

Innovative NanoMalaysia Berhad Technologies Shine at MTE 2025 with Prestigious Awards

KUALA LUMPUR, 24th February 2025 – NanoMalaysia Berhad (NMB) and its partners participated in and showcased three inventions leading to gold, silver and bronze medals at the 24th Malaysia Technology Expo (MTE) 2025 held at the World Trade Centre recently.

The AQUENE Graphene Cooling Fluid, in collaboration with Blue Snow Consulting and Engineering Sdn Bhd, received the gold medal in the Energy and Green Technology category. This revolutionary heat transfer fluid enhances the efficiency of cooling systems by transforming water into a graphene-based thermal conductor. By integrating Graphene Nanoplatelets (GNP), AQUENE improves heat exchange at all system interfaces, reducing energy consumption by 20-30%. The solution is already piloted in commercial buildings, district cooling plants, and liquid-cooled data centres, proving its energy conservation and sustainability potential. Its ability to enhance heat transfer at all exchange interfaces, from evaporator tubes to air-side cooling coil tubes, makes it an innovative game-changer in thermal management.

NMB's second invention, in collaboration with Serdang Paste Technology Sdn Bhd, won the silver medal in the Advanced Materials category and was awarded the revolutionary Conductive Thermal Paste for Electronic Applications. Leveraging nanomaterials such as Carbon Nanotubes (CNT) and graphene, this thermal paste offers exceptional thermal conductivity, ensuring optimal heat dissipation in semiconductors, consumer electronics, and renewable energy applications. This innovation revolutionises electronic devices, printed circuit boards, and photovoltaic technologies with its low drying temperature, superior adhesion, and energy-efficient cooling applications. Using sustainable organic binders derived from linseed oil further enhances its environmental benefits, making it a viable solution for the future of electronic manufacturing.

Recognised for its innovation in air purification, the Portable Air Purification Reactor for Cars and Small Rooms, equipped with UVA LED technology and Nano Reactive Coating by NMB and Caso Resource Optimization Sdn Bhd, received the bronze medal in the Protection of the Environment Water, Wastewater, Sanitation category. Designed to improve indoor air quality, this device effectively reduces airborne contaminants, achieving a 32.7% reduction in bacteria such as *Staphylococcus aureus* and an impressive 91.9% reduction in carbon dioxide levels. Its ability to combat multi-drug-resistant bacterial species makes it a breakthrough for health-conscious consumers, automobile users, and public transport operators, addressing increasing global concerns over air pollution and respiratory health. With growing awareness of

indoor air quality and its impact on overall well-being, this innovation offers a practical and effective solution for cleaner air.

-ENDS-

For media enquiries, kindly contact corporateaffairs@nanomalaysia.com.my.