



International SSL Alliance

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ISA

**Global SSL Award
for Outstanding
Industry
Development**

2024



International SSL Alliance



Solid state lighting (SSL) began with the discoveries and inventions in the second half of the 20th century, and continuous breakthroughs were made following the widespread application of semiconductors display at the end of the 20th century. In the new century, great strides have been made in SSL, which becomes a bright new star in the optoelectronic industry.

After 20 years' efforts, manufacturing technology of semiconductors has matured with the improvement of SSL efficiency and quite a lot of advanced properties. While replacing traditional lighting, SSL has been applied to areas of "beyond lighting", such as agricultural applications, Micro-LED, LiFi smart cities, healthcare, photocuring, energy saving and emission reduction. It is foreseeable that with the concerted efforts of the industry, SSL as well as its technology and products will be extended on a larger

time scale and applied in more areas. which will bringing more benefits to the world.

Current achievements and momentum in SSL can never be achieved overnight. Brilliant development is the result that built by many small successes over a long time period. Things by no means easy at the beginning, but will become more arduous subsequently. The current outstanding results of SSL are impossible without the efforts of the entire industry and the entrepreneurs. Recognizing their efforts and achievements will contribute to continue the success and entrepreneurship spirit of SSL.

In view of this, the 12th Executive Member Meeting of International SSL Alliance (ISA) decided to set up the "Global SSL Award of Industry Development Outstanding Contribution" (IDOC), and the selection will kick off in 2021. The award aims to recognize industry leaders, industrial organizations, project teams, institutions, etc. who have made outstanding contribution to the SSL development at regional and global levels within a certain time or historical period during the course of sustainable development of the global SSL.

I sincerely hope that the establishment of this award and the selection of its laureates will inspire more individuals and organizations to keep in mind of their original aspirations and mission, work hard for greater success, and inaugurate a new era of SSL.

Jianlin Cao
Jianlin Cao
 President of ISA

ISA Introduction

ISA is a non-for-profit international organization consists of regional alliances, association/society, leading companies and renowned universities in global Solid State Lighting (SSL) field.

The Business of ISA members have covered the whole SSL value chain of upstream, middle stream and downstream of global SSL industry such as epitaxy, packaging application, materials and equipment, design system integration and testing etc.

The currently ISA 83 members, representing more than 4000 individuals & organizations includes major players (such as Signify, Osram, Samsung, GE Lighting, Cree, Veeco, AIXTRON etc.). The output of which covers more than 70% that of global SSL industry.

The ISA Board of Advisers consists of leading experts and academic "Founder" level experts, such as the inventors of blue LED, yellow LED, Red LED, and OLED. Amongst Professor Shuji Nakamura, the Laureate of Nobel Prize in Physics in 2014, is the Co-Chair of ISA Board of Advisors (BOA) and Professor Hiroshi Amano, the Laureate of the Nobel Prize in Physics in 2014 is the member of ISA BOA.

The major works of ISA are: provide services to promote the development and application of global SSL, standardization, annually Global SSL Industry Report, annually SSL Awards, promote international, national and regional cooperation on SSL, etc.

The Mission of ISA

Cooperation with the global resources and efforts, ISA looks forward to fostering a more appropriate "eco-system" for the health development of the global SSL and its application. Echo the needs of the society with more added value services to ISA members. Strive to improve people's living and contribute a sustainable human society.

Global SSL Award for Outstanding Industry Development

Purpose and Significance

The award was established as decided by the ISA 12th Executive Member Meeting, which aims to promote the global SSL sustainable development by recognizing the industry organizations, project teams, industry leaders, institutions, etc. that have made outstanding contributions to the SSL development at regional/global levels within a certain period of time or historical period.

Qualification of the Application

Industry organizations, project teams, industry leaders, institutions, etc. in the field of SSL who meet above criteria are all qualified to apply. The application content which has won another ISA award before is not qualified to apply this award.

Criteria for Selection

Within a certain period of time or historical period, those who have made outstanding contributions at the regional or global level and have greater influence in R&D of SSL technology, products, SSL application, standard development, and lead the developments of the SSL industry etc.

