chemistry and renewable energy sector.

Publication: 13

Projects: 01



## Dr. Anu Manhas

Assistant Professor

Ph.D. CUG (2020), M.Phil., M.Sc., B.Sc.

[anu.manhas@sot.pdpu.ac.in](mailto:anu.manhas@sot.pdpu.ac.in)

09149873239

<https://anumanhas15.wixsite.com/anumanhas>

**Research Expertise:** Application of In silico drug design to address the problems related to drug resistance. Research activity includes structure-based drug design, molecular docking, virtual screening methods like drug-likeness studies and ADMET properties, molecular dynamics simulations, and free energy calculations.

Publication : 36

Projects: 02

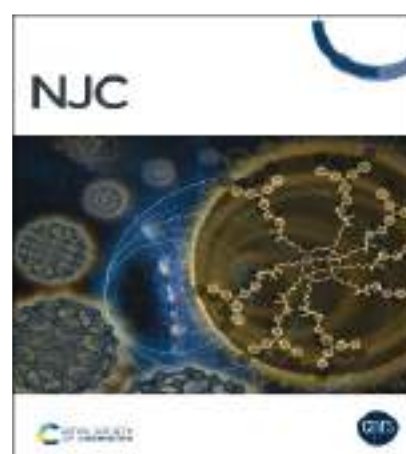
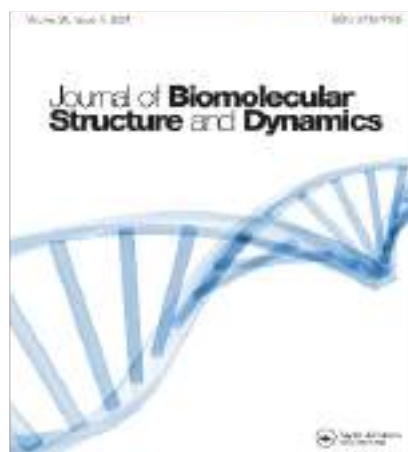
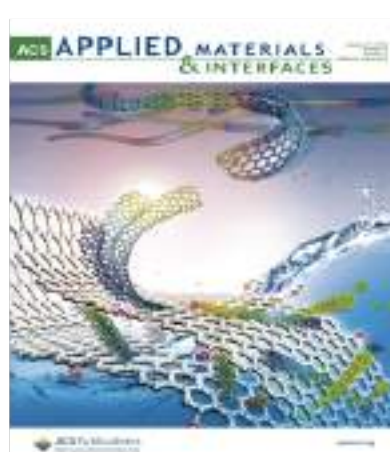
Ph.D. Students: 02



# RESEARCH PROJECTS

SR.NO.	PROJECT	FACULTY	FUNDING AGENCY
1	Synthesis of Sumanene and Corannulene derivative and its application in various fields of chemistry	Prof. Manoj Pandey	DST
2	Chemical and isotopic investigation of fluoride rich ground waters in Gujarat and in Rajasthan	Dr. Anirban Das	SERB – DST
3	Development of nano sized catalysts for the application in FCC and hydroprocessing	Prof. Rajib Bandyopadhyay	Reliance Industries Ltd.
4	Anovel nano particle based bio assay for sensitive detection of cancer specific proteases	Prof. Manoj Pandey	DST – SERB
5	Graphene Protected Si Nanosphere (interconnected) for developing high energy density Li ion battery	Dr. Ranjan K. Pati	MES – DST – SERB
6	Tracking chromium (VI) migration in groundwater using stable isotopes of Chromium	Dr. Anirban Das	DST
7	Water Innovation Centre Training and Research, PDPU with IITM, IITH, NCL, BARC	Prof. Manoj Pandey	DST
8	Nanostructured Electrolyte Materials for Low Temperature Solid Oxide Fuel Cell (LT-SOFC)	Dr. Ranjan K. Pati	DST – SERB
9	Sulfuric acid mediated weathering in the Ganga and the Brahmaputra (GYB) River Basins: Constraints from Sulfur and oxygen isotopes in dissolved sulfat	Dr. Anirban Das	MoES
10	Mechanochemical Approach for Perovskite Solar Cells: A way towards efficient, stable and low cost Solar cells	Prof. Manoj Pandey	DST
11	Mechanosynthesis of Stable and Efficient 2D Perovskite Solar Cells	Prof. Manoj Pandey	DST
12	"Studies on optical, electrical and microstructural properties of MoS <sub>2</sub> , SnS <sub>2</sub> and MoS <sub>2</sub> -SnS <sub>2</sub> hybrid nanostructured thin films for solar cell applications"	Dr. Rama Gaur	DST – SERB – TARE
13	Development of MXene –Transition Metal Compound Hetero – Nanostructures as Electrocatalysts for Overall Water Splitting	Dr. Nitin Chaudhari	DST – NRF
14	Detection of Biomarkers through Nanoscale Metal –Organic Frameworks (MOFs)	Dr. Tapan Pal	TARE – SERB
15	A hybrid structure –based modelling technique in exploring the effectiveness of natural compounds against the potential anticancer druggable target cyclin –dependent kinase protein	Dr. Anu Manhas	TARE – SERB
16	Development of MXene Hierarchical Transition Metal Sulfide Hybrid Nanostructures as Electrocatalyst for Overall Water Splitting	Dr. Nitin Chaudhari	CPRI

