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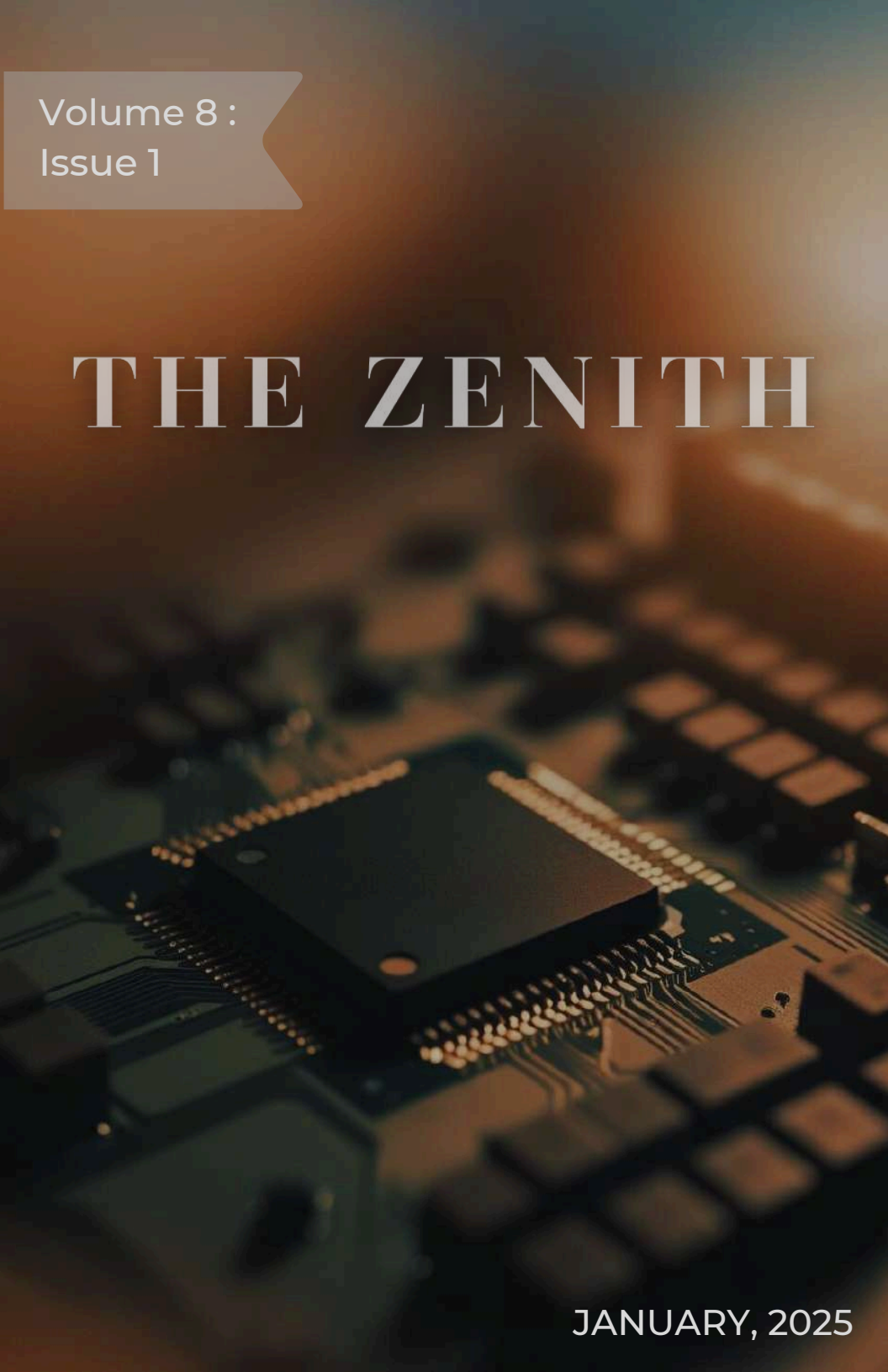
Issue 1

THE ZENITH



JANUARY, 2025

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VISION & MISSION

VISION

Excel in quality technical education and research in Electronics and Telecommunication (E&TC) Engineering for sustainable solution development for industry and betterment of society.

