



Lithium Niobate Photonics Conference 2023

InterContinental Grand Stanford Hong Kong,
Hong Kong, P.R. China



Lithium Niobate Photonics Conference 2023

LiNC-2023

6th ~ 9th December 2023

InterContinental Grand Stanford Hong Kong,
Hong Kong, P.R. China

Contents

Welcome Message	2
Committees	3
Sponsors	3
Organizers	4
Conference Highlights	5
General Information	8
Program	11

Welcome Message

We are delighted to invite you to the Lithium Niobate Photonics Conference (LiNC-2023), which will take place in Hong Kong, China, on 6-9 Dec 2023. This conference will bring together leading experts from academia and industry to share the latest advances and challenges in the field of lithium niobate (LN) photonics. The conference will cover the following topics:

- Novel functions and physics in lithium niobate devices
- Materials, fabrication, and integration
- Photonics 2.0 and hybrid integration process
- Quantum computation, sensing, and communication devices
- Industrial new products, manufacture, and perspectives

Our conference will offer a unique opportunity for researchers and students to interact with each other, present their latest research, and join the discussions on the future directions of LN photonics. We hope that this conference will foster new collaborations and inspire new ideas that will benefit the LN photonics community and society at large.

Our conference highlight is the Keynote Session scheduled on Thursday (Dec. 7th). Ten outstanding and distinguished speakers from China, USA, Australia, and Japan, will give presentations on the cutting-edge topics of LN based integrated photonics and quantum optics, as well as the ways to improve your research impacts with journal publications. In addition, one Industry Forum, five oral Technical Sessions, and a poster session will bring around 60 presentations more in our conference. In the Industry Forum, we will invite renowned experts to join in a panel discussion to share

and debate on the various aspects of LN based integration technologies from academia to industry.

We are also grateful to our sponsors for providing this opportunity to bring us together in Hong Kong. Special thanks to MDPI for supporting the platform for accepting submissions, and also for providing Best Paper Award, in which 3 oral contributed talks and 3 poster presentations will be selected. The Best Paper Award ceremony is scheduled at the late afternoon of Dec. 8th.

In addition to the technical program, we have also prepared a rich social event to facilitate meeting with colleagues from all over the world. A welcome reception will be held in the evening on Dec. 6th. In the evening of Dec. 7th, we will hold a Banquet on a Harbour Cruise. We welcome all registered participants to join us for the extraordinary harbour view while having buffet food and drinks on the boat, in the most comfortable season in HK. Special thanks to Liobate for supporting this.

We are indebted to the Advisory Committee and Program Committee who have worked persistently to provide ideas, invite speakers, review papers, and organize the technical sessions, which leads to the excellent technical program for this first year of our conference. We also thank the volunteers of The City University of Hong Kong, Zhejiang University, and South China Normal University in the organization process.

Hope you will enjoy the program we composed, as well as your stay in Hong Kong!

Sincerely,



Dr. Cheng Wang
City University of
Hong Kong



Dr. Liu Liu
Zhejiang University



Dr. Changjian Guo
South China
Normal University



Dr. Guijun Ji
Advanced Fiber Resources
(Zhuhai), Ltd.

Committees

Advisory Committee

Dr. Roel Baets, Ghent University-IMEC
Dr. Ai-Qun Liu, Hong Kong Polytechnic University
Dr. Marko Lončar, Harvard University
Dr. Ya Cheng, East China Normal University
Dr. Siyuan Yu, Sun Yat-sen University
Dr. Chao Lu, Hong Kong Polytechnic University

Program Committee

Dr. Bart Kuyken, Ghent University
Dr. Siyuan Yu, Sun Yat-sen University
Dr. Chao Lu, Hong Kong Polytechnic University
Dr. Di Zhu, A*STAR, Singapore
Dr. Xiankai Sun, Chinese University of Hong Kong
Dr. Yonghui Tian, Lanzhou University
Dr. Qinghua Song, Tsinghua University
Dr. Xin Wang, City University of Hong Kong

Sponsors

Gold Sponsor



Dinner Sponsor



Silver Sponsors



Organizers



Advanced Fiber Resources
(Zhuhai), Ltd.