Frequency and quantity Of Selection

This award is given annually and no more than 5 winners per year in principle. Otherwise, it will be decided by ISA Executive Member Meeting in case of any special needs. The ISA Executive Member Meeting reserves the right not to make an award in any year.



Global SSL Award for Outstanding Industry Development



Dr. Acharawan Chutarat

Biography

Dr. Acharawan Chutarat's core values focus on education, equality, well-being and better environment. She pursued a Bachelor Degree in Architecture, Master of Science in Lighting from Pennsylvania State University, and Ph.D. from MIT in Building Technology. While she was a Ph.D. student, she had a chance to work with William Lam in Boston, USA. Inspired by light and her former professors: Richark G. Mistrick and Craig A. Bernecker, she became a lighting educator and a researcher at School of Architecture and Design at King Mongkut's University of Technology Thonburi (KMUTT) believing that education is a powerful tool in achieving better human capacity and equality. She established the first master degree program in lighting design in Thailand in 2003. She helped to establish a distanced-learning program in lighting as a collaboration between Wismar University and KMUTT in 2013. She is the head of Design for Environmental and Sustainable Development Lab (D/E/S Lab) at KMUTT. She has been a guest lecturer for distanced-learning lighting design program at Wismar, Germany and an adjunct professor at Woxsen University, India. She is also a founder and a lighting designer at BioArchitek Co Ltd. She has been serving for many non-profit organizations such as an executive committee for Thai Illuminating Engineering Association (TIEA), a Board of Lux Pacifica, a secretary of Thai Green Building Foundation, a core member of Lighting Detectives Group. She has been organizing many trainings, workshops, seminars and conferences regarding lighting to educate community and to promote awareness in quality of good luminous environment. Her lectures are not only in Thailand but around the region such as Chile, Japan, Singapore, Sweden, Germany, India, Philippines,



Indonesia, Taiwan, Kazakhstan and China. She has been serving communities as a lighting expert for several local and international organizations such as Association of Siamese Architects, GIZ, Her Royal Highness Maha Chakri Sirindhorn Foundation, Ministry of Energy, Department of Highway, Electric Generating Authority of Thailand, Thai Industrial Standard Institute, Bangkok Metropolitan Administration, LEUKOS Journal of the IES as a reviewer in 2024, Virtual Lighting Design Community as a judge for LUFU (Lux Futurum 2024) and International Solid State Lighting Alliance (ISA) as a jury member for Global SSL Showcase Top 100 for 6 years.

Outstanding Contribution Brief

1. Lighting awareness and knowledge through education

Dr.Acharawan established the 1st international lighting design master degree program in Thailand in 2003. She continues to educate designers, students, stakeholders lighting design application in many forms such as training, workshop, conference, articles, exhibition for public and private sectors since 2002. It is hope that it has inspired younger generations to involve in making better luminous environment. At KMUTT, she invented a lighting dome or Solar Lab for hands on learning purpose based on experience working with William Lam. This supports better learning curve for students. Next step is to collaborate with Unilumin Company where she visited in in Shenzhen in August 2024 to integrate LED screen into the dome to mimic sky and to be used as immersive urban environment for students. It has been 23 years as a lighting educator. Current situation is that there are more than 200 lighting designers in Thailand, compared to around 10 designers back in 2003. She is a part of the success in lighting design industry in Thailand. The work of Thai lighting designers have been proven to be good value added to projects around Asian region.

2. Innovative luminance measurement tool for all

Her research has been involved in visual perception and preferences of LED CCT and luminance for roadway lighting. Research findings have been used as a guideline for the Department of Highway to write standards for LED road lighting that better fit for Thai eyes and preferences in comparing to HPS. A road lighting design and luminance L_{av} , uniformity U_0 , U_1 and disability glare measurement application tool call "Road Lighting Reality" has been created and validated from this research using photometer imaging light technique. The purpose is to create an affordable, accurate luminance measurement and road lighting standard evaluation tool on mobile phone for Department of Highway, integrating with their road database. The tool can also be accessed by all. Benefits of the tool is saving measurement time on site, saving budget in luminance measurement.