MISSION

M 1: To provide quality education for the preparation of technically and professionally competent E&TC engineers.
M 2: To create an environment to enhance life-long learning and 21st century skills
M 3: To inspire students' innovative thinking and creativity to promote research
culture.

MEET OUR TEAM

FACULTY ADIVSOR

Prof. S. D. Raut

STUDENTS FROM THIRD YEAR

Kshitija Deshmukh

Shreya Bhakare

Om Dhokane

Devashri Shastri

Harsh Gavali

Bhavi Sankhala

Jay Ikhe

STUDENTS FROM SECOND YEAR

Sayali Patil

Anushka Patil

TECHNICAL NEWS

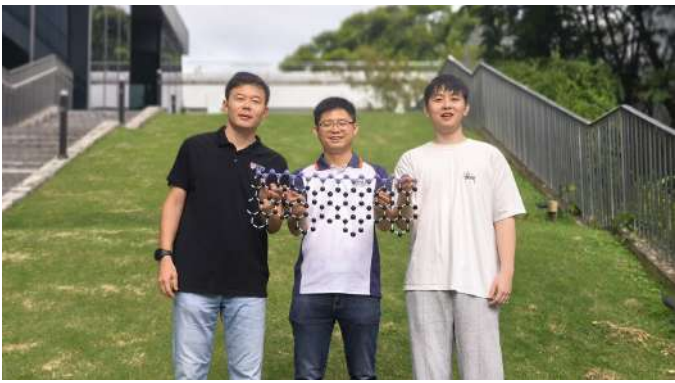
Novel graphene ribbons poised to advance quantum technologies

Researchers from the National University of Singapore (NUS) have recently achieved a significant breakthrough in the development of next-generation carbon-based quantum materials, opening new horizons for advancements in quantum electronics.

The innovation involves a novel type of graphene nanoribbon (GNR), named Janus GNR (JGNR). The material has a unique zigzag edge, with a special ferromagnetic edge state located on one of the edges. This unique design enables the realisation of one-dimensional ferromagnetic spin chain, which could have important applications in quantum electronics and quantum computing.

The research was led by Associate Professor Lu Jiong and his team from the NUS Department of Chemistry, in collaboration with international partners.

Graphene nanoribbons, which are narrow strips of nanoscale honeycomb carbon structures, exhibit remarkable magnetic properties due to the behaviour of unpaired electrons in the atoms' π-orbitals. Through atomically precise engineering of their edge structures into a zigzag arrangement, a one-dimensional spin-polarised channel can be constructed. This feature offers immense potential for applications in spintronic devices or serving as next-generation multi-qubit systems which are the fundamental building blocks of quantum computing.



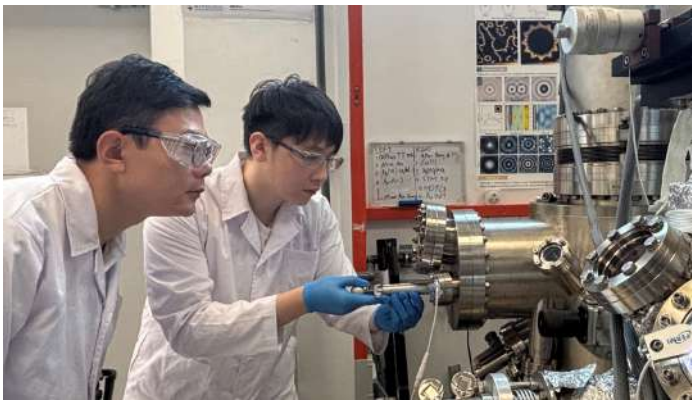
Source:https://news.nus.edu.sg/

Janus, the ancient Roman god of beginnings and endings, is often depicted as having two faces pointing in opposite directions representing the past and the future. The term "Janus" has been applied in materials science to describe materials that have different properties on opposite sides. JGNR has a novel structure with only one edge of the ribbon having a zigzag form, making it the world's first one-dimensional ferromagnetic carbon chain. This design is achieved by employing a Z-shaped precursor design which introduces a periodic array of hexagon carbon rings on one of the zigzag edges, breaking the structural and spin symmetry of the ribbon.

