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6-DAY NATIONAL WORKSHOP ON

Advanced Research Techniques for Chemical Analysis and Characterization

(Instruments for Training and Characterization: NMR, GC-MS,
HPLC-MS, Single Crystal XRD, FT-IR, UV and ECWS)

Sponsored by: Royal Society of Chemistry, JEOL, SISCO CHEM PVT. LTD. & Jay Appliances & Instruments Co.

23rd – 28th September, 2024



◀ IMPORTANT DATES ▶

Last date of Application and Registration

Last date of Submission of Registration Fee

18th September, 2024

18th September, 2024

Workshop Dates

23rd -28th September, 2024

Organized by

Centre for Advanced Research (CAR)

Doctor Harisingh Gour Vishwavidyalaya, Sagar [M.P.]

(A Central University)

The University

Doctor Harisingh Gour Vishwavidyalaya Sagar (A Central University), formerly University of Saugor, was established on 18th July 1946 by Dr. Sir Hari Singh Gour (Nov. 26, 1870 – Dec. 25, 1949) by his lifetime savings. This 18th University of India and the oldest and the biggest University of Madhya Pradesh has perhaps the singular distinction of being founded by the munificence of a single person's hard-earned money of about two crores of rupees. Apart from being a great jurist and legal luminary par excellence, he was a great Patriot, Philanthropist, Educationist and Social Reformer.

Dr. Hari Singh Gour was the first Vice-Chancellor of University of Delhi (1922 to 1926) and first Dean (1924) of The Faculty of Law in the University of Delhi. The University is situated 5 Km east of Sagar city and its campus covers an area of 1312.89 acres over Pathariya hills connected to the Vindhya Range, surrounded by lush green forest (about 100 acres) within its campus and has effectively contributed to the maintenance and preservation of ecosystem and its biodiversity. It is one of the finest picturesque campuses in India.

It has 42 University teaching departments, 11 schools and 19 affiliated colleges covering various districts of M. P. There are 4 hostels for boys, two hostels for girls and Residential facilities are available for teachers and officials of the University. The Banking, Postal, Health & Sanitation, shopping complex, Indian Coffee House (ICH), and Cafeteria services are available at the University premises. The Jawaharlal Nehru Library of the University has more than 4,00,000 books. Academic Departments, Hostels and Libraries are well equipped with Wi-Fi through National Knowledge Network (NKN) and e-resources are accessible through Wi-Fi. The NAAC has awarded 'A+' Grade re-accreditation to this University in its fourth cycle. This University got Central University status w.e.f. 15th Jan 2009.

About CAR

The CAR at the Dr. Harisingh Gour Vishwavidyalaya, Sagar is equipped with around 30 cutting-edge sophisticated instruments like Nuclear Magnetic Resonance Spectrometer, Single Crystal X-Ray Diffraction, Powder XRD, GC-TOFMS LC-Mass Spectrometer, Scanning and Transmission Electron Microscope, Nanosparry Drier, Particle Size Analyzer, Q-PCR and many more such instruments. Under devoted technical staff with multidisciplinary expertise, the Centre has made significant contributions to material characterization and till date trained several hundreds who are carrying out excellent work elsewhere. This facility was developed with support from UGC, New Delhi, and the DST-PURSE scheme. Since its inception in 2014, a number of high-impact research publications have been published with the help of instruments available at CAR.



About the National Workshop

Chemical analysis and characterization are the most essential and important part of research in chemical and allied sciences. This workshop will highlight the advanced techniques for chemical analysis and characterization including investigation of chemical reactions, analysis of components in the reaction mixture, spectral interpretation and determination of chemical composition and structure of target compounds including organic molecules, pharmaceuticals, drugs, pesticides, natural products and dyes in fundamental research by using various sophisticated instruments like FT-IR, UV, NMR, GC-MS, HPLC-MS and Single Crystal XRD. In addition, the applications of cyclic voltammetry (CV) are highly indispensable to study the electrochemical properties and reactions. Apart from chemical analysis and characterization these sophisticated instruments are powerful tools and continuously evolving analytical techniques with wide applications in various research fields including pharmaceutical, biological, environmental, forensic, material and medical sciences.

The main objective of this workshop is to popularize the practical usages of these sophisticated instruments and to extend hands-on training, demonstration and facilities to young researchers, faculties/academician, Ph.D., and M.Sc. students from different discipline of science, engineering, and technology. This intensive workshop will promote skill-based learning and provide the participants a valuable opportunity to gain practical experiences in the current scientific and technological advancements in chemical analysis and characterization techniques. In this workshop, the pioneer scientists from various institutions and universities (e.g. IITs, IISERs and Central Universities) and expert professionals are being invited to deliver lectures and provide training on various facets of these sophisticated instruments including basic principles, various methods of chemical analysis, advanced separation, and characterization techniques. The workshop will also provide a platform to exchange ideas, collaborations and make a strong bridge between academia, research organizations and industry.

Program Highlights

To provide participants the basic theories, functions, practical aspects, and applications of various sophisticated instruments through lectures, hands-on training and demonstration emphasizing advanced techniques for analysis and characterization of various target compounds including organic molecules, pharmaceuticals, drugs, pesticides, natural products, and dyes etc.

- Lectures on basic principles and applications of FT-IR, UV, NMR, GC-MS, HPL-MS, ECWS and Single Crystal XRD
- Hands-on-Training on Instrumentation, instrument handling, safety, and practical aspects of various sophisticated instruments.
- Training on sample preparation, sampling methods and working with sophisticated instruments.
- Spectral processing and interpretation, data analysis and identification of target compounds.
- Problem solving sessions using combinations of spectral data etc.

About Sagar City

Sagar (M.P.) is a divisional head quarter and well connected by rail and all-season roads. The weather in Sagar in September is pleasantly warm with a gentle breeze, with average highs of 30 °C and lows of 22 °C. Sagar railway station is mentioned as Saugor (SGO) in Railway time table. Saugor station is located on Bina-Katni section of West Central Railway. It is directly connected by train to Bina Jn (75 Km), Bhopal (215 Km), Jabalpur (279 Km), Lalitpur (110 Km) and Jhansi (200 Km). Nearest airport- Bhopal (200 Km), Khajuraho (215 Km), and Jabalpur (171 Km).

Who can participate

- Faculty /Scientist/Researcher's/ Postdoctoral fellow/ P.G. and Ph.D. Students/ Industry personnel from **Chemical Sciences, Biological Sciences, Zoology, Botany, Pharmaceutical Sciences, Microbiology, Forensic Sciences, Material Sciences, Medical Sciences, Environmental Sciences, Biotechnology** or any relevant area
- **Maximum number of participants** is limited to **50** (First come first serve basis through Registration)

Registration Fees*

- | | |
|--|-------------------|
| • PG Students | Rs. 2000/- |
| • Research Scholars/Ph.D. Students/ Postdoctoral fellow | Rs. 2500/- |
| • Faculty, Delegates from Academic and Research Institutions | Rs. 4000/- |
| • Industry Personnel | Rs. 6000/- |

*The registration fee includes registration kits and working food. Suitable accommodation will be provided on payment basis on request, in University Guest House or nearby hotels .

Bank Details for Reg. Fees

A/c Name	: Centre for Advanced Research
A/c Number	: 41487942215
Bank Name	: STATE BANK OF INDIA
Branch	: SAUGOR University
IFSC Code	: SBIN0001143

Registration Fee to be paid by Online Bank Transfer Only



QR for online Registration

Link for
online
Registration

<https://forms.gle/Q94fxWpfEpZFEaR8A>