SYNERGISTIC TRAINING PROGRAM UTILIZING THE SCIENTIFIC AND TECHNOLOGICAL INFRASTRUCTURE (STUTI-2022)

Report of The STUTI Program Organized by Sophisticated Analytical Instrumentation Facility, Maharaja Sayajirao University of Baroda From 11th To 17th December, 2022

Prof. P . Padmaja Sudhakar

Department Of Chemistry, MSUB

Flyer

SYNERGISTIC TRAINING PROGRAM UTILIZING THE SCIENTIFIC AND TECHNOLOGICAL INFRASTRUCTURE (STUTI) – 2022

11th to 17th December

Organised by
Department of Chemistry, Faculty of Science, MSU Baroda

In collaboration with
Shivaji University, Kolhapur

Supported by
Department of Science and Technology, Ministry of Science and Technology, Government of India, New Delhi

PATRON
Prof (Dr.) Vijay Kumar Srivastava
Honourable Vice-Chancellor
The Maharaja Sayajirao University of Baroda (MSU)

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Dean, Faculty of Science.
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CO-CONVENORS
Prof. R. G. Sonkawade, Shivaji University, Kolhapur, Head of SAIF-DST

CO-ORDINATING COMMITTEE
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Prof. Maurya, Department of Geology, MSU
Dr. Sunil Singh, Department of Botany, MSU
Dr. Nagar, Department of Botany, MSU
Dr. Kiran Nakum, Department of Chemistry. MSU
Dr. Bablu Prasad, Department of Environmental Studies, MSU

About STUTI
STUTI stands for Synergistic Training program Utilizing the Scientific and Technological Infrastructure Program funded by the Department of Science & Technology (DST), Government of India. The Scheme is intended to build human resource and its knowledge capacity through open access to S & T Infrastructure across the country.

Goal of STUTI Program
- Organize training program on DST supported R&D equipment targeting Scientists/ Professors/ PhDs and PDFs actively involved in research across various institutions in the country
- The participants will get skill based knowledge about the handling of various sophisticated instruments and characterization techniques and its analysis.
- The participants will understand the utility of these techniques for their research

About MSU Baroda
The Maharaja Sayajirao University of Baroda (MSU) is recognized as one of the premier institutions of higher learning and research in the country. Since its inception in 1949, the University has demonstrated a keen interest and a commitment to the sustenance and promotion of an environment, favourable to the growth and development of an academic excellence- a commitment that forms a part of the rich legacy of the institution. The University has been assigned A+ Grade by National Assessment and Accreditation Council in this year that is 2022. The university has been supported by DST, PURSE Phase I and Phase II which is solely a research output based programme.

About Faculty of Science
The Faculty of Science is a Constituent Institution of the Maharaja Sayajirao University of Baroda under the direct management and control of the University.. The Faculty of Science comprises twelve departments covering almost all the branches in modern science. It offers B.Sc.(Hons.) and M.Sc. courses in most disciplines.
Science research is an activity of utmost importance in the Faculty. Almost, all departments are DRS, SAP and FIST recognized.
The Faculty of science has been a beneficiary of PURSE programme and various departments have been supported by DST, FIST, UGC CAS. DBT-Builder etc. The researchers have been supported by number of individual research projects from various funding agencies such as DST, SERB, CSIR, BRNS, UGC etc. Various departments of Faculty of Science are well equipped with several sophisticated instruments procured under these schemes.
The Faculty of Science, with regular academic activities provides a platform for interaction with national and international eminent scientists as well as practical training on Sophisticated instruments to its budding researchers.

About Department of Chemistry
The Department of Chemistry was established in 1949. The department offers 3 years B.Sc. Hons. in Chemistry, 2 years M.Sc. Course with specialization in Organic, Inorganic, Analytical, Physical and Polymer Chemistry and Industrial & Sustainable Chemistry and Ph.D. course. The department has a vibrant research culture with support from UGC-CAS and DST-FIST I&II. The researchers of the department have projects funded by various funding agencies- CSIR, DST-SERB, DBT, UGC, UGC-DAE, BRNS, GUJCOST and GSTBM.

About Shivaji University
Shivaji University, established on 18th November, 1962 has 276 affiliated colleges with 40 post-graduate departments. Recently, accredited with NAAC 'A++' grade with CGPA 3.52 in its fourth cycle of reaccreditation 2021. Various science departments of Shivaji University are well equipped with different sophisticated instruments and laboratory infrastructures procured using funds from various funding agencies such as TEQIP I &II, DST-PURSE I & II, DST-FIST I & II, SAIF, UGC-SAP I & II, UGC DRS, MHRD RUSSA Centers for Alternative Medicine, Nano fabrics and VLSI Design, DBT-IPLS, RGSTC, Erasmus Mundus+ (EU projects), MHRD PMMNMTT Centre for Cyber Security & Data Science, DBT-BUILDER etc. STUTI project is sanctioned by DST, New Delhi to SUK worth Rs. 2.25 crore for organizing training programs on various sophisticated instruments.

