CIOE 2019 (The 21st China International Optoelectronic Exposition) successfully ended at Shenzhen Convention & Exhibition Center on September 7, 2019 and again facilitated business exchange in the global optoelectronics industry. CIOE 2019 covered 6 sub expos including Optical Communications Expo, Lasers Technology & Intelligent Manufacturing Expo, Infrared Applications Expo, Precision Optics, Lens & Camera Module Expo, Optoelectronic Sensor Expo, and Photonics Innovation Pavilion to present thousands of latest technologies and products in optoelectronics industry, exploring the opportunities and possibilities of the industry.

Serving 21 years for optoelectronics industry, CIOE has made its reputation as world’s leading optoelectronic exhibition. CIOE 2019 again achieved new records in exhibition area and the number of exhibitors and visitors. The show has not only become more international, but also provides more value to each participant.

78,709 professional visitors from 83 countries and regions, 15.2% increase compared to 2018
189,311 attendance in total, 15.3% increase compared to 2018
Overseas visitors increased to 3,649

9 Application Industries
- Optical Communication, Information Processing & Storage
- Advanced Manufacturing
- Sensing & Measurement
- Semiconductor Processing
- Lighting & Display
- Consumer Electronics
- Energy
- Medical
- Defense & Security

Exhibition Area
115,000M²
Visitors
78,709
Attendance
189,311
Optoelectronics Brands
3,922
Exhibitors
1,905
Buyer Groups
462
Visitor Analysis

Visitor Breakdown by Industry

- Optical Communication, Information Processing / Storage: 39.87%
- Advanced Manufacturing: 17.53%
- Consumer Electronics: 14.45%
- Semiconductor Manufacturing / Processing: 10.21%
- Sensing / Measurement: 6.25%
- Defense / Security: 4.21%
- Medical: 3.35%
- Lighting / Display: 2.11%
- Energy: 2.02%

Visitor Breakdown by Job Function

- Top Management: 22.18%
- Purchasing / Supply Chain Management: 21.31%
- R&D: 20.86%
- Manufacturing / Processing: 11.72%
- Sales: 9.11%
- Marketing: 7.32%
- Quality Management: 6.42%
- Others: 1.08%

Visiting Purpose

- Collecting Information: 31.00%
- Looking for New Products / Technologies: 23.69%
- Purchasing: 17.25%
- Looking for Agents and other Cooperation Opportunities: 10.97%
- Maintain / Explore Business Relationship: 9.40%
- Attending Conferences: 5.80%
- Preparing for the Participation of CIOE 2020: 1.74%
- Others: 0.15%
## Visitor Breakdown by 9 Application Industries

### Optical Communication, Information Processing and Storage
- Components / Module: 30.21%
- Equipment Provider: 19.05%
- Optical Fiber and Cable: 16.35%
- Telecom Operator: 11.21%
- Internet Service Provider: 9.87%
- System Integration / Project Contractor: 7.29%
- Materials / Accessories: 5.63%
- Others: 0.39%

### Advanced Manufacturing
- Optical Materials and Components: 22.76%
- Intelligent Equipment / Robots: 16.26%
- Laser Processing Equipment: 13.27%
- Machine Vision: 12.24%
- Optical Processing Equipment: 11.64%
- Automotive OEMs: 8.01%
- Industrial Lasers: 7.21%
- Hardware Mold: 5.67%
- 3D Printing: 2.15%
- Others: 0.79%

### Consumer Electronics
- Cell Phone: 22.70%
- Video / Digital Electronic Products: 17.25%
- Automotive Electronics: 16.42%
- Tablet PC / Computer / Peripherals: 10.26%
- AR/VR: 8.76%
- Wearable Electronics: 8.65%
- Household Appliances: 7.97%
- Robots / Drones: 7.10%
- Others: 0.89%

### Energy
- Lithium Battery: 27.85%
- Power Network: 25.98%
- Solar Energy: 19.74%
- Petroleum and Petrochemical: 14.34%
- Coal Industry: 10.74%
- Others: 1.35%

### Defense and Security
- Monitor Equipment and System: 43.28%
- Infrared Products: 18.33%
- Aviation / Aerospace: 18.24%
- Fire Fighting / Police: 11.34%
- Ocean / Shipping: 7.33%
- Others: 1.48%

### Semiconductor Processing and Manufacturing
- Semiconductor Equipment: 24.14%
- Semiconductor Materials: 21.93%
- Chip Manufacturing: 19.80%
- Packaging and Test: 19.66%
- IC Design: 12.96%
- Others: 1.51%

