



**Department of Physics**  
**Siddaganga Institute of Technology**  
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***Two Day Workshop on Basic Rietveld Refinement Analysis***  
***(Sponsored by TEQIP-II)***  
***24 – 25 March 2017***



The workshop was inaugurated on 24<sup>th</sup> March 2017 and inaugural address was delivered by the chief guest of the workshop Prof T. N. Guru Row, professor at Solid State and Structural Chemistry and Dean, Faculty of Sciences, Indian Institute of Science, Bangalore. A total of 35 participants (both professors and research students) from Science and Engineering Colleges, Universities and premier research institutes attended the workshop. During the two day workshop two notable scientist in crystallography namely Prof T N Guru Row, IISc and Dr. N. Vijayan from NPL, New Delhi delivered guest lecture. During initial part of the workshop, participants are introduced to basic concepts of x-ray diffraction and proper data collection. The participants are demonstrated the necessary precautions needed to collect high quality x-ray diffraction data using Rigaku Smartlab powder diffractometer present at Chemistry Research Center in the campus. The free, open access Rietveld software FullProf is distributed to the participants and the operation of the software is briefed. Phase or material identification by search match using QualX program is taught. Participants are made to work on different exercises to learn different fitting methods such as indexing, profile matching and Rietveld refinement. During last session participants are asked to work on their materials x-ray diffraction data and to analyze-extract the structure.

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