ASIA PACIFIC GREEN HYDROGEN 2024 CONFERENCE & EXHIBITION

10 - 12 JUNE 2024

BORNEO CONVENTION CENTRE KUCHING, SARAWAK

Jobs, Enterprise & Education: Opportunities for the Next Generation

Prof. Dr. Aishah Abdul Jalil
Centre of Hydrogen Energy
Universiti Teknologi Malaysia

An Event Hosted and Supported by

Ministry of Energy and Environmental Sustainability Sarawak

BUSINESS EVENTS SARAWAK

TRIBE LEGACY SARAWAK CAMPAIGN

SARAWAK More To Discover

Organised by

BORNEO BUSINESS CONNECT

Universiti Teknologi Malaysia (UTM)

ASIA PACIFIC GREEN HYDROGEN 2024 CONFERENCE & EXHIBITION

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BORNEO CONVENTION CENTRE KUCHING, SARAWAK

UTM Pagoh
(50 Hectares)

UTM Kuala Lumpur
(35 Hectares)

UTM Johor Bahru
(1,144 Hectares)

Hydrogen & Fuel Cell Technology as a Future Jobs Engine

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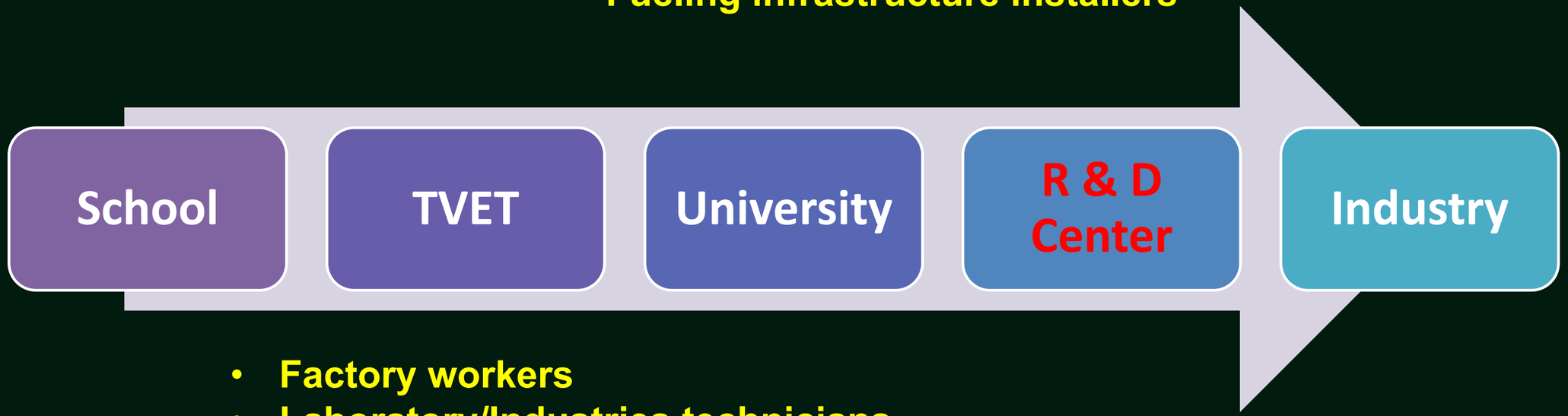
- Engineers
- Scientists
- Power plant operators
- Fueling infrastructure installers



