

**NATIONAL WORKSHOP ON  
"SOFTWARE AND APPLICATIONS OF SINGLE CRYSTAL  
X-RAY DIFFRACTION"**

**Thursday 29<sup>th</sup> –Saturday 31<sup>st</sup> August, 2019**

**Organized by**

**Department of Chemistry,  
Smt. S.S. Patel Nootan Science & Commerce College, Visnagar, Dist.-Mehsana, Gujarat 384315  
Constituent Institute of**



**Sankalchand Patel University, Website: [www.spu.ac.in](http://www.spu.ac.in)**



**Sponsorship under consideration in Gujarat Council on Science & Technology, Govt. of Gujarat.**



Sponsorship information will be updated after the confirmation form GUJCOST.

**About the Sankalchand Patel University**

Sankalchand Patel University (SPU) is a private university located in Visnagar, Gujarat, India. The university was established through the Gujarat private universities (Amendment) Act 2016. SPU has been rated among top 20 universities of Gujarat by Gujarat State Institutional Rating Framework (GSIRF) Govt. of Gujarat. SPU has established a quality education benchmark almost in every education domain. As of 2018, it offers 40 different courses in faculty of Science, Engineering & Technology, Management, Computer Science, Commerce, Pharmacy,

Nursing, Dental Sciences, Physiotherapy and Polytechnic. SPU is the leading private university in northern Gujarat. SPU has added new feather to its wings in 2019 in the form of Nootan Medical College and Research Centre. Sankalchand Patel university campus spread over 70 acres of land situated in natural surroundings, serves multiplicity of purposes due for an academic institution.

### **About the Department of Chemistry**

Department of Chemistry is the pride of SPU in the field of research and teaching. The Department of Chemistry has experienced and well qualified faculties from IITs and institute of repute. The department offers B.Sc. and M.Sc. degree with specialization in Organic or Analytical Chemistry. The initiative of our department to simplify and popularize the tough topics in chemistry through YouTube animated video in the name of “The Big Concept: PG topics” is highly acclaimed by the science community across the globe.

### **Importance of Single Crystal X-ray Diffraction Technique**

Single-crystal X-ray Diffraction is a highly sophisticated non-destructive analytical technique which explores detailed information about the internal lattice of crystalline substances, including unit cell dimensions, bond-lengths, bond-angles, and details of site-ordering. The data generated from the Single-crystal X-ray Diffraction analysis requires expertise in data refinement, to obtain the three dimensional crystal structure. The three dimensional crystal structure of a compound is a characteristic property that is the basis for understanding it's many of the properties.

### **Objective of the workshop**

The proposed national workshop will provide an opportunity to understand the state-of-the-art single crystal XRD techniques and initiate discussion among research scientist, academicians and young researchers to share their knowledge and experience in the area of crystallography. The beginners will get a chance to familiarize themselves with the fundamental principles, techniques, software, applications of Single Crystal X-Ray Diffraction, solution of crystal structures using the technique and International Union of Crystallography (IUCr) Paper writing and publishing crystal data.

**Name & Brief introduction of Expert: Dr. Md. Serajul Haque Faizi**, (Ph.D., IIT Guwahati, Post Doctoral Research Experience at IIT Kanpur and JNU, New Delhi, Ex-Visiting Faculty, Department of Chemistry, Sultan Qaboos University, Oman).

**Present Designation:** Assistant Professor, Department of Chemistry, L.S.College, BRA Bihar University, Muzaffarpur, Bihar, India.

### **Topics to be covered**

- **Day 1**
- Introduction to X-ray Crystallography
- Basics of the X-ray Diffraction
- Crystal growing techniques

- Introduction to WinGX software
- **Day 2**
- Data reduction, Structure Solution and Refinement
- Introduction to cif editing and checking
- Introduction to Diamond software
- Introduction to ORTEP figure
- **Day 3**
- Introduction to Mercury software
- Introduction to Adobe illustrator software
- Introduction to International Union of Crystallography (IUCr) Paper writing and publishing crystal data

**Participants may bring their own laptop for practice. Certificate of participation will be issued to only those participants who will attend all the sessions of workshop.**

**Workshop venue:** Auditorium Hall, 2<sup>nd</sup> Floor, Narsinhbhai Patel Dental College & Hospital, Sankalchand Patel University Campus.

**Eligibility:** Faculty members, scientists, research scholars, project staffs as well as M.Sc. students.

**Registration Fee:**

<b>Participants</b>	<b>External</b>	<b>From SPU</b>
Research Scholars/P.G. Students	Rs. 1,500/-	Rs. 1,200/-
Faculties/Post Doctoral Fellow/other officials	Rs. 2,000/-	Rs. 1,500/-
Participant from Industry	Rs. 3,000/-	

Spot/Post-deadline registration in all categories will be charged Rs. 300/- extra. Registration fee covers registration material, working lunch, tea/coffee in all three days. The number of participants is limited to 50 (*on a first come, first served basis*). Registration and accommodation fee receipt will be issued to all the participants.