The Hong Kong
Polytechnic University



City University of
Hong Kong



Zhejiang University



South China
Normal University



Physical Society of
Hong Kong



Optical Society of
Zhejiang

Keynote Speakers

High Performance Integrated Photonics based on Thin Film Lithium Niobate (TFLN)
8:40-9:25, Thursday, Dec. 7th



Marko Lončar
Harvard University, USA

Biography: Marko Lončar is Tientsai Lin Professor of Electrical Engineering at Harvard's John A Paulson School of Engineering and Applied Sciences (SEAS), and chair of Electrical Engineering area. Lončar received his Diploma from University of Belgrade (R. Serbia) in 1997, and PhD from Caltech in 2003 (with Axel Scherer), both in Electrical Engineering. After completing his postdoctoral studies at Harvard (with Federico Capasso), he joined Harvard faculty in 2006. Lončar is expert in nanophotonics and nanofabrication, and his group has done pioneering work in the field of quantum and nonlinear nanophotonics. In particular, Lončar is recognized for his work on the development of diamond and thin film lithium niobate nanophotonic platforms. Lončar has co-authored more than 250 manuscripts in top scientific journals and has given more than 300 invited talks and seminars.

He has received NSF CAREER Award in 2009, Sloan Fellowship in 2010, Marko Jarić Foundation Award in 2020, and Microoptics Conference Award in 2023. In recognition of his teaching activities, Lončar has been awarded Harvard University Levenson Prize for Excellence in Undergraduate Teaching (2012), and has been named Harvard College Professor in 2017. Lončar is Fellow of Optical Society of America and IEEE, as well as Senior Member of SPIE. He is co-founder of HyperLight Corporation (Cambridge, MA), VC backed startup commercializing lithium-niobate technology developed in his lab.

Large-Scale Photonic Integrated Circuits on Thin Film Lithium Niobate
9:25-10:10, Thursday, Dec. 7th



Ya Cheng
East China Normal University, China

Biography: Ya Cheng is a Professor of East China Normal University and Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science. He is also an Optica Fellow and a Fellow of Institute of Physics, UK. His work focuses on lithium niobate integrated photonics, femtosecond laser micromachining and strong-field atomic and molecular physics. His inventions include the well-known “slit-beam shaping” and “spatio-temporal focusing” techniques which are widely adopted in femtosecond laser direct writing. He also invents the photolithography assisted chemo-mechanical etching (PLACE) technique for fabricating large-scale low-loss photonic circuits on lithium niobate thin film. He has given ~150 plenary/invited talks at international conferences, published 6 books, and holds ~30 patents.

Lithium Niobate Building Blocks for Photonic Chip Optical Frequency Combs
10:30-11:15, Thursday, Dec. 7th



Arnan Mitchell
RMIT University, Australia

Biography: Professor Arnan Mitchell is a Distinguished Professor in the School of Engineering at RMIT University, Director of the RMIT Micro Nano Research Facility (MNRF) and is Director of the recently Announced ARC Centre of Excellence for Optical Micro-combs for Breakthrough Science (COMBS). He has published more than 700 research papers including publications in Science, Nature, Nature Medicine and Nature Photonics among many others. He is a senior member of the IEEE, SPIE and is a Fellow of Optica. He is a highly multidisciplinary researcher working in micro-chip technologies combining light, sound, fluids and electronics with applications spanning radar systems for defense, high speed fiber optic communications and point of care diagnostic systems for biomedicine.

He is enthusiastic about translating technology into the hands of end-users and has dedicated much of his career to building and training diverse teams and comprehensive micro and nanotechnology infrastructure to enable breakthrough discoveries to achieve real world impact.

