

REGISTRATION DETAILS

- Registration Fee:
Teaching Faculty & Scientists: **Rs. 1200/-**
Research Scholars and Students: **Rs. 750/-**
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- Call for Abstracts
Last Date for Submission of Abstract : 27-01-2026
- Google Form link for Abstract Submission :

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- An abstract book compiling all Accepted abstracts will be Published with a registered ISBN number

- Address for Correspondence:

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Two-Day National Conference

On

Advanced Molecules and
Materials: Characterization
and Applications

On

6th & 7th February, 2026.



BROCHURE



(Re-accredited with NAAC 'A+' Grade)

Organized by

DEPARTMENT OF PHYSICS

(Supporting by RUSA 2.0)

**KAKATIYA UNIVERSITY
WARANGAL, 506009
TELANGANA**

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ABOUT THE UNIVERSITY

Kakatiya University was established on 19th August, 1976 by upgrading the erstwhile Postgraduate Centre of Osmania University. The landmark event signified the fulfilment of the long-cherished aspirations of Telangana. It heralded a new era in the realm of Higher Education in the region.

The university is located in the historical city of Warangal and named after the great Kakatiya dynasty that ruled the Eastern Deccan region during the 12th and 14th centuries A.D. The university campus, spread over a sprawling area of about 672 acres, was aptly named 'Vidyaranya' after the great sage and Sanskrit scholar, Vidyaranya, who was born in Warangal and, as the legend has it, helped to establish the famous Vijayanagara empire in 1336. The development of the university has been gradual but consistent. It has made rapid strides in achieving academic excellence and soon established its credentials emerging, in course of time, as the fulcrum of higher education dynamics that involved teaching, research, career guidance and extension activities. It has made continual efforts in imparting value-based education, originality in comprehension, and innovation in action. It has sustained the momentum, over the decades, in nurturing and shaping the talents of thousands of students and researchers enabling them face challenges, excel in real life situations.

Kakatiya University has now 27 departments on campus with a network of 19 constituent colleges and 473 affiliated colleges. It has Postgraduate Colleges at Subedari (Hanumakonda), Nirmal, Khammam, Janagaon, Jayashankar Bhoopalpally, Mahabubabad and University Engineering College at Kothagudem. It offers 95 programmes at undergraduate and postgraduate level in the Faculties of Arts, Science, Commerce, Education, Law, Pharmacy, Engineering, Hotel Management and Oriental courses. In addition, the university offers 28 programmes under distance mode through School of Distance Learning and Continuing Education (SDLCE). The university is committed to meet the augmented demand for specialised courses from time to time.

The university is vibrant with research activity carrying out projects sponsored by various funding agencies such as UGC, CSIR, DST, DBT, AICTE, DRDO, MHRD, ICMR, ICSSR, and ICHR. As many as twelve departments have been supported by the UGC under its SAP-DRS Programme, eight departments under DST-FIST, nine departments under UGC BSC Non-SAP and two departments under DST-INSPIRE programmes..

Kakatiya University marched ahead with many noteworthy academic indicators to its credit over the decades. It was reaccredited with 'A' in 2009, again 'A' grade in 2017, and with improved grade of 'A+' by NAAC with CGPA of 3.27 in 2023. Notable among other milestones include: National Institutional Ranking Framework (NIRF) placed the university in II-band (101-150) in overall category, and in III-band in Institutions category (151-200) in 2018. As a consequence of NAAC Accreditation and NIRF ranking, the university was granted 'Graded Autonomy' by the UGC in December 2018. The university was sanctioned a grant of Rs. 50 crores by the RUSA in 2018 under research and innovation component.

ABOUT THE DEPARTMENT

The Department of Physics at Warangal was started in June 1968 at the Postgraduate Centre of Osmania University. The P.G. Centre was upgraded to Kakatiya University in August 1976. The first vice chancellor of this university was the late Prof. K. Venkata Ramaiah (professor of physics). The Department of Physics offers teaching programs at the B.Sc. level at the University Arts and Science College and M.Sc. and PhD programs at the Department in University College. The department has vigorous ongoing research programs to train PhD scholars and has achieved national and international recognition in the areas of condensed matter physics, spectroscopy and computational physics, solid-state physics, nuclear physics, and materials science. The specific areas of research include crystal growth and characterization, molecular spectroscopy and DFT computation, glasses and ceramics, liquid crystals, thin films, semiconductors, nanostructured materials, and ferroelectrics. Besides developing its own research programs, the department has strong interaction with national and international institutes/laboratories.

The department has been selected by the RUSA 2.0 to strengthen its teaching and research programs through financial assistance. The testimony of these efforts and hard work is measured in terms of quality research publications in reputed national and international journals. The students, upon completing the M.Sc. course, are leaving the Department portal with great confidence. It has organized several national seminars, symposia, and workshops. Nonteaching staff also played a vital role in the growth and development of the department. The department is again offering the M.Sc. Physics Program in distance mode from the 2025-26 academic year onwards.

ABOUT THE CONFERENCE

The conference on Advanced Molecules and Materials: Characterization and Applications is designed to bring together researchers, students, scientists, and industry professionals to explore the latest developments in modern materials and molecular technologies. It focuses on providing a clear understanding of advanced molecules, functional materials, and the analytical techniques used to study their structure, properties, and performance. Throughout the sessions, participants will learn how different characterization tools—such as spectroscopy, microscopy, diffraction methods, and thermal analysis—play a crucial role in identifying material behavior at the molecular and atomic levels. The workshop also explains how these materials are translated into real-world applications, including energy storage, electronics, catalysis, biomedical engineering, environmental technologies, and smart devices.

This program aims to help participants understand the relationship between molecular structure and material functionality, enabling them to select appropriate characterization techniques for their research and industrial needs. It encourages scientific discussion, knowledge sharing, and the development of innovative ideas through interactions with experts in the field. By the end of the workshop, attendees will gain improved analytical skills, enhanced understanding of material design, and deeper insights into the potential uses of new-generation molecules and materials in various technological sectors. The workshop ultimately serves as a platform for learning, collaboration, and advancing research in the rapidly growing field of materials science and molecular engineering.

Scope of the Conference:

- Spectroscopy and molecular Dynamics
- Thin films
- Liquid crystals
- Metals, composites, Ceramics and Glasses
- Nanomaterials
- Polymeric materials
- Crystal Growth and Characterization
- Nuclear science
- Luminescent materials
- Magnetic & dielectric material