# HIGHLIGHTED PUBLICATIONS





# STUDENTS PLACED



# STUDENTS IN ABROAD



NAME	PROGRAM ENROLLED	YEAR OF PASSING	CURRENT ORGANIZATION
Jeny D. Gosai	M.Sc.	2022	Ph.D. Scholar, Pandit Deendayal Energy University, India
Jessica Patel	Ph.D	2020	Ph.D. Scholar, Pandit Deendayal Energy University, India Postdoctoral Fellow, University of Montreal, Canada
Maitrayee Trivedi	Ph.D	2020	Research Associate, Punjab University, India
Maaz Nawab	Ph.D	2020	Research Scientist, Intas Pharmaceuticals
Sunita Barot	Ph.D	2017	Senior Quality Associate, Appco Pharma LLC, USA
Riddhi Thakkar	Ph.D	2019	Research Associate, Sardar Patel University, Anand, India
Sukumar Mandal (Part time)	Ph.D	2022	Sr. Vice President, RIL, Jamnagar Refinery
Bibhabasu Mohanty	Ph.D	2022	Assistant Professor, SAL Institute of Technology, Ahmedabad
Rakshith R. Shettigar	Ph.D	2018	Operations Manager Anhui Jucheng Fine Chemicals Co., Ltd.
Bhutiya Priyank Lilabhai	Ph.D	2018	Assistant Professor Department of Chemistry, BKNMU, Gujarat, India
Patel Khushbuben Gordhanbhai	Ph.D	2019	Assistant Professor, Rai University, Ahmedabad, Gujarat, India
Chandra Kanth P	Ph.D	2020	Scientist, Akums Life Sciences Limited, Punjab, India
Asha Anil	Ph.D	2020	Scientist, CSIR-CGCRI, Naroda Center, Ahmedabad



# EVENTS & ACTIVITIES

Rural Internship

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Industrial Orientation

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Industrial and Educational Visits

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Academic cum Adventure Camps

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Academia & Industrial  
Internships

# CHEM TALKS

## A Chemistry Colloquium Series

**SOT** **PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY**

**CHEMISTRY COLLOQUIUM SERIES (CHEMTALKS)**

Organized by Department of Chemistry, SOT, PDEU

THEMES: ENERGY / ENVIRONMENT / POLYMER / FUTURE ADVANCED MATERIALS / ORGANIC

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON CATALYSIS: KEY TECHNOLOGY FOR THE SUSTENANCE AND GROWTH OF SOCIETY**

**31 JANUARY 2022**  
3:00 PM

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**SOT** **PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY**

**CHEMISTRY COLLOQUIUM SERIES (CHEMTALKS)**

Organized by Department of Chemistry, SOT, PDEU

THEMES: SUSTAINABLE ENERGY / ENVIRONMENT / FUTURE ADVANCED MATERIALS / ORGANIC

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON THE TOP TECHS TRENDING NOW IN CHEMICAL SCIENCES**

**21<sup>st</sup> FEBRUARY 2022**  
3:00 PM

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY** **SOT**

**CHEMTALKS**

**CHEMISTRY COLLOQUIUM SERIES**

Organized by Department of Chemistry, SOT, PDEU

Themes: Energy / Environment / Advanced Materials

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

For Diploma, Research Scholar, UG, PG, PhD students & Faculty members

**Talk on "Towards exploration of materials for 100-1000"**

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**DATE: 18<sup>th</sup> April, 2022**  
**TIME: 3:00 PM**

**PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY** **SOT**

**CHEMTALKS**

**CHEMISTRY COLLOQUIUM SERIES**

Organized by Department of Chemistry, SOT, PDEU

Themes: Catalysis / Energy / Environment / Future Advanced Materials / Organic

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON "ELECTRO-CATALYTIC CONVERSION OF CARBON DIOXIDE INTO HYDROCARBONS"**

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**DATE: 18<sup>th</sup> MARCH 2022**  
**TIME: 10:00 PM, WEDNESDAY**

**PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY** **SOT**

**CHEMTALKS**

**CHEMISTRY COLLOQUIUM SERIES**

Organized by Department of Chemistry, SOT, PDEU

Themes: Environment / Catalysis / Advanced Materials

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**Talk on "Photocatalysis: An effective tool for degradation of organic pollutants"**

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**DATE: 07<sup>th</sup> May, 2022**  
**TIME: 3:00 PM**