- **Please confirm the availability of seat and accommodation fee before payment, through email or mobile no. of the coordinator.**

**Mode of Payment:** Registration fee shall be paid by way of online transaction (IMPS/RTGS/NEFT); Bank name: AXIS BANK LTD, VISNAGAR BRANCH, Account name: “Shrimati Sharadben Shantibhai Patel Nootan Science and Commerce College, Visnagar”; Account No. 461010100024912; IFSC Code: UTIB0000461. **It is not necessary to write the full name of the account name, Account No. and IFSC Code are important.**

- SPU and nearby participants may deposit the registration fee to the Coordinator in the Department of Chemistry.

**How to Apply:** All the participants have to register for the workshop using the offline registration form available at Sankalchand Patel University website [www.spu.ac.in](http://www.spu.ac.in). **Scanned copy of the dully filled form with copy of online payment/cash receipt and copy of valid identity proof, please send to [santchem2008@gmail.com](mailto:santchem2008@gmail.com). No need to send any hard copy.**

- **Note:** All the scanned documents should reach to the **Coordinator** on or before **31<sup>st</sup> July 2019**.

**All participants are requested to make their own arrangements for travel.**

**Accommodation:** For the out station participants, **all possible help and arrangements will be carried out for the comfortable accommodation** in nearby hotels/SPU Campus guest house/ boy's hostel and girl's hostel, upon prior request on payment basis. For the availability of rooms in SPU Campus Guest House and Hostels, please contact to the Coordinator/Dr. Rawesh Kumar/Ms. Ankita Adesra. Accommodation fee for SPU Campus Guest House and Hostels will be collected at registration desk on 29<sup>th</sup> August 2019, during 9.00-9.45 A.M. Accommodation in nearby hotels can be provided upon prior request on full advanced payment basis. Many nearby hotels at reasonable price are available in Visnagar. After receiving the registration form with accommodation request, all the information regarding nearby hotels will be given to the out station participants. Hotels will be booked from **5<sup>th</sup> August 2019**, according to the preference of the participants, after receiving full advanced payment (non refundable).

<b>Accommodation Fee (Per Participant):</b>	<b>Per Day</b>
SPU Campus Hostel on sharing basis (non AC)	Rs. 200/-
SPU Campus Guest House on sharing basis (AC)	Rs. 5,00/-
Hotels (AC)/(non AC)	(*)

Hotels/SPU Campus Guest House & Hostel will be booked from **5<sup>th</sup> August 2019**.

**Chief Patron:** Shri Prakash Patel, President-SPU

**Patron:** Prof.(Dr.) V. K. Srivastava, Provost-SPU

**Convener:**

Dr. R.M Patel, Principal

**Coordinator**

Dr. Santosh Kumar, Assistant Professor, Dept. of Chemistry

**Organizing Committee:**

Dr. Chirag Patel

Prof. Mahek Patel

Dr. Gautam Makwana

Dr. Alpesh R. Patel

Dr. Nikunj B. Patel

**(\*)For accommodation and any other information, please contact:**

Dr. Rawesh Kumar

Email: [kr.rawesh@gmail.com](mailto:kr.rawesh@gmail.com)

Mobile No.- 8864091237

Ms. Ankita Adesra

Email: [ankita.adesra@gmail.com](mailto:ankita.adesra@gmail.com)

Mobile No.- 9924769581

**Correspondence address of the Coordinator:**

Department of Chemistry (PG),  
Smt. S.S. Patel Nootan Science & Commerce College,  
P.O. Visnagar, Mehsana-384315, Gujarat (INDIA)  
Email: [santchem2008@gmail.com](mailto:santchem2008@gmail.com),  
Mobile No.- 8083244830(whatsapp).

**How to reach:**

**By Air:** Sardar Vallabhbhai Patel International Airport, Ahmedabad is the nearest airport. It is about 77 Km SPU campus. You can get bus for Visnagar bus station from **Geeta Mandir bus station** near Ahmedabad Railway Station.

**By Train:** The nearest railway station is Mehsana and Unjha about 20 Km from Visnagar. **The nearest railway junction is Ahmedabad Junction Railway Station**, approximately 84.3 kms from SPU campus.

**By Road: From Ahmedabad;** SPU campus is located at Visnagar town in Mehsana district of Gujarat, which is approximately 84.3 kms from Ahmedabad Junction Railway Station. You can easily get bus for Visnagar bus station from **Geeta Mandir bus station** near Ahmedabad Railway Station. SPU campus is situated 3.5 kms from Visnagar bus station; you can reach SPU campus by frequently available (reserved) auto rickshaws.

From Mehsana/Gandhinagar: the State Road Transport buses are easily accessible from all nearby cities.

**Important dates** Important dates (some are subject to change)

Wednesday 29 May 2019	Registration and payment opens
Wednesday 31 July 2019	Deadline for registration and payment (**)
Monday 5 <sup>th</sup> August 2019	Booking of Hotels/SPU Campus Guest House & Hostel starts
Thursday 29 August 2019	Workshop starts at 9.00AM
Saturday 31 August 2019	Workshop ends at 4.30 PM

(\*\*) After this date, an extra charge of Rs. 300 will be applied.