3. Policies and standards

As a result from serving for three main organizations: Association of Siamese Architects (ASA), Thai Illuminating Engineering Association (TIEA) and Thai Green Building Foundation, Dr. Acharawan has opportunity to connect lighting's best practices for Thailand's new Building Energy Code, especially on lower lighting power density where daylight integration and LED has potential to drive toward much lower energy consumption. She also contributed in lighting parts for Thai's Rating in Energy and Environmental Sustainability (TREES)'s New Construction V2 and Pensook (Well-being). Also her research on CCT and light level of LED for road lighting in Thailand for the Department of Highway have been used as a reference for its new guidelines. As TIEA committee, she has been a core contributing member in writing lighting design guidelines for interior and exterior Thai version.

4. Thai lighting industry support

Dr. Acharawan's professional practices at BioArchitek focuses on Lighting Innovation where she is a pioneer in using LED since more than 20 years in Thailand. There were challenges in many aspects such as availability of good products being made locally, life cycle cost, awareness in quality of LED and installation as well as potentials and trends in lighting design using LED. She together with her partner at BioArchitek have been developing new LED luminaire design with Thai manufactures for unavailable LED specifications in Thailand. Products can be used for other projects in Thailand and around the region. It is her mission to upgrade and upskill lighting industry in Thailand. As TIEA executive committee, TIEA has been supporting lighting related events, especially LED Expo, a major SSL event in Thailand every year as a partner and as a speaker from time to time for several years. This LED Expo has been financially supported by Electricity Generating Authority of Thailand (EGAT). She has been helping with training for the public under TIEA, KMUTT and BioArchitek. In addition to that, inhouse lighting trainings have been organized for manufacturers and design companies. Her responsibility this year for TIEA is to establish certified LED installer and to outreach more for stakeholders as well as to organize session for LED roadmap in Thailand. This is for safety, better quality and operation standards and reskilling Thai lighting contractor industry.

5. International lighting industry support

Dr. Acharawan serves as an official board member of Lux Pacifica, as a representative from Thailand. Lux Pacifica, established in 1989, is an international lighting conference focusing on lighting research and application to emphasize the importance of good lighting design. She organized the 7th Lux Pacifica in Bangkok in 2013. She also serves as a core member of Lighting Detectives Group. The Lighting Detectives is a non-profit group

dedicated to the study of lighting culture through practical methods, mainly by engaging in fieldwork. She organized "Bangkok Night Identity" as a part of Lighting Detectives activities involving local and international audiences in Bangkok in 2012. She co-organized an online workshop for Enlighten Asia 2021. As TIEA executive committee, TIEA helped together with CSA and ISA organizing Thailand International Forum on Solid State Lighting (SSL Thailand 2014) in Bangkok. She was a jury member for Global SSL Showcase Top 100 Award organized by International Solid State Lighting Alliance (ISA), receiving a recognition from ISA at its 10th anniversary celebration The Outstanding Contribution as a Jury Member of "Global SSL Showcase Top 100". She is a judge for LUFU (Lux Futurum 2024) organized by Virtual Lighting Design Community. She is also a technical reviewer for LEUKOS Journal of the IES.



Juries' Comments

- ◆ Has made a great contribution to the lighting industry in Thailand, regionally and internationally. Her impact is mainly in Thailand. Worked hard to develop lighting education in Thailand.
- ◆ Education is critically important for the lighting industry in this transitional era. Dr. Chaturat has made outstanding contributions at the national and international level.
- ◆ Her contributions in education on lighting in Thailand is well recognized and also many educational activities to promote solid state lighting in Asian region are very impressive.
- ◆ Ms. Acharawan Chaturat is an outstanding lighting technology leader in Thailand and the global lighting industry. The deep knowledge and brilliant education of Ms. Acharawan Chaturat are complemented by continuous development and the desire to educate students and form new knowledge about lighting technology.