### Medical
- Biomedical: 42.19%
- Medical Imaging: 39.44%
- Beauty / Health: 16.65%
- Others: 1.72%

### Lighting and Display
- LED Packing / Lighting: 48.63%
- LED Display: 27.35%
- Touch Screen / Panel Display: 22.30%
- Others: 1.72%

### Sensing and Measurement
- Testing and Measuring Equipment: 43.50%
- Sensor: 41.30%
- Internet of Things: 13.87%
- Others: 1.33%
### Optical Communications Expo

- **Optical Communication System Equipment**: 21.32%
- **Components (Active & Passive Components)**: 19.17%
- **Optical Fibers & Cables, Optical Fiber Sensors**: 14.31%
- **Optical Device Production Equipment**: 11.47%
- **Data Center**: 10.73%
- **Optical Communication Test Equipment**: 9.81%
- **Cloud Computing & Big Data**: 7.14%
- **Broadcasting Optical Transmission Equipment**: 5.65%
- **Others**: 0.40%

### Optical Communication System Equipment

- **Optical Materials**: 15.62%
- **Optical Components**: 15.00%
- **Optical Imaging Measurement & Optical Equipment**: 13.56%
- **Optical Coding Technology & Equipment**: 11.66%
- **Optical Processing Equipment**: 11.56%
- **Machine Vision System and Applications**: 9.32%
- **Sapphire and Touch Screen Manufacturing**: 4.44%
- **Others**: 0.78%

### Data Center Pavilion

- **Cloud Computing & Big Data**: 33.23%
- **Infrastructure**: 25.40%
- **ICT System Equipment**: 20.22%
- **IDC**: 17.95%
- **Others**: 3.20%

### Infrared Applications Expo

- **Infrared Devices and Devices**: 34.75%
- **Infrared Equipment and Applications**: 31.84%
- **Thz Imaging and Monitoring**: 16.81%
- **UV Technology**: 14.46%
- **Others**: 2.14%

### Photonics Innovation Pavilion

- **Photonics Chips**: 13.86%
- **Optoelectronic Display and Module**: 11.84%
- **Artificial Intelligence**: 11.36%
- **Internet of Things**: 11.11%
- **Robots**: 9.01%
- **Medical Imaging**: 8.24%
- **IC and Integrated Photonics**: 7.63%
- **Biophotonics**: 6.88%
- **Healthcare Photonics**: 6.45%
- **Big Data and Cloud Computing**: 5.29%
- **Smart Healthcare and Endowment**: 4.88%
- **Military-Civilian Integration**: 3.77%
- **Others**: 0.68%
Increasing Global Attentions to China!

Overseas Visitor Analysis

Overseas Visitors from 83 Countries and Regions

3,649 Visitors

17,372 Attendance

Top 10 Overseas Countries and Regions

1. Hong Kong (SAR) 21.51%
2. Taiwan 20.61%
3. Korea 10.63%
4. Japan 8.30%
5. U.S.A. 4.80%
6. India 4.08%
7. Russia 3.10%
8. Singapore 2.66%
9. Germany 2.27%
10. Brazil 1.67%

Overseas Visitor Breakdown by Region

- Asia (Excl. Taiwan, Hong Kong, Macau) 36.09%
- Europe 11.19%
- North America 6.28%
- South America 2.35%
- Africa 0.65%
- Oceania 0.88%

Overseas Visitors from 83 Countries and Regions
VIP Buyer Program

CIOE commits its effort to build up the business match-making platform for connecting buyers and sellers, and future business partners with efficiency and accuracy. At CIOE exhibition, lots of business, partners and even acquisition were connected by this program.

350+
Exhibitors

542
Match-makings

1,732
VIP Buyers

142%
Increase
Visitor Group

No. of Visitor Groups: 462

Associations, enterprises, scientific institutes, universities and other communities from various optoelectronics application fields showed their strong interest and support toward CIOE 2019. 462 visiting groups consisting of end users were organized to source products and to have technical exchanges.

Visitor Groups: (listed in no particular order)