Lithium-Niobate-on-Insulator Micro-Waveguides for Efficient Nonlinear Photonic Applications
11:15-12:00, Thursday, Dec. 7th



Xianfeng Chen
Shanghai Jiao Tong University, China

Biography: Xianfeng Chen is Distinguished Professor at Shanghai Jiao Tong University. I am a recipient of the National Outstanding Youth Fund and the "Ten Thousand Talents" Leading Talent Program. I have been engaged in research on the forefront of optics and its applications in past 30 years, and has made a series of research achievements in fields such as nonlinear optics, integrated optoelectronics, quantum information, and bio-photonics. I received the C.N. Yang Award from the Association of Asia Pacific Physical Societies, AAPPS in 2010. I am currently serving as the editor-in-chief of Journal of Nonlinear Optical Physics& Materials, among others. The research results have been published in over 400 journals in the fields of physics and optics, such as Nature, Nature Photonics, Science Advances, and Physical Review Letters. The dozens of doctoral graduates trained

are now active in various fields such as higher education, high-tech, government and independent entrepreneurship. In 2022, I won the first prize of "impart knowledge and educate people" at Shanghai Jiao Tong University. Currently, I am the director of the Institute of Optical Science and Technology at Shanghai Jiao Tong University.

Ultrafast Nonlinear Nanophotonics: From Superior Components to Advanced Circuits
13:30-14:15, Thursday, Dec. 7th



Alireza Marandi
Caltech, USA

Biography: Alireza Marandi is an Assistant Professor of Electrical Engineering and Applied Physics at Caltech. He received his PhD from Stanford University in 2013. Before joining Caltech, he held positions as a postdoctoral scholar and a research engineer at Stanford, a visiting scientist at the National Institute of Informatics in Japan, and a senior engineer in the Advanced Technology Group of Dolby Laboratories. Marandi is a Senior Member of OSA and IEEE and has been the recipient of NSF CAREER award, the AFOSR YIP award, ARO Early Career Award, DARPA Young Faculty Award, and the Young Scientist Prize of the IUPAP. He is named the 2019 KNI-Wheatley Scholar and a 2023 Sloan Foundation Fellow.

Photonic Quantum Computing with Continuous Variables
14:15-15:00, Thursday, Dec. 7th



Ulrik Andersen
Technical University of Denmark, Denmark

Biography: Ulrik L. Andersen is a professor of quantum physics at the department of Physics at the Technical University of Denmark (DTU). He is heading the section on Quantum Physics and Information Technology (QPIT) and he is the director of the Danish National Research Council Center of Excellence on Macroscopic Quantum States (bigQ). In 2022, he founded the company Alea Quantum Technologies, specializing in the development and commercialization of quantum safe communication systems.

Integrated Quantum Photonics for Quantum Network
15:00-15:45, Thursday, Dec. 7th



Xiaosong Ma
Nanjing University, China

Biography: Professor Xiao-Song Ma joined School of Physics at Nanjing University in 2015. He obtained his B.S. from Nanjing University in 2003, M.S. from Leiden University in 2005 and Ph.D in Physics at University of Vienna in 2010. He was a postdoc fellow in the Institute of Quantum Optics and Quantum Information in Vienna from 2010 to 2012, and a Marie Curie fellow in Yale University from 2012 to 2015. His research area covers long-distance quantum communication, experimental investigations on the foundation of quantum physics and integrated photonics for quantum-enhanced technology.

Integrated Quantum Photonics Based on Epitaxial Quantum Dots
16:05-16:50, Thursday, Dec. 7th



Jin Liu
Sun Yat-Sen University, China

Biography: Jin Liu is a professor of physics at Sun Yat-Sen University. He obtained his Ph.D. degree in 2012 from Technical University of Denmark. Before moving back to China, he worked with Dr. Kartik Srinivasan at National Institute of Standards and Technology (NIST) to develop integrated quantum photonic technologies. His current research activities cover integrated quantum photonics and nanophotonics by utilizing molecular beam epitaxy, semiconductor nanofabrication and cryogenic optical characterizations.

