MAIN ORGANIZER

CO-ORGANIZER

18TH - 19TH
SEPTEMBER
2023

3RD International Conference on Semiconductor Materials & Technology (ICoSeMT 2023)

SHANGRI-LA RASA SAYANG, PENANG

CONCURRENT WITH

2ND International Invention, Innovation and Design Expo (INoDEx 2023)

ONLINE

PROGRAMME BOOK

Innovation Towards a Sustainable Tomorrow

Published by:
International Conference on Semiconductor Materials and Technology (ICoSeMT 2023) and International Invention, Innovation & Design Expo (INoDEx 2023).

Programme Book Prepared by:
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Designed by:
Muhammad Nazer Abdul Hadi

E-copy of this document can be obtained from http://icosemt.usm.my.

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FOREWORD FROM MINISTER OF SCIENCE, TECHNOLOGY, AND INNOVATION

Salam Sejahtera and a very Good Evening.

First and foremost, I would like to take this opportunity to extend a very warm welcome to all the speakers and participants attending the 3rd International Conference on Semiconductor Materials and Technology (ICoSeMT 2023), and 2nd International Invention, Innovation & Design Expo (INoDEx 2023). “Selamat Datang” and welcome to Malaysia and the beautiful island of Penang.

The theme of this conference, "Innovation Towards a Sustainable Tomorrow" has captured the interest of the Ministry of Science, Technology and Innovation (MOSTI), as it is aligned with the direction of MOSTI for the focus of 2023 on community-based and people-centric approaches and collaboration in science, technology and innovation (STI) in solving the problems of the people and the country.

I am well pleased with the collaborative efforts of the organizers involved, namely the Universiti Sains Malaysia’s Institute of Nano Optoelectronics Research & Technology (INOR), coming together with strong support from National Nanotechnology Centre (NNC) MOSTI, Universiti Teknologi MARA Cawangan Pulau Pinang (UiTMCPP), MIMOS Berhad, and Collaborative Research in Engineering, Science & Technology (CREST). I wish to congratulate them in making this conference and expo a success.

This international event brings together more than 170 industry players, academics, scientists, researchers, and stakeholders from around the world, including Japan, Austria, Germany, South Korea, Singapore and India, to discuss, address, and showcase the current and future technology of semiconductor technology. With such an encouraging number of participants, I strongly believe the objective of ICoSeMT and INoDEx 2023, which are to highlight the significance of semiconductor materials and electronics and the urgency it needs to set the shared direction of semiconductor technology, can be achieved.

To further demonstrate the Government’s commitment on STI Development, the National Nanotechnology Policy and Strategy (NNPS) 2021-2030 was launched on 14 November 2021. The policy is aligned with the National Science, Technology and Innovation Policy (NSTIP) 2021-2030 and 10-10 MySTIE Framework.

The main goal of NSTIP is to make Malaysia a high-tech country focusing on efforts to transform the country from a technology user to a technology developer. In 13 April 2022, MOSTI launched the National Nanotechnology Technology and Product Roadmap 2021-2025. This roadmap is the main supporting document for the NNPS 2021-2030 to boost the nanotechnology industry in Malaysia. Amongst the main key sector in the nanotechnology policy and roadmap given priority for continuous technology development effort is Electronic and Device System (EDS) sector. The technology development effort in EDS sector is also aligned with MOSTI’s

Electrical and Electronic Roadmap 2021-2030 and New Industrial Masterplan (NIMP) 2030 recently launched by Ministry of Investment, Trade and Industry (MITI).

This effort would also fulfill aspects of the MALAYSIA MADANI agenda and targets, such as shaping and driving the future via the economy and education, as outlined by the Prime Minister, YAB Dato' Seri Anwar Ibrahim, in January this year. More recently, the Mid Term Review of the 12th Malaysia's Plan has also emphasized on 5 focused programs under the High Growth, High Value for technology and digital and electronics and electrical sectors. I am confident that this conference will benefit the nation and assist the government in realizing the aspirations of relevant national policies for the country's sustainable growth.

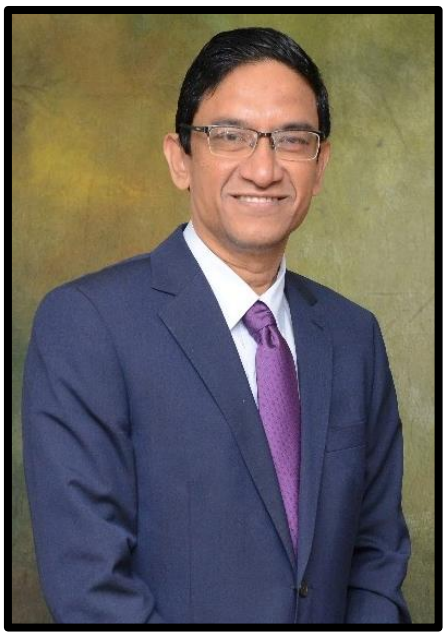
Once again, I would like to congratulate all those involved in organizing this conference and exhibition. This collaborative effort, again I must say, is very commendable and should be continued in the future. Syabas! To all participants, thank you for committing your time and energy towards this event. My best wishes to all of you for an intellectually stimulating and memorable event.

Thank you.

YB CHANG LIH KANG
MINISTER OF SCIENCE, TECHNOLOGY AND INNOVATION (MOSTI)

FOREWORD FROM THE VICE CHANCELLOR OF UNIVERSITI SAINS MALAYSIA

Assalamualaikum and greetings from Universiti Sains Malaysia.



On behalf of Universiti Sains Malaysia (USM), I would like to take this opportunity to welcome all the speakers, exhibitors and participants to the 3rd International Conference on Semiconductor Materials and Technology (ICoSeMT 2023), and the 2nd International Invention, Innovation & Design Expo (INoDEx 2023). It is wonderful to see that this event has successfully attracted a wide range of presenters, experts, industry players and participants, numbering over 170 in all, from various institutions, local and abroad, including those from Japan, Austria, Germany, South Korea, India, and Singapore.

I wish to express my deep appreciation on the efforts of the USM Institute of Nano Optoelectronics Research & Technology (INOR); Universiti Teknologi MARA Cawangan Pulau Pinang (UiTMCPP); National Nanotechnology Centre (NNC), Ministry of Science, Technology and Innovation of Malaysia (MOSTI); MIMOS Berhad; and Collaborative Research in Engineering, Science & Technology (CREST) for co-organising this event with strong collaborative support from various esteemed partners together with the involvement of prestigious industries including Intel, Thermofisher, Infineon, AT&S, Plexus, Osram, Silterra, Aseptec, Innolab, Hi-Tech, Crest Analytic, and Nanophoton. Penang has established a thorough value chain and drawn a variety of local suppliers for the past 51 years. This includes everything that supports the semiconductor manufacturing value chain, including automation, electronics, packaging, plastics, precision engineering, metal work, software development, and others. For the past four years, nearly 60% of the electrical and electronic exports have been mainly for semiconductor-related industries.

With the theme "Innovation Towards a Sustainable Tomorrow", in order to create a strong talent pipeline of highly-skilled professionals to meet the demand from industries, higher learning institutions such as USM are actively establishing an extensive and industry-ready academic programme. As we align with the USM's Accelerated Programme for Excellence (APEX) agenda, USM continues in its strides towards empowering research and innovation to raise the university up to global academic and industry standards. From research, an innovation can enhance technology development and could benefit others, even the bottom billion. I hope this conference will create a platform for researchers to share their knowledge and findings, as well as their innovations, thus encouraging greater collaboration and networking among the participants.

Overall, these initiatives and collaborations reflect USM's commitment to leading the way towards fostering the development of skilled professionals, bridging the academia-industry gap, and promoting scientific advancements in the field of semiconductor technology. Furthermore, in accordance with the motto "We Lead" at USM, I am happy to note that the university has continued to empower semiconductor events such as ICoSeMT and INoDEx throughout the years. I would also like to express my gratitude to the exhibitors from the industry for their steadfast dedication to this conference. I believe this event holds great potential in benefitting Malaysia, especially the academic community, postgraduate students, and researchers, as it will render networking possibilities with various semiconductor sectors.

On that note, I wish you all a successful event. Thank you.

PROFESSOR DATO' IR. DR. ABDUL RAHMAN MOHAMED, FASc.
Vice-Chancellor
Universiti Sains Malaysia

FOREWORD FROM THE RECTOR OF UNIVERSITI TEKNOLOGI MARA PULAU PINANG BRANCH

Assalamualaikum Warahmatullahi Wabarakatuh and Salam Sejahtera.

On behalf of Universiti Teknologi MARA Pulau Pinang Branch, it is with great pleasure and anticipation that I extend a warm welcome to all the esteemed experts and academics, from both local and international spheres to the 3rd International Conference on Semiconductor Materials and Technology (ICoSeMT 2023) and the 2nd International Invention, Innovation & Design Expo (INoDEx 2023).

I am delighted to witness the realisation of these remarkable events, which stand as a collaborative effort between the Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia (USM), Universiti Teknologi MARA Pulau Pinang Branch (UiTMCPP), National Nanotechnology Centre (NTC), Ministry of Science, Technology and Innovation of Malaysia (MOSTI), MIMOS Berhad and Collaborative Research in Engineering, Science & Technology (CREST). Collectively, we are weaving a rich tapestry of scientific research, invention and innovation that reaches far beyond the confines of these events, leaving an indelible mark on the global stage.

