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THE 3rd HYDROGEN ECONOMY FORUM (HEF 2022)

2022年《第三届氢能经济论坛》

e-Forum Booklet 论坛电子手册

Date: 16th December 2022 (Friday)

Time: 2:00pm ~ 5:00pm HKT, GMT + 8

Mode: Hybrid of Physical & online

Venue: The Stage, Hall 1B, Hong Kong Convention and Exhibition Centre, Wanchai, Hong Kong

Number of Participants: Physical 300 pax

Language of Forum: English and Mandarin (with simultaneous interpretation)

Fee: Free of Charge

Certificate: Continued Professional Development (CPD) certificate for 3 hours will be given (a) when requested during online registration and (b) attendance of 2.5 hours minimum.

Programme indicated below is subject to change without notice on the date of the event.

In case of enquiry on the Forum, please write to Mr. Peter Ho@ peterhokc@gmail.com

日期: 2022年12月16日 (星期五)

时间: 下午 2:00 ~ 5:00 香港时间、格林威治标准时间 + 8

模式: 现场和线上混合模式

地点: 香港湾仔香港会议展览中心展览厅1B舞台

人数: 现场可容纳300人

语言: 英文和普通话 (有中英文同步传译)

费用: 全免

证书: 3小时的持续专业发展 (CPD) 证书将在以下情况下提供: (a) 在线注册期间提出要求且 (b) 出席至少 2.5 小时。

所示的程序如有更改, 恕不另行通知。

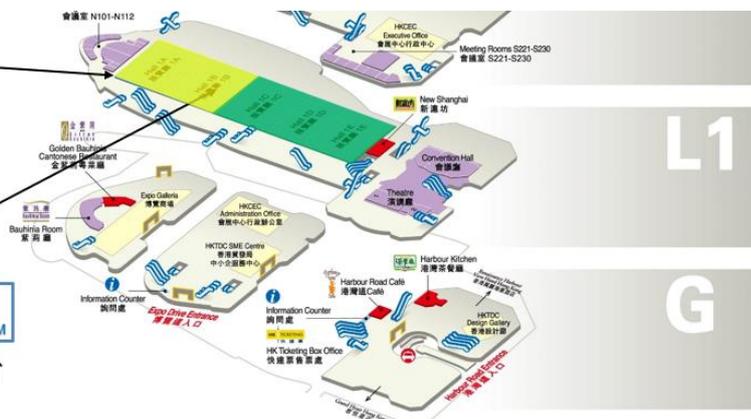
如对论坛有任何查询, 请发电邮何基章先生 peterhokc@gmail.com



Venue: Hall 1A-B

《第三届氢能经济论坛》
THE THIRD HYDROGEN ECONOMY FORUM

Hall 1B, The Stage 舞台



The Co-Organizers would respectfully thank the invaluable assistance of the following Supporting organizations for their support and promotion
(more will be added upon confirmation)

协办单位恭敬地感谢以下支持单位的支持和推广工作
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- **Mr. TSE Chin-wan (谢展寰 先生)** BBS, JP
Secretary for Environment and Ecology Bureau, HKSAR Government
香港特别行政区环境与生态局局长

3. Biography of Speakers / Panelists and Abstracts of Speeches

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- **Dr. ZHANG Wei-dong**, Program Director - Sustainability, UNDP, China
张卫东博士, 可持续发展项目总监, 联合国开发计划署
- **Dr. WAN Yu-feng, Partner**, Templewater; cum Director, Brava Transport Services Limited
萬宇峰博士, 善水资本 - 合伙人 兼 匯達交通服務 - 董事
- **Mr. Simon Ngo**, Head of Engineering – H.K. Utility, The Hong Kong & China Gas Co., Ltd.
敖少兴先生, 工程总监 – 香港公用业务, 香港中华煤气有限公司
- **Dr. ZHANG Han-wei**, CTO & Dean of Research Institute, GrandBlue Environment Co., Ltd.
张汉威博士, 首席技术官 及 研究院院长, 瀚蓝环境股份有限公司
- **Mr. John Hong**, Business Development Director, CIMC Hydrogen Energy Technology Co., Ltd.
洪程忠先生, 业务拓展总监, 中集氢能科技有限公司
- **Mr. David Hu**, Director, SGS Hong Kong Limited
胡大为先生, 董事-总监, SGS香港
- **Professor LU Chong-ming**, Division of Environment & Sustainability, HKUST
卢中铭教授, 环境及可持续发展学部, 香港科技大学

4. Introductions of the Co-Organizers' Leaders 介绍联合举办单位领导:

- **Ir Dr the Hon LO Wai Kwok (盧偉國議員 博士 工程師)** GBS, MH, JP, Chairman, **Hong Kong Green Strategy Alliance (HKGSA)**
- **Ir Prof Daniel M. CHENG (鄭文聰 教授 工程師)** BBS, MH, JP, President **Hong Kong Environmental Industry Association (HKEnvIA)**
- **Mr. Simon Ng (吳家穎 先生)**, CEO
Business Environment Council
- **Mr. Colin TAM (譚兆棟 先生)**, Chairman
Hong Kong Association of Energy Services Companies (HAESCO)
- **Mr. Johnny CHONG (莊寧 先生)**, Chairman
S.T.A.R.S. Foundation (STARSF)

Synopsis

Building on the success of the “Hydrogen Economy Conference” (HEC2020 and HEC 2021), we take great pleasure in organizing the “The Third Hydrogen Economy Forum” (HEF2022) for the third consecutive year. HEF2022 is part of the “Eco Asia Conference” under “Eco Expo Asia 2022” and will be conducted physically at the Hong Kong Convention and Exhibition Centre (HKCEC), concurrent with all other Eco Expo Asia activities at HKCEC.