What Nature Photonics looks for
16:50-17:35, Thursday, Dec. 7th



Noriaki Horiuchi
Nature Publishing Group

Biography: Noriaki joined Nature Photonics in September 2009. He started his research at Waseda University, Tokyo. In 1992, he went to study in France after receiving a scholarship from the French Government. Collaborating with Laboratoire de Minéralogie et Cristallographie of Université Paris 6 and France Télécom, Noriaki obtained his PhD in 1999 from Université Joseph Fourier, Grenoble. Following a postdoctoral researcher's position at Toyota Technological Institute, he worked as a researcher at RIKEN from 2002 to 2009. His research interests are in the fields of nonlinear optics, crystal growth and photonic crystals. Noriaki is based in Tokyo, Japan.

Inside Story of Physical Review Letters and Physical Review Journals
17:35-18:20, Thursday, Dec. 7th

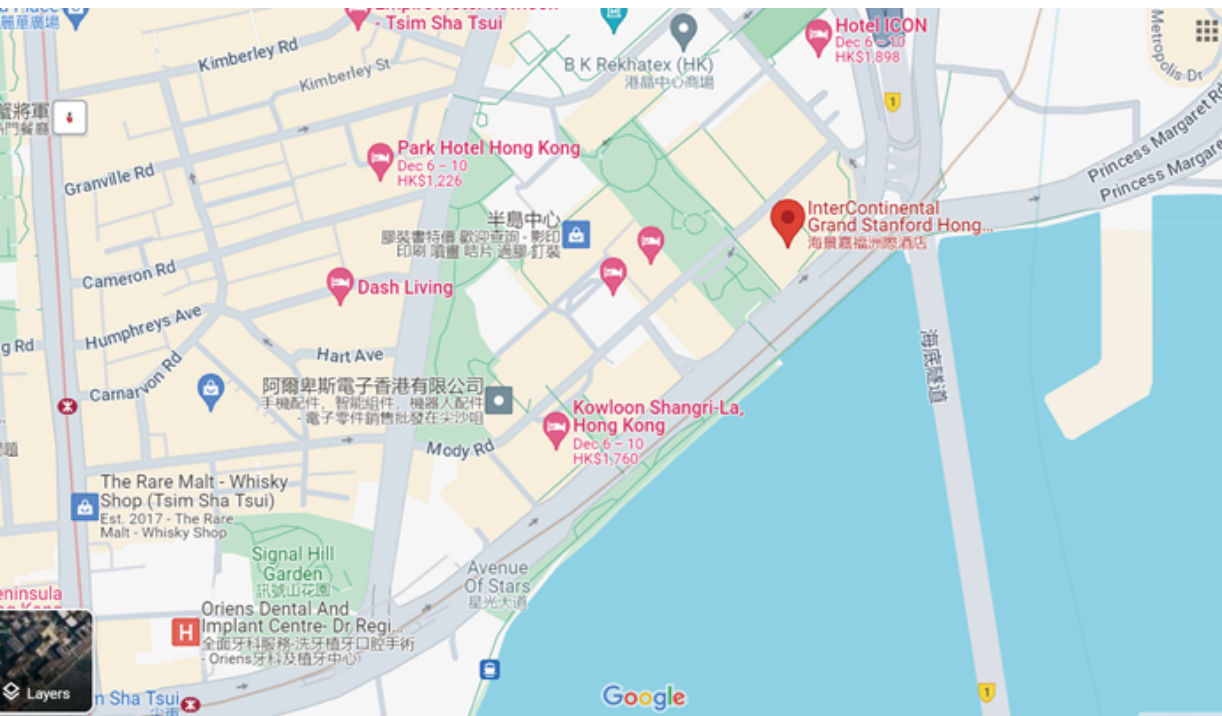


Mu Wang
American Physical Society

Biography: Mu Wang, Cheung-Kong Professor in condensed matter physics at Nanjing University (since 1997) and the adjunct professor at the Department of Materials Science and Chemical Engineering at Stony Brook University, New York (since 2021). He also serves as the senior associate editor for Physical Review Letters and the editor for Physical Review Materials. He is the Outreach Coordinator for the APS Journals in China. He was elected as a Fellow of the IOP (UK), a Fellow of the American Physical Society, and a Fellow of Optica (Optical Society of America). He received his Bs. and Ph.D. degrees from Nanjing University and worked as a postdoctoral researcher at Nijmegen University, Netherlands. His current research interests include the interaction of light and artificial microstructures, nanophotonics, metamaterials, and fundamentals of interfacial growth in crystallization.