The synergy between these two remarkable events serves as a testament to the resilience of human creativity. Our participants, hailing from diverse disciplines and backgrounds, are poised to redefine the future through their groundbreaking innovations and insightful research, in alignment with the goal of propelling Malaysia towards becoming a high-tech nation by 2030.

For the participants, your presence here signifies a collective dedication to making a difference – an unwavering pursuit of excellence that will shape industries, elevate communities, and shape the future. Innovation should be a culture and has to be ignited as it enhances technology development and the quality of life. I sincerely hope that this event will succeed in its objectives. As you peruse the pages of this programme book, I encourage you to take a moment to appreciate the stories, challenges, and triumphs that define ICoSeMT 2023 and INoDEx2023. Let these narratives inspire you, for within them lie the blueprints for a brighter future.

While our efforts may be modest, the inherent message holds immeasurable value. May Allah graciously accept our humble contributions. On this occasion, I would like to extend my congratulations to the organising committee for making this event possible and convey my best wishes to all delegates for a productive and rewarding conference ahead. May Allah SWT bless us all.

Thank you.

PROFESSOR Ir. DR. HAJI AHMAD RASHIDY RAZALI
Rector
Universiti Teknologi MARA Pulau Pinang Branch

FOREWORD FROM THE CHIEF EXECUTIVE OFFICER OF CREST

Welcome to the third installment of the International Conference on Semiconductor Materials and Technology 2023 (ICoSeMT) and the International Invention, Innovation, and Design Expo 2023 (INoDEx 2023). These events represent a nexus of diverse stakeholders, fostering collaboration and igniting growth within the semiconductor industries, locally in Malaysia and globally.

The semiconductor industry has garnered significant attention thanks to its remarkable growth, a fact vividly demonstrated by the vibrant international participation witnessed at this year's event. We're proud to host 175 participants from six diverse countries representing academia and industry, with expertise from 15 prominent companies. This global convergence underscores the industry's dynamic evolution and pivotal role in shaping the technological landscape.

Semiconductors continue to occupy a central role in our increasingly interconnected world. Often hailed as the brains behind modern technology, they drive innovation across crucial sectors like telecommunications, healthcare, and defense. The ever-advancing fields of IoT and AI further emphasize their significance in shaping our collective future.

In 2022, the global semiconductor market was valued at US$591.8 billion, and it is poised to reach approximately US$1,883.7 billion by 2032, with an anticipated compound annual growth rate (CAGR) of 12.28% during the forecast period from 2023 to 2032. Despite existing headwinds, semiconductor executives remain optimistic about the sector's future. This optimism is fueled by improvements in inventory management and, increased investment in research and development, and the continued acquisition of top talent.

In Malaysia, this sector is forecasted to achieve a CAGR of 7%, culminating in a total output of US$46 billion by 2028. This promising growth trajectory is expected to benefit outsourced semiconductor engineering (OSAT) vendors and ancillary firms that provide support services, aligning with the surging demand for semiconductors.

I extend a warm invitation to all delegates and participants to seize this unique opportunity for interaction, idea-sharing, and collaborative endeavors. Together, we can play a pivotal role in advancing the Electronics and Electrical (E&E) and semiconductor industry, shaping an even more innovative and interconnected future.

JAFFRI IBRAHIM
CEO, CREST

FOREWORD FROM THE CHAIRMAN OF ICoSeMT 2023 AND INoDEx 2023

Assalamualaikum Warahmatullahi Wabarakatuh and Salam Sejahtera.

Warm greetings from the organizing committee of the 3rd International Conference on Semiconductor Materials and Technology (ICoSeMT 2023), held concurrently with the 2nd International Invention, Innovation & Design Expo (INoDEx 2023). We extend our sincere honor and joy in welcoming all participants to this biennial event, a collaborative effort by the by Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia (USM), Universiti Teknologi MARA Cawangan Pulau Pinang (UiTMCPP), National Nanotechnology Centre (NNC), Ministry of Science, Technology and Innovation of Malaysia (MOSTI), MIMOS Berhad and Collaborative Research in Engineering, Science & Technology (CREST).

Embracing the enduring theme of "Innovation Towards A Sustainable Tomorrow," the conference has continually served as an effective platform for the exchange of ideas, knowledge, and expertise across semiconductor materials and technology domains. Similar to the 2021 edition, for this year a parallel event, the 2nd International Invention, Innovation & Design Expo (INoDeX 2023), is concurrently organized to foster a positive innovation culture and galvanize innovation across diverse spheres of life. This concurrent event shall stand as a pivotal platform for both local and international participants to showcase their inventive ideas, thus fostering interaction and future collaborations. Within the domains of Optical and Electronic Materials, Organic and Polymeric Materials, Devices, and Packaging Technology, we are thrilled to present three distinguished keynote speakers: Prof. Dr. Hiroshi Kawarada, from Waseda University, Japan; Dr. David Lacey from ams OSRAM, Malaysia; and Ts. Dr. Lee Hing Wah from MIMOS Berhad, Malaysia. Furthermore, ICoSeMT 2023 boasts two enlightening plenary talks by esteemed speakers: Assoc. Prof. Jean Jacques Delaunay, from University of Tokyo, Japan; Dr. Guenther Maier from AT&S: Advanced Technologies & Solutions Malaysia. Additionally, we are honoured to feature invited talks by eminent researchers from Malaysia.

We take immense pride in announcing the participation of more than 170 attendees from local and international companies, research institutions, and academia, representing six countries in this event. On this note, I would like to extend my heartfelt gratitude to our diligent committee members, whose unwavering efforts have been instrumental to ensure the success of this event.

A special acknowledgment goes to our esteemed keynote, plenary, and invited speakers for generously sharing their expertise. We are equally thankful to our sponsors for their invaluable contributions. Optimistically, we wish that all new knowledge that is discovered, invented, or innovated will drive us towards a sustainable tomorrow.

Thank you.

ASSOC. PROF. TS. DR. MOHD ZAMIR PAKHURUDDIN
Chairman, ICoSeMT and INoDEx 2023

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ABOUT ICoSeMT 2023

3rd International Conference on Semiconductor Materials and Technology (ICoSeMT 2023) is a biennial event that is jointly organized by Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia (USM), Universiti Teknologi MARA Cawangan Pulau Pinang (UiTMCPP), National Nanotechnology Centre (NNC), Ministry of Science, Technology and Innovation of Malaysia (MOSTI), MIMOS Berhad and Collaborative Research in Engineering, Science & Technology (CREST) with the Theme "Innovation Towards A Sustainable Tomorrow". The primary focus of the conference is to create an effective medium for institutions and industries to share ideas, knowledge, and expertise in the fields related to Semiconductor Materials and Technology. The primary focus of the conference is to create an effective medium for institutions and industries to share ideas, knowledge, and expertise in the fields related to Semiconductor Materials and Technology.

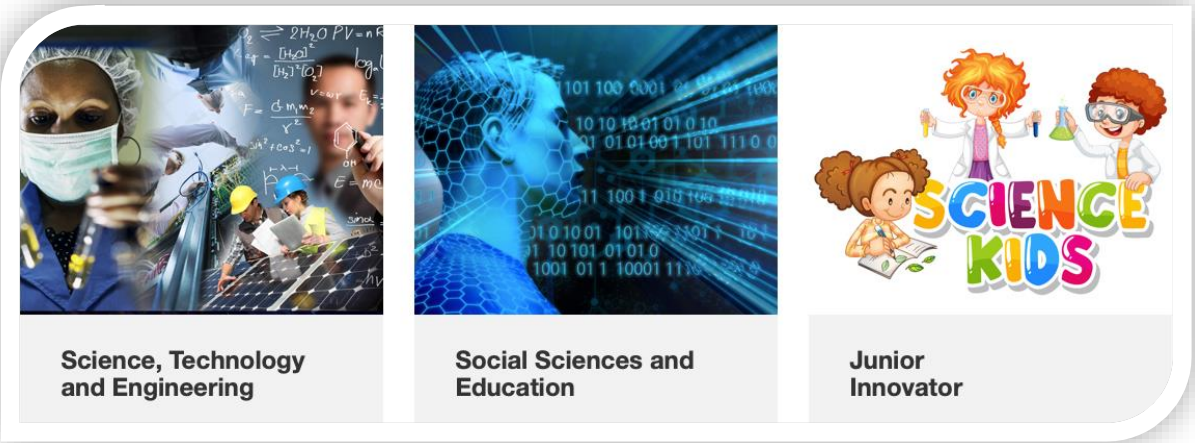
3rd ICoSeMT 2023 solicits contributions of abstracts, encompassing:

Optical and Electronic Materials	
• Narrow and Wide Band Gap Semiconductors • Diamond, Graphene, and Carbon Nanotubes • Piezoelectric and Ferroelectric Materials • Electroluminescent Materials • Superconductors	• Colour-Changing Materials • Energy Storage Materials • Dielectric Materials • Porous Structures • Nanostructures
Devices	
• Optoelectronics • Sensors and Actuators • Power Devices • Novel Devices • Photovoltaics	• MEMS/NEMS • Contacts and Interconnects • Fabrication Processes • Integrated System Design • Modelling and Simulation
Organic and Polymeric Materials	
• Organic Semiconductors • Conductive Polymers • Polymer Electronics and Coatings • Polymer Catalysts and Characterization	• Composite Polymers and Biopolymers • Functional Polymers and Polymer Hybrid Materials
Packaging Technology	
• Phosphor Technology • Lens and Optics • Thermal Management	• Back End Processes and Applications • Failure Analysis and Reliability • Front End Assembly Processes

ABOUT INoDEx 2023

This 2nd INoDEx 2023 is organized to promote positive innovation culture and encourage innovation activities from different walks of life. Additionally, INoDEx 2023 will be a great platform in creating opportunities for local and international participants to present their innovations and inventions. Eventually, both events will lead to interaction and future collaboration among the local and international participants.