Course Content
The main theme of this training program is to make the participants aware regarding the sophisticated instruments and techniques useful for research in chemical and biological Sciences. The training program includes theory, lectures as well as Demonstration/Hands on Training on the sophisticated instruments throughout the program.

Hands on training on: NMR Spectroscopy, Raman Spectroscopy, Scanning Electron Microscopy, Fluorescence Microscopy, Polarising Microscopy, Inductively Couple Mass Spectrometry, Atomic Absorption Spectrometry, GelDoc and PCR technique

Eligibility
- Participants should be Indian Citizen.
- Assistant professors / Associate professors/ Professors / Scientists/ Post Doc. Fellows/ Ph.D. Fellows and /or B. Tech. students who are actively involved in the field of basic or allied sciences or engineering.
- Young industry professionals who are actively involved in R&D

General information & Registration Procedure
- Interested candidates have to fill the online form (link given below)
- The link for the registration: https://forms.gle/ey5QiSffGdaeGsW87
- Deadline for registration: **5th December 2022**
- Venue: **Seminar Hall, Department of Chemistry, Faculty of Science**
- Maximum number of participants:30
- Not more than three people from the same institute
- Local Hospitality (accommodation & Meal) will be provided. The train fare (as per actuals) by shortest route will be reimbursed to the selected outstation participants
- **For registration and related queries write to: fosmsustuti22@gmail.com**
- **Child support for Researchers having 3 to 6 years old kids will be given by Chetan Balwadi (Contact: supdt-balwadi@msubaroda.ac.in)**

The time and detailed schedule of the program will be emailed to the selected participants via email

Lectures
1. Prof. R. G. Sonkawade, Shivaji University, Kolhapur: (i) Transmission Electron Microscopy: instrumentation and Operational parameters (ii) X-ray diffractometry: Instrumentation with operational parameters and use of I-STEM
2. Prof. A. V. Bedekar, Department of Chemistry, MSU- "Nuclear Magnetic Resonance Spectroscopy: An Effective Tool to Probe at The Structure of Molecules"
3. Prof. Ashish Prajapati, Department of Chemistry, MSU- "Liquid Crystals- A Fascinating State of Matter"
4. Prof. Ratna Prabha, Department of Biochemistry, MSU- Fluorescence microscope and Multimode reader for probing the chemical reactions and biological interactions of macromolecules.
5. Prof. Surjit Mukherjee, Adjunct Professor, Manipal Institute of Technology-Manipal Academy of Higher Education, Manipal, Karnataka-Basics of nuclear radiation detection techniques and associated electronics
6. Dr. Bablu Prasad, Department of Environmental Studies, MSU, Techniques and applications of polymerase chain reaction,
7. Prof. P.K.Jha, Department of Physics: Raman Spectroscopy, Basic Principles and Applications
8. Prof. Sunil Singh, Department of Botany, Gene Cloning and Applications

And many more on SEM, ICP-MS, etc.

Schedule

Day 1:	
9.30 am-11.00 am	Registration
11.00 am-11.30 am	Inagural function
11.30 am-1.00 pm	Lecture from resource person 1
1.00 pm-2.00 pm	Lunch Break
2.00 pm-3.30 pm	Lecture from resource person 2
3.30 pm-5.00 pm	Lecture from resource person 3
5.00 pm-5.30 pm	Tea Break
5.30 pm-7.00 pm	Lecture from resource person 4

Day 2:	
9.30 am-11.00 am	Lecture from resource person 5
11.30 am-1.00 pm	Lecture from resource person 6
1.00 pm-2.00 pm	Lunch Break
2.00 pm-3.30 pm	Lecture from resource person 7
3.30 pm-5.00 pm	Lecture from resource person 8
5.00pm-5.30pm	Tea Break
5.30pm onwards	Visit to Botanical Garden and Museum

Day 3:	
9.30am-11.00 am	Lecture from resource person 9
11.30am-1.00 pm	Instrumentation Demonstration
1.00pm-2.00 pm	Lunch Break
2.00pm onwards	Visit to SICART