Global SSL Award for Outstanding Industry Development



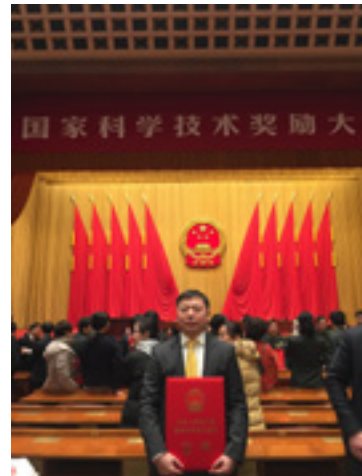
Dr. Wang Min

Biography

Dr. Wang Min, born in 1967, PhD from Zhejiang University, Professor-level Senior Engineer, recipient of the First Prize of the National Technological Invention Award in 2015, selected for the National Major Talent Program, recipient of the State Council Special Allowance. Currently serving as the part-time Vice Chairman of the Jiangxi Association for Science and Technology, Chairman of the Jiangxi Lighting Society, and Director of the National-Local Joint Engineering Research Center for Solid-State Light Sources.

Dr. Wang Min has dedicated nearly twenty years to the LED industry and is a leader in the commercialization of silicon substrate LED technology. In 2006, he co-founded LatticePower with National academician Jiang Fengyi, leading the team to achieve large-scale industrialization of silicon substrate LED technology ahead of anyone else globally and has established LatticePowr as a well-known brand for high-power LED light sources. Additionally, he founded several companies, including CECEP Latticelighting Technology and Luye Automotive Lighting, focusing on the development of a professional lighting industry chain centered around silicon substrate LED technology, thus forming a cluster for the silicon substrate LED industry.

Dr. Wang Min has always adhered to innovation-driven, conducted multiple national and provincial science and technology research projects, overcome a number of key technical problems in the field of silicon substrate LED technology, has more than 30 patents, and led the development of silicon substrate LED industry standards. Also, he won the LED industry "Ten leading figures", "Jiangxi Province ecological civilization construction advanced individual", "Jiangxi Province model worker", Jiangxi Province's fourth "Ten Jinggang son" and other honorary titles.



Outstanding Contribution Brief

1. Adheres to innovation-driven, the world's first to achieve the industrialization of GaN-on-Si technology

Dr. Wang Min is focusing on innovation and industrialization of silicon substrate LED technology. In 2006, LatticePower began to explore the industrialization of this technology. On the basis of bringing in venture capital and talents, he and his team were constantly improving the technical process. In 2009, they achieved low power silicon LED chips volume production and large scale production of high power silicon LED chips in 2012 which was selected as "Annual news event of 2012" by ISA. In 2014, US department of energy Manufacturing Roadmap Solid-State Lighting Research and Development wrote "LatticePowr was an adopter of this technology and commenced volume production of GaN-on-Si die in June 2012". In 2016, "Silicon substrate high light efficiency GaN blue light-emitting diode" project won the first prize of the 2015 National Technological Invention Award.



Based on blue LED, LatticePower continually expand to UVA LED, green LED, red LED, and firstly breakthrough 12-inch silicon substrate tricolor Micro LED epitaxy key technology in the world. Meanwhile, based on silicon substrate GaN technology, LatticePower develop silicon substrate GaN HEMT device (High Electron Mobility Transistor) technology simultaneously with the world.

2. Promotes the development of the silicon substrate LED industry chain and contributes a new technical path reference for the development of the global semiconductor lighting industry

In order to bring new products to the market, Mr. Wang Min started the whole industrial chain layout with the "technology + capital" model. He successively founded LatticePower Semiconductor and Lattice Bright these two subsidiaries, and LatticePower switched strategy from a single LED chip company to an IDM company with LED chips, packaging and module. At the same time, focusing on the application advantages of silicon substrate LED technology, He founded some application and supporting companies, for example, in 2009 CECEP LatticeLight which has become an active promoter of silicon substrate LED technology in street lights, tunnel lights and other applications, in 2015 Luye automotive lighting company, in 2018 merged a listed company named Changfang Group which is an advance portable lighting brand in China, and in 2020 hatched a ceramic substrate company, etc. Through more than ten years of building and integration, taken LatticePower as the lead, China's silicon substrate LED industry chain has a relative competitive advantage, a certain degree of economies of scale and an obvious effects of the cluster, which contributing a new technical path reference for the development of global semiconductor lighting.



