The BRICS Smart Lighting Industry Summit and

The 11th Meeting of BRICS SSL Collaboration Working Group

17-19 July, 2024 Shenzhen, China

16 July 2024 (Tuesday)

The 11th Meeting of BRICS SSL Collaboration Working Group

Name: Diana Y Lu

Organization/Company and title：
Unilumin Lighting，Application Expert

Short Bio:

More than 20 years working experience in global companies of Signify and OSRAM, focusing on driving innovation, standard, business breakthrough, products portfolio and lighting application.

Now as the application expert, focusing on the smart road lighting.

Global market view and pioneer concepts of connected, healthy and sustainable lighting. Devoted to bring innovation value of lighting forward and application to improve people's life.

Main Works

- Intelligent Commercial Lighting Design Guide, 2021, Vice Editor
- China Office Innovation trend (2014)—Co-authored, English/Chinese
- Office Lighting Application, 1st writer
- Shop Lighting Application, Co-authored
- Energy-saving lighting Application, Co-authored

Standard

- IEC TS Standard, Smart lighting related
- ISA Solar lighting standard, Global Standard
- Solar Lighting Design& Application Standard, Industry standard, China

- Smart Office lighting standard, Group standard, China

Subject: Smart Road Lighting in China

Abstract:
Mainly introduce the situation of smart road lighting in China, from simple smart which is based on sensors to smart road lighting systems, to smart pole practice even smart transportation and smart city concept.
Also it touches the solar and energy storage street lighting concepts. And it gives clear concepts of simple smart lighting and the culture link of future smart road lighting.

Name: Wu Yong

Organization/Company and title：
Chief expert on industrial development, SparkLink Alliance

Short Bio:
In 2008, Wu Yong was awarded a PhD in Tsinghua university, and then he was involved in the research on 4G, 5G standardization in wireless communications. In 2014, he was the chairman of the IMT team assessment group (China, Japan and Korea), the chairman of the international telecommunication union IMT, he was the chairman of Technical Circular Group of the International Telecommunication Union IMT Working Group. In 2023, he has been engaged in the development of SparkLink industry.

Subject: SparkLink: New wireless short-range communication technology and smart lighting applications

Abstract:
SparkLink is a new wireless short-range communication technology, which has the characteristics of low delay, high reliability, strong coverage, high concurrency and strong anti-interference ability. Facing the trend of intelligent development, SparkLink meets various high performance requirements of new wireless short range scenarios with unified technical standards. For smart lighting and smart light pole applications, SparkLink technology will play a high reliability, precise positioning, strong coverage advantages, to provide a reliable short-distance interconnection base for the smart lighting industry.

Name: Sergio Celaschi

Organization/Company and Title: The Ministry of Science, Technology and Innovations / CTI
PhD, Researcher

Short Bio:

Sergio Celaschi was born in the city of São Paulo – Brazil. Undergraduate (1974) and MSc (1977) in Physics – DFCM, EESC-USP, graduated in Applied Physics from Stanford University in 1985. From 1984 to 2000 he joined CPqD of TELEBRAS, working on R&D plus technology transfer of optical fibers, fiber optics devices (EDFA, LiNbO3 modulators, WDM and couplers) and high capacity fiber optics systems. He taught and researched at several Brazilian universities. He currently works at the Centro de Tecnologia da Informação - CTI Renato Archer, a R&D unit of MCTIC. He has 40+ years of experience in technological developments, photonics, lighting and technology transfer activities on optical communication. Cofounder of two industries (telecommunications and medical devices).

Subject:
Status, challenges, needs, and trends of SSL industry in Brazil. The cooperative project between China and CTI (China-Brazil SSL Joint Innovation Center)

Abstract:
Update on the situation of the cooperative project between China and CTI, Campinas Brazil. Installation at Center for Technology and Information - CTI of the Center for Innovation on Solid State Illumination (CIIES);

Update on establishment of the Chamber of Cities 4.0, created in 2019 with the aim of being a technical and collaborative forum to expand and discuss the public policy of smart cities in Brazil. The Chamber of Cities was created by a partnership of Ministry of Science, Technology and Innovation - MCTI, and the Ministry of Cities - MCID;

Update on the Memorandum. Nº 129/2024/MCTI, prepared by the Special Advisory for International Affairs (ASSIN). According to this memo, Brazil will

preside over the BRICS Working Groups WGs in 2025. The country will host and organize several events involving different bodies and thematic segments of the Federal Government, in the area of science, technology and innovation, meetings of several of its thematic WGs.

Name: Georges Blum

Organization/Company and title：
Brazilian Association of Manufacturers and Importers of Lighting Products (Abilumi)
Executive President

Short Bio:
Electrical Engineer Degree and Business Administration Specialization. Abilumi Executive President since 2.013. Many years of experience in industrial production, quality control and engineering and product development of Lighting Products. Consultant of ISO 9001 and SOP – Sales and Operating Plan. Director of Reciclus – company that collects in the country lamps that contains mercury and send to other companies that recuperate the mercury adequately.