Day 4-6:	
9.30am-11.00 am	Lecture from resource person
11.30am-1.00 pm	Instrumentation Demonstration
1.00pm-2.00pm	Lunch Break
2.00pm-3.30 pm	Lecture from resource person
3.30pm-5.00 pm	Lecture from resource person
5.00pm-5.30 pm	Tea Break
5.30 pm onwards	Instrument Demonstration

Day 7:	
9.30am-11.00 am	Lecture from resource person
11.30am-1.00 pm	Lecture from resource person
1.00pm-2.00pm	Lunch Break
2.00pm-3.30 pm	Lecture from resource person
3.30pm-5.00 pm	Instrument Demonstration
5.00pm-5.30 pm	Tea Break
5.30 pm onwards	Valedictory Ceremony

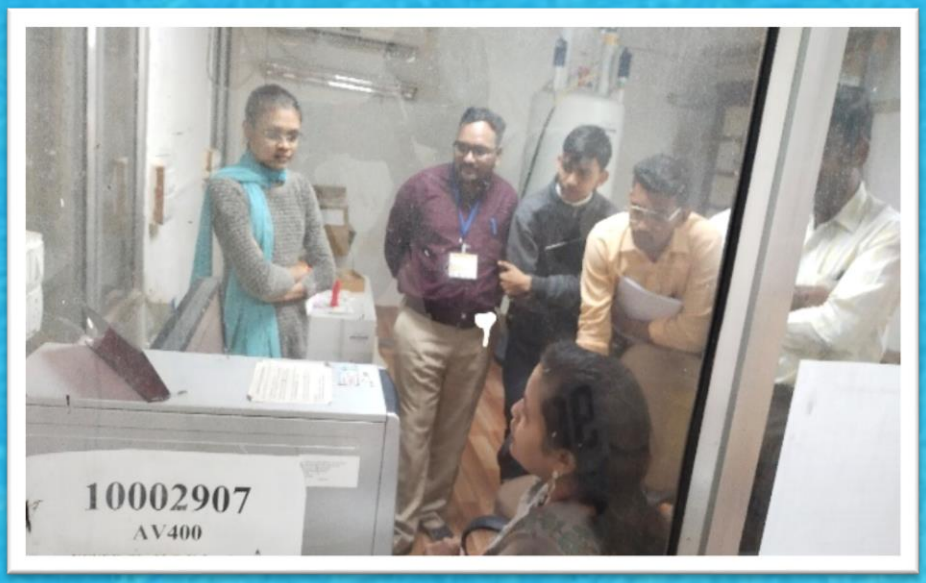
Inaguration

President: Prof. (Dr.) Vijay K. Srivastava, Vice-Chancellor, MSUB
Chief Guest: Prof. (Dr.) Kannan Srinivasan, Director, CSIR-CSMCRI
Guest of Honour: Prof. Haribhai Kataria, Dean, Faculty of Science, MSUB

Lecture


Why use X-rays?
The electromagnetic spectrum

Instrument Demonstration & Hands-On-Training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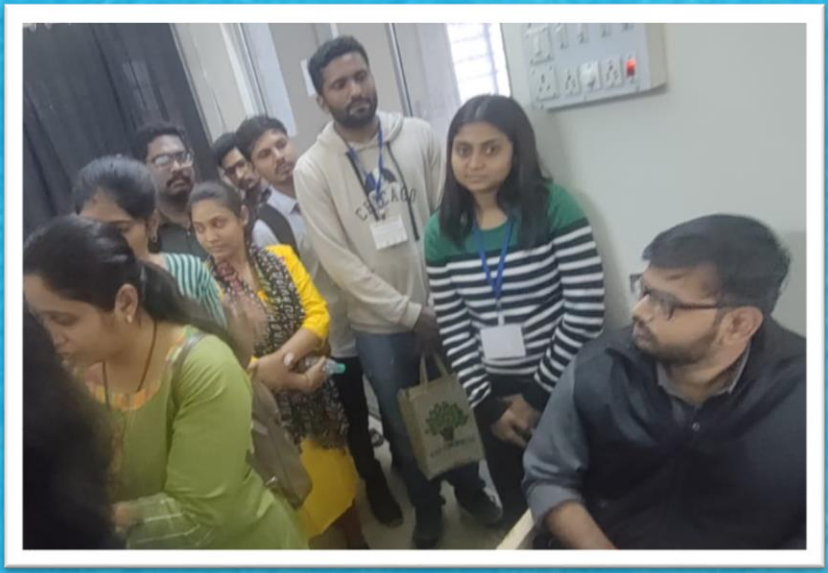

Visit to SICART

Visit to Botanical Garden and Geological Museum