Conference Venue

InterContinental Grand Stanford Hong Kong, 70 Mody Road, Tsimshatsui East, Kowloon, Hong Kong.



The LiNC-2023 Conference will be held at InterContinental Grand Stanford Hong Kong. Located on the waterfront of Victoria Harbour right in the heart of the shopping, business and entertainment district of Tsimshatsui East, InterContinental Grand Stanford Hong Kong offers sophistication and heritage amidst the breath-taking view of Victoria Harbour.

Traffic Route:

1. From Hong Kong International Airport:

1.1 Via Airport Express Train (to Tsim Sha Tsui Station)

- From the airport, follow the signs to the Airport Express train station. You can buy a ticket from the machines or the counters. The fare is HK\$107 - HK\$123.
- Board the train and get off at Hong Kong Station, which is the last stop. The train ride takes about 24 minutes.
- From Hong Kong Station, follow the signs to the subway station. You need to transfer to the Tsuen Wan Line, which is the red line on the subway map. You can use the same ticket or Octopus card that you used for the Airport

- Express train.
- Take the subway and get off at Tsim Sha Tsui Station, which is the 6th stop. The subway ride takes about 11 minutes.
- From Tsim Sha Tsui Station, exit from Exit B2 and walk along Nathan Road towards the harbour. Turn right at Mody Road and walk for about 10 minutes. You will see the hotel on your left. The hotel address is 70 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong.

1.2 Via Airport Express Train (to Kowloon Station)

The Airport Express Train operates around every 15 minutes from 05:54hrs to 00:48hrs. Travel by train from Hong Kong International Airport to Kowloon Station cost HK\$105 one way one person. The distance between Airport and Kowloon Station is approximately 25 minutes by train and 15 minutes by taxi from Kowloon Station to the Hotel.

1.3 Taxi

Travel by taxi direct to InterContinental Grand Stanford Hong Kong is approximately 30 minutes and cost HK\$350 one way to accommodate the maximum of four passengers.

2. From West Kowloon Station (high speed train station):

2.1 Subway (West Rail Line)

You can take the subway (from Austin Station) and take the West Rail Line to East Tsim Sha Tsui Station, which is the 5th stop. The subway ride takes about 15 minutes and costs HK\$9.8. From East Tsim Sha Tsui Station, exit from Exit P1 and walk for about 10 minutes to the hotel. The hotel address is 70 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong.