- Factory workers
- Laboratory/Industries technicians
- Public transport drivers

- *USA will provide 635,000 new jobs in 2035.*
- *Quick start is a must !*

H2FCT Syllabus in Malaysia Universities

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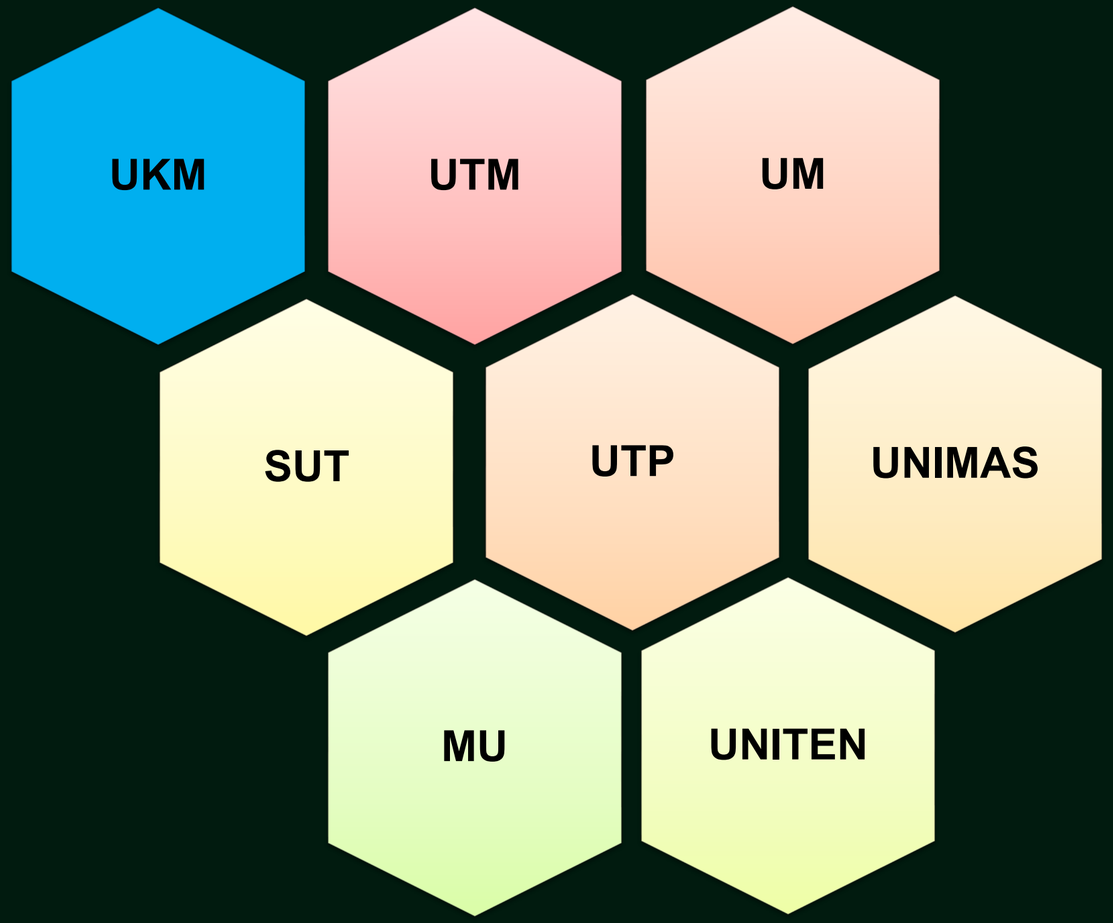

Quick Knowledge Transfer (H2FCT)

ASIA PACIFIC GREEN HYDROGEN 2024 CONFERENCE & EXHIBITION

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BORNEO CONVENTION CENTRE KUCHING, SARAWAK

School

- Classes
- Experiment
- Video
- Competition
- Visit

Higher Education

- Classes
- Research
- Workshop
- Internship
- Visit
- Conference

Industry

- Courses
- Training
- Conference
- Workshop
- Collaboration

Community

- Mass Media
- Webinar

Train the Trainers

Institute of Future Energy - UTM

Institute of Future Energy (IFE)

Director

Assoc. Prof. Ir. Dr. Md Pauzi Abdullah

Centre of Hydrogen Energy (CHE)

Director

Prof. Dr. Aishah Abdul Jalil

Centre of Electrical Energy Systems (CEES)

Director

Assoc. Prof. Ts. Dr. Dalila Mat Said

Ocean Thermal Energy Center (OTEC)