**PARVATI DEENDRAYAL ENERGY UNIVERSITY** **SOT**

**CHEMTALKS**

**CHEMISTRY COLLOQUIUM SERIES**

**TALK ON**

**NANOBIOSENSORS: THE FUTURE FOR DIAGNOSIS OF DISEASE**

FOR DIPLOMA, RESEARCH SCHOLAR, UG, PG, PHD STUDENTS AND FACULTY MEMBERS

ORGANIZED BY DEPARTMENT OF CHEMISTRY, SOT, PDEU

Themes: Devices

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**DATE: 18<sup>th</sup> JULY, 2022**  
**TIME: 3:00 PM**

**SOT** **PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY**

**CHEMISTRY COLLOQUIUM SERIES (CHEMTALKS)**

Organized by Department of Chemistry, SOT, PDEU

THEMES: ORGANIC / DEVICE / BIO

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON DESIGN AND SYNTHESIS OF FLUORESCENT PROBES FOR BIO-APPLICATIONS**

**30<sup>th</sup> AUGUST 2022**  
3:00 PM

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**SOT** **PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY**

**CHEMISTRY COLLOQUIUM SERIES (CHEMTALKS)**

Organized by Department of Chemistry, SOT, PDEU

THEMES: ORGANIC

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON Total synthesis of (+)-noopeptin and its Analogues, Novel Methods/Green Approaches for Natural Products & Pharmaceutically Important Small Molecule Synthesis**

**30<sup>th</sup> SEPTEMBER 2022**  
3:00 PM

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU

**SOT** **PDEU** **PARVATI DEENDRAYAL ENERGY UNIVERSITY**

**CHEMISTRY COLLOQUIUM SERIES (CHEMTALKS)**

Organized by Department of Chemistry, SOT, PDEU

THEMES: ARTIFICIAL LIFE

**PATRONS** **CHAIRMAN** **SPEAKER**

Prof. S. Sundar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Sushil Kumar  
Associate Professor  
Chemistry, SOT, PDEU

Prof. Raju  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Rajesh K. Jais  
Associate Professor  
Chemistry, SOT, PDEU

**TALK ON Artificial Life: what is it and how to make it via chemistry?**

**25<sup>th</sup> DECEMBER 2022**  
3:00 PM

For Diploma, Research Scholar, UG, PG, PhD students and Faculty members

**COORDINATORS**

Dr. Nitin Chaudhary  
Associate Professor  
Chemistry, SOT, PDEU

Dr. Ramesh Gaur  
Associate Professor  
Chemistry, SOT, PDEU



# ChemStreet Departmental Newsletter



<https://sot.pdpu.ac.in/downloads/CHEMSTREETIssue3.pdf>



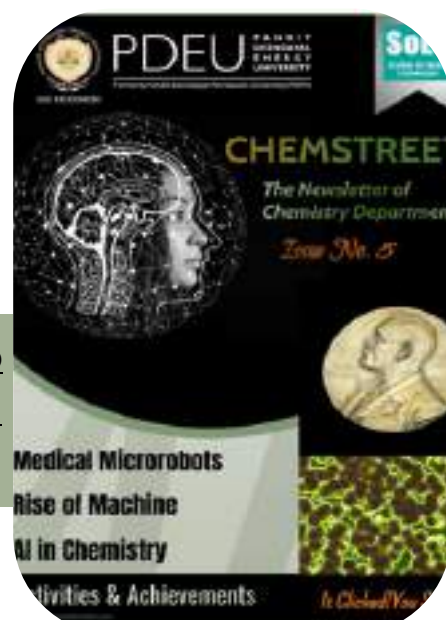
<https://sot.pdpu.ac.in/downloads/CHEMSTREETIssue1.pdf>



<https://sot.pdpu.ac.in/downloads/CHEMSTREETIssue4.pdf>



<https://sot.pdpu.ac.in/downloads/CHEMSTREETIssue2.pdf>



<https://sot.pdpu.ac.in/downloads/ChemStreet%20Issue%205.pdf>

# CONFERENCES

## International Symposium on Materials of the Millennium: Emerging Trends and Future Prospects

(MMETFP-2021)



### ORGANIZING COMMITTEE

<b>Patron:</b>	Prof. S. Sundar Manoharan, Director General, PDEU
<b>Vice Patron:</b>	Prof. Asitbis Sircar Chatterjee, School of Energy Technology, PDEU
<b>Chairman:</b>	Prof. Manoj Pandey, Head, Dept. of Chemistry, PDEU
<b>Convener:</b>	Dr. Rama Gaur Dr. Syed Shahabuddin
<b>Theme Coordinator:</b>	Dr. Nandini Mukherjee Dr. Kalidhasan Mukherjee Dr. Anu Manhas Dr. Prakash Chandra
<b>Treasurer:</b>	Dr. Tapati Pal Dr. Vasudev Trivedi
<b>Technical Committee:</b>	Prof. Rajib Bandyopadhyay Dr. Anirban Das Dr. Manoj Kumar Pandey Dr. Ranjan Pati Dr. Nilin Chaudhari Dr. Anu Manhas Dr. Balasubramanian Burugutli
<b>Editorial Committee:</b>	Dr. Shashinath MA Dr. Niragi Dave Dr. Ravi Tejasi Dr. Vipin Shukla
<b>Advisory Committee:</b>	Prof. V. K. Jain (Guj. Univ.) Dr. Sanjeev Patel (Narmada Univ. Vadodra) Dr. Indrajit Tyagi (ZSI, Kolkata) Dr. Kaviraj Pandey, IITM, Mumbai