3. Promotes the formation of silicon substrate production base and contributes to ensuring the global semiconductor lighting supply chain



Dr. Wang Min has the courage to break through the "Red Sea" market, actively exploits the mobile phone flash, automotive lighting, portable lighting, aviation lighting and other "blue ocean" market, achieves the large-scale application of silicon substrate LED technology products from general lighting to professional lighting and beyond lighting. The success of the large-scale production and commercial use of silicon substrate LED technology has contributed to the diversification of the development path of the global semiconductor lighting industry, and has also changed the technological competition pattern to a certain extent. At the same time, Mr. Wang Min has served as the chairman of Jiangxi LED Industry Alliance for many years, and cooperated with the local government to cultivate and introduce the whole LED industry chain enterprises, driving Jiangxi to become one of the largest LED chips and packaging production bases in the global. After the global outbreak of the new coronavirus epidemic, LatticePower has overcome all difficulties to stabilize and ensure supply for overseas customers such as Samsung, and has made positive contributions to the stability of the global LED supply chain.



4. Actively carry out EMC projects, and contributes to energy saving, emission reduction and low-carbon development

Dr. Wang Min always adheres to the concept of innovation-driven sustainable development, opens up the whole industry chain technology development and collaboration, constantly promotes the innovation and iteration of technology and products. He led Lattice lighting team proposing the concept of modular street lamps and achieving production and application firstly in the industry, and independently develops the urban smart lighting management platform, operating more than 50 EMC projects of LED street and tunnel lights in major cities in China. From 2009 to the full operation period, those EMC projects will save more than 2.2 billion KWH of electricity and reduce 2.18 million tons of carbon dioxide emissions, which contributes to the realization of "carbon peak" and "carbon standard" and helps the world's green and low-carbon development.

Juries' Comments

- ◆ Outstanding developments made by LatticePower and its related entities over the relatively short period of less than two decades involving significant innovation.
- ◆ The development of alternative approaches to lighting technology is very important. Wang Min has challenged the dominance of sapphire substrates and led research to use silicon substrates. He has built companies that have applied this technology to many different applications.
- ◆ His contributions in technical innovations of LED chip technologies through leading Lattice Power Co. are very impressive.
- ◆ A brilliant example of the implementation of the concept of innovative development of "Technology + capital". Mr. WANG Min organized research and implementation in one of the promising areas of development of LED technologies on silicon substrates for GaN-on-Silicon and UV LED. This allows you to reduce the cost of production of LED chips and develop new areas of semiconductor production.

Global SSL Award for Outstanding Industry Development



Mr. Jin Conglong

Biography

Jin Conglong was born in 1976 and is currently a member of the Standing Committee of the Nanchang Municipal People's Congress. He is also an A-level talent in Shenzhen and holds over 30 invention patents. Mr. Jin Conglong joined Shenzhen MTC Co., Ltd. in 2012 as the Vice President of the company. Currently he is President/CEO of SMTC, which the most important sector in the LED industry of AMTC. He has over 10 years of rich experience in electronic information manufacturing management and marketing, focusing on the integration and management innovation of informatization, automation, and standardization. Having a solid theoretical foundation and rich practical experience in the field of LED semiconductor lighting chips and their packaging, possessing keen judgment and unique insights into the future development and trends of the industry. Fully responsible for the strategic development, operational management, technological innovation, and market expansion of the LED industry chain of AMTC, and serving as the decision-maker for the company's strategic development.