Subject:

The Last Year Brazil Products Importation Data and the Main Market Quality Concerns

Abstract:
The objective is to receive some inputs if these poor quality (mainly electrical safety risk to the customers) products also happen in other BRICS countries and which practical actions they have to reduce these problems.

Name: Anton Chernyakov

Organization/Company and Title:

Submicron Heterostructures for Microelectronics, Research & Engineering Center, RAS (SHM R&E Center, RAS)
PhD, Researcher

Short Bio:
In 2014 thesis of PhD on "Features of the degradation of the external quantum efficiency of high-power blue LEDs based on quantum InGaN/GaN structures" was successfully defended.

During time at SHM R&E Center, RAS as a researcher:The measuring complex which certified to international standards for research electrooptical and thermal characteristics of LED was established with my participation.

Subject: Micro-LED; Sino-RUS Collaboration

Abstract:
The latest development of SSL in Russia, particularly the current status and trends of R&D in Russia, the current cooperations with Fudan university China, and future cooperative scenarios, the perspectives of “beyond lighting” applications etc.

Name: Hrishikesh Ta

Organization/Company and title：
Bajaj Electricals Ltd.
Vertical Head R&D Lighting

Short Bio:
Having an experience of 23+ years in R&D, currently heading R&D Lighting of Bajaj Electricals Ltd, one of the largest lighting manufacturing companies in India.
As the head of lighting research and development (R&D), I lead a team of talented engineers and designers in creating innovative lighting solutions. With a background in mechanical engineering and a passion for sustainable design, I am dedicated to pushing the boundaries of technology to develop more energy-efficient and environmentally friendly lighting products. My expertise lies in integrating cutting-edge technologies such as LED, Solar, smart controls, and automation into our products to meet the ever-evolving needs of our customers. I am committed to driving forward progress in the field of lighting R&D through collaboration, creativity, and a strong focus on customer satisfaction.

Subject: The Situation of SSL Market in India

Abstract:
The SSL market in India has been growing rapidly due to government initiatives promoting energy-efficient lighting and increasing consumer awareness. The implementation of schemes such as UJALA has led to widespread adoption of LED bulbs in households, while the BEE's energy efficiency labeling program has helped consumers make informed choices when purchasing LED products. The market for SSL is expanding across various sectors including residential, commercial, industrial, and outdoor lighting. However, there are still challenges such as the need for further cost reductions and technological advancements to make SSL more affordable and accessible to a wider population. Overall, the SSL market in India shows great potential for continued growth and development.

Name: Ruan Jun

Organization/Company and title：
China Solid Station Lighting Alliance
Secretary General

Short Bio:
Dr. Ruan Jun has been engaged in strategy research, standardization and international cooperation in the field of solid-state lighting more than 18 years. He participated in the organization and implementation of solid-state lighting and wide- band-gap semiconductor R&D projects and industrial planning. He served as ISO/TC 274 committee member and China representative. He promoted international industrial cooperation with USA 、Germany、BIRCS etc. He assisted NDRC in the preparation of the "Belt and Road" Green Lighting Action Initiative, to promote international cooperation on green lighting.

Subject: China SSL industry and its 20 years of development experience

Abstract:
This report will introduce the latest development trend of China's SSL industry in 2023, and shares the experience gained by CSA in promoting the development of China's industry in the past two decades.

Name: Jeremiah Mathobela

Organization/Company and title：
SABS/ Departmental manager- Electro-technical

Short Bio:
Head of Department of Electrotechnical, in the division of Laboratory Services Division of SABS. Encompassing the entire electrotechnical laboratories of Lighting technology, Appliances, Rotating machines, High voltage, Short-circuit and Materials and installations labs. Master of Engineering (2019), from University of Witwatersrand, majoring in Insulation co-ordination, lightning protection and earthing. Over 16 years' working experience in Electrical network performance, technical investigations, high voltage testing and lab operations.

Subject: The development status of SSL industry in South Africa

Abstract:
The presentation covers the structure of how standardization and regulation are managed in South Africa. It also briefly illustrates how the organs of state involved in regulation of SSLs are interlinked. A status of adoption and details of the testing capabilities is included.

Name: TROFIMOV Yuri

Organization/Company and title：
Center of LED and Optoelectronic Technologies of National Academy of Sciences of Belarus, Director

Short Bio:
Trofimov Yuri (born May 14, 1950) is a Belarusian scientist in the field of optoelectronics and LED technology. Ph.D.
Yuri Trofimov's scientific interests include:

- research and development of the physicochemical foundations for the production of thin polycrystalline films of semiconductor solid solutions AIIBVI and the creation on their basis of highly efficient optoelectronic converters for systems of optical processing and display of information and measuring equipment;
- research and development of display and indicator technology;
- research and development of semiconductor LED technology: agro photonics, greenhouse LED Light, LED Traps for whitefly, leafroller, etc., LED Lights for special application; Quantum Dots/Rods etc.