<table>
<thead>
<tr>
<th>Visitor Group</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Communication, Information Processing &amp; Storage</td>
<td>Huawei, ZTE, Nokia, SPDI, INSPUR, NEC…</td>
</tr>
<tr>
<td>Advanced Manufacturing</td>
<td>BYD AUTO, UBTECH, GAC R&amp;D Center, Nissan, Pony.ai, HAN’S LASER…</td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>OnePlus, VIVO, TRANSSION, XTC, HSAE, GOODiX, IQIYI Smart…</td>
</tr>
<tr>
<td>Defense / Security</td>
<td>Infinova, Wanjiaan, SUNELL, Dali Technology…</td>
</tr>
<tr>
<td>Semiconductor Processing / Energy</td>
<td>FOXCONN, Sanchips, Broadcom, VITAL, NPIC, BAK, SUNWODA…</td>
</tr>
<tr>
<td>Medical</td>
<td>BGI, mindray, SonoScape, Tencent…</td>
</tr>
<tr>
<td>Lighting / Display</td>
<td>OPPLE, LEDMAN, OSRAM…</td>
</tr>
<tr>
<td>Institutes / Universities</td>
<td>NORLA INSTITUTE OF TECHNICAL PHYSICS, Shenzhen University, Dongguan University of Technology, SYSU, Southern University of Science and Technology…</td>
</tr>
</tbody>
</table>
We work for jewelry processing and we have gained a lot of new ideas at CIOE 2019. CIOE helps us to develop and expand our business. As we plan to expand the company’s products and production lines, we need to purchase ultrafast pulse lasers, nano imprinters, nano gold glass, and laser direct writing lithography machines. We have gained lots of valuable experiences from this exhibition.

--- Mr. Huang, GoldWay, MFR

Thanks to the detailed visitor guide and road maps for applications, we can identify our target products and exhibitors. The onsite visitor service is also very helpful. We are very grateful to the organizers for their arrangement.

--- Mr. Wang, Regional Sourcing, Volkswagen Group China

Congratulations on the success of CIOE 2019. Highly appreciate for the organizer’s hospitality and support to our company at this exhibition. This year, CIOE is excellent as usual, providing a mutual exchanging platform for enterprises and peers from optoelectronics industry. CIOE has not only cutting-edge technology forums, but also has product demo and interactive communication platforms. Thanks to the organizer! Bless CIOE! We will see you next year at the new venue!

--- Mr. Huang, Director, Fujian Post and Telecom Planning and Designing Institute

Increasing visitor satisfaction and gaining global attention

We are surprised to find so many companies and products in just a few days. Especially, there are many innovative AR/VR products. We also met many senior technicians at the show. At the same time, it enriches our innovative ideas. Wish CIOE have a new start at new venue.

--- Ms. Zheng, Optical Engineer, Endoscopy System Department, SonoScape

It’s my first time at CIOE. We are surprised to find so many companies and products in just a few days. Especially, there are many innovative AR/VR products. We also met many senior technicians at the show. At the same time, it enriches our innovative ideas. Wish CIOE have a new start at new venue.

--- Mr. Liao, Senior Researcher, Tencent Artificial Intelligent Laboratory

I have attended CIOE for two or three years, and I can still get different information every time. I can collect industry information without going abroad. CIOE deserves to be known as the leading Optoelectronics exposition in China. Next year, CIOE will move to a larger exhibition center, and I hope CIOE can get larger and cover more product categories.

--- Mr. Peng, Pre-research Expert, VIVO

Visitors are willing to participate in CIOE 2020

Visitors will recommend CIOE to friends or colleagues

Visitors are satisfied with CIOE 2019’s exhibition organization

What did our visitors say?
Exhibitors are satisfied with overall exhibiting experience in CIOE 2019

91.5%
Exhibitors are willing to participate in CIOE 2020

92.2%
Exhibitors will recommend CIOE to peers or industry partners

91.1%

1,905 exhibitors from 38 countries and regions

7 International and Regional Pavilions

- Denmark
- Canada
- U.S.A.
- Germany
- Japan
- Korea
- Taiwan

1905 Exhibitors

3922 Optoelectronics Brands

31.7% Overseas Exhibitors (603)

33.2% Overseas Brands (1303)
### What did our exhibitors say?

