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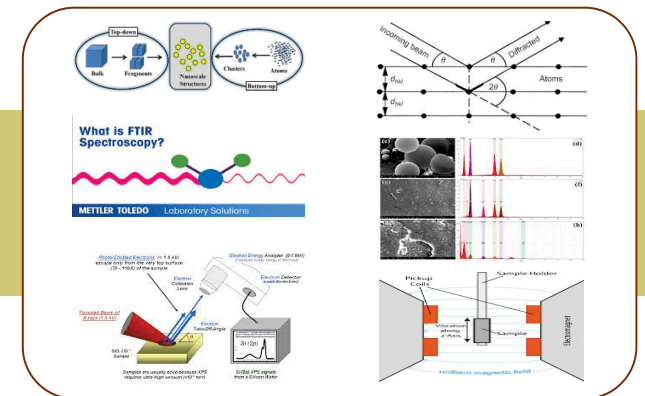
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**MGM UNIVERSITY**  
CHHATRAPATI SAMBHAJINAGAR

# National Workshop on Materials Synthesis and Analytical Techniques- 2025 (NWMSAT-25)

**27 Jan – 1 Feb, 2025**



## ORGANIZED BY

Department of Physics,  
School of Basic and Applied Sciences,  
MGM University, Chhatrapati Sambhajinagar.

## Convener

**Dr. K. M. Jadhav**  
Emeritus Professor (Physics),  
School of Basic and Applied Sciences, MGUM

## Co-Conveners

**Dr. Kranti Zakde**  
Associate Professor and Head, Department of Physics

## About the Workshop:

Recently, nano science and nanotechnology plays important role in materials synthesis, characterization and applications. Nanomaterials with distinct properties like smaller dimension in nanoscale, large surface to volume ratio, greater chemical stability, easy preparation, tunable properties etc. have attracted many researchers. The properties of nanomaterials are sensitive to method of preparation and associate parameters. In nanotechnology bottom-up approach and top-down approach is used for the synthesis of nanomaterials. The characterization of nanomaterials is also very important because of their smaller nano size dimension.

Many sophisticated instruments have been developed to characterize the synthesized nanomaterials. The critical analysis of the various collected data using these sophisticated instruments is essential to interpret the results. Thus, the research scholar must be familiar/get acquainted with the various synthesis methods and characterization /analytical techniques.

In view of this, the Department of Physics, School of Basic and Applied Sciences (SBAS) has arranged National Workshop on synthesis (solid state reaction method, ball milling, wet chemical, spray pyrolysis, etc.) and analytical techniques (TGA- DTA, XRD, FTIR, SEM/TEM, UV- Visible, BET, etc.) of one week duration. The research scholars from MGM University and other National Institutes/ Universities will be the beneficiaries of this workshop. All the interested candidates are invited for the workshop.

## MGM University:

“In a gentle way, you can shake the world.” With this philosophy and ideology of Mahatma Gandhi, MGM established an educational trust in 1982 under the guidance of former Education Minister Shri Kamalkishor Kadam and a group of founder members who are hard-core academicians and visionaries. For more than four decades, Mahatma Gandhi Mission has blazed a trail of academic excellence and state-of-the-art health care services. MGM's lush green and serene campus is conducive to create a peaceful learning atmosphere. In all, during this journey Mahatma Gandhi Mission has established its mark over 6 campuses having

over 70 colleges, Institutions and Centers of Engineering, Architecture, Medical, Nursing, Management, Computer Science, IT, Biotechnology, Science, Commerce, Fine Arts, Ceramic and Pottery, Performing Arts, Fashion Design, Mass Communication & Journalism, Film Arts and Photography. It has established many incubation centers for students, MGM Khadi is one of the best production and research centre for Khadi and Paithani saree. The MGM Trust continues its journey of imparting value-based services and creating global technocrats with its self – financed private “MGM University” launched at Chhatrapati Sambhajnagar, Maharashtra in December 2019. The MGM University is the first self-finance University at Chhatrapati Sambhajnagar, Capital city of Marathwada region established by Established by the Mahatma Gandhi Mission Trust and approved by Government of Maharashtra by Act. No. XXVI of 2019 with 2(f) status granted by the University Grants Commission (UGC) of India. MGM University imparts quality education in the faculty of Basic & Applied Science, Engineering & Technology, Management & Commerce, Performing Arts, Design, Social Science & Humanities, Law and Interdisciplinary studies with excellent track record in education, research, industry-connect & student placement.

## School of Basic and Applied Sciences (SBAS):

The School of Basic and Applied Sciences (SBAS) was established in 2021, since then, the School is organizing several activities like conferences, workshops, seminars, invited talks, quiz competition for the benefit of students of MGM University. The MGM University offers Ph.D. program in Physics, Chemistry, Mathematics etc. subjects. Few students have been registered for their Ph.D. degree under the supervision of university recognized teachers. Most of the research students are working in the field of material science. These students should be aware of the various synthesis methods and analytical techniques which are needed for their material.

## Who can attend?

UG/PG Students (B.Sc./B.Tech./M.Sc./M.Tech.), Research Scholars, Faculty from academic and institutions. Interested participants can register

Interested Participants can register through following registration link with Payment of registration fees

**Rs. 5000/-**

## Registration Link:

[https://erp.mgm.ac.in/asd\\_EventPublicUserMaster.htm?eventID=120](https://erp.mgm.ac.in/asd_EventPublicUserMaster.htm?eventID=120)

(Registration fee includes working Tea, Lunch, Notepad, Pen, Certificate, etc.)

## Last Date of Registration:

10 Jan. 2025

## Workshop Topics covered

- Powder X-Ray diffraction techniques
- FT-IR and UV-Visible Spectroscopy
- Raman Spectroscopy
- Atomic Absorption Spectroscopy
- TGA-DTA Techniques
- SEM, TEM and BET
- Electroanalytical Techniques

## Benefits of Workshop:

- The participants will gain knowledge about various methods and of material synthesis and analytical techniques for its characterization.
- Hands on experience on various analytical instruments.
- Skill of Interpretation of analytical and characterization data.
- Knowledge of designing of research in materials synthesis, characterization and applications.