INoDEx 2023 Category



CONFERENCE VENUE

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Rasa Sayang Resort & Spa

PENANG

Shangri-La Rasa Sayang, Penang

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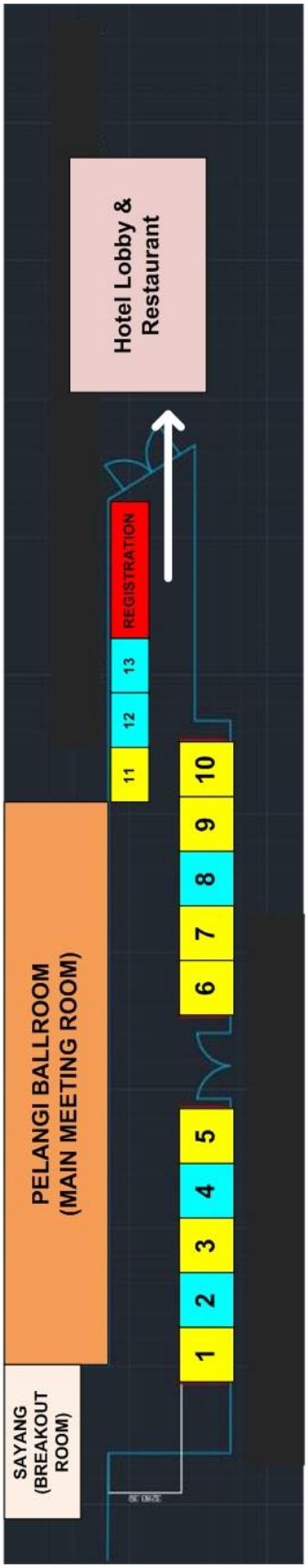
ICoSeMT & INoDEx 2023

Booth Exhibition Layout



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11 GAIA SCIENCE SDN BHD
12 UNIVERSITI TEKNOLOGI MARA CAWANGAN PULAU PINANG
13 INSTITUTE OF NANO OPTOELECTRONICS RESEARCH AND TECHNOLOGY

Day 0: 17 September 2023

Time	Programme
1400 –1900	Pre-Registration *Oral//Booth Participants can opt for pre-registration at the Pelangi Ballroom Entrance

Day 1: 18 September 2023

Time	Programme	
0800 – 0900	**Registration of Guest and Participant** **Booth set up** Venue: Pelangi Ballroom Entrance	
OPENING CEREMONY ***Venue: Pelangi Ballroom*** Chairperson: Ms. Nor Zulaikha Abu Hasan		
0900 – 0930	Doa Recital	
	National Anthem, Menara Ilmu, USM Transformation Video	
	Welcoming speech by Assoc. Prof. Ts. Dr. Mohd Zamir Pakhuruddin Program Chairman, ICoSeMT 2023 dan INoDEx 2023	
Time/Event	**ICoSeMT 2023**	**INoDEx 2023**
0930 – 1030	**KEYNOTE TALK 1** ***Venue: Pelangi Ballroom*** Prof Hiroshi Kawarada, Waseda University Title: Diamond p-FETs platform for wide bandgap n-FET	**Video presentation**
1030 – 1100	Photo Session and Coffee Break	
1100 – 1130	**VENDOR TALK 1** ***Venue: Pelangi Ballroom*** Hi-Tech Instruments Sdn Bhd	

PARALLEL ORAL SESSION 1			
1130 – 1250	**ORAL SESSION 1A** ***Venue: Pelangi Ballroom*** ➢ Invited Talk 1: 1A1 ➢ Oral Presentation: 1A2-1A5	**ORAL SESSION 1B** ***Venue: Sayang III Room*** ➢ Invited Talk 2: 1B1 ➢ Oral Presentation: 1B2-1B5	
1250 – 1400	Lunch Break		
1400 – 1500	**KEYNOTE TALK 2** ***Venue: Pelangi Ballroom*** Dr. David Lacey, ams OSRAM Sdn Bhd. Title: Trends in Optoelectronic Devices & Applications		
1500 – 1530	**VENDOR TALK 2** ***Venue: Pelangi Ballroom*** nanophoton Korea/ Quasi-S Sdn Bhd.		
1530 – 1545	Coffee Break		
1545 – 1615	**VENDOR TALK 3** ***Venue: Pelangi Ballroom*** Gaia Science (M) Sdn Bhd		
PARALLEL ORAL SESSION 2			
1615 – 1705	**ORAL SESSION 2A** ***Venue: Pelangi Ballroom*** ➢ Invited Talk 2: 2A1 ➢ Oral Presentation: 2A2	**ORAL SESSION 2B** ***Venue: Sayang III Room*** ➢ Invited Talk 3: 2B1 ➢ Oral Presentation: 2B2-2B3	
1705 – 1945	**Break**		
1945 – 2245	**ICoSeMT & INoDEx 2023: Opening Ceremony** **Venue: Pelangi Ballroom, Shangri-La Rasa Sayang**		
END OF DAY 1			

Day 2: 19 September 2023

Time/Event	ICoSeMT 2023		INoDEx 2023
0830 – 0900	**Registration of Guest and Participant & Advertisement Video**		**Video presentations**
0900 – 0945	**PLENARY TALK 1** ***Venue: Pelangi Ballroom*** Assoc. Prof. Dr Jean-Jacques Delaunay, University of Tokyo Title: Trends in Functional Optical Structures		
0945 – 1000	Photo Session and Coffee Break		
1000 – 1030	**Vendor Talk 4** ***Venue: Pelangi Ballroom*** Thermo Fisher Scientific		
1030 – 1100	**Vendor Talk 5** ***Venue: Pelangi Ballroom*** Inno Lab Engineering Sdn Bhd		
1100 – 1250	**PARALLEL SESSION 3A** ***Venue: Pelangi Ballroom*** ➢ Invited Talk 4: 3A1 ➢ Oral Presentation: 3A2-3A7	**PARALLEL SESSION 3B** ***Venue: Sayang III Room*** ➢ Invited Talk 5: 3B2 ➢ Oral Presentation: 3B2-3B7	
1250 – 1400	Lunch Break / Advertisement Video		
1400 – 1500	**KEYNOTE TALK 3** ***Venue: Pelangi Ballroom*** Ts. Dr. Lee Hing Wah, MIMOS Title: Catalysing Malaysia's Semiconductor Industry Development with High-Value Semiconductor Technology (HVST) Research & Innovation		
1500 – 1545	**PLENARY TALK 2** ***Venue: Pelangi Ballroom*** Dr. Guenther Maier, AT&S Title: IC Substrate technology for Advanced Packaging		

1545 – 1600	Coffee Break		
1600 – 1720	**PARALLEL SESSION 4A** ***Venue: Pelangi Ballroom*** ➢ Invited Talk 6: 4A1 ➢ Oral Presentation: 4A2-4A5	**PARALLEL SESSION 4B** ***Venue: Sayang III Room*** ➢ Invited Talk 7: 4B1 ➢ Oral Presentation: 4B2-4B5	
CLOSING CEREMONY ***Venue: Pelangi Ballroom*** Chairperson: Ms. Nor Zulaikha Abu Hasan			
1720 – 1815	**Closing Speech** Dr Ainorkhilah Mahmood Deputy Chairman of ICoSeMT 2023 & INoDEx 2023		
	Award Announcement INoDEx 2023 & ICoSeMT 2023		
	End of Ceremony		
END OF EVENT			

ICoSeMT & INoDEx 2023: OPENING CEREMONY

Date : 18 September 2023 (Monday)
Venue : Grand Ballroom, Shangri-La Rasa Sayang, Penang
Time : 8.00 p.m – 11.00 p.m
Attire : Traditional

Time	Activities
7.45 PM	Arrival of Invited Guests and Program Participants *(Cocktail reception will be held in the Grand Ballroom lobby before the event commences)*
8.15 PM	Arrival of Minister of MOSTI, MOSTI delegates, Vice-Chancellor of USM, Deputy Vice-Chancellor of USM, VVIPs, Deans and Directors, and honoured guests
8.20 PM	National Anthem University Anthem USM Transformation Video Presentation
8.40 PM	Address by YBhg. Prof. Dato' Ir. Dr. Abdul Rahman Mohamed, FASc., Deputy Vice-Chancellor of USM Address by YB Chang Lih Kang, Minister of MOSTI & Official launch of ICoSeMT & INoDEx 2023
9.10 PM	Dinner Reception
	Performance 1
9.40 PM	Performance 2
10.00 PM	Presentation of Best Dress Award (by Assoc. Prof. Ts. Dr. Mohd Zamir Pakhuruddin)
10.15 PM	Performance 3
10.45 PM	End of ceremony

Event Chairman: Ir. Dr. Mohd Firdaus Abdullah

Performance by Adikarma

3rd ICoSeMT 2023
Date: 18 & 19 September 2023
Venue: Shangri-La Rasa Sayang,
Batu Ferringhi, Penang

The pre-registration desk will be situated in the lobby area of the Pelangi Ballroom, commencing at 14:00 hours on Sunday, September 17, 2023. Exhibitors and participants with booths are authorized to arrange their booths in the Pelangi Ballroom's lobby area between 14:00 and 19:00 hours on Sunday, September 17, 2023. If additional time is needed, booth setup may also be performed early in the morning on September 18, 2023. To gain access to all sessions, as well as lunch, coffee breaks, and tea breaks, it is mandatory to possess a badge. Please ensure that your badge is always kept with you, except during the dinner event. For those who have chosen to attend the dinner, a coupon will be provided during the registration process. Please note that individuals are not permitted to collect badges on behalf of other participants. Conference Cancellation Policy: No refunds will be granted.