Director

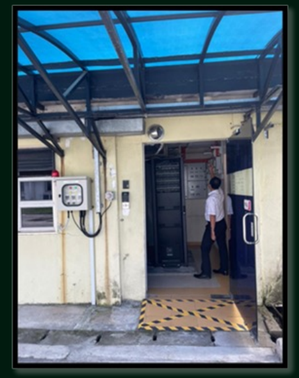
Ts. Dr. Sathiabama T. Thirugnana

CHE Research (1997 ~) Products

Hydrogen Station in CHE Kuala Lumpur

- Electrolyzer located outside the building
- H_2 filling station
- Supply tanks

Hydrogen based Fuel Cell – Backup Power Supply



Power Supply backup for the UTM Digital Data Center

CHE Research (1997 ~) – H_2 Application

H_2-Motive Fuel Cell Powered Motorcycle

Fuel Cell Powered Wheel Chair

Hydrogen Filling Station

CHE Research (1997 ~) – H_2 Application

FUEL CELL MOTORCYCLE PROTOTYPE

CENTRE OF HYDROGEN ENERGY UTMKL


BERITA HARIAN

PM lihat motosikal hidrogen

SAPP sah keluar daripada BN

FUEL CELL POWERED WHEELCHAIR


Kerusi roda hidrogen ke Eropah

JOHOR BAHRU 16 Nov. – Syarikat pengedar teknologi sel bahan api, Horizon FC Malaysia Sdn. Bhd. (Horizon Malaysia), bakal memasarkan kerusi roda berkuasa hidrogen buatan tempatan di beberapa negara Eropah tahun depan.

Pengarahnya, Joseph Koh I Shen berkata, kerusi roda berkuasa hidrogen yang pertama seumpamanya dibangunkan di negara ini adalah para pemidapat pemintahan dari negara-negara berbenuan.

Menurutnya, prototaip kerusi roda yang dibangunkan oleh penyelidik Universiti Teknologi Malaysia (UTM) dengan kerjasama syarikatnya itu akan diberi kepada sebuah syarikat di Switzerland untuk tindakan seterusnya.

"Syarikat di Switzerland itu merupakan syarikat pengedar kerusi roda dan ia telah pun menyatakan minatnya terhadap produk yang kita bangunkan yang dilihat mampu memberi pilihan kepada pelanggannya.

"Selain itu, kerusi roda tersebut juga mempunyai potensi untuk dipasarkan ke negara-negara yang mempunyai stesen hidrogen seperti di Norway, Jerman, Jepun, Korea dan Singapura," katanya kepada Utusan Malaysia, di sini hari ini.

Beliau dihubungi semasa Pameran Sesi Industri dan Teknologi (Instec) 2011, platform untuk para penyelidik UTM mempamerkan produk penyelidikan mereka di Dewan Sultan Iskandar UTM selama tiga hari.

Dalam pada itu, Penyarah Kanan Fakulti Kejuruteraan Kimia UTM yang juga penyelidik produk itu, Dr. Saharuddin Haron berkata, kerusi roda berkuasa hidrogen itu dibangunkan sejak awam bulan lepas.

Tambahnya, kerusi roda tersebut yang juga mesra alam itu digerakkan menggunakan kuasa hidrogen dan mampu mencecah jarak 72.4 kilometer iaitu selama 11 jam sekali cas berbanding yang digunakan sekarang.

"Kerusi roda yang ada sekarang digerakkan menggunakan motor dan ia hanya mampu pergi sejauh 22.4 kilometer dan boleh bertahan selama tiga jam sahaja dengan sekali cas," ujarnya.