Due to the limited seats in the conference hall, HEF2022 will also be broadcasted live in virtual mode, completely free-of-charge and open to all Eco Expo Asia participants who cannot join physically due to limited seats, as well as any other interested individuals from around the world.

Hong Kong is entering into the Hydrogen (H₂) era, with many eye-catching achievements this year such as the introduction of the first tri-axles hydrogen bus, and HKPC’s award winning Integrated Fuel Cell Hybrid Power System. As a clean energy itself, hydrogen also contributes significantly towards achieving Carbon Neutrality (碳中和), the ultimate goal as set in the China National Plan as well as Hong Kong’s Climate Action Framework to accomplish in middle of the century.

This year, we are again privileged to have the continued support from the Hong Kong Trade Development Council as our Strategic Partner, making HEF2022 an official and integral part of Eco Expo Asia 2022. HEF2022 is also honored to have **Mr. TSE Chin-wan BBS, JP, Secretary for Environment & Ecology** of The Government of the HKSAR to be our Guest of Honor, delivering his **Keynote Speech** at our Forum. Further, we have arranged several world-renowned experts in the field of H₂ applications, sharing their cutting-edge know-hows, professional insights as well as the latest updates and policy directions on H₂ applications at HEF2022.

The event is completely free-of-charge, but the number of participants is limited, and seats of both physical and virtual events will be given on a first come-first-serve basis. Please secure your seat by registering online at <https://www.hktdc.com/event/ecoexpoasia/en/intelligence-hub/seminar/34094> or <https://www.starsf.org/hef2022> or by scanning the QR Code below, by 15th December 2022 (Thursday). Joining instructions will be sent to successful applicants by email at least one (1) working day before the event.



论坛概要

在成功举办“氢能经济会议”（HEC2020 和 HEC 2021）的基础上，我们很高兴连续第三年举办“第三届氢能经济论坛”（HEF2022）。HEF2022 是“国际环保博览 2022”下的“国际环保会议”的一部分，将在香港会议展览中心举行，与所有其它的国际环保活动同时举行。

由于会议厅座位有限，第三届氢能经济论坛也将以线上模式进行直播，完全免费，并向所有因座位有限而无法亲临现场的亚洲国际环保博览会参与者以及任何其他来自世界各地感兴趣的人开。

香港正步入氢能时代，今年取得多项令人瞩目的成就，例如推出首辆三轴氢能巴士，以及生产力局获奖的综合燃料电池混合动力系统。作为一种清洁能源本身，氢能也为实现碳中和做出了重大贡献，碳中和是中国国家计划和香港气候行动计划在本世纪中叶实现的最终目标。

今年，我们荣幸再次得到香港贸易发展局作为战略合作伙伴的持续支持，使第三届氢能经济论坛成为 2022 年国际环保博览的正式组成部分。我们也很荣幸邀请到**谢展寰先生**，香港特别行政区政府**环境生态局局长**成为我们的主礼嘉宾，在论坛上发表主题演讲。此外，我们还安排了多位世界知名的氢能应用领域专家，在会上分享他们的前沿知识、专业见解以及氢能应用的最新动态和政策方向。

本论坛活动完全免费，但参加人数有限，实体和线上活动的座位将以先到先得的方式提供。请在 2022 年 12 月 15 日（星期四）之前通过 <https://www.hktdc.com/event/ecoexpoasia/en/intelligence-hub/seminar/34094> 英文线上报名登记或 <https://zh.starsf.org/hef2022> 中文线上报名登记或扫描下面的二维码来确保您的座位。参加说明将在活动开始前至少一 (1) 个工作日通过电子邮件发送给成功的申请者。



Program Rundown 论坛流程

The 3rd Hydrogen Economy Forum 2022		2022年第三届氢能经济论坛
14:00 - 14:10	MC : Dr. Ivan Li Introduction of Guests of Honor by : Mr. Colin TAM, Chairman of Organizing Committee	主持人: 李栩然博士 筹委会主席 谭兆栋先生介绍荣誉嘉宾
10 min	Welcome Speech by: Ir Dr the Hon LO Wai-kiwok GBS, MH, JP, Chairman, Hong Kong Green Strategy Alliance	盧偉國議員 博士 工程師, GBS, MH, JP 香港綠色策略聯盟 主席致欢迎词
14:10 - 14:20	Keynote Speech	主題演講
10 min	Guest of Honor: Mr TSE Chin-wan , BBS, JP Secretary for Environment and Ecology, HKSAR Government	主礼嘉宾: 香港特別行政區政府环境及生态局局长 謝展寰先生, BBS, JP
14:20 - 14:30	Presentation of Carbon Neutral Certificate	頒發碳中和證書
10 min	Group Photo of Guests of Honor, Guest Speakers & Leaders of Co-organisers	主礼嘉宾, 演讲嘉宾及协办单位领导合影
14:30 - 14:45	Topic 1: Hydrogen Ecosystem in Hong Kong	讲题一: 香港氢能生态系统
15 min	Speaker: Dr. WAN Yu-feng, Partner, Templewater; cum Director, Brava Transport Services Limited	讲者: 萬宇峰博士, 善水资本 - 合伙人 兼 匯達交通服務 - 董事
14:45 - 15:00	Topic 2: UNDP Facilitates China's Hydrogen Economy in the Making	讲题二: 联合国开发计划署促进中国氢能经济的发展
15 min	Speaker: Dr. ZHANG Wei-dong, Program Director - Sustainability, UNDP, China (Online)	讲者: 张卫东博士, 可持续发展项目总监, 联合国开发计划署 (线上)
15:00 - 15:15	Topic 3: Towngas' hydrogen, back to the future	讲题三: 中华煤气的氢气 - 回到未来
15 min	Speaker: Mr. Simon Ngo, Head of Engineering - H.K. Utility, The Hong Kong & China Gas Co., Ltd.	讲者: 敖少兴先生, 工程總監 - 香港公用業務, 香港中华煤气有限公司
15:15 - 15:30	Topic 4: Application & Contribution of Hydrogen Energy in Green Transportation	讲题四: 绿色交通中氢能的应用与贡献
15 min	Speaker: Mr. John Hong, Business Development Director, CIMC Hydrogen Energy Technology Co., Ltd.	讲者: 洪程忠先生, 业务拓展总监, 中集氢能科技有限公司
15:30 - 15:45	Topic 5: Waste to Hydrogen	讲题五: 废物制氢
15 min	Speaker: Dr. ZHANG Han-wei, CTO & Dean of Research Institute, GrandBlue Environment Co., Ltd.	讲者: 张汉威博士, 首席技术官及研究院院长, 瀚蓝环境股份有限公司
15:45 - 16:00	Topic 6: Hydrogen Quality and Safety	讲题六: 氢能的相关安全和品质
15 min	Speaker: Mr. David Hu, Director, SGS Hong Kong Limited	讲者: 胡大为先生, 董事-总监, SGS香港
16:00 - 17:00	Panel Discussion (Speaker + Professor Lu Zhong-min, HKUST) & Closing Remarks	论坛 (讲者+ 及香港科技大学卢中铭教授) 及结语
60 min	Moderator: Professor Daniel Cheng	主持人: 郑文聪教授

