

WELCOMING REMARKS
MAI-SAEM TECHNICAL TALK: NANOTECHNOLOGY AND ITS
APPLICATIONS IN THE AUTOMOTIVE INDUSTRY

BY

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Thank you Masters of Ceremony.

Salutations

YANG BERUSAHA EN. NIZMAR

Chief Operation Officer

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Honorary guests,

Ladies and Gentlemen.

Assalaamu'alaikum warahmatullaahi wabarakatuh,

Salam Sejahtera,

Salam 1Nano.

Ladies and gentlemen,

1. Good morning. It is my pleasure and a privilege to welcome all of you to this game-changing gathering, bringing together key representatives from nanotechnology industry, automotive industries and SMEs with a common goal that is, to explore business opportunities in the automotive world. We gather for the first time under the auspices of **MAI-SAEM Technical Talk: Nanotechnology and Its Applications in the Automotive Industry**. This programme is organised as to reflect the pervasive reality of advanced materials innovations' cutting across automotive industry and the importance to the economy.
2. The word 'nanotechnology' might seem a little odd to be applied to a technology that is clearly several decades old. After all, a 'nanometer' is something that means one billionth part of a meter, something no one could

have measured until very recently. But in this sense, nanotechnology refers to the purposeful inclusion of very tiny amounts of materials to create chemical reactions at the quantum level. Nanotechnology will play a major role in the automotive industry with the adoption of Graphene, the wonder material.

3. NanoMalaysia Berhad as an agency under MOSTI is the connector of innovators, policy makers, industry players, funding authorities and people, the consumers, adopting the NBOS approach to efficiently commercialise nanotechnology products. These Primary Outputs shall be achieved via industrial focus and critical mass, human capital development, facilities and infrastructure, investments, commercialisation imperatives, R&D funding and employment. Hence, we need cooperation from everyone to embark on this exciting journey of nanotechnology development.

Ladies and Gentlemen,

4. When we talk about Graphene here in Malaysia, it is synonymous with the **National Graphene Action Plan 2020**. This commercialisation delivery framework managed by NanoMalaysia has created 21 product development projects since July 2014.
5. Among the identified applications are on commercially ready projects like nanofluids and conductive inks and this year until 2020 we are targeting rubber, ultracapacitors and plastics applications of which are three areas relevant to the automotive industry. Generating RM20 billions of gross national income and creating 9,000 jobs through start-ups, joint-ventures and technical collaborations by 2020 are the aims of this initiative.
6. Graphene offers a compelling value proposition for enhancing lithium-ion batteries as well as ultracapacitors. In ultracapacitors for instance, Graphene could be used to enhance the electrodes, enabling a larger storage capacity. The two can be bundled to produce longer-lasting, fast recharging energy storage devices.

Ladies and gentlemen,

7. NanoMalaysia has developed the iNanovation programme for our commercialisation efforts including NGAP 2020 of which NanoMalaysia is the Lead Agency. iNanovation accommodates both market pull, technology push initiatives named iPull and iPush respectively joined with the correct business model for joint-ventures with the right industrial partners thus providing business and employment opportunities for start-ups entrepreneurs and product innovators. In addition to the both initiatives, iSwitch is another initiative that can be leveraged by industry players to improve and develop products, increase market share and venture into new markets.

8. It is important to highlight here that the commercialisation of nanotechnology innovations will contribute to the wealth of the country targeting USD15-20,000 as income per capita under the New Economic Model. Thus, NanoMalaysia is giving all sectors an importance including the automotive industry.

Ladies and gentlemen,

9. In the interest of time, I would like to thank MAI the co-organiser of this technical talk for their continuous interests in Malaysia's nanotechnology developments. For my dedicated staffs whom have been burning midnight oil in making sure this event a success, thank you for your effort, devotion and hardwork.

10. On behalf of NanoMalaysia Berhad, I would like to thank all speakers and guests for participating in the same spirit and dedication, thank you for your generous time. More or less, this technical talk would be a great networking session, a starter for something new and a stimulator in re-energising the automotive industry. I do hope, everyone here will bring back valuable experiences and knowledge. Thank you.