Under the leadership of Trofimov Yuri, the LED lights have been developed and put into production: street lamps, lamps for housing and communal services, lights for industrial lighting, irradiators for growing various plant crops, both in industrial and domestic conditions, lamps for aircraft, railway and automobile vehicles, and other products, a testing laboratory for LED technology has been created and accredited, equipped with modern, precision measuring equipment. About 10,000 pcs of LED products are produced annually, which are sold both on the domestic market and exported (Russia, Kazakhstan, Serbia, etc.).

Author more than 400 scientific works and 30 patents.
Awarded Diplomas of the Council of Ministers of the Republic of Belarus (2003), the Ministry of Industry of the Republic of Belarus (2016) and badge of distinction named after V.M. Ignatovsky National Academy of Sciences of Belarus (2020).

Subject:
The government policies, strategies, R&D, current status and industry needs of SSL development in Belarus

Abstract:
An overview of the lighting technology market of the Republic of Belarus is presented: the main players, scientific institutes and manufacturing companies, educational institutions, testing centers and certification bodies. Information is provided on the range of LED products produced by Belarusian companies. Current directions of research and development carried out at the Center for LED and Optoelectronic Technologies of the National Academy of Sciences of Belarus and other institutes are presented. Problematic issues of SSL development in Belarus are considered.

Name: LISHIK Sergey

Organization/Company and title：
Center of LED and Optoelectronic Technologies of National Academy of Sciences of Belarus
Scientific secretary – Head of R&D department

Short Bio:
Lishik Sergey (born Dec 30, 1976) is a Belarusian scientist in the field of optoelectronics and LED technologies. Ph.D.
Sergey Lishik's scientific interests include: LEDs and devices based on LEDs; Thermal and optical simulation; UV LED Lights and devices for air, water and surface disinfection; Disinfection by visible light (405 nm); The high efficiency, lightweight personal UV Protective Masks; Agro photonics. Greenhouse LED Light. Modular green wall system; LED lights to attract fish (squids) and insects

for additional feeding of fish (carp); LED Traps for monitoring and controlling of insects (Whitefly, Leafroller, etc); LED Lights for special application; Quantum Dots/Rods (CdS, Perovskite, etc).
The following devices have been developed with the participation of Sergey Lishik: LED Lights with heat pipes based heatsink, LED Street Lights, LED Lights for housing and communal services, LED Grow Plant Lights, etc.
Author more than 107 scientific works and 11 patents of Belarus, Russia, Kazakhstan.
Awarded by medal of the NAS Belarus for significant scientific and technical achievements (2022), the Diploma of NASB (2015) and the Diploma 1st degree for project "Industrial LED light with a heat sink based on heat pipes" (2014).

Subject:
The current status of a joint Belarus-Chinese project with Fudan University, China

Abstract:
The name of the Belarusian-Chinese project is “Revealing Thermal/moisture Coupling Degradation Mechanisms of Cesium Lead Triiodide Perovskite Photoluminescent Quantum Dots and its Reliability Enhancement Method Study.” Perovskite quantum dots CsPbX3 (X = Cl, Br, I) are one of the most promising materials in micro- and optoelectronics. However, a significant disadvantage of CsPbI3 perovskite quantum dots is their low stability, caused by the destruction of the crystal structure under the influence of environmental factors such as heat, humidity, oxygen and light. The project aims to solve the above problem by studying the degradation mechanisms of CsPbI3 perovskite quantum dots with an atomic layer of silicon dioxide formed using plasma-assisted atomic layer deposition (PEALD) technology. Other promising areas of Belarusian-Chinese cooperation in the field of SSL were also considered.

Name: Jiajie Fan

Organization/Company and title：
Youth Professor, Fudan University

Short Bio:
Dr. Fan is a Youth Professor at the Academy for Engineering & Technology and Shanghai Engineering Technology Research Center for SiC Power Device, Fudan University, China. He received the Ph.D. degree in Industrial and Systems Engineering at The Hong Kong Polytechnic University, Hong Kong, China. His main research interests include Wide bandgap power electronics packaging and reliability modeling, Prognostics and health management.

Subject: Solid State Lighting System Reliability Modeling based on Full Lifecycle Digital Twins

Abstract:
Driven by the ever-increasing societal needs for digitalization and intelligence, such as autonomous driving, Manufacture 4.0, “Smart-X”, “AI in all”, the demands for solid state lighting components and systems are growing fast. To realize “performance and lifetime on demand” for those SSLs, Digital Twin (DT) will play a more and more important role. This talk will focus on the full lifecycle DTs for SSL reliability modeling, covering material modeling and characterization, process design and modeling, tests and qualifications, health monitoring and lifetime prognostics. Some challenges for future developments will also be highlighted.