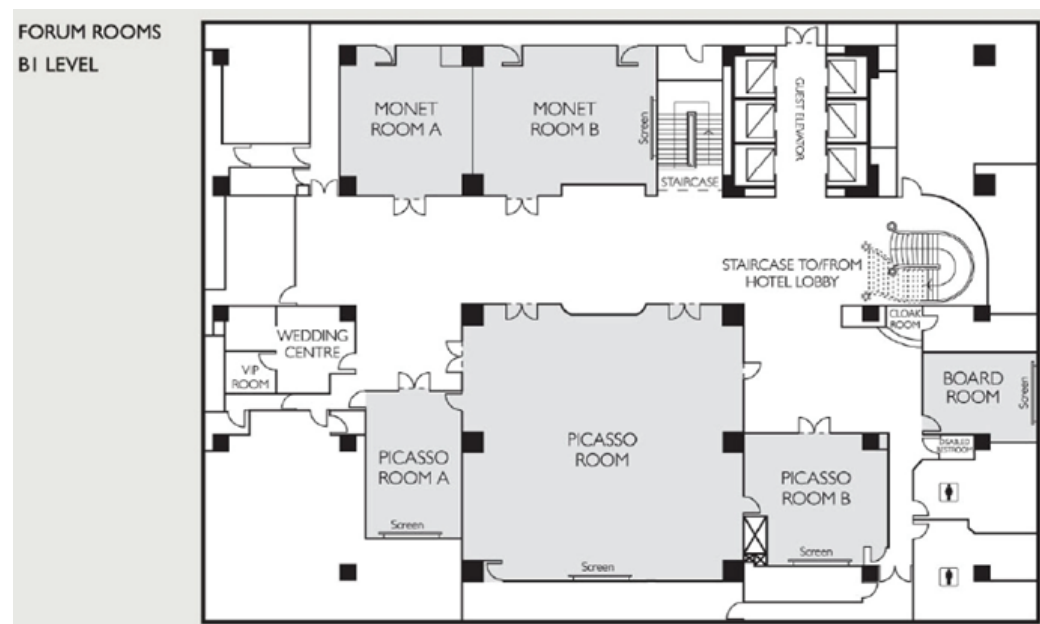
2.2 Taxi

Travel by taxi direct to InterContinental Grand Stanford Hong Kong is approximately 9 minutes and cost about HK\$30 one way to accommodate the maximum of four passengers.

3. From Hung Hom Station

You can walk for about 15 minutes to the hotel. The hotel is located near the Hung Hom Ferry Pier, which is also a scenic spot to enjoy the view of Victoria Harbour. Alternatively, you can take a taxi from the station to the hotel, which takes about 5 minutes and costs around HK\$25.

Floor Plan



Sessions in **Picasso** Room: Keynote, AFR industry forum, Fabrication technologies, Nonlinear photonics, Poster, Best paper award.
Sessions in **Monet** Room: Quantum photonics, Acoustics and BIC, Electro-optics.

Registration

Location: Monet Room, B1 Level

Time: 14:00-21:00, Dec. 6th

Location: Hallway, B1 Level

Time: 8:00-18:00, Dec. 7th & 8th

Welcome Reception

The welcome cocktail reception is free for all the conference registrants, which is combined with the registration on Dec. 6th. Soft drinks, beer, wine, and canapés will be served.

Location: Monet Room, B1 Level

Time: 18:00-20:00, Dec. 6th

Banquet

Banquet, sponsored by Liobate, will be held on a Harbour Cruise from 19:10 to 21:30 on Dec. 7 (<https://www.cruise.com.hk>). You will be directed from the conference hotel to Hung Hom Ferry Pier for embarking the Cruise after the first day of technical sessions (~20 min walk).

Please remember to bring your conference name badge, which serves as the entrance ticket to the Banquet.

Location of embark and disembark: Hung Hom Ferry Pier

(see map on the right).

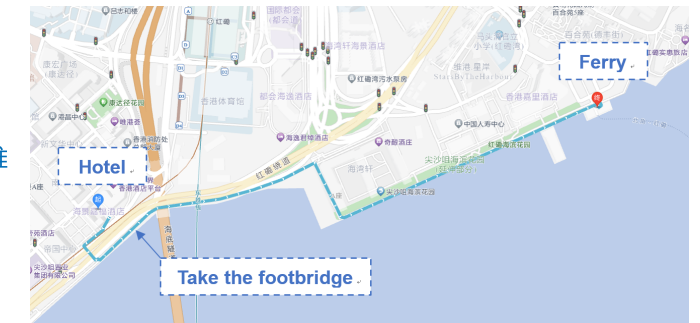
Please follow the volunteers to go from the conference hotel to the ferry pier.

Cruise Vessel: Harbour Cruise – Bauhinia, “Man Lok” (洋紫荆维港游“民乐”号)

Time of leaving from hotel: 18:40 PM, Dec. 7th

Time of Embarkation: 19:10-19:25

Time of Disembarkation: 21:15-21:30



Lunch and Tea Break

Buffet lunches are included in the registration fee for all registered delegates. The entrance to the lunches is the name badge from the registration.

Location: Hallway, B1 Level

Time: Refer to the program

Onsite Speaker Preparation

All presenters should check in at the corresponding session room at least 30 minutes prior to their scheduled talk to upload and check their presentation.

Onsite Poster Preparation

All presenters should prepare the poster according to the template provided by the conference organizers. The size of the poster is 80cm width by 180 cm height. For a better presentation, presenters should send their electronic poster file to the organizer, who will help print the final poster. Posters will be ready in the morning of Dec. 8th, and during the poster sessions, the presenters should stand beside their posters for answering questions.

