



IEEE International Conference on Sensors & Nanotechnology (Sennano 2025)

By

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Introduction

The IEEE International Conference on Sensors and Nanotechnology (SENNANO) is a prestigious annual flagship event that brings together researchers, academics, engineers, and industry professionals from across the globe to exchange knowledge and showcase the latest advancements in sensors and nanotechnology. The conference covers a broad range of topics, including nanomaterials and nanofabrication, biosensors and medical devices, environmental monitoring, energy harvesting and storage, and wireless sensor networks.

SENNANO 2025 was jointly organised by the IEEE Sensors and Nanotechnology Council Malaysia Joint Chapter and the National Nanotechnology Centre (NNC), Ministry of Science, Technology and Innovation (MOSTI), as part of the National Nanotechnology Policy and Strategy (DSNN) Action Plan 2021–2030. The Institution of Engineers, Malaysia (IEM), through its Electronic Engineering Technical Division (eETD), proudly served as a co-organiser, continuing its strong involvement since SENNANO 2023.



Figure 1 : Sennano 2025 Poster

Members of IEM eETD played an active role in the organising committee, contributing to the technical and operational success of the conference. In addition, IEM members were offered discounted registration fees, ensuring wider participation from the Malaysian engineering community. From eETD's perspective, co-organising SENNANO reinforces its commitment to advancing frontier knowledge, strengthening industry–academia collaboration, and providing Malaysian engineers with access to global expertise and networks in sensors and nanotechnology.

SENNANO 2025 Highlights

SENNANO 2025 was successfully held on 10–11 September 2025 at the Zenith Hotel, Putrajaya, Malaysia. The conference attracted a total of 131 participants, including keynote and invited speakers, researchers, industry experts, and government representatives. Participants represented a diverse range of countries, including Malaysia, India, Pakistan, China, Singapore, the United States, Japan, Türkiye, Indonesia, Denmark, Canada, and the Philippines.

One of the key highlights of SENNANO 2025 was the Plenary Address by Prof. Sir Konstantin Novoselov, the 2010 Nobel Laureate in Physics, who delivered an inspiring talk on the latest frontiers of nanomaterials research. In addition, distinguished keynote and invited speakers shared insights into cutting-edge developments in sensors and nanotechnology, making SENNANO 2025 a milestone event for the global engineering and scientific community.



Figure 2: Plenary Address by Prof. Sir Konstantin Novoselov, the 2010 Nobel Laureate in Physics

During the two-day conference, IEM eETD also set up a booth to promote IEM and its activities. The booth received strong engagement, with participants actively seeking information on membership, networking opportunities, and professional benefits. This effort further enhanced IEM's visibility within the engineering community both locally and internationally.





Figure 3: IEM eETD Booth and Sponsors Booth

The success of SENNANO 2025 was made possible through the generous support of its sponsors. Lynas Malaysia, as the Platinum Sponsor, played a pivotal role in ensuring the event's success. Additional support came from Advanced Devices & Instrumentation, Tekmark Sdn Bhd, Dahan Tech, DreamCatcher, and Aseptec Sdn Bhd. Their contributions not only enhanced the quality and impact of the conference but also reflected strong industry engagement and commitment to advancing research and innovation in the fields of sensors and nanotechnology.

Officiating Ceremony

The Opening Ceremony was held on 10 September 2025, officiated by YBhg. Ismarul Nizam Ismail @ Abdul Kadir, Principal Assistant Director, Ministry of Science, Technology and Innovation (MOSTI). The ceremony began with welcoming remarks by Prof. Dr Asrulnizam Abd Manaf, Chair of SENNANO 2025, followed by the official opening speech from the Chief Secretary. The officiation underscored the government's strong commitment to advancing nanotechnology as a key driver of national innovation and competitiveness. A symbolic video presentation and the striking of a ceremonial gong marked the official commencement of the conference.



Figure 4: Opening Speech by YBhg. Ismarul Nizam Ismail@Abdul Kadir

Best Paper Competition Organised by IEM eETD

As part of its contribution to SENNANO 2025, IEM eETD organised a Best Paper Competition, recognising outstanding research presented at the conference. Awards were given in the following categories:

- Sensors Track (IEM Best Paper Award): Deep Learning Algorithms for Malaysian Food Recognition and Calorie Estimation in Diabetes Management.
- Nanoelectronics Track (IEM Best Paper Award): Impact of Electrode Gap and GO Coating on Porous Paper-Based Impedance Humidity Sensor Performance.

This initiative not only highlighted the exceptional quality of research showcased at SENNANO 2025 but also reinforced IEM eETD's commitment to promoting engineering excellence and impactful research.



Figure 5: IEM Best Paper Winners

SENNANO 2025 Publications

All selected papers from SENNANO 2025 are scheduled for publication in IEEE Xplore, ensuring global visibility and impact. The IEEE's confirmation of acceptance for these papers reaffirms the high calibre of research presented at the conference and guarantees that the contributions will reach a worldwide audience, further advancing the fields of sensors and nanotechnology.

Conclusion

The IEEE SENNANO 2025 Conference concluded with resounding success, providing a dynamic platform for knowledge sharing, collaboration, and innovation. The participation of world-renowned researchers, government leaders, and industry experts underscored the strategic importance of sensors and nanotechnology in shaping future industries.



Figure 6 : Sennano 2025 Group Photo

As a co-organiser, IEM eETD played a significant role in this achievement through its organising committee involvement, booth exhibition, sponsorship engagement, and Best Paper Competition further enhancing IEM's visibility and contribution to the global engineering community. The collaborations and knowledge exchanges fostered at SENNANO 2025 will undoubtedly pave the way for future advancements in sensors, nanotechnology, and their transformative applications across industries.