Assoc Prof Lu said, "Magnetic graphene nanoribbons -- narrow strips of graphene formed by fused benzene rings -- offers tremendous potential for quantum technologies due to their long spin coherence times and the potential to operate at room temperature. Creating a one-dimensional single zigzag edge in such systems is a daunting yet essential task for realising the bottom-up assembly of multiple spin qubits for quantum technologies."

The significant achievement is a result of close collaboration among synthetic chemists, materials scientists, and theoretical physicists, including Professor Steven G Louie from UC Berkeley in the United States, Professor Hiroshi Sakaguchi from Kyoto University in Japan and other contributing authors.

The research breakthrough was published in the scientific journal Nature on 9 January 2025.



Source:https://news.nus.edu.sg/

EXPERT LECTURES / SEMINARS / COURSES ORGANISED

Workshop on “Basics of Intellectual Property Rights and Its Importance for Innovators and Entrepreneurs”.

The Department of Electronics & Telecommunication Engineering and the Institution Innovation Council at K.K. Wagh Institute of Engineering Education and Research, Nashik, organized a workshop on "Basics of Intellectual Property Rights and Its Importance for Innovators and Entrepreneurs" on November 30, 2024.
The session was led by Mr. Raosaheb Y. Ghegade, Associate Professor at Gokhale Pharmacy College, Nashik. Attended by students and faculty, the event emphasized the significance of intellectual property for fostering innovation and entrepreneurship. The workshop reflected the institute's dedication to promoting innovation and academic excellence.

K.K. Wagh ENTC Students Visit Cyber Sanskar for Industrial Training

On 26th October 2024, 53 students from the B.Tech 2nd year (E&TC Division B) of K.K. Wagh Institute of Engineering Education and Research visited Cyber Sanskar on Gangapur Road, Nashik, for an industrial training session.

The visit, organized under the course Privacy and Security in Online Social Media (Multidisciplinary Minor), was coordinated by Dr. Anshu Gupta and Prof. S. S. Togare. The session was conducted by Mr. Tanmay Dixit from Cyber Sanskar, providing students with hands-on knowledge about online privacy and security.

This visit aimed to bridge the gap between theoretical learning and practical application, enriching students' understanding of cybersecurity concepts.

CAMPUS PLACEMENTS / ACHIEVEMENTS

Tejashri Mahajan Secures Placement at IBM

Tejashri Avinash Mahajan from the ENTC Department of K.K. Wagh Institute of Engineering Education and Research, Nashik, has secured a placement at IBM with a package of ₹4.5 LPA.
Congratulations to her on this achievement!

Dr. D.M. Chandwadkar Honored with Dr. Srinath Award 2023-24

Dr. Dinesh M. Chandwadkar, Dean of Student Affairs, Professor, and Head of the Department at K.K. Wagh Institute of Engineering Education and Research, Nashik, received the prestigious Dr. Srinath Award 2023-24 for his outstanding contributions to Innovation Technology for Heavy Duty Vehicles.
With 33 years of teaching experience, Dr. Chandwadkar is a key member of the SAE India Digital Forum and has actively guided students in BAJA SAE India competitions. His contributions include publishing 40 research papers in reputed journals and conferences, acting as an evaluator for AICTE funding proposals, and serving as a reviewer for international journals.
Dr. Chandwadkar also led a research project titled “Technology Pilot for Fast DC Charging for EV Bus,” funded by the Department of Heavy Industries under the FAME TPEM scheme. He has previously received the “Best Industry-Aligned Research” award from CSI Mumbai in 2018 and has secured over 1.5 crore rupees in research grants from the Government of India.
This recognition underscores Dr. Chandwadkar’s dedication to advancing automotive innovation and his impactful role in engineering education and research. The award ceremony was held on December 11, 2024, by the SAEINDIA Foundation.