Best Paper Award

LiNC-2023 is pleased to announce that this year’s Best Paper Award will be sponsored by MDPI.

3 recipients for oral contributed talks, 2000 HKD award for each recipient

3 recipients for poster presentations, 2000 HKD award for each recipient

The recipients for the Best Paper Award will be selected during the conference by LiNC-2023 Committee and invited experts, and will be announced at the end of the conference in the afternoon of Dec. 8th.

Dec. 7th, Keynote Session, Room Picasso
(Presiders: Siyuan Yu, Marko Lončar, Jin Liu, Aiqun Liu)

8:30-8:40	Welcome Speech	
8:40-9:25	Marko Lončar (Harvard University, USA)	High Performance Integrated Photonics based on Thin Film Lithium Niobate (TFLN)
9:25-10:10	Ya Cheng (East China Normal University, China)	Large-Scale Photonic Integrated Circuits on Thin Film Lithium Niobate
10:10-10:30	Tea break	
10:30-11:15	Arnan Mitchell (RMIT University, Australia)	Lithium Niobate Building Blocks for Photonic Chip Optical Frequency Combs
11:15-12:00	Xianfeng Chen (Shanghai Jiao Tong University, China)	Lithium-Niobate-on-Insulator Micro-Waveguides for Efficient Nonlinear Photonic Applications
12:00-13:30	Lunch break	
13:30-14:15	Alireza Marandi (Caltech, USA)	Ultrafast Nonlinear Nanophotonics: From Superior Components to Advanced Circuits
14:15-15:00	Ulrik Andersen (Technical University of Denmark, Denmark)	Photonic Quantum Computing with Continuous variables
15:00-15:45	Xiaosong Ma (Nanjing University, China)	Integrated Quantum Photonics for Quantum Network
15:45-16:05	Tea break	
16:05-16:50	Jin Liu (Sun Yat-Sen University, China)	Integrated Quantum Photonics Based on Epitaxial Quantum Dots
16:50-17:35	Noriaki Horiuchi (Nature Publishing Group)	What Nature Photonics looks for
17:35-18:20	Mu Wang (American Physical Society)	Inside Story of Physical Review Letters and Physical Review Journals
19:10 --	Banquet	

Dec. 8th, Technical Session, Room Picasso

Session: AFR Industry Forum (Presider: Kevin Zhang)		
8:00-8:20	Xin Ou (Shanghai Inst. Microsys. Inform. Technol., CAS, China)	Heterogeneous integration XOI-materials for photonic integrated circuit and acoustic RF filter (Invited)
8:20-8:40	Xinlun Cai (Sun Yat-Sen University, China)	High speed and low power consumption TFLN PICs for optical communications (Invited)
8:40-9:00	Weihua Guo (Huazhong Univ. Sci. Technol., China)	Application opportunity and development status of thin film lithium niobate photonic integrated circuits (Invited)
9:00-9:20	Tao Chu (Zhejiang University, China)	Improving electro-optic modulation efficiencies of thin-film lithium niobate modulators(Invited)
9:20-9:35	Yang Liu (National Optoelectron. Innov. Center, China)	150 Gbaud optical PAM4 modulation based on segmented thin film lithium niobate modulator
9:35-9:50	Reinhard Geiss (Fraunhofer Inst. Appl. Opt. Precision Eng. Germany)	Low-loss lithium niobate integrated photonic devices fabricated on wafer-scale
9:50-10:05	Tong Ge (The City University of Hong Kong, China)	Integrated lithium niobate microwave photonics system for high-speed signal processing
10:05-10:20	Tea break	
10:20-10:40	Dennis Zhou (Advanced Fiber Resources, China)	Energy efficient optical interconnect for AI clusters and data centers (Invited)
10:40-11:30	Panel Discussion	
11:30-13:10	Poster session & Lunch break	
Session: Fabrication Technologies (Presider: Liu Liu)		
13:10-13:35	Guanghui Ren (RMIT University, Australia)	Propagation loss reduction strategy for silicon nitride loaded thin-film lithium niobate Platform (Invited)
13:35-13:50	Rongjin Zhuang (Tsinghua University, China)	High-Q thin film lithium niobate microrings fabricated with wet etching
13:50-14:05	Matthew Yeh (Harvard University, USA)	Material processing considerations for stable thin-film lithium niobate electro-optic devices
14:05-14:20	Simin Yu (ShanghaiTech University, China)	Fabrication of thin-film lithium niobate by poling-assisted hydrofluoric acid wet etching
14:20-14:35	Xiaotian Xue (Shanghai Jiao Tong University, China)	Integrated erbium-doped lithium niobate on insulator waveguide amplifier for high-power application
14:35-14:50	Tea break	