For any queries, contact us

DR. RAMA GAUR DR. SYED SHAHABUDDIN  
rma.gaur@pdeu.ac.in syed.shahabuddin@pdeu.ac.in  
+679-2327 5356 +679 2327 5338



### REGISTRATION DETAILS

Open to all the academicians, researchers,  
scholars and students

<b>REGISTRATION FEE:</b>	
Students	Rs. 750/- +18 % GST
Academician & Staff	Rs. 1500/- +18 % GST
Industry Delegates & Others	Rs. 2000/- +18 % GST

Registration fee includes participation, welcome kit, and  
certificates of participation, breakfast, high tea and lunch.  
All delegates have to arrange their own accommodation.  
Organizers may help in securing accommodation on  
payment basis for delegates within the close proximity of  
the symposium venue.

**Last date for Registration: 30<sup>th</sup> April 2023**

<https://www.pdeu.ac.in/waste-to-best>



**International symposium on  
"WASTE TO BEST: Sustainable  
Environmental remediation strategies and  
solution"**

**19 May – 20 May 2023**

M.Sc. & Ph.D. students, professionals working in industry  
and any other interested individuals can apply

Selected papers will be published  
as Conference Proceedings  
in International journal



Best Poster Awards &  
Best Oral Presentation  
Awards for the participants



An Initiative under G20 presidency of India

**ORGANIZED BY  
DEPARTMENT OF CHEMISTRY,  
SCHOOL OF ENERGY TECHNOLOGY  
& IQAC PDEU  
PANDIT DEENDAYAL ENERGY UNIVERSITY**

**Gandhinagar, Gujarat-382426  
INDIA**

[www.pdeu.ac.in](http://www.pdeu.ac.in)



# WORKSHOPS



**Invitation**

You are cordially invited to the inaugural ceremony of the  
**National Workshop on  
 Materials and Methods towards Developing Sensors for  
 Public Safety (MMDSPS-2022)**  
**January 09-15, 2023**

Organized by:  
 Department of Chemistry  
 School of Energy Technology  
 Pandit Deendayal Energy University  
 Gandhinagar, Gujarat-382426, India

**5 days hands-on workshop on  
 Synthesis of Nanomaterials  
 & Nanocomposites**  
**26th Dec - 30th Dec 2022**

**Highlights of the workshop**

- Hands-on training on synthesis of nanomaterials
- Understanding of the synthetic aspects
- Informative sessions on Various synthetic approaches
- Characterization of synthesized nanomaterials
- Certificate of training will be awarded



**ONE-DAY WORKSHOP ON  
 KNOW YOUR MATERIAL :  
 INSIGHTS TO MATERIALS CHARACTERIZATION**  
 SPONSORED BY MALVERN PANALYTICAL  
 (A DIVISION SPECTRIS TECHNOLOGIES PVT LTD)

**24<sup>th</sup> SEPTEMBER 2022**

ORGANIZED BY: DEPARTMENT OF CHEMISTRY,  
 PANDIT DEENDAYAL ENERGY UNIVERSITY, GANDHINAGAR, GUJARAT



**One Day Workshop  
 PUBLISH OR FLOURISH :  
 STRATEGIES FOR SCIENTIFIC RESEARCH  
 PUBLICATION**  
**15<sup>th</sup> October 2022**



**ONE DAY WORKSHOP  
 PUBLISH OR PERISH:  
 STRATEGIES FOR SCIENTIFIC RESEARCH  
 PUBLICATION**

Venue: B-Block, GF, B 002(LTC:1),  
 PANDIT DEENDAYAL PETROLEUM UNIVERSITY

**29 February 2020**  
**9:00 am - 5:00 pm**

Enquiry:  
 079-23275338 Ext. 5356/5385.  
 +91-8337426231

**Limited seats only!!  
 Register to reserve your seat!**



Organized by:  
 Department Of Chemistry,  
 School of Technology,  
 PANDIT DEENDAYAL ENERGY UNIVERSITY



# STTP



**SoET**  
SCHOOL OF  
ENERGY  
TECHNOLOGY



**PDEU**  
PANDIT  
DEENDAYAL  
ENERGY  
UNIVERSITY  
GANDHINAGAR, GUJARAT  
Formerly Pandit Deendayal Petroleum University (PDPU)