2. Introduction of the Guest of Honour & Keynote Speaker



Mr. TSE Chin-wan (谢展寰 先生) BBS, JP
Secretary for Environment & Ecology, HKSAR Government
香港特别行政区政府 环境及生态局局长

Mr. Tse joined the former Environmental Protection Agency in 1985 which was subsequently reorganized in 1986 to become the current Environmental Protection Department (EPD). Throughout the service with EPD, Mr. Tse had taken up a wide range of duties at professional and senior managerial levels. He was appointed as a Deputy Director of Environmental Protection in 2013 and subsequently as the Under Secretary for the Environment in August 2017.

Mr. Tse possesses a broad spectrum of experience in various areas of environmental protection, including law enforcement, computer modelling, environmental impact assessment and cross-boundary cooperation with the mainland. During his tenure as the Under Secretary for the Environment, he helped spearhead the formulation of policies on air quality, waste management, climate actions and conservation.

谢展寰先生在1985年加入前环境保护处，该处其后于1986年重组，成为现时的环境保护署（环保署）。在环保署服务期间，谢先生肩负专业及高级管理层面上多方面的职务。他在2013年出任环保署副署长，并于2017年8月获委任为环境局副局长。

谢先生在环境保护的各个范畴，包括执法、电脑模拟、环境影响评估以及与内地的跨境合作等，均具备广泛经验。任职环境局副局长期间，他协助领导空气质素、废物管理、气候行动和保育政策的制订工作。

3. Biography of Speakers / Panelists and Abstracts of Speeches

Topic 1: Hydrogen Ecosystem in Hong Kong

讲題一：香港的氢能生态系统



Dr. WAN Yu-feng (萬宇峰博士), Partner - Templewater;
cum Director - Brava Transport Services Limited
善水資本 - 合伙人 兼 匯達交通服務 - 董事

Dr. Yufeng Wan is a Partner of Templewater (a HK-headquartered alternative asset manager) and one of the founding members. Dr. Wan is also a Director of Bravo Transport Services Limited, the largest bus operator on HK island. He is responsible for overall business development targeting hydrogen and decarbonization opportunities for the group and portfolio companies. Templewater is launching Asia's first decarbonization investment fund that focuses on hydrogen technologies as a critical solution in global decarbonization initiatives. Templewater collaborates with leading domestic and international hydrogen technology partners to build a high-quality hydrogen ecosystem that is suitable for Hong Kong and in line with the government's targets.

Prior to joining Templewater, Dr. Wan had 16 years of experience across various industries including 12 years in banking and 4 years in manufacturing.

Dr. Wan holds a Doctorate Degree in Engineering at the University of Sheffield and a BEng in Automatic Control from the South China University of Technology.

萬宇峰博士是善水資本（一家位於香港總部的另類資產管理公司）的合夥人，也是創始成員之一。萬博士亦是港島最大的巴士營運公司匯達交通服務的董事。他負責針對集團和投資組合公司的氢能和脫碳機會的整體業務發展。善水資本正在發起亞洲首個專注於氢能科技作為全球脫碳計劃關鍵解決方案的脫碳投資基金。善水與國內及全球領先的氢能技術合作夥伴公共打造適合香港，符合政府目標的高質量氢能生態系統。

在加入善水資本之前，萬博士在各個行業擁有 16 年的經驗，其中包括 12 年的銀行業和 4 年的製造業。

萬博士擁有英國謝菲爾德大學工學博士學位和華南理工大學自動控制學士學位。

Topic 1: Abstract of speech

Templewater is the controlling shareholder of Bravo Transport. Since taking over the business in 2020, Templewater has been committed to supporting Bravo Transport's sustainability agenda, with the intention to accelerate the transition towards zero emission transportation infrastructure in line with the government's targets. Early this year, Bravo launched Hong Kong's first battery electric and fuel cell electric double decker buses, respectively. In October 2022, Templewater also announced the plan to build Hong Kong's first hydrogen refuelling station at Citybus' West Kowloon Depot in Q1 2023, subject to government approval.

Hydrogen infrastructure plays an important role in achieving Hong Kong's 2050 carbon neutrality target. Hong Kong's hydrogen ecosystem should be specifically designed and developed to suit the city's unique operating environment including but not limited to its weather, terrain, urban density and quality standard. Templewater, through cooperation with government and industry partners, is dedicated to build a high-quality hydrogen ecosystem in Hong Kong for the benefit of our society and to support Hong Kong to contribute to the national goal of carbon neutrality by 2060.

