

Report on a Workshop Seven days DST-STUTI Workshop on Material Characterization Techniques

Conducted by Department of Pure & Applied Physics

Date of Event : November 1-7, 2022

Venue: Department of Pure & Applied Physics, GGV



November 01-07, 2022

Seven Days DST-STUTI Workshop on Material Characterization Techniques

(A Training Workshop Under STUTI, Funded by DST)

Organized by
Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh (A Central University)
Department of Pure & Applied Physics
Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh

Chief Guest
Prof. Nilambari Dove
Former Vice-Chancellor
Saurashtra University
Rajkot, Gujarat

Chief Patron
Prof. Alok Kumar Chokrawal
Vice-Chancellor
Guru Ghasidas Vishwavidyalaya
Bilaspur, Chhattisgarh

Patron
Prof. Manish Shrivastava
Registrar, GGV, Bilaspur

Coordinator
Prof. Parmendra Kumar Bajpai
Dean, SoS Physical Sciences

Convener
Prof. Madhendra Nath Tripathi
Department of Pure & Applied Physics

Convener
Prof. Hari Shanker Tawari
Department of Pure & Applied Physics

Convener
Prof. Goutam Kumar Patra
Department of Chemistry

Overview of STUTI and Objectives of Workshop
The STUTI program envisions hands-on training and sensitization of state-of-the-art equipment as well as towards sharing while ensuring transparent access to SET facilities. Department of Science and Technology has identified IIT-Gandhinagar to function as a Project Management Unit (PMU) and as co-ordinator for this workshop. This workshop aims to provide an insight into the basic principles and techniques of material characterization, i.e., X-ray diffraction, Photoluminescence, FTIR, UV-Visible spectroscopy, Differential scanning calorimetry, and basic of Computational physics including density functional theory. The participants will be introduced to the basic concepts of these techniques and insights into the analysis of the data, troubleshooting, and advanced modes of operation. The participants will be provided with hands-on experience in the operation of the instrument and will have a chance to interact with subject experts and analyze their own samples (with prior approval).

< DST-supported STUTI program on “Material Characterization Techniques” >



<Inauguration function of DST-supported STUTI program on “Material Characterization Techniques”>



Details of Event Proceedings

Date (DD-MM-YYYY)	Details of the Session	Details of Resource Person	Number of Participants
01-11-2022	Day 1 Session 1&2	Dr. Pradip Das and Dr. M. P. Sharma from Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	31
02-11-2022	Day 2 Session 1&2	Prof. P.K Bajpai, Dr. A. K. Singh, Dr. G. R. Turpu from Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and Dr. Subhash Banerjee from Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	31
03-11-2022	Day 3 Session 1&2	Dr. Jai Singh, Dr. R.K. Pandey, Dr. S.P. Patel Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and Prof. Charu Arora, Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	31
04-11-2022	Day 4 Session 1&2	Prof. G.K .Patra, Dr. U.P. Azad, Dr. B. Mondal and Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and Dr. G. R. Turpu, Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	31
05-11-2022	Day 5 Session 1&Tour	Dr. Jai Singh, Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), Participants interaction and Local tour	31
06-11-2022	Day 6 Session 1&2	Prof. M.N. Tripathi, Dr. R.P. Patel Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) and Dr. Ashish Singh and Dr. A Shrivastava, Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	31

07-11-2022	Day 7 Session 1&2	Dr. S.P. Patel Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.), Accelerator Visit,	31
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A Brief Abstract of the Event (Maximum 500 Words):

The Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, Chhattisgarh commenced a week-long training session on the DST-FIST-supported “**Material Characterization Techniques**” on its campus from 01st Nov to 7th Nov, 2022. More than 30 faculty members, postdoctoral researchers, and doctoral students from all over India have participated in this training workshop. The event is funded by the Department of Science and Technology (DST), under **STUTI program** (Synergistic Training Program Utilizing the Scientific and Technological Infrastructure), in which IIT Gandhinagar is identified as a Project Management Unit (PMU). In welcome note by Vice-Chancellor Prof. Alok Kumar Chakrawal mentioned about the significance of such workshop from perspective of research and growth. Apart from the theoretical knowledge, the workshop has aimed to provide practical hands-on training experience to the participants through a laboratory session. Various characterization techniques i.e. X-ray diffraction, Photoluminescence, FT-IR, UV-Visible spectroscopy, Raman Spectroscopy, Differential scanning calorimetry, and basic of Computational physics including density functional theory with basic theory and operation of instruments has demonstrated to create awareness among the participants.

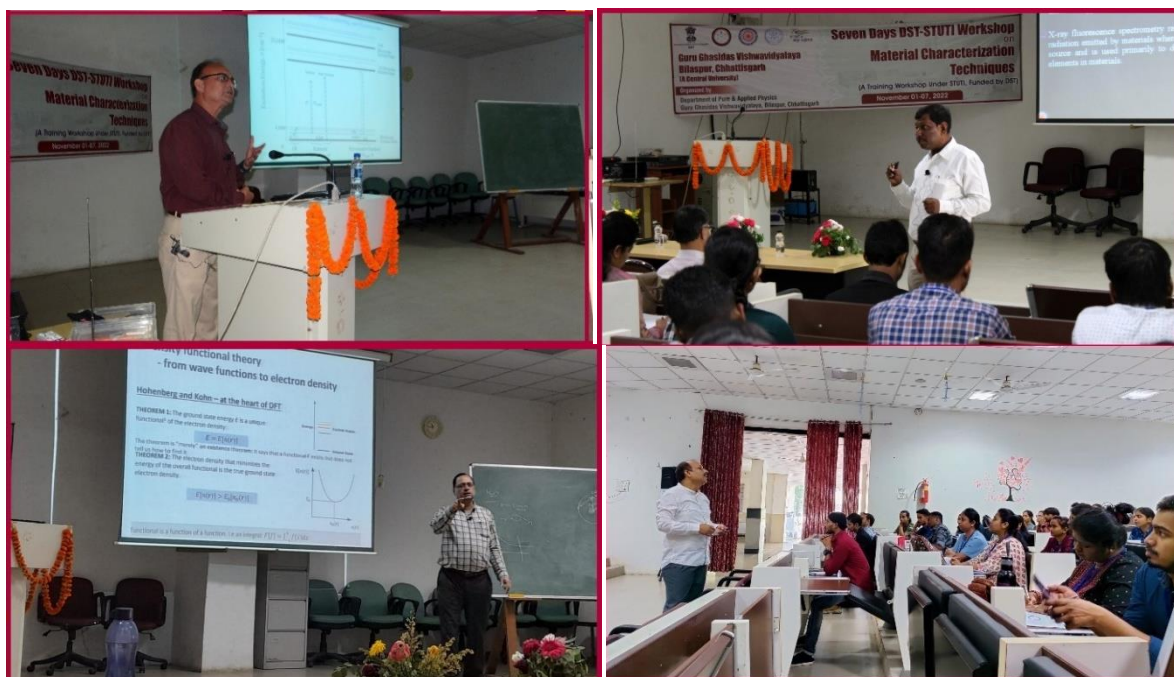


Image : Resource person (Prof. P.K. Bajapai) delivering lecture (left & upper), Dr. P. Das delivering lecture (right & upper), Prof. M. N. Tripathi delivering lecture (left & below) and Dr. Jai Singh delivering lecture (right & below) to registered participants



Image: Demonstration of various instruments to registered participants and Accelerator centre visit.

Signature of Programme Coordinator