**ONLINE FIVE DAYS SHORT TERM TRAINING PROGRAMME (STTP) ON**

## EMERGING MULTIDISCIPLINARY RESEARCH (EMR)

**9<sup>TH</sup> January to 13<sup>TH</sup> January 2023**

Organized by: Department of Chemistry,






**SHORT TERM TRAINING PROGRAMME**

### INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS


*Skill Development Initiative for  
Chemical & Pharmaceutical Industries*

**25<sup>th</sup> - 29<sup>th</sup> JULY, 2016**



Organized by  
Department of Science  
School of Technology  
Pandit Deendayal Petroleum University  
Raisan, Gandhinagar, Gujarat-382007

Sponsored by  
**Torrent Pharmaceuticals Limited**  
Ahmedabad, Gujarat, India




ISO 9001:2008

**SHORT TERM TRAINING PROGRAMME**




### INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS

*Skill Development Initiative for  
Chemical & Pharmaceutical Industries*

**29<sup>th</sup> May-2<sup>nd</sup> June, 2017**



Organized by  
Department of Science  
School of Technology  
Pandit Deendayal Petroleum University  
Raisan, Gandhinagar, Gujarat-382007






**SHORT TERM TRAINING PROGRAMME**

### INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS

*Skill Development Initiative for  
Chemical & Pharmaceutical Industries*

**25<sup>th</sup> June-29<sup>th</sup> June, 2018**



Organized by  
Department of Science  
School of Technology  
Pandit Deendayal Petroleum University  
Raisan, Gandhinagar, Gujarat-382007

Sponsored by  
**Thermo Fisher Scientific**  
Metrohm & QP Analytics



**SOT** SCHOOL OF TECHNOLOGY

**PDEU** PARAGIT DEVIJI UNIVERSITY

**INFORMATIONAL WEBINAR ON**  
**ELECTROCHEMICAL METHODS: TECHNIQUES TO APPLICATIONS**

Date: April 05th, 2021 Time: 11am - 3pm (IST)

**Speakers:**  
 Prof. Ravi Sankar Sharma (HOD, School of Chemistry, PDEU)  
 Dr. Shashi Kumar (Associate Professor, School of Chemistry, PDEU)  
 Dr. Ravi (Associate Professor, School of Chemistry, PDEU)  
 Dr. Shashi Kumar (Associate Professor, School of Chemistry, PDEU)

**HIGHLIGHTS**  
 • Basics of Electrochemical Methods  
 • Fundamentals of Electrochemistry  
 • Electrochemical Analysis in Drug Analysis, Environmental Monitoring, and Industrial Applications  
 • Electrochemical Synthesis, Storage and Applications

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-04-05>

**Organized by:**  
 DEPARTMENT OF CHEMISTRY, SCHOOL OF TECHNOLOGY, PARAGIT DEVIJI UNIVERSITY, Gandhinagar, Ahmedabad

**PDEU** PARAGIT DEVIJI UNIVERSITY

**SOT** SCHOOL OF TECHNOLOGY

**LABORATORY SAFETY PRACTICES**  
 (For Diploma Students, B.Sc. (H), B.Tech students and Faculty members)  
 Organized: Department of Chemistry, SOT, PDEU

**Speakers:**  
 Dr. A. Sankar Narayanan (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**14 AUGUST 2021**  
 10:30 AM Onwards

**FREE REGISTRATION**  
 10 seats will be available

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-08-14>

**PDEU** PARAGIT DEVIJI UNIVERSITY

**FREE WEBINAR**

**Why pursue MSc. PDEU Way**  
 Postgraduate Counseling Program, Informational Seminar  
 1<sup>st</sup> May, 2020, Saturday (For MSc. Aspirants)

**Speakers:**  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-05-01>

# WEBINARS

**SOT** SCHOOL OF TECHNOLOGY

**INTERNATIONAL WOMEN'S DAY**  
 MARCH 08, 2021  
 Time: 5:00 PM - 5:30 PM

**WEBINAR SESSION ON**  
**"THE SHE OF SCIENCE WORLD"**

**Speakers:**  
 Dr. Anurag Joshi (Associate Professor, School of Chemistry, PDEU)  
 Dr. Anurag Joshi (Associate Professor, School of Chemistry, PDEU)  
 Dr. Anurag Joshi (Associate Professor, School of Chemistry, PDEU)

**Highlights:**  
 • Inspiring stories of women scientists from different fields  
 • Inspiring stories of women scientists from different fields  
 • Inspiring stories of women scientists from different fields