讲題一：演讲摘要

善水资本是汇达交通服务的控股股东。自 2020 年接管业务以来，善水资本一直致力于支持汇达交通服务的可持续发展议程，旨在根据政府的目标加快向零排放交通基础设施的过渡。今年年初，汇达分别推出了香港首款纯电动和燃料电池电动双层巴士。2022 年 10 月，善水资本还宣布计划于 2023 年第一季度在城巴西九龙车厂建设香港首个加氢站，但须获得政府批准。

氢能基础设施在实现香港 2050 年碳中和目标方面发挥着重要作用。香港的氢能生态系统应专门设计和开发，以适应城市独特的运营环境，包括但不限于其天气、地形、城市密度和质量标准。善水资本通过与政府和行业伙伴的合作，致力于在香港建立一个优质的氢能生态系统，造福我们的社会，并支持香港为国家到 2060 年实现碳中和的目标做出贡献。

Topic 2: UNDP Facilitates China's Hydrogen Economy in the Making 讲题二：联合国开发计划署促进中国氢能经济的发展



Dr. ZHANG Wei-dong (张卫东博士), Program Director - Sustainability,
UNDP, China
可持续发展项目总监, 联合国开发计划署 – 中国

Currently serving as Programme Manager with UNDP China, Dr. Zhang Weidong is in charge of developing and implementing projects related to water resources management, sustainable livelihood, hydrogen economy, carbon emission reduction, and Climate Change adaptation / mitigation in partnership with both governments and private sectors.

In developing capacities for climate change in China, he has been involved in implementing projects in partnership with National Development and Reform Commission (NDRC) in developing the provincial climate change programmes and institutional arrangement, developing the provincial capacities in creating Greenhouse Gases inventories and registry system for emission trading system in China.

In promoting hydrogen economy in China, he has been involved in designing and implementing two phase of promoting the commercialization of Fuel-Cell Bus with funding from GEF and involving in the design and implementation of the 3rd phase of the FCV project; the UNDP first hydrogen economy pilot project, in which he leads the development of carbon trading methodologies; He is now advocating a shift to a Hydrogen Economy with hydrogen from renewable sources and eventually a Hydrogen Society in China.

In actively promoting UNDP Public-Private Partnership, he is leading a flagship programme in partnership with Ministry of Water Resources, Ministry of Commerce, and Coca-Cola Greater China in addressing water related issues in China, including climate change adaptation, ecosystem management, drinking water safety in rural regions; use of recycled water from urban sewage; sustainable agriculture through improving irrigation efficiency; reduction of non-point source pollution from agriculture.

Before officially joining UNDP in 2010, he served as Project Manager with State Forestry Administration in managing a 4-year project, i.e., ADB/GEF Combating Land Degradation in China as the National Project Director of an FAO funded 13-year forestry project for combating land degradation. He also has one year working experience with WWF China Office as Forest coordinator for biodiversity conservation.

张卫东博士目前担任联合国开发计划署中国项目经理，负责与政府和私营部门合作开发和实施与水资源管理、可持续生计、氢能经济、碳减排和气候变化适应/减缓相关的项目。在发展中国应对气候变化的能力方面，他与国家发展和改革委员会 (NDRC) 合作实施项目，制定省级气候变化计划和制度安排，发展省级建立温室气体存量和登记系统的能力中国排碳权交易体系。

在推动中国氢能经济方面，参与了GEF资助的燃料电池客车商业化二期工程的设计和 implementation，以及燃料电池汽车三期项目的设计和 implementation；联合国开发计划署第一个氢经济试点项目，他领导了碳交易方法的开发；他现在提倡利用可再生能源向氢经济转变，并最终在中国倡导氢社会。在积极推动联合国开发计划署公私合作伙伴关系的过程中，他领导了一项与水利部、商务部和可口可乐大中华区合作的旗舰项目，以解决中国与水有关的问题，包括适应气候变化、生态系统管理、饮用水农村地区的用水安全；使用城市污水中的再生水；通过提高灌溉效率实现可持续农业；减少农业面源污染。

在 2010 年正式加入联合国开发计划署之前，他曾在国家林业局担任项目经理，负责管理一个为期 4 年的项目，即亚投行/全球环境基金在中国防治土地退化，并担任粮农组织资助的一个为期 13 年的林业项目的国家项目主任，以防治土地退化。他还曾在世界自然基金会中国办公室担任生物多样性保护森林协调员一年的工作经验。

Topic 2: Abstract of Speech

It has been 15 years since UNDP China began promoting hydrogen-based clean energy solutions, starting from 2003 in close collaboration with the Ministry of Science and Technology (MOST) and with funding from the Global Environment Facility (GEF). What began as a small demonstration pilot, has now been scaled across multiple cities.

The programme contributed to a series of nationwide progress in the industry, including pushing for national, regional, and local policies and strategic plans, building a knowledge sharing network and platform, pushing for industrial standards, successful operations demonstration, and building a platform for technical capacity development. The country now has 4 industrial clusters, policy incentives or development plan in place in 11 provinces and cities, 33 publicly listed companies on the production chain, and over 41 auto makers that have set up FCV assembly lines.

