

**Shiksha Mandal's
Bajaj College of Science, Wardha**

Report of the first Virtual Workshop on X-ray Diffraction

Event Date: 23rd July 2020 (11 a.m. to 5 p.m.)

Event Platform: Zoom Cloud

No. of Participants: 75

Convener: Dr. Om Mahodaya, Principal

Event Co-ordinator: Dr. G.V. Lakhotiya, Incharge, CIC

Resource Persons:

Dr. Pankaj Poddar, Senior Scientist, NCL, Pune

Dr. Arpan Nayak, Asst. Prof., VIT, Vellore


Dr. G.V. Lakhotiya, Asst. Prof., BCS, Wardha

Dr. M.M. Yerpude, Asst. Prof., Dept. of Physics, BCS, Wardha

The Central Instrumentation Centre, Bajaj College of Science, Wardha organized a virtual online workshop of its kind under the convenorship of Dr. Om Mahodaya, Principal, BCS on 23rd July, 2020. 125 participants (UG/PG students/research scholars/faculties/teachers) from different institutes registered for this event from which 65 deserving participants were invited to participate in the same. 10 faculty members of the institute also attended the programme. Dr. Pankaj Poddar, Senior Scientist from NCL, Pune mentored this programme and Dr. Arpan Kumar Nayak, Asst. Prof. (Physics) from VIT, Vellore was invited to deliver one of the sessions along with Dr. G.V. Lakhotiya and Dr. M.M. Yerpude of Department of Physics.

The online gathering over the zoom platform is addressed by our principal Dr. Om Mahodaya. The event started with the welcome address of our Principal Dr. Om Mahodaya who highlighted the role of CIC to promote research culture in the rural region




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of Wardha where researchers and faculties face lack of facilities of characterization in material science. The first session of the program was engaged by Dr. G.V. Lakhotiya, Assistant Professor, Dept. of Physics, Bajaj College of Science, Wardha who discussed the importance of X-ray diffraction and its applications. The second session was the live demonstration of X-ray diffraction techniques from CIC where all the major steps and diffractometer functioning were explained. Third session was on the data analysis and plotting which was demonstrated by Dr. Arpan Nayak, Assistant professor, Vellore Institute of Technology, Vellore. He has introduced the functioning of X'pert Hi-score Plus software for data plotting and analysis. The phase identification in XRD analysis is among the crucial processes, taking into consideration the participants in the workshop were mainly beginners and Dr. Nayak also covered the matching of data with JCPDS/ICDD files. The fourth workshop session was conducted by Dr. Mangesh M Yerpude, Assistant Professor, Dept. of physics, Bajaj College of Science, Wardha on Rietveld Refinement Using FullProf and Crystal Structure Visualization Using VESTA. Dr. Yerpude also introduced the free softwares and database available for X-ray analysis and crystal structure visualization. The final session of the workshop was mentored by Dr. Pankaj Poddar where he addressed the queries of the participants and motivated them to explore their talent in the field of crystallography. Concluding session was conducted by Dr. Pradeep V Tekade, Associate Professor, Dept. of Chemistry, Bajaj College of Science, Wardha who also looks after all research affairs of the college. In this session, some of the participants expressed their views and valuable feedbacks for the workshop which was complemented by Principal Dr. Om Mahodaya. With the promise in bringing such knowledge sharing virtual events, the workshop ended with the Nation anthem.

Regards

Dr. G.V. Lakhotiya
Workshop Co-ordinator



A handwritten signature in blue ink, appearing to read "G.V. Lakhotiya".

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