Name: NGUYEN DOAN KET

Organization/Company and Title：
Vietnam Lighting Association (VLA) - Permanent Vice President,
Rang Dong Light Source & Vacuum Flask Jsc - Deputy General Director

Short Bio:
Graduated in Electrical Engineering from Hanoi University of Science and Technology (1982) and Master’s in Business Administration from National Economics University (1996). He has more than over 40 years of experience in the lighting industry at Rang Dong Light Source & Vacuum Flask Joint Stock Company, a leading lighting company in Vietnam. He has participated in and directed numerous scientific and technological projects to improve production

capacity and research & development of LED products, contributing to the development of the SSL lighting industry in Vietnam, such as: Project “Research and development of production technology, testing and commercialization of LED products used in high-tech agricultural in the Vietnamese” - World Bank and Ministry of Science and Technology; Project “Research, design, manufacture specialized lighting systems and devcelop processes for using it in the propagation and flowering control of some types of plants on an industrial scale” - National Technology Innovation Program – Ministry of Science and Technology; and Project “Research and production of urban LED lighting with integrated power control from 70W to 150W” - Hanoi Department of Science and Technology; etc …

Currently, he is the Permanent Vice President of Vietnam Lighting Association (VLA) (period 2024 - 2029), member of the Executive Committee of Vietnam Digital Media Association (VDMA), and member of the Executive Committee of Vietnam Automation Association (VAA).

Subject: The development status of SSL industry in Vietnam

Abstract:
Introducing the current status and development trend of SSL industry in Vietnam; some relevant policies and strategies of the Vietnam government on SSL in the recent period.

Name: Acharawan Chutarat

Organization/Company and title：
King Mongkut’s University of Technology Thonburi (KMUTT)
BioArchitek Co.Ltd.
Thai Illuminating Engineering Association (TIEA)

Short Bio:

Dr. Acharawan Chutarat is a lecturer and a former chairperson of Architecture Program at School of Architecture + Design, KMUTT (King Mongkut’s University of Technology Thonburi), Bangkok. She is a head of Design for Environmental and Sustainable Development (D/E/S Lab). In parallel, she is a lighting designer at BioArchitek, working on various projects for government, private sectors,

communities, local and international organizations. She has received a Bachelor Degree in Architecture, Master of Science in Lighting from Penn State University, and Ph.D. from MIT with specialization in daylight and visual perception. She has been serving for many non-profit organizations such as Thai Illuminating Engineering Association (TIEA), Lux Pacifica, Thai Green Building Institute (TGBI), ARCASIA Committee on Green and Sustainable Architecture. She has been a guest lecturer for distanced lighting design program at Wismar, Germany and an adjunct professor at Woxsen University, India. She is also a member of Lighting Detective Group.

Subject: The government policies, strategies, R&D, current status and industry needs of SSL development in Thailand

Abstract:
Will introduce the latest development trend of SSL industry in Thailand.

18 July 2024 (Thursday)

The BRICS Smart Lighting Industry Summit

Name: Frank FANG
姓名：方超（Frank）

Organization/Company and title：
EXC-LED, Technical director

Short Bio: Senior expert in the field of outdoor lighting control, information system project manager, graduated from Wuhan University applied mathematics major, engaged in IT industry for 20 years, has rich experience in team management and project development, engaged in smart city, smart community, smart building, smart home, industrial Internet of things monitoring and other industries. Major innovations have been made in cutting-edge technologies such as integrated control, zero-carbon solutions, ultra-high light efficiency, and interconnected intelligent control.

Subject: Leading the future | EXC Landscape & Road lighting innovation technology sharing

Abstract:
EXC has always adhered to product technology innovation for more than ten years, is committed to lighting the future of the city with smart photoelectric, and leads the trend of the lighting industry with technological innovation. This speech will bring the important innovative technologies and products of EXC in the two fields of landscape lighting and road lighting in 2024.
In the field of landscape lighting, EXC has introduced innovative AI RDM control solutions with fault feedback and remote operation and maintenance functions, with strong data capability and 100% accuracy. Combined with artificial intelligence, it can generate professional-grade maintenance and animation obstacle avoidance suggestions with one click, and truly achieve intelligent operation and maintenance.
At the same time, EXC will also share the intelligent cloud cabinet solution with high integration, convenient installation and cost-leading, which optimizes the traditional three boxes into the main cabinet + auxiliary cabinet through a modular combination, and combines 48V remote DC power supply to provide a new generation of intelligent control solutions.
EXC road lighting from modules, lamps to integrated control, adhere to independent research and development and innovation, to create a one-stop lighting + control product solutions, this will bring the world's leading 250.5LM/W ultra-high light efficiency module and intelligent management of micro-smooth series of products, to achieve a lower carbon, smarter, more comfortable road lighting contribution to EXC innovation force.