讲题二：演讲摘要

自 2003 年与科技部 (MOST) 密切合作并在全球环境基金 (GEF) 的资助下，联合国开发计划署驻华代表处开始推广氢基清洁能源解决方案至今已有 15 年。最初是一个小型示范试点，现在已经扩展到多个城市。

该计划推动了一系列全国性的行业进步，包括推动国家、区域和地方的政策和战略规划，构建知识共享网络和平台，推动行业标准，成功运营示范，搭建技术平台。能力发展。目前，全国已有4个产业集群、政策激励或发展规划落地11个省市，产业链上市公司33家，拥有燃料电池汽车总装线的整车企业超过41家。

Topic 3: Towngas' hydrogen, back to the future 讲题三：中华煤气的氢气 - 回到未来



Mr. Simon NGO (敖少兴先生), Head of Engineering – H. K. Utility,
The Hong Kong & China Gas Co., Ltd.
工程总监 – 香港公用业务, 香港中华煤气有限公司

Mr. Simon Ngo, BSc CEng FHKIE FIGEM, is the Head of Engineering – H. K. Utility of the Hong Kong and China Gas Company Limited overseeing the company's gas production and underground network infrastructures in Hong Kong. He has over 40-year experience in production, transmission and distribution of town gas which is hydrogen-rich. His span of responsibility covers all engineering aspects from design, planning, construction to operation and maintenance. He is a Fellow of both the Hong Kong Institution of Engineers (HKIE) and the Institution of Gas Engineers and Managers (IGEM), a past Chairman of the IGEM Far East District Section and also a past Chairman of the Gas Discipline Committee of the HKIE. He is also currently a member of the Hong Kong University of Science and Technology's School of Engineering Industrial Advisory Committee and Energy Institute Advisory Committee.

敖少興先生現任香港中華煤氣有限公司工程總監 – 香港公用業務，主管香港燃氣生產及地下輸配網路系統。在含氫氣量高的煤氣生產及輸配方面，他擁有超過40年經驗，對於燃氣工程的各個範疇，包括設計、策劃、建造以至操作、維護等都擁有豐富經驗。他現時為香港工程師學會及英國燃氣專業學會的資深會員，並曾任燃氣專業學會遠東分區之主席及香港工程師學會燃氣界別的主席。敖少興先生現時亦是香港科技大學工學院之工業顧問委員會及能源研究院顧問委員會的成員。

Topic 3: Abstract of Speech

Carbon neutrality is one of the hottest topics worldwide in recent years, and quite rightly so in view of its tremendous impact on the future generations of humankind. The targets to achieve carbon neutrality have been set in the country's "30-60" dual carbon goals and the HKSAR Government's "Climate Action Plan 2050". Towngas, as a key energy supplier, has been exploring various possible means to help pave the way towards these glorious yet tough targets. One of the initiatives is to extract hydrogen, which accounts for about 50% of the town gas composition, from any part of the network for clean energy applications, such as hydrogen fuel cells for buses, trucks, etc. With 160 years of hydrogen experience and its 3,700km gas pipeline network that can reach virtually every part of the territory, Towngas is aiming to ignite a hydrogen economy to provide Hong Kong with a fast-track, safe, efficient and low-cost hydrogen supply for the transport and commercial sectors. On top of that, Towngas is also actively partnering with universities and research institutes in carrying out energy research projects, with a common goal of exploring a greener and brighter future.

讲题三：演讲摘要

碳中和成為近年全球最熱門話題之一，它對人類後代有著巨大影響。國家的「30-60」雙碳目標以及香港特區政府的「香港氣候行動藍圖2050」均對實現碳中和訂下了目標。作為主要的能源供應商之一，煤氣公司一直在探索各種可能性，積極為實現這個即光榮而艱鉅的目標而鋪道，其中一項舉措是從煤氣輸配網絡中提取氫氣。氫氣約佔煤氣成份中的 50%，可作清潔能源應用，例如用於氫燃料電池巴士、重型貨車等。煤氣公司期望可透過 160 年的氫能經驗及其幾乎覆蓋全港的 3,700 公里燃氣管道網絡，推動氫能經濟發展，為香港的運輸和商業領域提供快速、安全、高效和低成本的氫氣供應。此外，煤氣公司亦積極與各間大學及科研機構合作，開展可再生能源研究項目，共同探索更綠色、更美好的未來。

Topic 4: Application & Contribution of Hydrogen Energy in Green Transportation

讲题四：绿色交通中氢能的应用与贡献



Speaker: Mr. John Hong, Business Development Director,
CIMC Hydrogen Energy Technology Co., Ltd.

讲者：洪程忠先生，业务拓展总监，中集氢能科技有限公司

MBA, has worked in the energy field for more than 20 years, and has rich experience in the application of clean energy such as LNG, CNG, H2 in road transportation, water transportation and other fields

工商管理硕士，在能源领域工作超过二十年，尤其是在液化天然气，压缩天然气，氢气等清洁能源在路上交通，水上交通等领域应用有丰富的经验。

Topic 4: Abstract of Speech

CIMC Hydrogen Energy Technology Co., Ltd. (abbreviation: CIMC Hydrogen Energy Technology) is a development platform under CIMC Enric that specializes in undertaking hydrogen energy business at home and abroad, with a strategic focus on the three major areas of transportation, hydrogen power and hydrogen. After 16 years of vigorous development, CIMC Hydrogen Technology now has 3 wholly owned subsidiaries, 2 joint ventures, and five world-leading equipment manufacturing bases in Shijiazhuang, Langfang, Nantong, Zhangjiagang, and Qidong. With a global vision and a group operation mode, an industrial structure covering the entire industrial chain of "manufacturing, storage, transportation and use" of hydrogen energy has been formed. The business scope is centered on Beijing-Tianjin-Hebei, the Yangtze River Delta, and the Guangdong-Hong Kong-Macao Greater Bay Area, and radiates to South Korea, Japan, Russia, Denmark, Switzerland, the United States and more than ten countries have created green, convenient and economical hydrogen energy utilization overall solutions for customers.