INFORMATION FOR PRESENTERS:

For those delivering oral presentations, your allocated presentation time is limited to 15 minutes, comprising a 10-minute presentation followed by a 5-minute question and answer session. All oral session rooms will be equipped with a projector, a laptop computer, and a laser pointer. Presenters are allowed to use their own computers during their presentations. We kindly request presenters to upload their presentations to the laptop in their respective rooms before the commencement of their sessions.

AWARD:

The award for Best Presenter will be determined by the evaluation committee and announced during the Closing Ceremony on September 19, 2023.

KEYNOTES, PLENARY & INVITED SPEAKERS

Diamond p-FETs Platform for Wide Bandgap n-FET

Prof. Dr. Hiroshi Kawarada

Waseda University, Japan

Biography

Prof. Dr. Hiroshi Kawarada received Doctor of Engineering from Waseda University (1985) and joined Osaka University as Assistant Professor at Osaka, University (1986) where he started diamond research. Later, he worked in Waseda University as Associate Professor (1990) and Professor (1995-), where he developed C-H diamond FET in 1994. As Visiting Researcher, he stayed in Fraunhofer Institute (IAF) by Fellowship of Alexander von Humboldt Foundation (1995-1996). As an organizer he served for European Conference on Diamond and Related Materials (1998-2008). In Japan, he also served for Japan Applied Physics Society as Board Member, New Diamond Forum as Chairman (2009-2014) and Science Council of Japan as Member. His research field is nanoelectronics, bioelectronics and power electronics using diamond, where he has 380 articles with about 10000 citations.

KEYNOTE SPEAKER 2

Trends in Optoelectronic Devices & Applications

Dr. David Lacey

ams OSRAM Malaysia

Biography

Dr David Lacey is Director of Advanced Development & Services, R&D for Osram Opto Semiconductors (M) Sdn Bhd, Penang – part of the ams OSRAM group. He has been based in Malaysia for more than 20 years and is currently a Board Member of Collaborative Research in Engineering, Science & Technology (CREST) and the President of FREPENCA – the Free Industrial Zone, Penang Companies Association. He also represents ams Osram at SFAM – The Semiconductor Fabrication Association of Malaysia since the association's foundation in 2016.

KEYNOTE SPEAKER 3

Catalysing Malaysia's Semiconductor Industry Development with High-Value Semiconductor Technology (HVST) Research & Innovation

Ts. Dr. Lee Hing Wah

MIMOS Berhad Malaysia

Biography

Ts. Dr. Lee Hing Wah is the Head of Semiconductor-areas of research and is responsible for the development of Semiconductor technology, Nanotechnology-based materials, process technologies, and sensors/devices to support the Semiconductor and E&E Industry in Malaysia. He holds a PhD in Mechanical Engineering (MEMS) from the University of Science Malaysia (USM) and has more than 17 years of industrial experience as a researcher. With ownership of over 50 publications and filed patents in Nano/Semiconductor/Electronics and related areas, his expertise spans various fields. Areas of research include:

• Semiconductor technologies such as Advanced Packaging, WBGSs, other niche areas such as AI, memristor,
• Nanomaterials and 2D-NM synthesis and characterization (ferromagnetic nanoparticles, metal oxide nanowires, carbon nanotubes, graphene and their derivatives).
• Incorporation of nanomaterials on MEMS and NEMS device platforms for sensors and electronics applications.
• Printed, flexible and wearable electronics.
• Chairman of the national mirror committee NSC 19/TC 12 (IEC TC113) on Nanotechnology for electrotechnical products and systems.
• Technical committee for NSC 19/TC 14 (IEC TC124) Wearable electronic devices and technology.

Additionally, he is involved in the National Project Committee on Nanomaterials and the National Technical Committee on Wearable Electronic Devices and Technologies.

Trends In Functional Optical Structures

Assoc. Prof. Jean Jacques Delaunay

University of Tokyo, Japan

Biography

Dr. Jean-Jacques Delaunay is an Associate Professor at the School of Engineering, The University of Tokyo. He received his Ph.D. degree from Strasbourg University. He has worked for research institutions in the fields of optics, photonics, and optical functional materials in France, Germany, and Japan. He conducts research on the synthesis of micro/nanomaterials with controlled structures and functionalities for sensing and energy conversion. He also conceives plasmonic nanostructures to enhance the sensitivity of detectors and improve the efficiency of light collection for solar energy conversion devices. His current research projects include the development of surface wave platforms for optical sensing and light-emitting devices. He has co-authored more than 100 scientific publications and serves as an APEX/JJAP editor.

IC Substrate Technology for Advanced Packaging

Dr. Guenther Maier

AT&S: Advanced Technologies & Solutions, Malaysia

Biography

Dr. Guenther Maier master's in chemistry (University of Graz, Austria), PhD in Materials Science (University of Leoben, Austria). 20+ years' work experience as scientist (50+ papers in web of science), program manager and head of department at Materials Center Leoben Forschung. In the past three years at AT&S, world-wide responsible for research and university network development. Since more than 18 months engaged in Malaysia to build a sustainable network in research and higher education for IC Substrates and Advanced Packaging.

DR. YILMAZ DIKME
Element 3-5 GmbH
Germany

Low Temperature Grown AlN

ASSOC. PROF. DR. NG SHA SHIONG
Universiti Sains Malaysia
Malaysia

Development of InGaN Epitaxial Films for Long-Wavelength LEDs and High-Efficiency Solar Cells Applications

DR. AZHARUL ARIF KAMARULZAMAN
ams OSRAM
Malaysia

Epitaxy Development for High Volume Production of LEDs

DR. SAI CHEONG LEE

ams OSRAM
Malaysia

Role of Physical Modelling and Optimization in Optical Product Development

ASSOC. PROF. Ir. Ts. DR. MOHAMAD HAFIZ MAMAT
Universiti Teknologi MARA, Shah Alam

Fabrication of Chemical Solution Grown Zinc Oxide Nanomaterials for Humidity Sensing Applications

IRFAN ABD RAHMAN

Infineon Technologies

A Study on the Effect of PECVD Nitride on Stress Hysteresis

ASSOC. PROF. DR. AHMAD SHUHAIMI ABU BAKAR
Universiti Malaya

High-Quality GaN on Silicon Using Aluminum Nitride Pulsed-Atomic Layer Epitaxy Inserted Buffer

ASSOC. PROF. DR. NORZAINI ZAINAL
Universiti Sains Malaysia
Malaysia

Epitaxy of AlN/Sapphire Templates for UV LEDs

PRESENTATION SCHEDULE

KEYNOTE SPEAKERS

DAY 1: 18 SEPTEMBER 2023 (MONDAY) **9:30 am – 10:30 am** **Pelangi Ballroom** Chairperson: Ts. Dr. Mohd Syamsul Nasyriq Samsol Baharin	
9:30 am	***Professor Dr. Hiroshi Kawarada*** *(Waseda University, JAPAN)* "Diamond p-FETs Platform for Wide Bandgap n-FET"
DAY 1: 18 SEPTEMBER 2023 (MONDAY) **2:00 pm – 3:00 pm** **Pelangi Ballroom** Chairperson: Dr. Ainorkhilah binti Mahmood	
2.00 pm	***Dr. David Lacey*** *(ams OSRAM Sdn. Bhd., MALAYSIA)* "Trends in Optoelectronics Devices & Applications"
DAY 2: 19 SEPTEMBER 2023 (TUESDAY) **2:00 pm – 3:00 pm** **Pelangi Ballroom** Chairperson: Assoc. Prof. Ir. Dr. Nor Azlan Othman	
2:00 pm	***Ts. Dr. Lee Hing Wah*** *(MIMOS Berhad, MALAYSIA)* "Catalysing Malaysia's Semiconductor Industry Development with High-Value Semiconductor Technology (HVST) Research & Innovation"

PLENARY SPEAKERS

DAY 2: 19 SEPTEMBER 2023 (TUESDAY) **9:00 am – 9:45 am** **Pelangi Ballroom** Chairperson: Dr. Yusnita Mohd Ali	
9:00 am	***Associate Professor Dr. Jean-Jacques Delaunay*** *(University of Tokyo, JAPAN)* "Trends in Functional Optical Structures"
DAY 2: 19 SEPTEMBER 2023 (TUESDAY) **3:00 pm – 3:45 pm** **Pelangi Ballroom** Chairperson: Assoc. Prof. Ir. Dr. Nor Azlan Othman	
3.00 pm	***Dr. Guenther Maier*** *(AT&S: Advanced Technologies & Solution, MALAYSIA)* "IC Substrate Technology for Advanced Packaging"