Name: Jack Chen

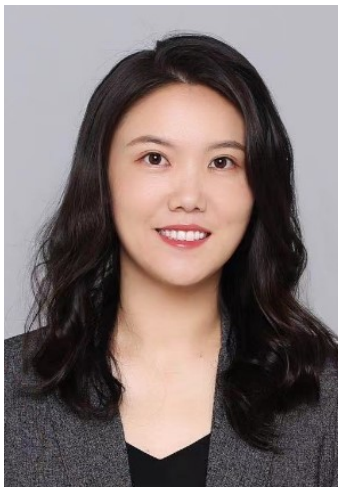
Organization/Company and title：
LEDVANCE Operation & Management (Shenzhen) Co., Ltd
Senior R&D Director
Head of New Product Introduction Region EU

Short Bio:
Mr. Jack Chen works in lighting industry more than 20 years, focusing on product development and R&D team management. From 2005 Oct to 2017 Sept, Jack worked in Philips Lighting as product development engineer, R&D manager and senior R&D manager, a short-term working experience in Europe. Since 2017 Sept, Jack joined LEDVANCE as head of R&D center in Shenzhen, from 2023 Oct, Jack

was appointed a new position head of Europe new product in additional R&D head.

Subject: From Line to Loop, Grean Transition in LEDVANCE

Abstract:
The sustainability of our products is one key pillar of our sustainability strategy at LEDVANCE. This means considering every aspect of our lamps and luminaires, from their materials and manufacturing processes to their functionality and end-of-life disposal. Here, you'll discover how we're illuminating the path towards a greener future with our lamps and luminaires. Our sustainability tagline “from line to loop” refers to LEDVANCE’s transition from linear processes (take-make-waste) to circular ones (take-make-reuse + repeat).



Name: Qian Li

Organization/Company and title：
EVERFINE Institute of Optoelectronics
Vice Director of Optics Dept.

Short Bio:
Qian Li is the vice director EVERFINE Institute of Optoelectronics, and has been involved in the research and development of lighting measurement methods and standards for over 17 years. She is the General Secretary of SAC/TC224/SC3 “Subcommittee 3 on Measurement of light and radiation of Standardization Administration of China”, and participated in several National Hi-tech Projects on measurement of Solid State Lighting.
Ms. Li is an Associate Division Director (ADD) of CIE D2 (Physical Measurement of Light and Radiation), and chair the CIE Technical Committee (TC) 2-89 “Measurement of Temporal Light Modulation of Light Sources and Lighting Systems”. She is also a member of CIE TC 2-78 “The Goniophotometry of Lamps and Luminaires” and JTC19 “Terms and Definitions of Horticultural Lighting”. In IEC, Ms. Li is a registered expert in several working groups of IEC TC34 “lighting” and a liaison representative to CIE.

Subject: Technology and Standardization Development of Optical Radiation Measurement for Efficient and Intelligent Lighting

Abstract:
The presentation will introduce the progress of the optical radiation measurement technology and standardization for efficient and intelligent lighting. In addition to conventional measurements of luminous efficiency, spectral power distribution and spatial light intensity distribution, the presentation will also focus on the measurement of flicker, electrical harmonics, and standby power consumption of lighting products. At the same time, it will also explore the measurement technology and standardization trends in sub fields such as intelligent vehicle lights and plant lighting.

Name: Poet LI

Organization/Company and title：
Head of Product Portfolio Compact Systems – Eurasia, Inventronics

Short Bio:
Head of product portfolio - Compact Systems in INVENTRONICS with deep expertise and insights in intelligent drivers, digital lighting system and wireless system focusing on EURASIA market

Subject: Innovation and evolution of DALI lighting systems

Abstract:
- Starting from lighting old days
- Complete DALI offer from Inventronics based on applications
- Respect the legacy, bridging the innovative future

Name: Lijuan Chen

Organization/Company and title：
International Sales Manager from Shenzhen Jinhong Lighting Co.,LTD.

Short Bio:

LIJUAN CHEN, Female，graduated from Yangzte University in 2006 with TEM 8 certificate and English Teacher Certificate.

I have been working as an international sales and related career for 15 years, exported the electronic components, microphones with Austria brand LEWITT, food additives and APIs in Hubei Yitai , Led Lights in ZYTECH group and exchanger in Italian LUVE group ect, having the rich experience in oversea marketing and sales.

My current job is to export a series of mobile solar products (mobile solar light tower / solar CCTVs / solar generator) to countries all over the world, and contribute to the world's environmental protection and energy conservation.

Subject: A series of mobile solar products (mobile solar light tower / solar CCTVs /solar generator)

Abstract: The structure and functions of mobile solar light tower / solar CCTVs /solar generator, datasheet and their applications.

Name: Tony Jiang

Organization/Company and title：
Tuya Smart
Senior Product Expert

Short Bio:
Focused on LED roadway lighting industry for nearly 15 years, participated in the revision of 10+ industry standards, including NEMA, Zhaga, D4i and other global industry standards, has a deep understanding of the global smart roadway lighting industry.

Subject: The Total Solution for Smart Roadway Lighting from Tuya Smart

Abstract:
The overall platform capability of PaaS, SaaS and hardware for smart roadway lighting from Tuya Smart.