讲题四：演讲摘要

中集氢能科技有限公司（简称：中集氢能科技）是中集安瑞科旗下专门承接国内外氢能业务的发展平台，战略聚焦交通、氢电、氢气三大领域。致力于成为氢能领域行业领先的科技型企业。

经过16年的蓬勃发展，中集氢能科技已拥有3家全资子公司、2家合资公司、并在石家庄、廊坊、南通、张家港、启东设有五大国际领先的装备生产制造基地，以国际化视野和集团化运作方式，形成覆盖“制储运加用”氢能全产业链的产业格局，业务范围以京津冀、长三角、粤港澳大湾区为核心，辐射至韩国、日本、俄罗斯、丹麦、瑞士、美国等十余个国家，为客户打造绿色、便捷、经济的氢能利用整体解决方案。

Topic 5: Waste to Hydrogen

讲题五： 废物制氢



Dr. ZHANG Han-wei (张汉威博士) , Chief Technology Officer cum Dean of Research Institute, GrandBlue Environment Co., Ltd.
首席技术官及研究院院长, 瀚蓝环境股份有限公司

Dr. Zhang has been working for major Waste-To-Energy (WtE) companies of USA and China in the areas of technology development, international business development and operation management. He has been involved in commercial WTE projects globally in the development of feasibility studies and proposals for integrated waste management to achieve commercially viable extraction and recycling of usable materials, combined with energy recovery from the remaining residual waste. He has rich experience on the planning, design, construction, operation and maintenance of WTE plants and waste gasification processes. He is also Vice President Engineering of Global Waste-To-Energy Council.

张博士一直在美国和中国的主要垃圾焚烧发电（转废为能）公司从事技术开发、国际业务发展和运营管理方面的工作。他参与了全球范围内的商业垃圾焚烧发电项目，为综合废物管理制定可行性研究和提案，以实现商业上可行的可用材料提取和回收，并结合剩余废物的能源回收。他在垃圾焚烧发电厂和垃圾气化工艺的规划、设计、建设、运营和维护方面拥有丰富的经验。他还是全球废物转化能源委员会的工程副总裁。

Topic 5: Abstract of Speech

The activities on hydrogen production, transportation and hydrogen refueling stations within Grandblue Environment Inc will be presented. The supply chains and technologies for hydrogen industry are well developed at Foshan City, Guangdong where the Grandblue headquarter is located. Grandblue is working on Waste-To-Hydrogen processes from multiple waste streams, such as nonhazardous industrial waste, kitchen waste and secondary aluminum ash. Gasification, anaerobic digestion or hydrometallurgical process is suitable for those waste streams. The costs of each process for a specific waste stream are compared to those of other commercial hydrogen production processes.

讲题五： 演讲摘要

将介绍瀚蓝环境股份有限公司在制氢、运输和加氢站方面的业务。瀚蓝总部所在的广东佛山市拥有氢能产业的供应链和技术。瀚蓝正在研究多种废物作为进料的制氢工艺，例如无害工业废物、厨房废物和再生铝灰。气化、厌氧消化或水法冶金工艺适用于这些废物原料。将特定废物的每个制氢过程的成本与其他商业制氢过程的成本进行比较。

Topic 6 : Hydrogen Quality and Safety

讲题 六: 氢能的相关安全和品质



Mr. David Hu, Director, SGS Hong Kong Limited
胡大为先生, 董事-总监, SGS香港

Mr. Hu worked in SGS Group for 18 years, dedicated in Oil and Gas, Construction and Environment Industry in Asia. With profound experienced in product quality control, risk management, safety, and carbon management, especially related the projects related the petroleum & petrochemical product, covering hydrogen, natural gas, sustainable aviation fuel.

SGS is the world's leading testing, inspection, and certification company with global network, 96,000 employees and 2,700 offices/laboratories.

在SGS集团工作18年, 专注于亚洲的石油天然气、建筑和环境行业。在产品质量控制、风险管理、安全和碳管理方面具有丰富的经验, 尤其是与石油石化产品相关的项目, 涵盖氢气、天然气、可持续航空燃料。

SGS 是世界领先的测试、检验和认证公司, 拥有全球网络、96,000 名员工和 2,700 个办事处/实验室。

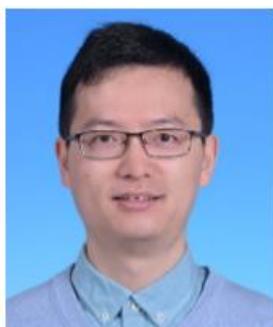
Abstract of Speech

Hydrogen is regarded as one of the clean fuels today and becomes more and more popular to match the carbon neutral needs. With hydrogen's properties, it is non-toxic and dissipate rapidly when it is released, safety is one of the main concerns when we apply this energy source in production, storage, transferring and use in fuel cell. Different standards in hydrogen related equipment, materials, product itself are available today and will be developed days and days, it can strengthen the management of related factifies and minimize the risk. Let's share with you and make the hydrogen world safe.

演讲摘要

氢气被认为是当今的清洁能源之一, 并且越来越受欢迎以满足碳中和的需求。氢气具有无毒、释放后迅速消散的特性, 在燃料电池的生产、储存、传输和使用过程中, 安全是我们关注的主要问题之一。氢相关设备、材料、产品本身的不同标准今天可用, 并将日复一日地制定, 它可以加强相关事实的管理, 将风险降到最低。让我们与您分享, 让氢能世界安全。

Panelist 论坛嘉宾:



Professor LU Zhong-ming (卢中铭教授)

Division of Environment & Sustainability, HKUST
环境及可持续发展学部, 香港科技大学

Dr. LU Zhong-ming is an assistant professor in Division of Environment and Sustainability at the Hong Kong University of Science and Technology. Dr. Lu received his PhD in Environmental Engineering at the Georgia Institute of Technology and Bachelors in Environmental Science and Economics at the Peking University. Dr. Lu focuses on sustainable infrastructure system and urban sustainability through deep integration of multidisciplinary knowledge. His research work covers three major areas: 1) applied data science for sustainability; 2) modeling the performance of water (e.g., green infrastructure, decentralized water technologies) and energy infrastructure (e.g., green hydrogen, distributed energy) related to environmental sustainability and climate resilience; and 3) planning of sustainable urban infrastructure. Dr. Lu published twenty peer-reviewed journal articles as the first or corresponding author in the area of sustainable engineering, urban studies, and environmental sustainability. Dr. Lu is leading multiple research grants in Hong Kong and Mainland China about sustainable infrastructures.