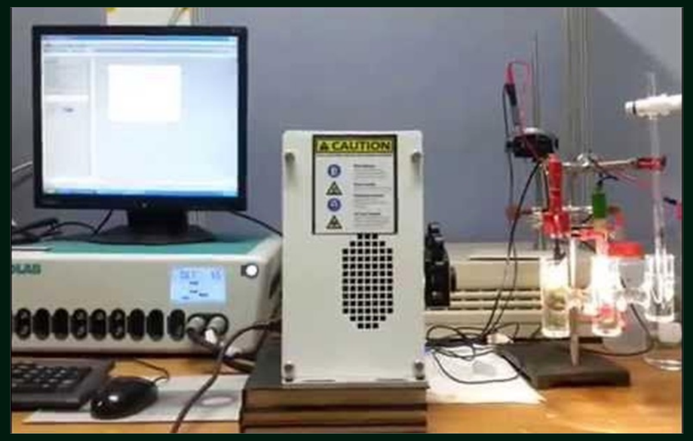
SAHARUDIN HARON

JOSEPH KOH I SHEN

CHE Current Research – H_2 Production

High Temperature Electrolysis

Photoelectrochemical Water Splitting

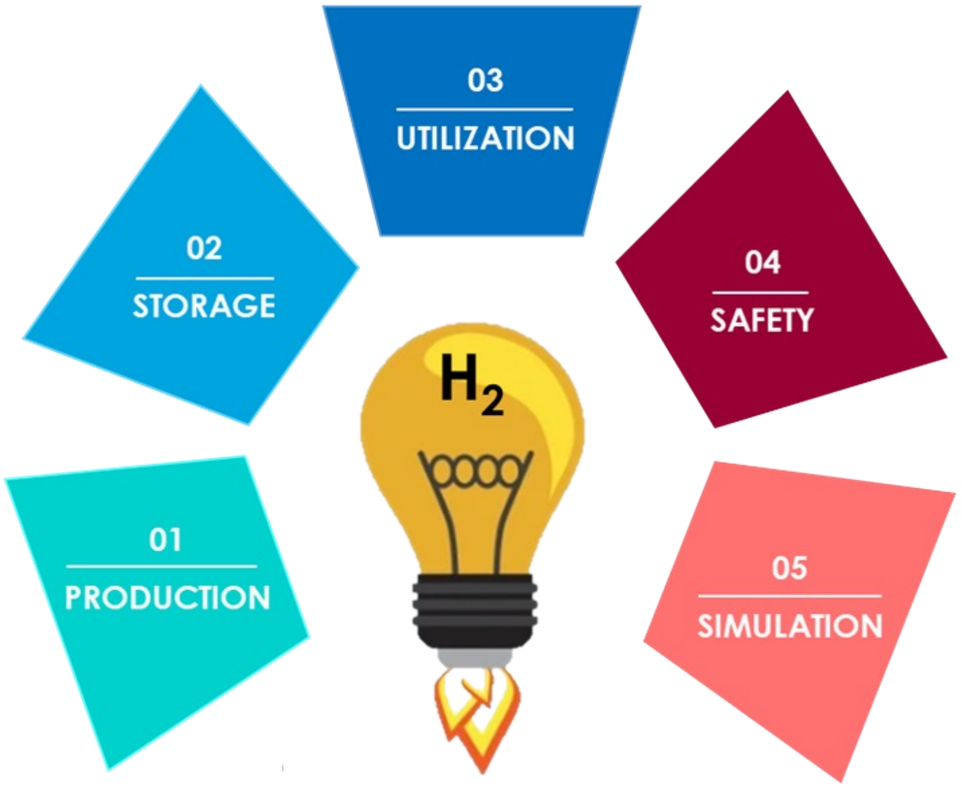


Gasification/Pyrolysis from Biomass

CURRENT RESEARCH IN CHE

03 Fuel cell, SOFC, Catalysis, Sensor, Battery

02 Liquid organic H_2 carrier, Pressurized H_2 storage, Adsorption

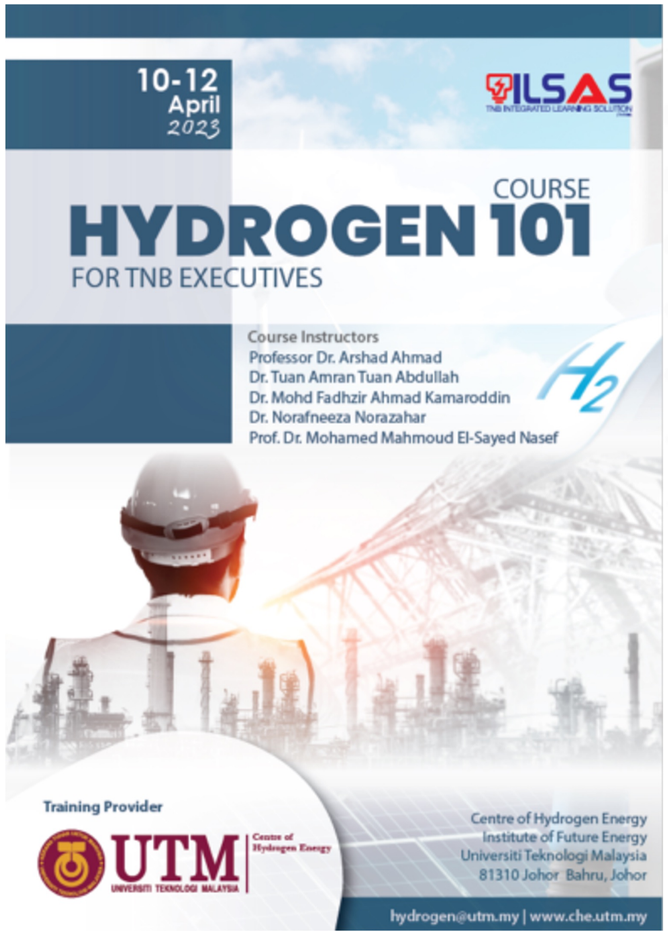


04 Piping, Explosion, Risk Assessment, Energy management

01 Photoelectrochemical WS, Dry reforming of methane, Gasification, Bioconversion

05 Simulation and Modelling for all processes

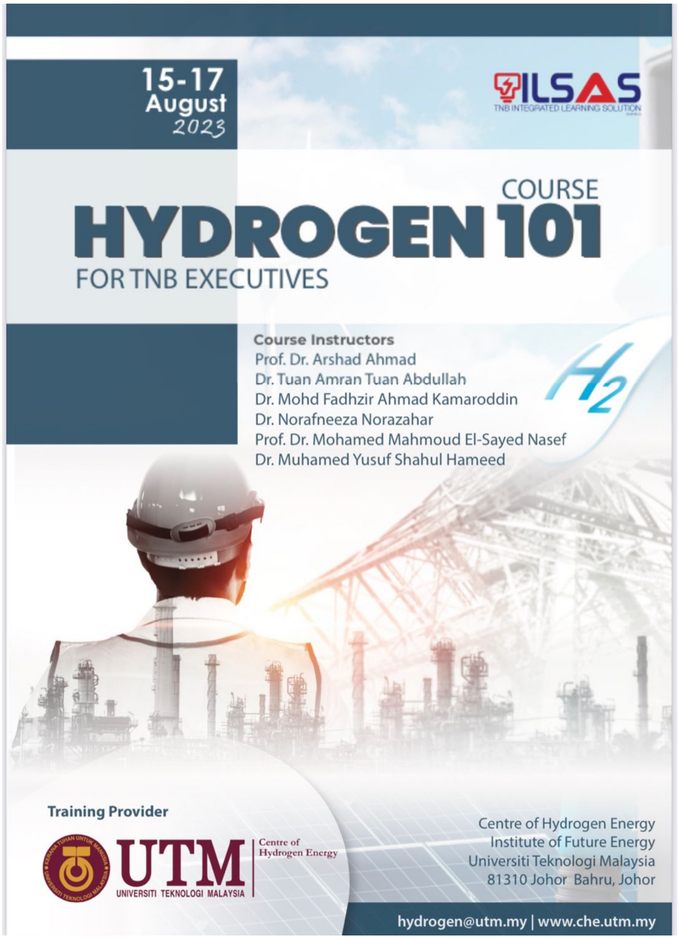
Hydrogen 101 Course for TNB Executives (1st Session)



TNB Executives Gain Essential Insights on Hydrogen Technologies with UTM's Hydrogen 101

By Mohd Fadhzir Ahmad Kamaroddin / Department of Deputy Vice-Chancellor (Research and Innovation) / May 15, 2023 / 3 minutes of reading

Hydrogen 101 Course for TNB Executives (2nd Session)



[Empowering TNB Executives: UTM's Hydrogen 101 Training Course Shines Light on Hydrogen Energy's Future]

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Hydrogen Gas Turbine Technology (16-17 Nov 2023)

TWO-DAY IN-HOUSE TRAINING ON HYDROGEN GAS TURBINE COURSE FOR TNB EXECUTIVES

Introduction:

The hydrogen gas turbine course provides participants with a comprehensive understanding of hydrogen's role in decarbonization efforts and its application in gas turbine systems. This course covers gas turbine fundamentals, hydrogen fuel and combustion properties, performance optimization, safety considerations, and computational modeling. By the end of the course, participants will gain valuable insights and skills to effectively leverage hydrogen as a clean and sustainable fuel source in power generation.

Course Learning Outcome:

At the end of this program, participants shall be able to:

i. Evaluate the role of hydrogen as an energy carrier in decarbonization efforts.
ii. Explain the fundamental principles of gas turbine technology.
iii. Assess the properties and characteristics of hydrogen as a fuel.
iv. Apply computational modeling techniques to study hydrogen combustion processes in gas turbines, demonstrating practical application in analysing and optimizing gas turbine performance.
v. Develop strategies for optimizing the performance of hydrogen gas turbines, demonstrating effective evaluation of key factors in gas turbine operation.