Name: QING PEI

Organization/Company and title：
Chief Deputy Engineer
Shanghai Sansi Electronic Engineering Co., Ltd.

Short Bio:
With deep theoretical expertise and substantial experience in software development, engineering, image processing, and pattern recognition, he has contributed to numerous national and provincial research initiatives. He notably served as the project secretary and technical leader for Topic 3 of the "Outdoor Smart Lighting Key Technologies and System Integration" project under the "13th Five-Year"

National Key Research and Development Program. He spearheaded the development of the "Sansi Smart Street Light System Software Platform," which, since its inception in 2015, has facilitated hundreds of projects both domestically and internationally, paving the way for the practical implementation of smart cities in the future.

Subject: Exploring the Innovative Applications and Future Trends of Smart Lighting Systems: A Case Study on the Shenzhen-Zhongshan Link Project

Abstract:
In the era dominated by AI and digital twin technologies, the realm of smart lighting has evolved beyond expectations. Leveraging extensive practical experience in environments such as highways, urban areas, road tunnels, and rail transit, and integrating advanced research in system integration, digital twins, and virtual reality, Sansi has expanded the horizons for the application of smart lighting technologies. Focusing on the major national project, the Shenzhen-Zhongshan Link, this presentation will delve into the innovative applications and anticipate the future trends of smart lighting systems.

Name: **Henry So**

Organization/Company and title:
GM of Guangzhou JiaYuan Internet Service Co., Ltd.

Short Bio:
Co-founder of the Smart Pole(Lamp Post) Industry Platform “Smart Pole Insight”
Secretary General of the Smart Pole Industry Alliance
Member of the Smart Pole Committee of the China Institute of Communications
Deputy Secretary General of the Smart Street Lamp Professional Committee of the China Association of Lighting Industry
Deputy Secretary General of the Guangdong Smart Pole Industry Alliance Deputy Director of the Smart Pole Professional Committee of the Hebei Smart City Federation

Subject: An Overview of the Development of the Smart Pole Industry in China

Abstract:
Introduce the background and development stages of China's smart streetlight industry, analyze the current market status and challenges, and forecast future trends and opportunities.

18 July 2024 (Thursday)

The Meeting of BRICS and "BRICS +" SSL International Standardization

Name: Michael Scholand, L.C.

Organization/Company and title：
SSLC Platform, IEA 4E
Deputy Manager

Short Bio:
Michael has worked as an energy-efficiency policy and program expert for over 25 years. He has a bachelors and masters degree in engineering, and has worked on lighting related activities since 1995. He has advised the US, Canadian and European governments on their lighting policies, and has led research and published reports that support this work including life cycle assessments, market penetration studies, price forecasts, energy and CO2 savings models, patent searches, measurement metrics, test standards, and more. Michael is Lighting Certified (LC) by the National Council for Qualifications in the Lighting Professions (NCQLP) in North America, and has helped operate the IEA 4E SSL Annex since 2012. He lives in London, England with this three children.

Subject: IEA 4E Smart Sustainability in Lighting and Controls (SSLC) Platform

Abstract:
In 2018, lighting accounted for 16.5 percent1 of global electricity consumption. As

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use of solid-state lighting (SSL) increased rapidly around the world, the share of electricity for lighting decreased to about 12%2 - despite increases in total illuminated space. While those electricity savings are mainly attributable to more energy-efficient light emitting diodes (LED), even greater electricity savings can be achieved through smart lighting systems and controls. LED technology lends itself well to lighting controls, and industry estimates that global lighting electricity use could be reduced further to just 8% through continued efficiency gains in solid state lighting technologies in combination with widespread implementation of smart lighting systems and controls. And each percentage point of global electricity matters – one percent of electricity equates to approximately 115 million metric tonnes of CO2 emissions annually. Taken over 10 years, that's more than a gigatonne of CO2 emissions.

The IEA 4E is therefore launching a new five-year programme of its Solid-State Lighting Annex (SSL Annex), called the Smart Sustainability in Lighting and Controls (SSLC) Platform which will run from 2024 to 2029. The award-winning Team of Experts will continue its track-record of success, with efforts concentrated in three key priority "focus areas" of interest to our member governments:

1) Market Assessment and Benchmarking – research into smart lighting, sensors, controls and lighting systems, including test methods, new system solutions and interoperability.
2) Understanding Impacts of Lighting – evaluating lighting's impact on health and the well-being of people, energy consumption, use of materials and other resources and ecosystems – including the application of circular economy principles.
3) Support for Standards and Regulations – develop guidance on quality and performance for products and systems; participate in international standardisation activities (CIE, IEC) and contribute to the development and assessment of new test standards for lighting controls and systems.

The SSLC Platform is actively working on these topics to develop information and analysis to support governments working to transform their lighting markets, improving both the energy efficiency and quality of our illuminated spaces. The Platform brings together top researchers and experts from around the world to jointly address challenges in the rapidly evolving lighting market. The activities undertaken by the SSLC Platform are complementary and supportive of the work of governments, international standards bodies, and the research & development being conducted by industry and academia. Through this work, the SSLC Platform is working to accelerate the global transition to high quality, energy-efficient solid state lighting.