<table>
<thead>
<tr>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have exhibited at CIOE for 10 years and witnessed the development of optoelectronics industry. Moving to the new venue next year will become a milestone in the history of CIOE. We are very grateful to CIOE for providing more opportunities to with the industry to communicate, interconnect and develop. Wish CIOE better and better.</td>
<td>Wang Yi, Senior Business Development Manager, Qingdao Trumpf Technology Co., Ltd.</td>
</tr>
<tr>
<td>CIOE will move to the new exhibition center next year, upgrading the size and facilities. We hope that in a larger stage and better platform, optoelectronics industry in China and Shenzhen will flourish. Researchers like us would have a larger stage to present our achievements.</td>
<td>Lv Jiancheng, President, Shenzhen Institutes of Advanced Technology</td>
</tr>
<tr>
<td>We wish we could have exhibit at CIOE earlier. We have found a lot of business opportunities at this exhibition and met many customers. CIOE will move to the new exhibition hall next year – Shenzhen World Exhibition and Convention Center. We are looking forward to having CIOE’s support in the new facilities. With the development of our products and the further development of the sensor market, we hope to find more potential customers and friends at CIOE 2020 to explore more business opportunities.</td>
<td>Liu Yang, CEO, OPNOUS</td>
</tr>
<tr>
<td>SCHOTT has been participating in the CIOE for more than 10 years. Every year, SCHOTT and other departments of the Group have booths at the Precision Optics, Lens and Camera Module Expo and Optical Communication Expo concurrently. CIOE is very professional in the field of optics and optical communication. You can meet many of the world’s leading companies and industry professionals at this exhibition and can also find many of the advanced materials, technologies, equipment, manufacturers, and even some solutions. We believe that CIOE will continue to maintain high quality service after moving to the new exhibition hall next year. SCHOTT will also continue to exhibit and give our support to CIOE.</td>
<td>Kevin, Marketing Director, Asia-Pacific Augmented Reality Business, SCHOTT</td>
</tr>
<tr>
<td>Wish CIOE be better and prosperous. At the same time, hope the development of infrared thermal imaging industry will become more vigorous and all peers in the industry can find their right position and have a better development in the future. Hikvision hopes to collaborate with colleagues in the industry to achieve a win-win situation and grow together.</td>
<td>Yao Jing, Marketing Director, Hikvision</td>
</tr>
<tr>
<td>In the last decade, InnoLight Technology has grown up with CIOE step by step. Now, CIOE has become one of the most influential events in the global optical communication industry. The exhibition area will continue to expand in the new venue next year. Wish CIOE getting better and better in the bigger venue and InnoLight can also have more opportunities to communicate with peers at CIOE.</td>
<td>Liu Sheng, General Manager, InnoLight Technology</td>
</tr>
</tbody>
</table>
CIOE is not only an exhibiting platform for new products and technologies, but also a communication platform for professionals in the optoelectronics industry and its applications to have an in-depth communication and discussion. The concurrent China International Optoelectronic Conference (CIOEC) organized 68 forums to cover the hottest topics of optoelectronics in academic, industry and applications. Among them 12 forums provided simultaneous interpretation services for English and Chinese languages. More than 800 presentations were presented. Over 13,700 professionals joined CIOEC to discuss the latest market movements, technical trends and to explore the future of the industry together.
### Optical Communication Forums

<table>
<thead>
<tr>
<th>Event</th>
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<tbody>
<tr>
<td>5G Era Optical Communication Industry Transformation and Application Innovation Development Forum</td>
</tr>
<tr>
<td>Data Center Optical Interconnection Technology Summit</td>
</tr>
<tr>
<td>6th Global Optical Intelligent-Manufacturing Forum (Shenzhen)</td>
</tr>
<tr>
<td>Optoelectronic Devices and Integration Technology Development Forum</td>
</tr>
<tr>
<td>Belt and Road &amp; Bay Area Cooperation Summit</td>
</tr>
</tbody>
</table>

**Experts from China Mobile, China Telecom and China Unicom, top equipment vendors and system integrators shared their valuable insights on the topics like, 5G, Data Center and IoT.**

### Optics Forums

<table>
<thead>
<tr>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>&quot;Digital China&quot; and Next Generation Data Center Optical Interconnection Technical Forum</td>
</tr>
<tr>
<td>China Telecom - Development and Application Forum of Optical Access Network in Gigabit Network Era</td>
</tr>
<tr>
<td>China Mobile &quot;Towards the Cloud vOLT, Leading the Gigabit New Era&quot; Forum</td>
</tr>
<tr>
<td>Green Data Center Innovation Forum</td>
</tr>
<tr>
<td>Asia Pacific Block Chain and IoT Application Forum</td>
</tr>
</tbody>
</table>

Covering the entire supply chain of optics industry, the forum invited professors and executives to present the industry hotspots and their solutions in solving technical difficulties. Research institutes like CIOMP, Germany Optic Institute, IOC and leading enterprises such as Sunny Optical Technology and ZEISS participated.

<table>
<thead>
<tr>
<th>Event</th>
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<tbody>
<tr>
<td>2,041 Attendees</td>
</tr>
<tr>
<td>6th Global Optical Intelligent-Manufacturing Forum (Shenzhen)</td>
</tr>
<tr>
<td>Hyperspectral Imaging on Industrial Inspection Seminar</td>
</tr>
<tr>
<td>2019 Shenzhen Sapphire &amp; Compound Semiconductor &amp; Optoelectronic Crystal Summit</td>
</tr>
</tbody>
</table>

Connecting you to the future of optoelectronics
Professionals from US, Germany, France, Australia and Russia gathered to discuss the latest updates and breakthroughs on advanced manufacturing, ultrafast laser micro-nano technology, automobile, and new applications in 3C manufacturing, with 1,500+ peers participated.