VENDOR TALK

DAY 1: 18 SEPTEMBER 2023 (MONDAY) **Pelangi Ballroom** Chairperson: Wan Anisha Wan Mohammad	
11:00 am	***Abby Soo Mun Teng,*** *Tay Khoon Yang* *(Hi-Tech Instruments Sdn. Bhd., MALAYSIA)* "Atomic Resolution Observation and Analysis on Nanomaterials and Nanodevices by using Advanced Aberration-Corrected SEM/STEM/TEM Technologies and Triple Beam System (FIB/SEM/ARGON) for High Quality Lamella Preparation**"**
DAY 1: 18 SEPTEMBER 2023 (MONDAY) **Pelangi Ballroom** Chairperson: Dr. Azrinawati Mohd Zin	
3:00 pm	*Tae-Hyun Kim, Hye-Kyung Shin**, Hyo-Jin Kim*** *(Photonic Division, Nanophoton Korea, KOREA/Quasi-S Sdn. Bhd., MALAYISA)* "From Science to Industry for Defects Analysis of 2 D Materials and SiC Wafers by Ultra-Fast Raman Imaging Microscopy"
3.45 pm	***Rocky Nguyen*** *(Park Systems Corp., KOREA/Gaia Science (M) Sdn. Bhd., MALAYSIA)* "AFM-Based Failure Analysis for Electronics and Semiconductor Manufacturing"
DAY 2: 19 SEPTEMBER 2023 (TUESDAY) **Pelangi Ballroom** Chairperson: Assoc. Prof. ChM. Dr. Nor Aziyah Bakhari	
10.00 am	***Yongkai Zhou*** *(Thermo Fisher Scientific, SINGAPORE)* "Advanced Dualbeam's Applications for the Research in Semiconductor's Materials and Technology"
10.30 am	***Low Hou Ran*** *(Inno Lab Engineering Sdn. Bhd., MALAYSIA)* "Thin Film Analysis by XRF – An Overview"

ORAL SESSION SESSION 1 DAY 1: 18 SEPTEMBER 2023 (MONDAY)		
PARALLEL SESSION 1A (Pelangi Ballroom) Chairperson: Dr. Nor Shahanim Mohamad Hadis		
Time	**Title/Presenter**	**ID**
11:30 am	Role of Physical Modelling and Optimization in Optical Product Development ***INVITED TALK*: *Sai Cheong Lee****	1A1
11:50 am	Advanced Potentiometric Water-Gated Configuration Using AlGaN/GaN High Electron Mobility Transistor (WGHEMT) ***Amirul Firdaus****, *Najihah Fauzi, Shaili Falina, Hiroshi Kawarada, Mohd Syamsul*	1A2
12:05 pm	An Experimental Model Analysis on Aerofoil Shaped Pin Fin Arrays ***Mainak Bhaumik* **, *Kavita Dhanawade*	1A3
12:20 pm	Impact of Protection Diodes on Bias Temperature Instability in SOI Technology *Mohd Hanif Kamaruddin, Mohd Amir Zulkefli**, **Ahmad Aiman Mohd Nazir**, Muhammad 'Arif Razali, Sharifah Shafini Syed Shahabuddin*	1A4
12:35 pm	Accelerating Forward Electromagnetic Scattering Prediction Using Neural Networks and Generalized Mie Theory *Ying Li Thong, **Tiem Leong Yoon****	1A5

PARALLEL SESSION 1B (Sayang Room) Chairperson: Dr. Rosfariza Radzali		
Time	**Title/Presenter**	**ID**
11:30 am	A Study on the Effect of PECVD Nitride Process Parameters on Stress Hysteresis ***INVITED TALK*: Abd Rahman Irfan***, *Karthigesu Malathi, Packeer Mohamed Mohamed Fauzi*	1B1
11:45 am	$CsPbBr_3$ Plasmonic-Waveguide Small Laser ***Ahmad Syazwan Ahmad Kamal****, *Cheng-Chieh Lin, Zhiyu Wang, Di Xing, Yang-Chun Lee, Mu-Hsin Chen, Ya-Lun Ho, Chun-Wei Chen, Jean-Jacques Delaunay*	1B2
12:00 pm	Recovery of Precious Metals from Electronic Waste through Acid Leaching ***Wan Nur Fazlina Abdol Jani*,*** *Noor Hidayu Abdul Rani, Nor Fadilah Mohamad, Sharifah Iziuna Sayed Jamaludin, Fatihah Suja*	1B3
12:15 pm	Anchoring Pt-Ni Nanosponges on Graphene for Efficient Methanol Oxidation Reaction ***Mahayatun Dayana Johan Ooi****, *Natasha Liyana Hishammudin, Ainorkhilah Mahmood, Yushamdan Yusof*	1B4
12:30 pm	The Physical and Racah Parameter of Erbium-Samarium Co-Doped Zinc Sodium Tellurite Glass for Solid-State Laser Use: The Impact of Rice Husk-Derived Micro/Nano-Silica *Nur Nabihah Yusof,* ***Nurulhuda Mohammad Yusoff*,*** *Siti Maisarah Aziz, Iskandar Shahrim Mustafa, Muhammad Fadhirul Izwan bin Abdul Malik*	1B5

ORAL SESSION SESSION 2 DAY 1: 18 SEPTEMBER 2023 (MONDAY)		
PARALLEL SESSION 2A (Pelangi Ballroom) Chairperson: ChM. Marina Mokhtar		
Time	**Title/Presenter**	**ID**
16:15 pm	Fabrication of Chemical Solution Grown Zinc Oxide Nanomaterials for Humidity Sensing Applications ***INVITED TALK*: *Mohamad Hafiz Mamat****	2A1
16:35 pm	The Study of Nonlinear Optical Behavior of Gold, Silver Nanoparticles and Their Combinations Synthesized by Palsed Laser Ablation in Liquid ***Md Rumon Shahrier****, *Sabah M. Mohammad, Mundzir Abdullah, Suvindraj Rajamanickam, Shireen Mohammed Abed, Abubakar A. Sifawa*	2A2

PARALLEL SESSION 2B (Sayang Room) Chairperson: Ts. Anith Nuraini Abd Rashid		
Time	**Title/Presenter**	**ID**
16:15 pm	Low Temperature Grown AlN ***INVITED TALK*: *Yilmaz Dikme*****, *Khosrow Rahimi, Mohd Anas Ahmad, Mohd Ann Amirul Zulffiqal Md Sahar, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Norzaini Zainal, Mohd Zamir Pakhuruddin*	2B1
16:35 pm	Observation of 3rd Order Optical Nonlinearity in Long-Chaın Alkylammonıum Bismuth Iodide Quantum Dots ***Han Yann Heng***, *Muhammad Aizat Abu Bakar, Leong Wei Xian Rebecca, Mohamad Shuaib Mohamed Saheed, Muhamad Fikri Zaini, Mohd Mustaqim Roslib, Noor Aswafi Ahmad Zaini, Dian Alwani Zainuri, Abdul Razak Ibrahim, Mundzir Abdullah****	2B2
16:50 pm	Structural Properties and Hardness of Erbium-Doped Calcium Sodium Fluorophosphate Glass Embedded with Silver Nanoparticles *Faizani Mohd Noor,* ***Siti Maisarah Aziz****, *Nadira Basri*	2B3

ORAL SESSION SESSION 3 DAY 2: 19 SEPTEMBER 2023 (TUESDAY)		
PARALLEL SESSION 3A (Pelangi Ballroom) Chairperson: Dr. Shaili Falina Binti Mohd Sukri		
Time	**Title/Presenter**	**ID**
11:00 am	Development of InGaN Epıtaxıal Fılms for Long-Wavelength LEDs and Hıgh-Efficıency Solar Cells Applıcatıons ***INVITED TALK*: S. S. Ng***, *A. K. Tan, A. S. Yusof, N. A. Hamzah, M. A. Ahmad, Z. Hassan, S. O. S. Hamady*	3A1
11:20 am	Characterization of The Heat Affected Zone of Gold Wire Bond ***Koh Shiann Chern Jason****	3A2
11:35 am	Electrical Characterization of Hybrid P3HT: Cds and Pristine P3HT ***Nabila Anis Zakaria****	3A3
11:50 am	Effect of Rapıd Thermal Annealıng Process on $Ga_xCe_yO_z$ Passıvatıon Layer ***Kammutty Musliyarakath Abdul Shekkeer*,*** *Kuan Yew Cheong, Hock Jin Quah*	3A4
12:05 pm	Optımızatıon of Modıfied Actıvated Carbon Coconut Shell wıth Tetraethylenepentamıne (TEPA) and Imıdazole (Ims) for Carbon Capture Usıng Response Surface Methodology Approach *Noor Hidayu Abdul Rani, Nur Farah Anisah Radzuwan,* ***Nor Fadilah Mohamad****, *Nurul Hazwani Sabri, Wan Nur Fazlina Abdol Jani*	3A5
12.20 pm	Innovatıve Acıd Treatment Strategıes for Enhanced Multıwalled Carbon Nanotube Functıonalıty ***Jemilat Yetunde Yusuf****, *Hassan Soleimani, Lee Kean Chuan, Bashiru Bolaji Balogun, Abdullahi Abbas Adam, Balogun Asmau Iyabo*	3A6
12.35 pm	Investıgate the Behavıour of Fıeld Plate on E-Mode AlGaN/GaN MISHEMT Devıces for Power Devıces Applıcatıon ***Naeemul Islam****, *Mohamed Fauzi Packeer Mohamed, Mohd Syamsul Nasyriq Samsol Baharin, Shaili Falina, Alhan Farhanah Abd Rahim*	3A7