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-03-08>

**SOT** SCHOOL OF TECHNOLOGY

**PDEU** PARAGIT DEVIJI UNIVERSITY

**WEBINAR**

**SCIENCE: PATHWAYS TO FUTURE TECHNOLOGIES**  
 For MSc. - Physics, Chemistry and Mathematics Aspirants

**13<sup>th</sup> June, 2020, Saturday | 11am onwards**

**Speakers:**  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-06-13>

**PDEU** PARAGIT DEVIJI UNIVERSITY

**SOT** SCHOOL OF TECHNOLOGY

**LIVE WEBINAR**

**Current and Emerging Career Opportunities in Chemistry**

**Saturday, 5th June 2021**  
 2:00 PM Onwards

**Speakers:**  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-06-05>

**PDEU** PARAGIT DEVIJI UNIVERSITY

**SOT** SCHOOL OF TECHNOLOGY

**MULTIFARIOUS APPLICATIONS OF CHEMICAL SCIENCES**  
 Organized by Department of Chemistry, SOT, PDEU

**03<sup>rd</sup> July 2021**  
 10:30 AM Onwards

**Speakers:**  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-07-03>

**PDEU** PARAGIT DEVIJI UNIVERSITY

**SOT** SCHOOL OF TECHNOLOGY

**Amazing Earth: Space to Surface**

**22nd May 2021, 11:00 AM**

**Speakers:**  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)  
 Dr. Ravi Sankar Sharma (Associate Professor)

**Link for Registration:**  
<https://www.google.com/events/details/paragit-deviji-university-2021-05-22>



**SOT** **PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**WEBINAR**

**CLIMATE CHANGE: VITAL SIGNS OF THE PLANET**

In Dept. of Physics, Chemistry and Mathematics

**8<sup>th</sup> MAY, 2021 | SATURDAY**  
10:00 AM ONWARDS

**SPEAKERS**

**PATRON**  
Dr. Lata Kulkarni  
School of Technology, PDU

**MODERATOR**  
Dr. Pooja Mishra  
School of Technology, PDU

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

Register Now!

Free Registration

Zoom

**SOT** **PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**Materials Science and Engineering: Current Trends and Future Prospects**

**8<sup>th</sup> MAY, 2021 | 11:00 AM onwards**

**PATRON**  
Prof. Dr. Lata Kulkarni  
School of Technology, PDU

**CO-PATRON**  
Prof. Dr. Shweta Singh  
School of Technology, PDU

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

**COORDINATORS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

Register Now!

Free Registration

Zoom

**SOT** **PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**WEBINAR**

**Science & Innovations: PDEU Way**

Jointly Organized by Department of Physics, Chemistry and Mathematics

**26<sup>th</sup> APRIL, 2021, SUNDAY | 11:00 AM ONWARDS**

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU

**MODERATOR**  
Dr. Pooja Mishra  
School of Technology, PDU

Register Now!

Free Registration

Zoom

**SOT** **PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**WEBINAR SERIES**

**MULTIDISCIPLINARY APPLICATIONS OF CHEMICAL SCIENCES**

**SERIES 1**  
ROLE OF CHEMICAL SCIENCES IN INDUSTRIAL SCIENCE

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

Register Now!

Free Registration

Zoom

**SOT** **PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**WEBINAR SERIES**

**MULTIDISCIPLINARY APPLICATIONS OF CHEMICAL SCIENCES**

**SERIES 2**  
ROLE OF CHEMICAL SCIENCES IN ENERGY AND ENVIRONMENTAL SCIENCE

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

Register Now!

Free Registration

Zoom

**ONE DAY WORKSHOP**  
**PUBLISH OR PERISH: STRATEGIES FOR SCIENTIFIC RESEARCH PUBLICATION**  
**29 February 2020**

**ORGANIZED BY**  
Department of Science,  
School of Technology,  
PANDIT DEENDAYAL PETROLEUM UNIVERSITY

**INVITED SPEAKERS**  
Prof. Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

**PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**2 Day International Webinar**  
**WASTE TO BEST: Sustainable Environmental Remediation Strategies & Solution**  
**12<sup>th</sup>-13<sup>th</sup> April 2021**  
**11:00 AM - 2:00 PM (Indian Standard Time)**

**In Collaboration with**  
**UNIVERSITI TEKNOLOGI MARA**

**Organized by:**  
Department of Chemistry, School of Technology,  
Pandit Deendayal Energy University.

**SOT** **NATIONAL WEBINAR ON INTELLECTUAL PROPERTY RIGHTS AND CAREER OPPORTUNITIES IN IPR**  
**SEPTEMBER 25, 2021**

**INVITED SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

**TITLE OF THE TALKS**  
Introduction & Overview of Intellectual Property Rights by Dr. Anu Thakur  
Intellectual Property Rights (IPR) & Patent process by Dr. Pooja Mishra  
Understanding Process & Design Patents through Case Studies by Dr. Shweta Singh  
Patent Grant Process: How concepts and case studies by Dr. Anu Thakur  
Career Opportunities in IPR by Dr. Pooja Mishra