Worldwide infrared industry institutes, labs, leading companies, and analysis organizations discussed the topics covering infrared technologies, applications, materials and devices on infrared detection technologies, THz technologies, etc.
Encouraged by five consecutive years of successful forums, CIOE collaborated with Yole Développement to organize 4 different forums. And CIOE co-hosted industry events with EPIC and LightCounting.

- The 1st Executive Forum on Silicon Photonics
- The 2nd Executive LiDAR for Automotive Forum
- The 2nd Executive Forum on 3D Sensing for Consumer
- The 4th Executive Infrared Imaging Forum
- EPIC TechWatch
- LightCounting: Sharing on Overseas Service Providers
CIOE organized Optoelectronics+ conference series to discuss the applications and solutions of optoelectronics technologies in emerging fields. 13 forum topics from industry such as automotive, robots, intelligent terminal, machine vision, AI security, medical, AR/VR etc.

5G + AIOT Technology Summit
AR/VR Optical Application Summit Forum
The 2nd Intelligent Driving Technology Summit
The 27th MEMS Seminar: Machine Vision and Industrial Detection
2019 Robotic and Intelligent Systems Forum - Machine Vision’s Technologies and Industrial Applications
AI and Security Industry Forum - the Implementation of Intelligent Security
2019 Military and Civilian Dual-usage Optoelectronics Technology Summit
Vehicle-mounted Cameras Imaging Quality Assessment Seminar

4,537 Attendees
Stay Close with Target Audience

CIOE Wechat Webinar

The CIOE Wechat Webinar is a platform sharing trends and technologies of optoelectronics and applications. Experts are invited to share and interact based on the discussing topic in order to meet peers’ learning and communication needs. Topics cover Optical Communication and Application, Automotive, Mobile phones, Defense and Security, Intelligent Manufacturing, Medical, Laser, Optical Intelligent Manufacturing, etc. Leveraging WeChat’s live broadcast function, this program can enable quick promotion and wide coverage. It is a brand-new way for companies to carry out brand promotion, technical solution and news to the target audiences.

Webinar (Online)
CIOE WeChat Webinar is an opportunity for industry peers to learn about trending topics and interact with experts.

Sharing Salon (Offline)
Sharing events are regularly held in Shenzhen, Beijing, Shanghai, Guangzhou and other industry-concentrated cities. The salon enables industry professionals to exchange ideas and discuss business face to face.

Branding Promoting
Technical Sharing
Network Expanding
Peer Communicating

Scan and follow CIOE Official WeChat
Marketing Coverage

Official Website
WWW.CIOE.CN/EN
Annual Impression: 2 Million +
The ideal platform for branding awareness, products and news releasing.

E-newsletter
Data Volume: 1.1 Million +
Weekly news being blasted to precise data segmentation from 9 application industries.

Social Media
WeChat Followers: 100,000 +
Year-round interaction with industrial elites with WeChat blast and chat groups. CIOE also shows great influence on Facebook, Twitter and LinkedIn.

Exhibitor Invitation Letter
Pageviews: 133,952 times
Exhibitors can send the invitation letter to their target or potential customers via Messages / Mails / WeChat etc.

Media Partners
News Read: 822,004 times
TikTok Impression: 2,180,325 times
Collaborate with over 300+ media partners to get our news out there to the international optoelectronics community

Oversea Partners
Cover 66 countries and regions
Google Searched: 11,752,327 times
We work with over 300 media partners to get our news out there to the international optoelectronics community

CIOE has sophisticated marketing channels to help optoelectronic companies with 365 days nonstop promotion, using over 1 million data and various channels to expand network, to establish business connections and to locate more business opportunities.
Offline Activities
Facilitating business exchange

China Optoelectronics
Annual Circulation: 100,000 pcs
CIOE’s own magazine published and sent to VIP buyers, societies and associations, optoelectronics institutes, universities, government bodies, global leading optoelectronics enterprises.

Onsite Printed Publication
Applications tour routes, visitor guide, official catalog, optoelectronics express.

CIOE Live Interview
No. of views: 812,318 times
CIOE’s exhibitors interviews live-broadcasting for their showcasing products and latest movements.
One small step for CIOE,
One giant leap for optoelectronics community.

We are moving to
Shenzhen World Exhibition & Convention Center
in 2020!

160,000m² Exhibition Area  6 Sub-Expositions

Floor Plan

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