Name: Sergio Celaschi

Organization/Company and Title: The Ministry of Science, Technology and Innovations / CTI
PhD, Researcher

Short Bio:

Sergio Celaschi was born in the city of São Paulo – Brazil. Undergraduate (1974) and MSc (1977) in Physics – DFCM, EESC-USP, graduated in Applied Physics from Stanford University in 1985. From 1984 to 2000 he joined CPqD of TELEBRAS, working on R&D plus technology transfer of optical fibers, fiber optics devices (EDFA, LiNbO3 modulators, WDM and couplers) and high capacity fiber optics systems. He taught and researched at several Brazilian universities. He currently works at the Centro de Tecnologia da Informação - CTI Renato Archer, a R&D unit of MCTIC. He has 40+ years of experience in technological developments, photonics, lighting and technology transfer activities on optical communication. Cofounder of two industries (telecommunications and medical devices).

Subject: The SSL standards in Brazil

Abstract: Will introduce the standardization development in the field of SSL in Brazil.

Name: Santosh Agnihotri

Organization/Company and title：

Orient Electric Limited (A CK Birla Group)
General Manager & Head (Quality & Technical)

Short Bio:

Serving the industry from last 30+ years in R&D, Quality & Technical Compliances, currently heading Quality & Technical operations (Lighting and Switchgear business) of Orient Electric limited, one of the largest lighting manufacturing companies in India. Having engineering and MBA/ M. Phil (Management) background, driving technical operations and compliances at group level.

My contributions to the industry are mentioned below:

- Chairperson of ELCOMA (Electric Lamps and Components Manufacturing Association) Technical committee, which represents all major brands in India.
- Technical Committee member in Bureau of Energy Efficiency
- BIS committee member for ETD23, ETD43, ETD49 on behalf of ELCOMA.
- Participating in Standard formulation committees for compliances.
- 20+ Articles published in Illumination (Lighting Industry Magazine) on different topics like standards and regulations, Star labelling Compliances, e-waste regulations, future of DOB technology etc.
- Lifetime member in ERDA (Electrical research and development Association)
- Make Orient brand as First Indian brand to get energy star ratings as 3 & 5 Star in India.

Subject: "The SSL standards in India"

Abstract:

The SSL market in India is growing rapidly with government initiatives such as promoting energy-efficient and a safety compliant product. The power ministry through BEE has upgraded the star rating criteria, which has resulted in transformation of high energy efficient products.

Lighting products must be compliant with their safety standards, it is mandatory part. Currently the government has put some initiatives by putting lighting products under e-waste management rules-2022, so producers are responsible for its safe disposal. (it covers all lighting products).

Overall, the SSL market in India shows great potential for continued growth and development.

Name: Xu Yuanyuan

Organization/Company and title：
China Solid State lighting Alliance – Standardization Committee
Vice Secretary General

Short Bio:
Ms. XU has been engaged in standardization work in the field of SSL for many years, participated in a number of national science and technology research and development projects related to SSL, organized/participated in a number of national standards revision work, and was mainly responsible for the organization and management of CSA group standards.

Subject: The development trend of SSL standardization in China

Abstract:
The report mainly introduces the standardization development in the field of SSL in China, the role of different types of standards (national standards, industry standards, group standards, local standards, enterprise standards) in the development of the industry and the introduction of CSA standardization work.

Name: Jeremiah Mathobela

Organization/Company and title：
SABS/ Departmental manager- Electro-technical

Short Bio:
Head of Department of Electrotechnical, in the division of Laboratory Services Division of SABS. Encompassing the entire electrotechnical laboratories of Lighting technology, Appliances, Rotating machines, High voltage, Short-circuit

and Materials and installations labs. Master of Engineering (2019), from University of Witwatersrand, majoring in Insulation co-ordination, lightning protection and earthing. Over 16 years' working experience in Electrical network performance, technical investigations, high voltage testing and lab operations.

Subject: The SSL standards in South Africa

Abstract:
SSL standards statues, request, needs and, new regulations (include new request for certificates). An overview of the Quality assurance and regulation structure, regulation in South Africa and the harmonization progress in the SADC region.

Name: Yuan Fu

Organization/Company and title：
Executive Secretary of ISA

Short Bio:
Deputy Secretary General of ISA Secretariat, work with the Chairman of ISA TCS. Coordinate procedures related to ISA recommendations, technical reports and various drafts, and be responsible for daily liaison with the TCS working Group leaders. In charge of communications with international standards organizations.

Subject: The Introduction of ISA Technical Committee on Standardization (TCS)

Abstract:
Introduce the work carried out by ISA TCS and the recommendations/technical reports it has adopted， as well as the current cooperation with international standard organizations.