**TIME: 11:00 AM - 2:00 PM**

**REGISTER NOW!**

**Zoom**

**PDEU** **PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**PDEU: A Place for Deep Diving into SCIENCE**

**20<sup>th</sup> APRIL 2021**  
**11:00 AM onwards**

**Guesting Session for Aspiring UG/PG Science Graduates**

**SPEAKERS**  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU  
Dr. Anu Thakur  
School of Technology, PDU  
Dr. Pooja Mishra  
School of Technology, PDU  
Dr. Shweta Singh  
School of Technology, PDU

**REGISTER NOW!**

**Zoom**

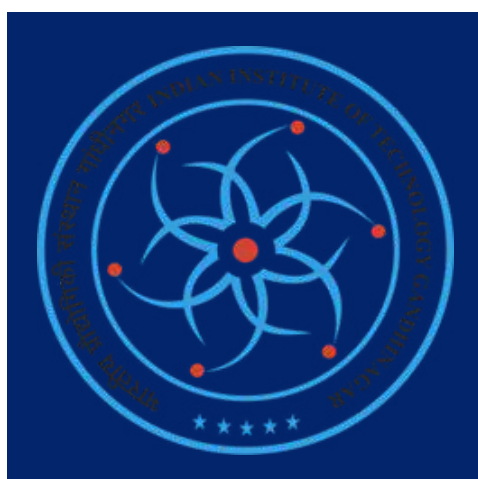


# ACADEMIC COLLABORATIONS

Indian Institute of  
Technology (BHU), Varanasi



Indian Institute of  
Technology Gandhinagar



University Pertahanan  
Nasional Malaysia



Universiti Teknologi,  
MARA



University of Jiroft,  
Iran



University of Central  
Lancashire



CUG,  
Gandhinagar



IITRAM,  
Ahmedabad



IAAA,  
Sweden



Korea University





# ALCHEMY

## THE CHEMISTRY CLUB, PDEU

Alchemy – The Chemistry Club of Pandit Deendayal Energy University, an initiative under Office of Student Activities, Involvement and Leadership (OSAIL) was established in the academic year 2019-20 by the initiative of our founder, Mr. Bhargav Nandasana (B.Sc. Chemistry). Alchemy provides a platform where club members and students of PDEU can interact with those who share keen interest in the field of chemistry. Also, the club diligently allows to cultivate interpersonal skills and leadership qualities by conducting various events related to chemistry in day-to-day life and provides hands-on experience of chemistry with real world applications. This academic year 2022-23 remarks fourth successful year for the club. Under the guidance of Dr. Manoj Kumar Pandey (Faculty Advisor), the club is now led by Mr. Gaurav Chandnani (President) and Ms. Priyancy Gandhi (Vice- President), along with 55 other club members.