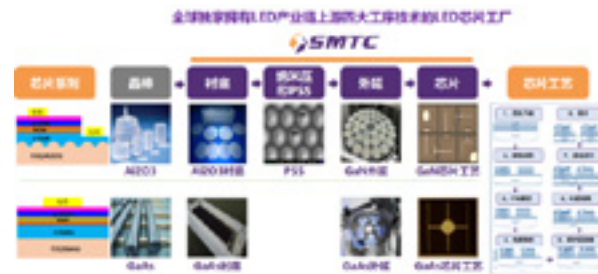
Mr. Jin Conglong led SMTC to become the world's exclusive company with four major technologies and production capabilities in the entire LED chip industry chain. With a forward-looking vision, the company continued to deepen its research and development in the field of compound semiconductors, gathered R&D strength in the semiconductor industry, actively promoted the digital and intelligent transformation and upgrading of the industry, and empowered high-quality development with technological innovation. In just five years, it has built the most automated LED chip production line in the industry, with the highest single factory capacity and the lowest cost, and has unique competitiveness, subverting the traditional production mode of the industry. Through continuous innovation and lean management, SMTC has doubled its revenue and profits in the past three years, with a production capacity and scale of 1.1 million pieces wafer per month (4 inches), ranking first in the world. It has created the miracle of the semiconductor LED chip industry's optimal cost, fastest mass production and profitability, and achieved high-quality leapfrog development for SMTC.

Outstanding Contribution Brief

1. Innovation leads, deeply cultivates technology, and builds a layout of the entire LED industry chain

Mr. Jin Conglong led SMTC to integrate the core industry chain technology upstream of LED chips, forming an independent manufacturing capability for the entire process of "sapphire wafer → patterned substrate PSS → LED epitaxial wafer → LED chip". This is the first of its kind in China, breaking the situation of single technology and regional dispersion, and achieving large-scale operation.

Mr. Jin Conglong focuses on talent cultivation and technological innovation. By attracting high technical talents from domestic and foreign industries, he promotes innovation among all members of the team and builds multiple national and provincial innovation platforms. In just three years, he has applied for more than 1200 technology invention patents, including patents in substrate, epitaxial, chip technology, as well as advanced technology products such as Mini/Micro LED, high-efficiency, high-voltage, and power inverter. The acquisition of these patents has enabled SMTC to be ranked fifth among the top 50 innovative giants in the field of specialization, precision, novelty, and innovation, providing strong technical support for Chinese LED chip companies to compete in the global market.



2. Lean management, cost reduction and efficiency improvement, and continuous promotion of industrial digital transformation

Mr. Jin Conglong advocates the concept of refined management and cost control, actively promotes the intelligent manufacturing and digital transformation of SMTC, builds world-class and internationally leading intelligent and digital production equipment and systems, creates a globally leading digital intelligent LED chip production base, realizes automation, lean, digital and intelligent management of the production process, greatly improves production efficiency and product yield, while reducing energy consumption and pollution, realizing green manufacturing, and making important contributions to enhancing the international competitiveness of China's semiconductor lighting industry.

Under the leadership of Mr. Jin Conglong, SMTC has continuously expanded its production capacity and invested 10 billion yuan to build LED epitaxial and chip projects, red and yellow LED chip projects, and Mini/Micro LED chip research and development and production projects, becoming the world's largest LED chip supplier in terms of production capacity. By purchasing advanced production equipment and optimizing production processes, SMTC's monthly production capacity has increased from hundreds of thousands of chips to over 1.1 million chips (4 inches), meeting the market's demand for high-quality LED chips.

His work not only drives the coordinated development of upstream and downstream enterprises in the semiconductor lighting industry chain, but also stimulates the technological innovation vitality of the entire industry and promotes the optimization and upgrading of the industrial structure.



Jin Conglong was on an interview of CCTV.

3. Strategic leadership, precise layout, leading the development of the global semiconductor lighting industry

Mr. Jin Conglong has a keen insight into the market trends of the semiconductor lighting industry. He leads SMTC to become the world's exclusive company with four major technologies and production capabilities in the entire LED chip industry chain. With a forward-looking vision, he laid out a strategic plan, gathered the R&D strength of the semiconductor industry, actively promoted the digital and intelligent transformation and upgrading of the industry, empowered high-quality development with technological innovation, and based on the traditional lighting market. At the same time, he expanded into high-end lighting, TV backlight, Mini RGB direct display, backlight and other fields, forming a diversified market layout.