PARALLEL SESSION 3B (Sayang Room) Chairperson: Ms. Siti Azlina Rosli		
Time	**Title/Presenter**	**ID**
11:00 am	Epıtaxy of AlN/Sapphıre Templates for Uv LEDs ***INVITED TALK*: *Norzaini Zainal****	3B1
11:20 am	Development of Amıne-Modıfied Sılıca Gel from Rıce Husk for Efficient Carbon Dıoxıde Capture ***Noor Hidayu Abdul Rani****, *Nur Najiha Najwa Bahri, Nor Fadilah Mohamad, Nurul Hazwani Sabri, Wan Nur Fazlina Abdol Jani*	3B2
11:35 am	Study on Anodıc Growth Tungsten Oxıde Nanopartıcle on ITO Glass : Structural, Morphology and Optıcal Propertıes ***Farhat M Ali Salem****, *Yam Fong Kwong, Mahayatun Dayana Johan Ooi*	3B3
11:50 am	Enhancing Solid-State Laser Performance: The Impact of Plasmonic Nanoparticles on Photoluminescence in Er^{3+}-Doped Sodium Zinc Tellurite Glass ***Nur Nabihah Yusof****, *Nurul Huda Mohd Yusoff, Siti Maisarah Aziz, Iskandar Shahrim Mustafa, Suhairul Hashim, Muhammad Noorazlan Bin Abd Azis, Nazirul Nazrin Shahrol Nidzam, Mohd Hafiz Mohd Zaid, Rosdiyana Hisam*	3B4
12:05 pm	Enhancıng Selectıve Wavelength Sensıng in PANI-ZnO Composıtes-Based Photodetectors through LSPR Effects of Gold and Sılver Nanopartıcles ***Suvindraj Rajamanickam*,*** *Sabah M. Mohammad, Ibrahim Abdul Razak, Md Rumon Shahrier, Mundzir Abdullah*	3B5
12.20 pm	An Efficient Method of High Temperature Reverse Bias (HTRB) using Fluorinert Isolation in Discrete Technology *Mohd Amir Zulkefli*, Nur Azmina Md. Sakri,* ***Ahmad Aiman Mohd Nazir****, Mohd Hanif Kamaruddin, Muhammad 'Arif Razali, Sharifah Shafini Syed Shahabuddin*	3B6
12.35 pm	Study of Bio-Organic Based Natural Rubber Thin Film as a Resistive Switching Material ***Muhammad Awais*,*** *Kuan Yew Cheong, Nadras Binti Othman, Feng Zhao*	3B7

ORAL SESSION SESSION 4 DAY 2: 19 SEPTEMBER 2023 (TUESDAY)		
PARALLEL SESSION 4A (Pelangi Ballroom) Chairperson: Azlina Mohd Mydin		
Time	**Title/Presenter**	**ID**
16:00 pm	High-Quality GaN on Silicon Using Aluminum Nitride Pulsed-Atomic Layer Epitaxy Inserted Buffer ***INVITED TALK*: *Ahmad Shuhaimi Abu Bakar****	4A1
16:20 pm	Influence of Annealing Treatment Duration on the Formation of Tb_4O_7 Passivation Layer on Si Substrate in Argon Ambient ***Abubakar A. Sifawa****, *Sabah M. Mohammad, Suvindraj Rajamanickam, Shireen Mohammed Abed, Md Rumon Shahrier, Way Foong Lim*	4A2
16:35 pm	Effect of Forming Gas-Oxygen-Forming Gas Annealing on Thulium Oxide Passivation Layer on Silicon ***Junchen Deng****, *Hock Jin Quah*	4A3
16:50 pm	Effect of PVA-G-GMA/PAA Solution Concentration on the Porous Fiber Structure ***Arbanah binti Muhammad****, *Juhyun Park*	4A4
17.05 pm	Improvement of UV Photodetector Performance through Coating Si Nanowires with Au Nanoparticle-Decorated ZnO Thin Film ***Shireen Mohammed Abed*,** *Sabah M. Mohammad, Z. Hassan, Suvindraj Rajamanickam, Md Rumon Shahrier, Abubakar A. Sifawa*	4A5

PARALLEL SESSION 4B (Sayang Room) Chairperson: Dr. Sabah M. Mohammad		
Time	**Title/Presenter**	**ID**
16:00 pm	Epıtaxy Development for Hıgh Volume Productıon of LEDs ***INVITED TALK: K. Azharul Ariff******	4B1
16:20 pm	Characterization of Mechanical Properties of PMMA Reinforced Nano-SiO_2 for Denture Base Application ***Nada R. Kareem****; *MdRadzi. Y., Awham M. Hameed*	4B2
16:35 pm	The Influence of Dıfferent Graphene Nanoplatelets (GNPS) Loadıngs on Mechanıcal and Thermal Behavıor of Epoxıdızed Palm Oıl-Epoxy Resın Nanocomposıtes ***Nur Aliaa Zulkefli****, *Rohani Mustapha, Suriani Mat Jusoh, Mohamad Awang, Che Mohd Ruzaidi Ghazali, Siti Noor Hidayah Mustapha*	4B3
16:50 pm	Feasibility Study of Gold Nanoislands on AlGaN/GaN HEMT for PH Sensing ***Najihah Fauzi*,*** *Amirul Firdaus, Shaili Falina, Masafumi Inaba, Hiroshi Kawarada, Mohd Syamsul*	4B4
17.05 pm	Comparative Study between CeO_2 and Boron Doped CeO_2 for Si Based Metal Oxide Semiconductor Device ***Ainita Rozati Mohd Zabidi****, *Zainuriah Hassan, Way Foong Lim*	4B5

ICoSeMT 2023 PARTICIPANTS DIRECTORY

KEYNOTE AND PLENARY SPEAKERS

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1	Prof. Dr.	Hiroshi Kawarada	kawarada@waseda.jp	Waseda University, Japan
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3	Ts. Dr.	Lee Hing Wah	hingwah.lee@mimos.my	MIMOS Berhad, Malaysia
4	Assoc. Prof. Dr.	Jean Jacques Delaunay	jean@mech.t.u-tokyo.ac.jp	University of Tokyo, Japan
5	Dr.	Guenther Maier	g.maier@ats.net	AT&S: Advanced Technologies & Solutions Malaysia

INVITED SPEAKER

No	Title	Name	Email	Organization
1	Mr.	Irfan Abd Rahman	irfan.abdrahman@infineon.com	Infineon Technologies (Kulim) Sdn Bhd
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4	Dr.	Azharul Arif Kamarulzaman	Azharul-Ariff.Kamarulzaman@ams-osram.com	Osram Optosemiconductors
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PRESENTERS

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28	Mrs.	Najihah binti Mohd Fauzi	jiehafauzi@gmail.com	Universiti Sains Malaysia
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OPENS 7th September 2023 **CLOSING DATE 30th September 2023**

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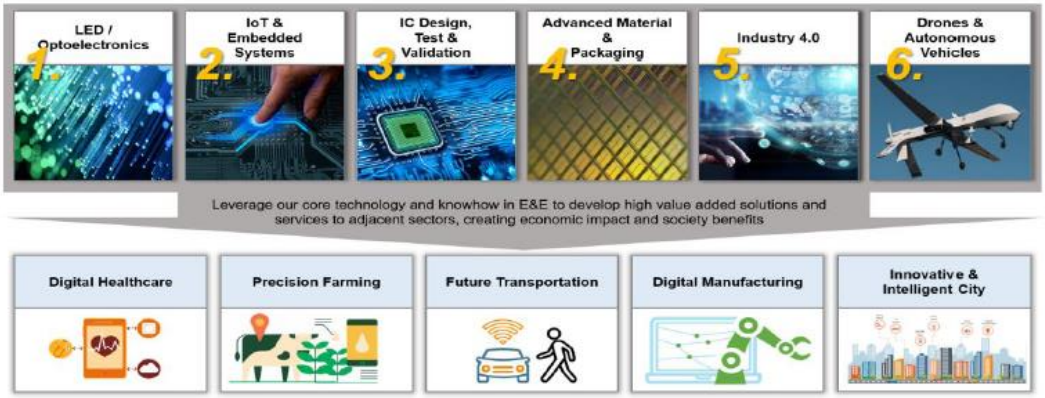

This RFP will be evaluated for a matching grant scheme intended to award successful collaborative technical and business proposals with research, development, commercialization, and innovation elements of E&E technologies in Malaysia. Two key categories are Research and Development project proposals between TRL 5 to 7 and Commercialization and Innovation project proposals between TRL 7 to 9. Other key requirements are as below.