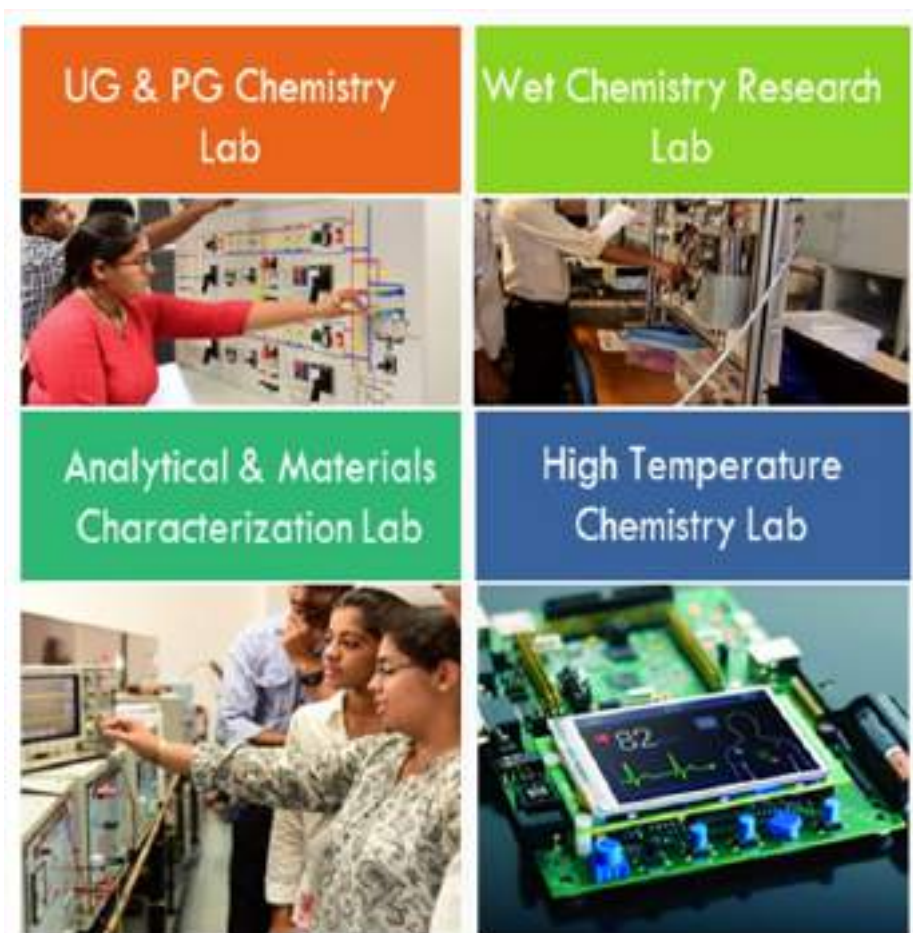


ALCHEMY\_PDEU

Scan to visit social media profile



# CHEMISTRY LAB & STAFF



**Dr. Vasudev Trivedi (Staff)**  
**Lab Manager**  
**Vasudev.Trivedi@sot.pdpu.**  
**ac.in**  
**079-2327-5045**

Chemistry Lab provides the facilities to conduct different experiments such as chemical kinetics, titrations, distillations, pH, Conductance, and potential measurements, etc. and is well equipped with instruments such as rotary evaporator, ultrasonicator, polarimeter, muffle furnace, hot air oven, centrifuge, magnetic stirrers, ice-flaking, weighing balance, fume hood, etc. Lab Attendants are well experienced to help the students and solve the problems.

All the Laboratories are well equipped with the state of the art facilities and suitable for the most convenient as well as smooth working of

- UG/PG Chemistry Lab
- Wet Chemical Research Lab
- Analytical & Materials Characterization Lab
- High-temperature Chemistry Lab



# INSTRUMENTS

Sr. No.	Instrument	Company
1	XRD-Bench-top	RIGAKU
2	High Performance Liquid Chromatography	SHIMADZU
3	Gas Chromatograph	SHIMADZU
4	Automated Flash Chromatograph	YAMAZEN
5	Chromatotron	T-SQUARED
6	Uv-Visible Spectrophotometer	PERKIN ELMER & LAB INDIA
7	FT-IR Spectrophotometer	PERKIN ELMER
8	Tablet Dissolution Test Appratus	LAB INDIA
9	Electro Chemical Work Station	AUTOLAB & CH INSTRUMENTS
10	Potentiometric Autotitrator	VEGO
11	Refrigrated Centrifuge	ELTEK
12	Ultra probe Sonicator	OSCAR
13	High temperature furnace	ANTS

# ANALYTICAL FACILITIES & ANALYSIS CHARGES

SR.NO	NAME OF THE INSTRUMENT		Charges per sample (INR)		REMARKS
			R&D	INDUSTRIAL	
1	XRD-Benchtop (Rigaku)	Powder	700	2000	
2	High Performance Liquid Chromatography - (Shimadzu)		600	1200	Method provided by client
3	Gas Chromatograph (Shimadzu)		400	800	
4	Automated Flash Chromatograph (Yamazen)		1000	2000	per run Method provided by client
5	Chromatotron (T-Squared)		500	1000	UV active compounds only, Solvent method provided by client
6	UV - Visible Spectrophotometer	Lab India	200	400	for single run
		Perkin-Elmer	200	400	
7	FT-IR Spectrophotometer(PerkinElmer)		200	400	
8	Tablet dissolution test apparatus (Lab India)		200	400	per hour
9	Potentiometric Auto titrator (Vego)		Complimentary		
10	Electro Chemical Work Station (AutoLab & CH Instrument)	IV	200	400	Method provided by client
		CV	200	400	
		Impedance	500	1000	
		Additional Tech.	400	800	
11	Refrigerated Centrifuge (Eltek)		Complimentary		
12	Ultra Probe Sonicator (Oscar)		Complimentary		

# Upcoming New Instruments

## DST – FIST Sponsored Instruments

### NMR – 400 MHz

- Introducing the JNM-ECZL400S: A 400MHz FT NMR spectrometer with YearHold magnet and Smart Transceiver System, allowing multi-resonance measurements for diverse structural insights in solution state chemistry.
- Enhanced Impurity Analysis: The innovative ROYAL HFX Probe, featuring unique coil design, achieves remarkable Signal-to-Noise ratios, detecting drug impurities beyond 0.03% w/w LOD.
- Versatile NMR Experimentation: Conduct No-D NMR experiments effortlessly, ideal for unstable compounds; combine Delta & JASON for intuitive operation, data processing, and structure prediction.



### Surface area analyzer

- Fastest multi-station BET analyzer for entry-level budgets
- All-in-one instrument: 2 analysis and 4 degassing stations
- Optimized short cells and Dewar for BET analysis with less waste





# Upcoming New Event



## International Conference on Materials for Sustainable Energy Environment & Health

**ICMSEEH-23**

8th - 9th December, 2023

[www.icmseeh23pdeu.in](http://www.icmseeh23pdeu.in)





The Department of Chemistry believes in achieving excellence and is looking forward for –

- Industrial collaboration
- Industrial visit
- Industrial talk
- Internship
- Placement
- Consultancy



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