SMTC started production at the end of 2019 and has achieved rapid growth in production capacity from 0 to 1.1 million wafers in less than 5 years, becoming a leader in the LED chips industry. SMTC made its first profit in 2021 and steadily increased its net profit to 343 million yuan by 2023, leading the industry in production, sales, and profit margins. As a rising star in the LED chip industry, the company's CEO Jin Conglong is known as a "Chaser of light". Fearless of increasingly fierce market competition, actively seeking change, improving quality control, applying Chinese chips to the world, creating the world's first "little giant" in the chip field with single unit production, and winning the China LED Pioneer Award for Outstanding Contribution in Ten Years.

Mr. Jin Conglong also focuses on the integration and optimization of the global supply chain, and has established long-term and stable cooperative relationships with many well-known domestic and foreign enterprises. Through communication and cooperation with international peers, as well as cooperation with international clients such as Samsung and Seoul Semiconductor, we actively brought in advanced international technologies, while pushing the innovative achievements of China's LED industry to the world stage, injecting new vitality into the development of the global semiconductor lighting industry. His work not only elevated the international status of China's semiconductor lighting industry, but also promoted the common progress and prosperity of global semiconductor lighting technology.

Juries' Comments

- ◆ Amazing achievements in the development of Zhaochi Semiconductor into a major SSL company based on research and development.
- ◆ Jin Conglong has been very successful in building the world's largest manufacturer of LEDs and making a significant contribution to the global supply of LEDs at affordable prices.
- ◆ His leadership in SMTC and technical contributions for LED technologies are very impressive.
- ◆ The full-fledged development of the national LED lighting industry is impossible without its own mass production of semiconductor structures and chips for LEDs. Mr. JIN Conglong has a great achievement in the creation and development of CMTS production. Such production creates a powerful and independent foundation of the lighting industry in China.

Global SSL Award for Outstanding Industry Development



Mr. Santosh Agnihotri

Biography

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, a CK Birla group company in India. I have engineering and MBA/ M. Phil (Management) background, driving technical operations and compliances at group level.



Outstanding Contribution Brief

Contributions to the industry are mentioned as below:

- Chairperson of Electric Lamps and Components Manufacturing Association (ELCOMA) Technical committee, which represents all major lighting brands in India.
- Technical Committee member in Bureau of Energy Efficiency, Ministry of Power.
- BIS committee member for ETD23, ETD43, ETD49 on behalf of ELCOMA (Lighting Association).
- Participating in many Standard formulation committees for compliances with BIS (Bureau of Indian Standards)
- 20+ Articles published in Illumination (Lighting Industry Magazine) on different topics like standards and regulations, Star labelling Compliances, surveillance and check testing, e-waste regulations, future of DOB technology, sustainability beyond lighting 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.
- First in India to have the approval from BEE, (Ministry of Power) for five-star 9W LED Bulb.
- Two times National award winner for energy conservation (NECA Award) our 9W Self Ballasted LED Bulb awarded as the most energy efficient equipment of the year 2021.



Juries' Comments

- ◆ Lifetime involvement in Indian standardization, compliance testing and product development.
- ◆ Santosh has made major contributions to the development of the lighting industry in India through his role with ELCOMA, his support of the Bureaus of Energy Efficiency and Indian Standards and his articles in the Illumination magazine.
- ◆ His contribution for SSL in committees to promote SSL many years in India is well recognized, but not enough information to make further judgement.
- ◆ Standardization and technical regulation for such a huge market as India is a very difficult task. Mr. Santosh Agnihotri has done an outstanding job in this direction.

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Mr. Jeremiah Mathobela

Biography

Mr. Jeremiah Mathobela completed a master's degree in electrical engineering with the University of the Witwatersrand in 2019. He worked in various sectors of the industry ranging from government departments, Municipality, National utility, state owned institutions and private companies in the span of 17 years work experience. He has participated in various workgroups and care groups where resolving industry challenges and developments of new technologies were championed. He is currently registered with ECSA as a professional technologist since the year 2013.