Category 1
Research & Development

Research and Development with Product, Services or Solutions Outcome

TRL 5 to 7

Category 2
Commercilization & Innovation

Design and Development of Minimum Viable Product (MVP) or Prototype

TRL 7 to 9

Key Requirements

- Focused On Applied R&D
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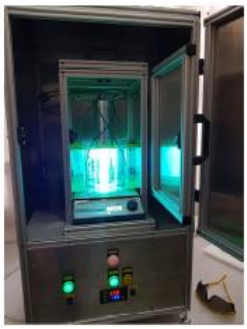

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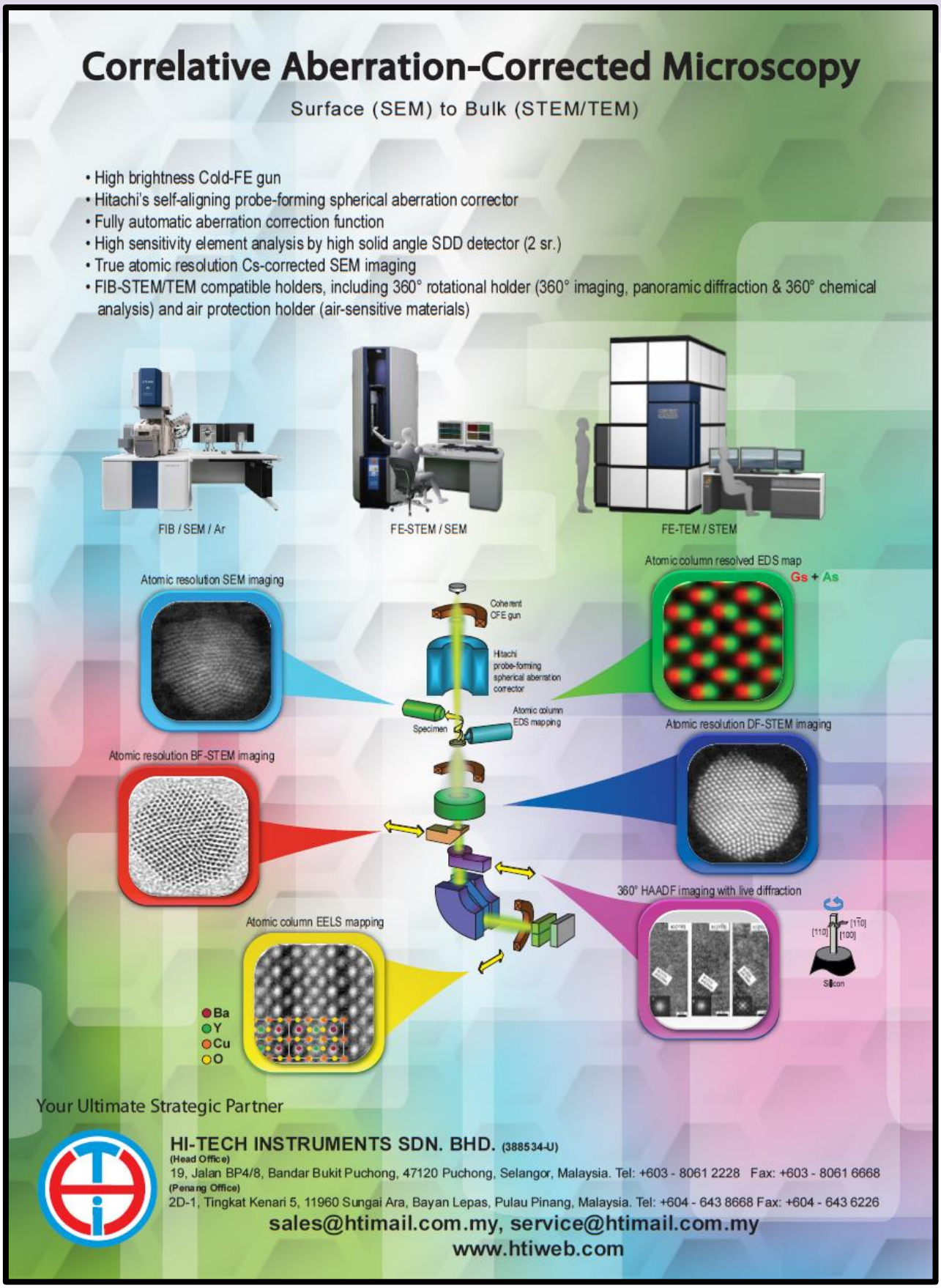
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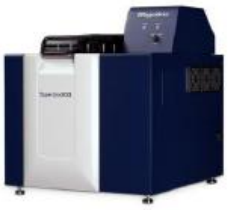

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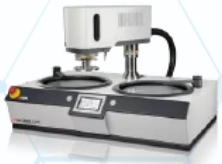

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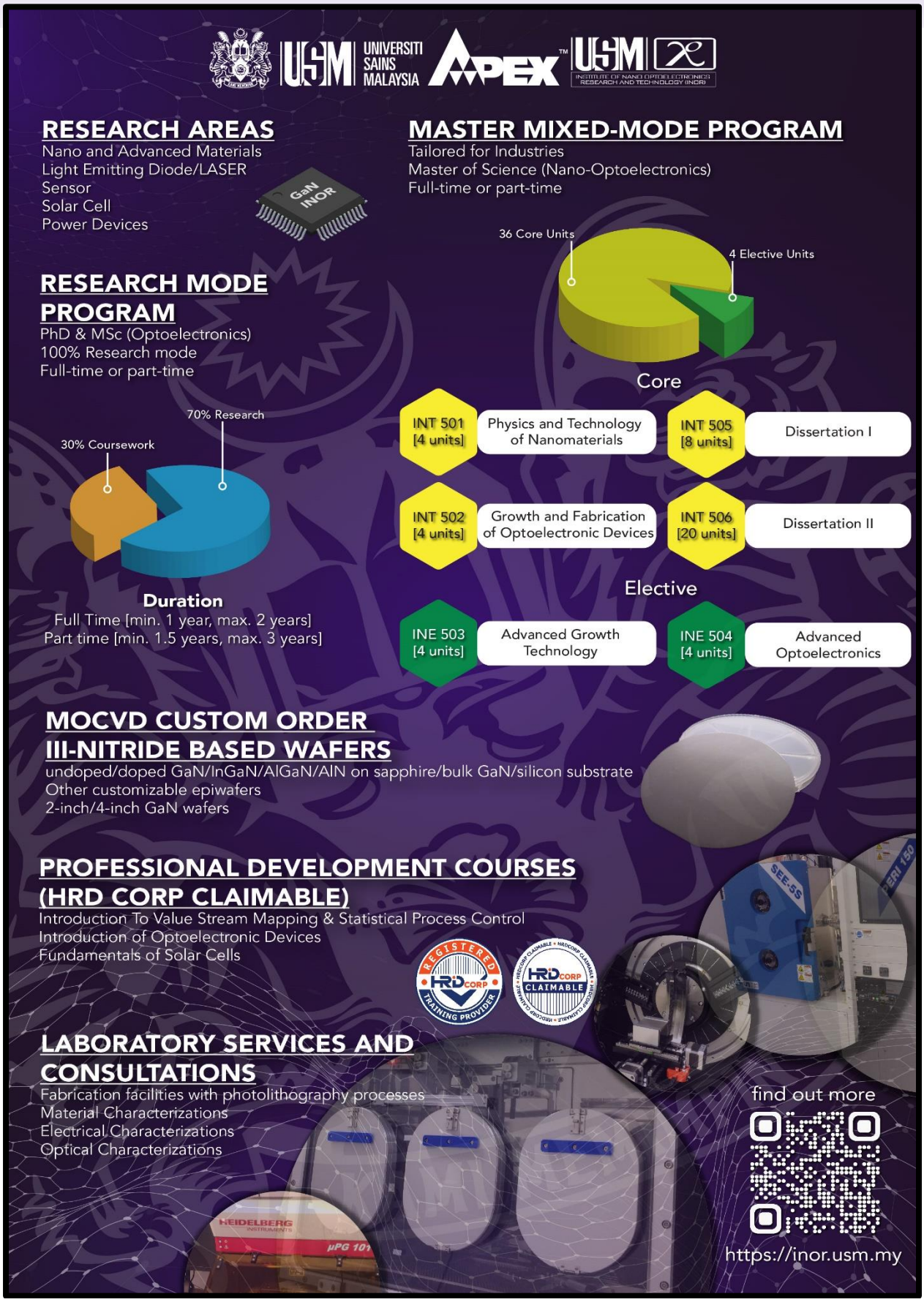
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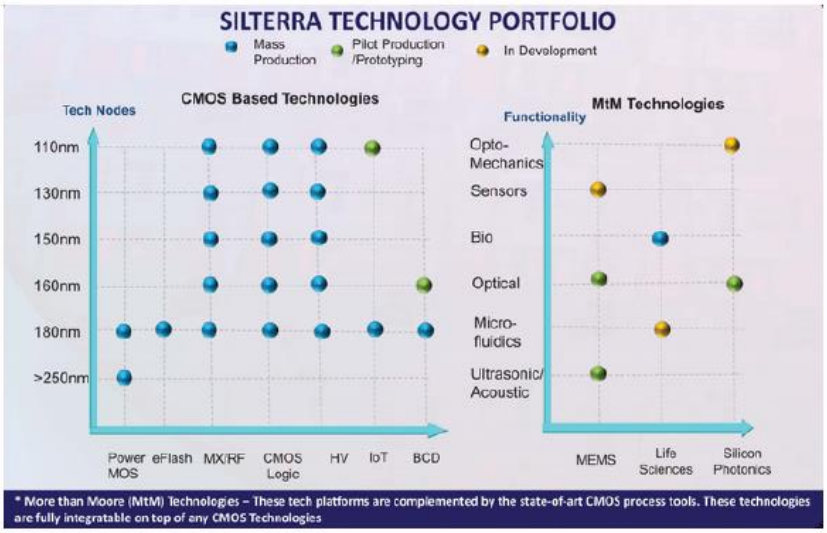
Company Overview

SilTerra Malaysia Sdn. Bhd. is a leading pure-play wafer foundry in Malaysia. Our headquarters and production facility is located in Kulim Hi-Tech Park, Kedah, Malaysia.