卢仲明博士，香港科技大学环境与可持续发展学部助理教授。卢博士在佐治亚理工学院获得环境工程博士学位，在北京大学获得环境科学与经济学学士学位。卢博士通过多学科知识的深度融合，专注于可持续基础设施系统和城市可持续发展。他的研究工作涵盖三个主要领域：1) 可持续发展的应用数据科学；2) 模拟水的性能（例如，绿色基础设施，分散式水技术）和与环境可持续性和气候适应力相关的能源基础设施（例如，绿色氢能、分布式能源）；3) 可持续城市基础设施规划。卢博士在可持续工程、城市研究和环境可持续性领域以第一作者或通讯作者的身份发表了 20 篇同行评审的期刊文章。卢博士在香港和中国大陆领导多项关于可持续基础设施的研究资助。

4. Introductions of the Co-Organizers and Biography of the Leaders



www.hkgsa.org

Ir Dr the Hon LO Wai Kwok (盧偉國議員 博士 工程師) GBS, MH, JP, Chairman

Hong Kong Green Strategy Alliance (HKGSA)
香港绿色策略联盟 主席

Ir Dr the Hon Lo Wai Kwok is Chairman of HKGSA and was also the President of the Hong Kong Institution of Engineers in 2007/08. WK is currently Member of the Legislative Council of the Hong Kong Special Administrative Region, representing the Engineering Functional Constituency. He also serves as Chairman of the Business and Professionals Alliance of Hong Kong, Honorary Chairman of the Hong Kong Quality Assurance Agency, member of the West Kowloon Cultural District Authority, member of the Board of Directors of the Airport Authority Hong Kong and Past President of the Hong Kong Professionals and Senior Executives Association, etc. He was Sha Tin District Councillor for many years. His expertise and areas of services cover infrastructure, town planning, environment, housing, technology, industry, education, and community service, etc.

卢伟国先生、工程师是香港绿色策略联盟主席，也是 2007/08 年度香港工程师学会会长。现为香港特别行政区立法会议员，代表工程界。他亦担任香港商界专业联盟主席、香港品质保证局名誉主席、西九文化区管理局成员、香港机场管理局董事局成员及香港专业及高级行政人员协会前任主席等。曾任沙田区议员多年。他的专长和服务领域涵盖基建、城市规划、环境、房屋、科技、工业、教育和社区服务等。



**Ir Prof Daniel M. CHENG (鄭文聰 教授 工程師) BBS, MH, JP, President
Hong Kong Environmental Industry Association (HKEnvIA)
香港環保產業協會 主席**

Ir Professor Daniel M. Cheng BBS, MH, JP is the Managing Director of Dunwell Technology (Holdings) Ltd., he is the Honorary President of Federation of Hong Kong Industries and the President of Hong Kong Environmental Industries Association, Board member of Business Environment Council and Deputy Chairman of Hong Kong Green Strategy Alliance, Member of HKX Advisory Committee. For HKSAR Government, he is also serving as Member of The Chief Executive's Council of Advisers on Innovation and Strategic Development, Member of the Committee on Innovation, Technology and Re-industrialisation, Member of Advisory Committee on Recycling Fund, Member of the Steering Committee on the Promotion of Electric Vehicles.

Prof Cheng was the member of Advisory Committee on Water Supplies (Yr 2016 -2020), the Council Member of Hong Kong Trade Development Council (Yr 2013 - 2017), the member of Hong Kong Productivity Council (Yr 2009–2015) and Vocational Training Council (Yr 2011–2015), he was also the Chairman of Federation of Hong Kong Industries (Yr 2015– 2017) and Past Chairman of Hong Kong Waste Management Association (Yr 2000–2001).

Since July 2015, Hong Kong Polytechnic University appointed Prof Cheng as Professor of Practice (Management). The University of Hong Kong (HKU) appointed Prof Cheng as Honorary Professor from Yr. 2016 - 2019 and currently Adjunct Professor in the Department of Industrial and Manufacturing Systems Engineering to recognize his continue academic and industrial contribution. Prof Cheng is a Fellow of Hong Kong Institute of Engineers and Registered Professional Engineer. Prof Cheng graduated from California State Polytechnic University, Pomona, U.S.A. Department of Industrial Engineering in 1981. In February 2014, Prof Cheng was inducted into the "Hall of Fame" by the California Polytechnic University-Pomona, as the first Asian Inductee in the 75th Anniversary.

鄭文聰教授先生BBS, MH, 太平紳士為正昌環保科技（集團）有限公司董事總經理，香港工業總會名譽會長及香港環保產業協會會長，商業環境委員會成員香港綠色策略聯盟理事會及副主席，香港證券交易所諮詢委員會委員。他亦為香港特區政府行政長官創新及策略發展顧問團成員、創新科技及再工業化委員會成員、回收基金諮詢委員會成員，電動車推廣督導委員會成員。鄭教授曾任水務諮詢委員會委員（2016-2020年）、香港貿易發展局理事會成員（2013-2017年）、香港生產力促進局委員（2009-2015年）和職業培訓理事會（2011-2015年），他亦曾任香港工業總會主席（2015-2017年）和香港廢物管理協會前任主席（2000-2001年）。

自2015年7月起，香港理工大學委任鄭教授為實踐教授（管理學）。香港大學（HKU）委任鄭教授為2016年至2019年名譽教授。現任工業與製造系統工程系兼職教授，以表彰他持續的學術和工業貢獻。鄭教授為香港工程師學會資深會員及註冊專業工程師。1981年畢業於美國波莫納加州州立理工大學工業工程系，2014年2月，鄭教授入選加州理工大學波莫納分校“名人堂”，成為第75屆美國加州州立理工大學波莫納分校的首位亞裔入選者。



Mr. Simon Ng (吴家颖先生), CEO
Business Environment Council
商界環保協會 行政總裁

Mr Simon Ng is Chief Executive Officer of Business Environment Council. He works closely with BEC Board of Directors in setting and implementing organisation goals and strategies conducive to supporting BEC members and the wider business community in the transition towards net-zero economy and a sustainable Hong Kong. Mr Ng runs BEC's daily operations, leads BEC's policy contributions, and ensures BEC's continuing relevance in bringing and creating value to its stakeholders and the community at large. He is also the Vice-Chair of BEC's three Advisory Groups.