Name: TROFIMOV Yuri

Organization/Company and title：
Center of LED and Optoelectronic Technologies of National Academy of Sciences of Belarus, Director

Short Bio:
Trofimov Yuri (born May 14, 1950) is a Belarusian scientist in the field of optoelectronics and LED technology. Ph.D.
Yuri Trofimov's scientific interests include:

- research and development of the physicochemical foundations for the production of thin polycrystalline films of semiconductor solid solutions AIIBVI and the creation on their basis of highly efficient optoelectronic converters for systems of optical processing and display of information and measuring equipment;
- research and development of display and indicator technology;
- research and development of semiconductor LED technology: agro photonics, greenhouse LED Light, LED Traps for whitefly, leafroller, etc., LED Lights for special application; Quantum Dots/Rods etc.

Under the leadership of Trofimov Yuri, the LED lights have been developed and put into production: street lamps, lamps for housing and communal services, lights for industrial lighting, irradiators for growing various plant crops, both in industrial and domestic conditions, lamps for aircraft, railway and automobile vehicles, and other products, a testing laboratory for LED technology has been created and accredited, equipped with modern, precision measuring equipment. About 10,000 pcs of LED products are produced annually, which are sold both on the domestic market and exported (Russia, Kazakhstan, Serbia, etc.).
Author more than 400 scientific works and 30 patents.
Awarded Diplomas of the Council of Ministers of the Republic of Belarus (2003), the Ministry of Industry of the Republic of Belarus (2016) and badge of distinction named after V.M. Ignatovsky National Academy of Sciences of Belarus (2020).

Subject: The SSL standards in Belarus.

Abstract:

The statuses of standards adopted in the Republic of Belarus regarding SSL are considered. The standardization system of the Republic of Belarus in the field of SSL was formed under the influence of standardization systems of international organizations (IEC, ISO, EN), European Union directives, standards of the Russian Federation (GOST) and within the framework of the formation of a unified standardization system of the Eurasian Economic Union (EAC). The features of the regulatory framework regarding the possibility of using SSL in the Republic of Belarus are considered. The biggest gap in standardization is the use of SSL in agriculture, including growing plants. The capabilities of the lighting testing laboratory of the State Enterprise "CSOT NAS of Belarus" are presented.

Name: Acharawan Chutarat

Organization/Company and title：
King Mongkut's University of Technology Thonburi (KMUTT)
BioArchitek Co.Ltd.
Thai Illuminating Engineering Association (TIEA)

Short Bio:

Dr. Acharawan Chutarat is a lecturer and a former chairperson of Architecture Program at School of Architecture + Design, KMUTT (King Mongkut's University of Technology Thonburi), Bangkok. She is a head of Design for Environmental and Sustainable Development (D/E/S Lab). In parallel, she is a lighting designer at BioArchitek, working on various projects for government, private sectors, communities, local and international organizations. She has received a Bachelor Degree in Architecture, Master of Science in Lighting from Penn State University, and Ph.D. from MIT with specialization in daylight and visual perception. She has been serving for many non-profit organizations such as Thai Illuminating Engineering Association (TIEA), Lux Pacifica, Thai Green Building Institute (TGBI), ARCASIA Committee on Green and Sustainable Architecture. She has been a guest lecturer for distanced lighting design program at Wismar, Germany and an adjunct professor at Woxsen University, India. She is also a member of Lighting Detective Group.

Subject: The SSL standards statues, request, needs and, new regulations in Thailand

Abstract:
Will introduce the SSL standards and regulations of Thailand.

Name: NGUYEN DOAN KET

Organization/Company and Title：
Vietnam Lighting Association (VLA) - Permanent Vice President,
Rang Dong Light Source & Vacuum Flask Jsc - Deputy General Director

Short Bio:
Graduated in Electrical Engineering from Hanoi University of Science and Technology (1982) and Master's in Business Administration from National Economics University (1996). He has more than over 40 years of experience in the lighting industry at Rang Dong Light Source & Vacuum Flask Joint Stock Company, a leading lighting company in Vietnam. He has participated in and directed numerous scientific and technological projects to improve production capacity and research & development of LED products, contributing to the development of the SSL lighting industry in Vietnam, such as: Project "Research and development of production technology, testing and commercialization of LED products used in high-tech agricultural in the Vietnamese" - World Bank and Ministry of Science and Technology; Project "Research, design, manufacture specialized lighting systems and devcelop processes for using it in the propagation and flowering control of some types of plants on an industrial scale" - National Technology Innovation Program – Ministry of Science and Technology; and Project "Research and production of urban LED lighting with integrated power control from 70W to 150W" - Hanoi Department of Science and Technology; etc …

Currently, he is the Permanent Vice President of Vietnam Lighting Association (VLA) (period 2024 - 2029), member of the Executive Committee of Vietnam Digital Media Association (VDMA), and member of the Executive Committee of Vietnam Automation Association (VAA).

Subject: The SSL standards in Vietnam

Abstract:
The information on the SSL standards and regulations of the domestic market of Vietnam.