Team EncryptoEnclave Reaches Finals of Smart India Hackathon 2024

Electronics and Telecommunication Engineering students from K.K. Wagh Institute of Engineering Education and Research, Nashik, achieved a remarkable milestone as Team EncryptoEnclave, led by Ritesh Sakhare, reached the finals of the prestigious Smart India Hackathon 2024. The event was held at Manipal University Jaipur from December 11th to 15th, 2024.

The team worked on problem statement PS1559, focusing on enhancing the backend services of Aadhaar Card systems. Their innovative solution, which prioritized security and efficiency, impressed the judges from the Ministry of Electronics and Information Technology.

This achievement showcases the students' technical expertise and dedication to creating impactful solutions for government services, underscoring the institute's commitment to nurturing innovation and excellence.

Team AquaInnovators Shines in Smart India Hackathon 2024 Finals

The Electronics and Telecommunication Engineering students of K.K. Wagh Institute of Engineering Education and Research, Nashik, achieved significant success as Team AquaInnovators, led by Vidhi Metkar, reached the finals of the prestigious Smart India Hackathon 2024. The team included talented members Tejal Patil, Ayush Pund, Yash Giri, Yash Barve, and Bhushan Gavali.
The event, organized by the Ministry of Education's AICTE Innovation Cell, was held from December 11th to 15th, 2024. The team tackled a challenging problem statement provided by the Ministry of Jal Shakti, showcasing their ingenuity and dedication toward solving water-related issues.
Their achievement highlights their innovative approach and commitment to addressing critical problems, reflecting the institute's focus on fostering innovation and societal impact.

K.K. Wagh ENTC Students Shine at MindSpark 24 Robotics Competition

Students from the Electronics and Telecommunication (ENTC) Department of K.K. Wagh Institute of Engineering Education and Research, Nashik, showcased their talent at MindSpark 24, a prestigious national-level competition organized by COEP, Pune. The event, held to bring together the brightest engineering minds across the country, featured exciting robotics challenges such as Robo War, Robo Sumo, and Robo Race.

The ENTC team participated in both Robo Race and Robo Sumo competitions. Under the leadership of Atharva Mayekar, along with teammates Kanaad Buwa, Harshvardhan Shah, Sanket Ghadge, Sarvesh Kshirsagar, Sagar Sahu, and Amogh Aradhye, the team achieved an impressive 8th rank out of 150 participating teams in Robo Race.

This achievement highlights the team's technical skills, teamwork, and dedication, bringing pride to the institute and demonstrating their potential in robotics and engineering innovation.

INDUSTRIAL TRAINING / SEMINAR / WORKSHOP DONE BY STAFF

Faculty Attended Short-Term Training Program on Scientific Paper Writing

Prof. R. V. Chothe and Prof. S. V. Shelke from the Electronics and Telecommunication Department of K.K. Wagh Institute of Engineering Education and Research attended a one-week short-term training program on “Advanced Project and Scientific Paper Writing: Strategies for High Impact Factor Journal Publication.”
The program was held from 4th November 2024 to 9th November 2024 and focused on enhancing skills in project development and strategies for publishing in high-impact factor journals. This training will contribute to their academic and professional development.

Faculty Completed NPTEL Course on Cloud Computing

Prof. S D Raut and Prof. R R Khinde from K.K. Wagh Institute of Engineering Education and Research have successfully completed the NPTEL course on Cloud Computing, conducted during the July–October 2024 session.This 12-week program covered core concepts of cloud computing, including virtualization, storage, scalability, and cloud security. The faculty's participation reflects their dedication to upgrading their technical expertise, which will contribute to the academic enrichment of the institution.

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