He is responsible for all the Electrotechnical Business Units BU's at the South African Bureau Standards (SABS). The BU's include several testing laboratories like Lighting technology, Appliances, Electromagnetic compatibility, High-voltage, short-circuit, Rotating Machines and explosion prevention technologies. These are around conformity assessment in support of those industries and certification schemes.

Part of his work include a contribution to refurbishment of the lighting lab and equipping it for solid state lighting. He also represents South Africa in the BRICS SSL workgroup and presented the development status in South Africa.

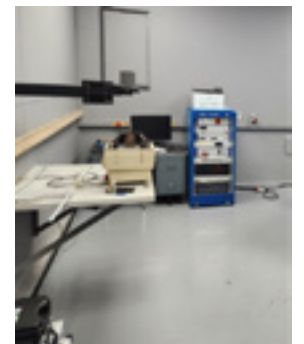


Outstanding Contribution Brief

South Africa lacks capability and capacity to test Solid State Lighting (SSL) systems and components. The lighting industry stakeholders and the National Regulator for Compulsory Specifications have been raising concerns and requesting that the gap be closed. This is because the verification of the performance for imported lighting systems could not be confirmed in the country. The country also intended to improve local production of the lighting systems.

Mr. Jeremiah Mathobela has managed a project to get funding for the new integrating sphere and the goniometer to test solid state systems. The first part of this project has seen commissioning of the sphere and starting the accreditation of that section of the laboratory. The capability for testing is one of it's kind in South Africa and since commissioned it has started supporting developers of lighting systems in the country with conformity testing. The laboratory has completed training of 4 x test officers in testing of SSL and continues to absorb interns to expand testing capability in the country.

The SADC region is in discussion to determine minimum energy and luminous flux performance levels for lighting systems which will move more than 80% of lighting towards SSL technologies. The completion of the integrating sphere has given the region the capability to verify the performance of SSLs, and which is about to replace all traditional lighting systems.



Juries' Comments

- ◆ Outstanding contribution to photometry in RSA (and the region) by improving the test facilities necessary for Standards compliance testing for designers, specifiers, manufacturers and importers.
- ◆ Jeremiah has made an excellent start in setting up a national laboratory to make measurements that are critical to maintaining lighting standards in southern Africa. This is part of a broad set of important responsibilities. From one point of view, it would be good to wait until the success of this venture is apparent or further capabilities are added to their laboratory. On the other hand, it would be good to encourage him in his work and show that the international community is grateful for his efforts.
- ◆ His contribution to initiate the testing lab and program for SSL products in South Africa is recognized, but it seems the contribution was limited within the country.
- ◆ For the national markets of Africa, the task of verifying the technical parameters of imported products is very important. Mr. Jeremiah Mathobela's work on the development of the laboratory for the control of lighting parameters contributes not only to improving the quality of imported products sold and protecting the interests of consumers, but also helps to develop the national production of lighting equipment in the Republic of South Africa.



Evgeny Dolin

Past Director General of LED and LED-based Systems Manufacturer's Non-profit Partnership (NPRPSS) of Russia

Global SSL Award for Outstanding Industry Development

2024



Jury Panel



Guoqi Zhang

Professor of Delft University of Technology
Co-Chair of ISA Board of Advisors



Isac Roizenblatt

Technical Director of the Brazilian Association of the Lighting Industry (ABILUX)
Member of ISA Board of Advisors



Ling Wu

President of China Advanced Semiconductor Industry Innovation Alliance (CASA)
Member of ISA Council of Management



Norman Bardsley

CEO of Bardsley Consulting
Chief Analyst of ISA



Shyam Sujan

Past Secretary General of the Electric Lamp and Component Manufacturers Association of India (ELCOMA)



Warren Julian

Emeritus Professor, University of Sydney
Past President of Illuminating Engineering Society of Australia and New Zealand (IESANZ)
Member of ISA Council of Management



Yoshi Ohno

PhD., NIST Fellow, National Institute of Standards and Technology, USA
Past president of CIE
Member of ISA Board of Advisors
Chairman of ISA TCS



The winners of AOID 2023



Mr. Isac Roizenblatt



Mr. Jan W. Denneman



Prof. Jiangen Pan