TNB ILSAS, NOV 2023
By our collaboration partner Sustainable High Speed Reacting Flow Group

Hydrogen Forum – TNB ILSAS: Grid Division (27 Nov 2023)

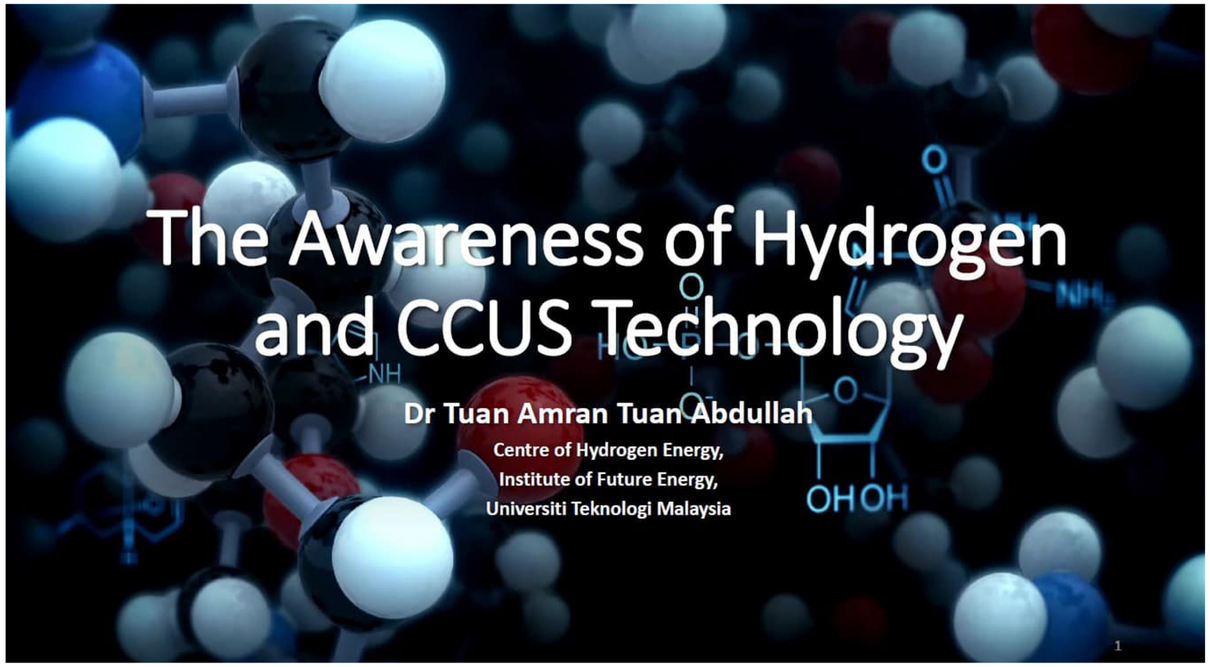
TNB GRID ACADEMY 3.0

In collaboration with ILSAS TNB GRID ACADEMY

TNB ILSAS, 27 NOV 2023

UTM UNIVERSITI TEKNOLOGI MALAYSIA

Awareness on Hydrogen & CCUS Technology – TNB ILSAS (8 & 14 December 2023)



TNB ILSAS, 8 & 14 DEC 2023

UTM UNIVERSITI TEKNOLOGI MALAYSIA

We welcome collaborative efforts between UTM and SARAWAK based on mutual interest

thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
merci
obrigado
bedankt
dziękuję
спасибо
Баярлалаа
рахмат
go raibh maith agat
mochchakkeram
sukriya
kop khun krap
terima kasih
arigatô
grazie
dakujem
takk
tapadh leat
감사합니다
ありがとう
ευχαριστώ
мерси
хвала
dank je
mersi
barka
welalin
tack
spas
kia ora
faafetai lava
vinaka
blagodaram
misaotra
matondo
paldies
grazzi
mahalo
kiitos
dankie
dhanyavad
hvala
maururuu
köszönöm
nandri
nanni
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