Mr Ng has over 25 years of experience in academic and policy research, project management and stakeholder engagement. In particular, Mr Ng is known for his ground-breaking work on ship emissions inventory and evidence-based control policy in Hong Kong and the Pearl River Delta, and his instrumental role in the Fair Winds Charter – a voluntary business initiative to reduce ship emissions. Before taking the CEO position, Mr Ng was BEC's Director of Policy & Research for 3 years. Prior to joining BEC, he was Chief Research Officer of a Hong Kong based think tank and held teaching and research positions in several local universities. Currently, Mr Ng is a Member of the Council for Sustainable Development of the Hong Kong SAR Government. Internationally, Mr Ng is an Expert Member of the UNCRD Regional Environmentally Sustainable Transport Forum in Asia since 2006.

吳家穎先生是商界環保協會行政總裁。吳先生與董事局合作無間，制定和實施機構策略，以支持協會會員及商界轉型，邁向零碳經濟及可持續發展的香港。吳先生負責商界環保協會日常運作，帶領協會的政策倡議工作，致力確保協會持續發揮影響力，為持分者及整體社會帶來及創造價值。吳先生亦同時出任協會三個諮詢小組的副主席。

吳先生從事學術及政策研究、項目管理及持分者參與工作超過25年。其中，吳先生在香港和珠江三角洲船舶排放清單及管控政策方面作出了突破性的研究，並主力促成由航運業界牽頭、推動船舶自願減排的「乘風約章」而為人所認識。出任商界環保協會行政總裁之前，吳先生是協會的政策及研究總監。加入協會之前，吳先生曾在一所香港智庫出任研究總監一職，亦在多間本地大學從事教學及研究工作。吳先生現任香港特區政府可持續發展委員會委員，亦自2006年起出任聯合國區域發展中心亞洲環境可持續交通區域論壇的專家組成員。



Mr. Colin TAM (譚兆棟 先生), Chairman
Hong Kong Association of Energy Services Companies (HAESCO)
香港能源服务协会 主席

Colin Tam has over 44 years of experience in USA, Asia, and Middle East as an entrepreneur and C-Suite executive of international companies. He is the current chairman of two NGOs, HAESCO and IPPF. Colin was the founder and CEO of two successful regional energy companies which are now listed on the HK Stock Exchange by their new owners. Now, he is an active developer, strategic advisor, and investor in the following industries: renewable energy, waste to energy, and clean/low carbon technologies. He maintains an extensive network of contacts in the related business, government, and financial sectors. He was a member of the AMCHAM (HK) board and the Expert Committee of the China Investment Association (AIC).

譚兆棟先生在美國、亞洲和中東擁有超過 44 年的經驗，作為一名企業家和國際公司的高管。他是兩個非政府組織 HAESCO 香港能源服務協會 和 國際獨立電力供應商協會的現任主席。他是兩家成功的區域性能源公司的創始人兼首席執行官，這些公司現在由其新所有者在香港證券交易所上市。現在，他是以下行業的活躍開發人員、戰略顧問和投資者：可再生能源、廢物轉化為能源和清潔/低碳技術。他在相關企業、政府和金融部門擁有廣泛的人脈網絡。他是美國商會（香港）董事會成員和中國投資協會（AIC）專家委員會成員。



www.starsf.org

Mr. Johnny CHONG (莊寧先生), Chairman
S.T.A.R.S. Foundation (STARSF)
可持續科技研策基金會 主席

Trained as engineer from The University of Warwick to organize resources to solve problems logically, effectively and being involved in technology transfer, business model development, M&A and IPO consultancy from year 2010, to discover innovative technology fusion with global partners and deliver commercially viable solutions.

Engaging in the research and development of semiconductor materials for 15 years, his specialty is photochemical semiconductor manufacturing, involving new materials, quantum dot applications, biodiesel and other fields such as new energy power plants in Japan.

Mr. Chong is currently the founding chairman of S.T.A.R.S. Foundation (可持續科技研策基金會) since 2010, an international non-government organization which focuses in developing technological transfer and innovative technology integration and providing commercially viable business model.

He has been giving speeches in Beijing, Hong Kong, UK, and Israel, such as 2010 Shanghai World Expo London Pavilion (上海世博會倫敦館), 2010 Low-Carbon Economy Forum in Diaoyutai State Guesthouse (釣魚台國賓館).

毕业于英国华威大学工程师，组织资源逻辑有效地解决问题，从2010年开始参与技术转移、商业模式开发、并购和IPO咨询，与全球合作伙伴一起发现创新技术融合并提供商业上可行的解决方案。从事半导体材料研发15年，专长为光化学半导体制造，涉及新材料、量子点应用、生物柴油等领域，如在日本的新能源发电厂。

庄先生现为可持续科技研究基金会主席，成立于2010年，是一个国际非政府组织，专注于发展技术转让和创新技术集成，并提供商业上可行的商业模式。

曾在北京、香港、英国、以色列发表演讲，如2010年上海世博会伦敦馆、2010年钓鱼台国宾馆低碳经济论坛等。

THE THIRD HYDROGEN ECONOMY FORUM (HEF 2022)

2022年《第三届氢能经济论坛》

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