



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)

Guru Ghasidas Vishwavidyalaya,
Bilaspur, Chhattisgarh
(A Central University)

Department of Pure & Applied Physics
Guru Ghasidas Vishwavidyalaya
Bilaspur, Chhattisgarh

Chief Guest
Prof. Nilambari Bora
Former Vice-Chancellor
Sardar Sarbajit University
Rajkot, Gujarat

Chief Patron
Prof. Ajit Kumar Chakravarti
Vice-Chancellor
Guru Ghasidas Vishwavidyalaya
Bilaspur, Chhattisgarh

Patron
Prof. Mansh Shrivastava
Bilaspur, GGV, Bilaspur

Coordinator
Prof. Parvendra Kumar Bajpai
Bilaspur, Pure & Applied Physics

Overview of STUTI and Objectives of Workshop

The STUTI programme was conceived to support the realization of state-of-the-art research projects as well as knowledge sharing activities across the Department of Science and Technology (DST) funded STUTI Institutions to help them in their efforts to improve their research capabilities for their workshop. The workshop aims to provide an insight into the latest research and development in materials characterization using X-ray diffraction, Microanalysis, FTIR, UV-Visible spectroscopy, DSC/TGA, and basic of Computational physics including density functional theory. The participants will be introduced to the basics of materials and insights into the analysis of the data from scanning and diffraction studies of materials. The participants will be presented with hands-on experience with the operation of the equipment and will have a chance to interact with subject experts and analyze their own samples (with prior approval).

Co-ordinator
Prof. Madhendra Nath Tripathi
Department of Pure & Applied Physics

Co-ordinator
Prof. Hari Shanker Tawat
Department of Pure & Applied Physics

Co-ordinator
Prof. Gauram Kumar Patra
Department of Pure & Applied Physics

< DST-supported STUTI program on "Material Characterization Techniques" >



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

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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 |

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विभागाध्यक्ष भौतिकी
Dept. of Pure & Applied Physics
गुरु घासीदास विश्वविद्यालय
Koni, Bilaspur (C.G.)

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

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.

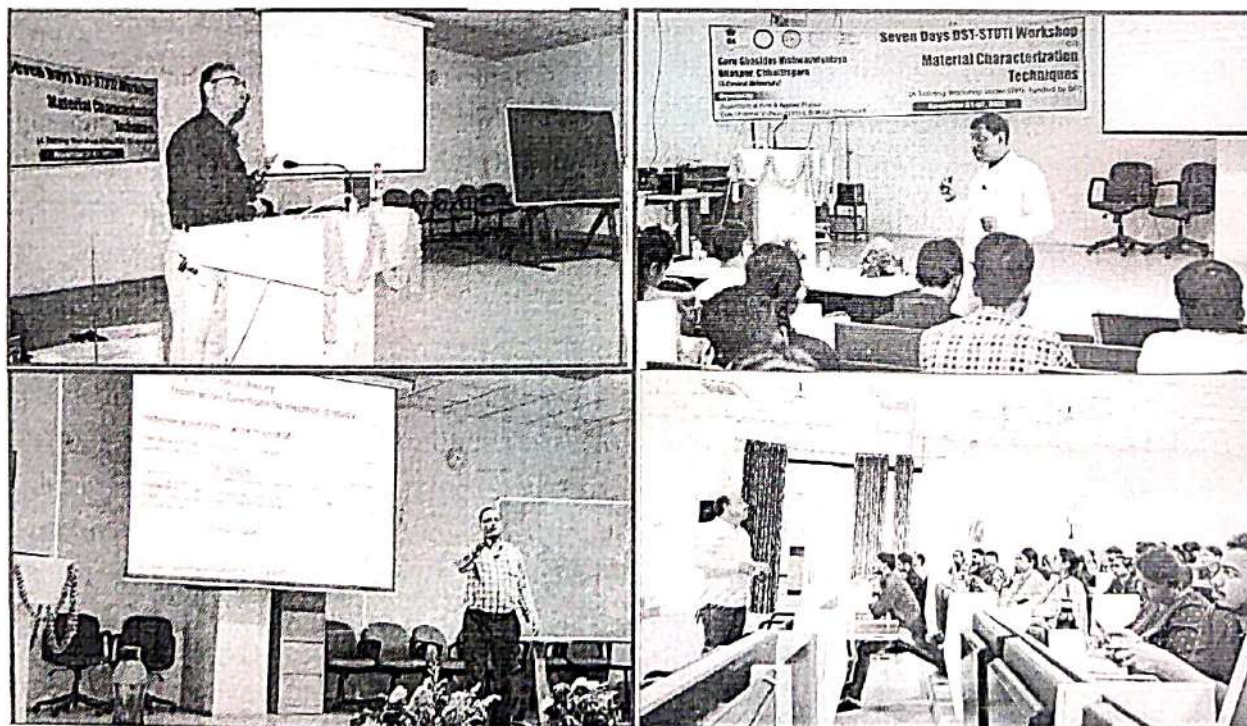


Image : Resource person (Prof. P.K. Bajapai) delivering lecture (left & upper), Dr. P. das delivering lecture (right & upper), Prof. M. N. Tripathi delivering lecture (left & below) and Dr. Jai Singh delivering lecture (right & below) to registered participants



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

Signature of Programme Coordinator

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 विभागाध्यक्ष
 भौतिकी विभाग

Criteria - III(3.3.2)
 Dept. of Pure & Applied Physics
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 Guru Ghasidas Vishwavidyalaya
 बिलासपुर (छ.ग.)/Bilaspur (C.G.)