We offer foundry-matched CMOS Logic, Mixed-Signal / RFCMOS, High Voltage, Power, BCDMOS, MEMS and Specialty technologies, with technology range from 180nm to 110nm nodes, to serve our global customers' and deliver excellent manufacturing services to enable our customers to shorten design cycle time and rapidly ramp up their products into volume production.

SilTerra offers two-pronged technology strategies, namely Main Stream and "Moore-Than-Moore" technologies, to serve a myriad of end-market applications including IoT, Power MOSFET, Power Management IC, Display Driver, Finger Print Sensor and other consumer & communication products.



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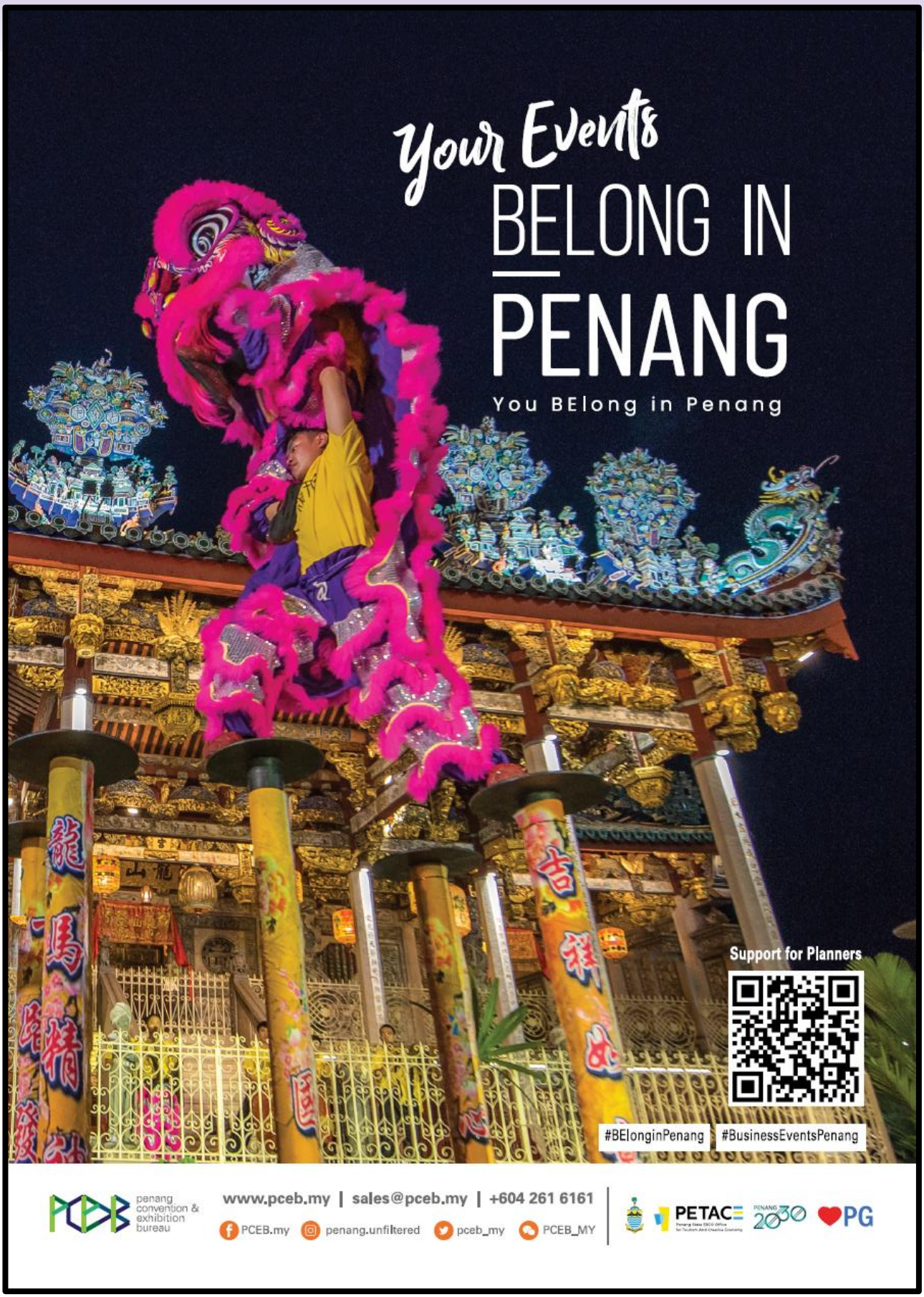
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- Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia (USM)
- Universiti Teknologi MARA Cawangan Pulau Pinang (UiTMCPP)
- MIMOS Berhad
- Collaborative Research in Engineering, Science & Technology (CREST)
- SilTerra Malaysia Sdn Bhd
- Penang Convention & Exhibition Bureau (PCEB) | Business Events Penang
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- Thermo Fisher Scientific
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- Bruker Malaysia Sdn. Bhd.
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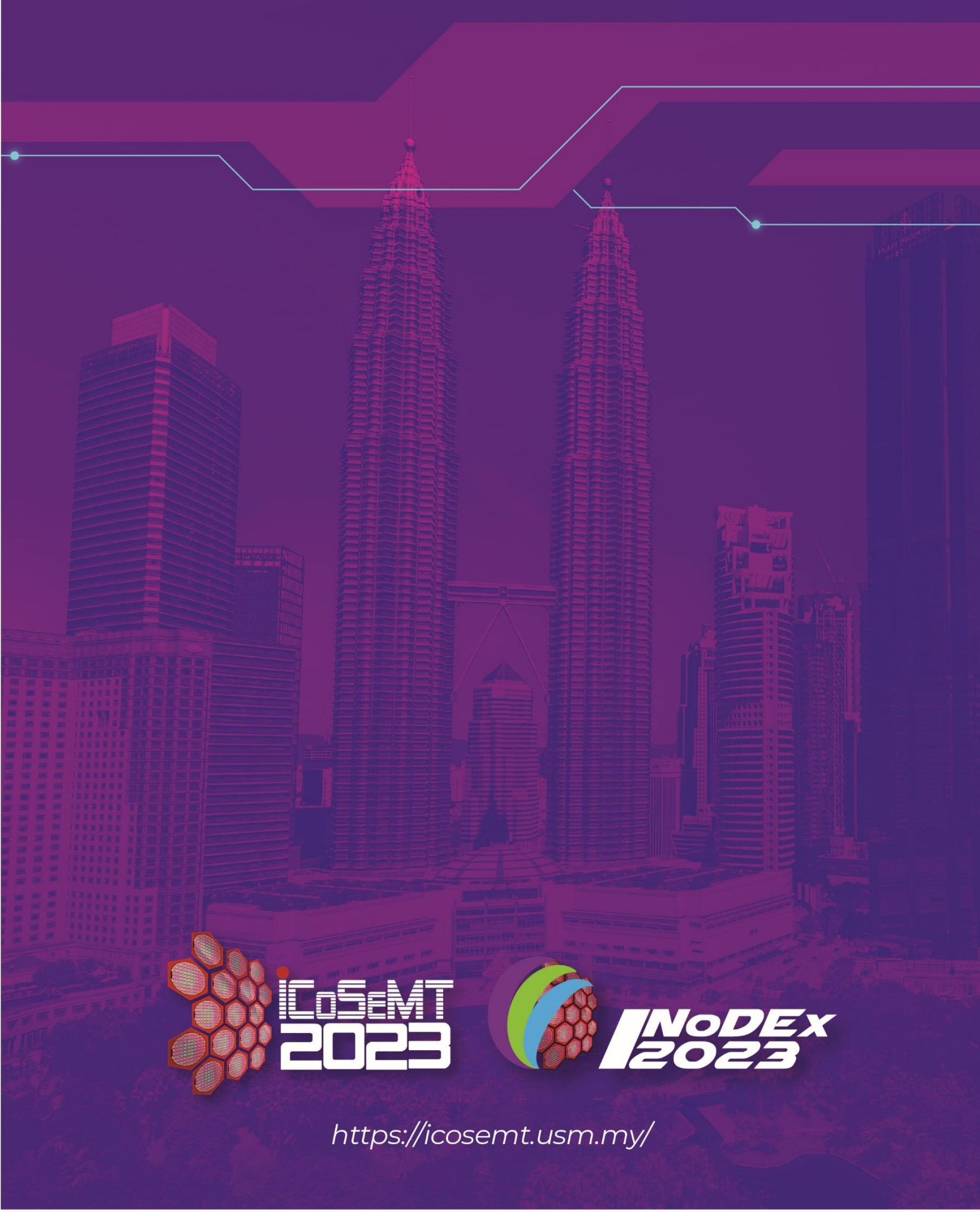
- ASEPTEC Sdn. Bhd.
- Gaia (Science) Sdn. Bhd.
- RGS Corporation Sdn. Bhd.

The organizing committee also wishes to extend its gratitude to individuals who had given support and assistance towards the success of ICoSeMT 2023 & INoDEx 2023.

Chief Editor:
Dr. Mundzir Abdullah



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