Dec. 8th, Technical Session, Room Picasso

Session: Nonlinear Photonics (Presider: Cheng Wang)

14:50-15:15	Jinsong Xia (Huazhong Univ. Sci. Technol., China)	All optical wavelength conversion based on thin-film PPLN (Invited)
15:15-15:40	Fang Bo (Nankai University, China)	Second harmonic generation in reversed-polarized double-layer thin film lithium niobate devices (Invited)
15:40-16:05	Chunhua Dong (Univ. Sci. Technol. China, China)	Frequency comb in the lithium niobate microresonators (Invited)
16:05-16:20	Chunyu Huang (Nanjing University, China)	Designing lithium niobate photonic waveguide for broadband sum-frequency generation
16:20-16:45	Juanjuan Lu (ShanghaiTech University, China)	Integrated lithium niobate nonlinear photonics (Invited)
16:45-17:00	Best Paper Award	

Dec. 8th, Technical Session, Room Monet

Session: Quantum Photonics (Presiders: Wei Luo and Xiaosong Ma)

8:00-8:25	Amir Ghadami (Lightium AG, Switzerland)	Photonics engine for quantum control of atomic systems (Invited)
8:25-8:50	Zhenda Xie (Nanjing University, China)	Chip-scale optical frequency comb and quantum optical circuits using thin film lithium niobate (Invited)
8:50-9:05	Lu He (Beijing Institute of Technology, China)	Topology-optimized computing optical chip: from classical to quantum
9:05-9:20	Yuan Li (The Hong Kong Polytechnic University, China)	High-dimensional degenerate entangled states on quantum photonic chip
9:20-9:35	Min-Hao Jiang (Nanjing University, China)	Quantum storage of entangled photons at telecom wavelengths in a crystal
9:35-9:50	Shengshuai Liu (East China Normal University, China)	Quantum squeezing manipulation based on phase-sensitive amplifier
9:50-10:05	Huihui Zhu (The Hong Kong Polytechnic University, China)	A large number qubits of quantum microprocessor for graph simulation
10:05-10:20	Tea break	
10:20-10:45	Jietai Jing (East China Normal University, China)	OAM multiplexed quantum entanglement and its applications (Invited)

Dec. 8th, Technical Session, Room Monet

10:45-11:00	Helen Cai (The Hong Kong Polytechnic University, China)	Silicon nitride photonic platform for quantum devices fabrication and integration
11:00-11:15	Wei Luo (The Hong Kong Polytechnic University, China)	High-speed quantum photonic chips for quantum key distribution (QKD) systems
11:15-11:30	Yanbo Lou (East China Normal University, China)	Reconfigurable quantum network by spatially multiplexed four-wave mixing processes
11:30-13:10	Poster session & Lunch break	

Session: Acoustics and BIC (Presider: Zejie Yu)

13:10-13:35	Linbo Shao (Virginia Tech., USA)	Acoustic-wave integrated circuits on lithium niobate (Invited)
13:35-14:00	Yansong Yang (The Hong Kong Univ. Sci. Technol., China)	MEMS acoustic waves in lithium niobate thin films for RF applications (Invited)
14:00-14:25	Jingcui Song (Sun Yat-Sen University, China)	Integrated photonics based on thin-film lithium niobate-chalcogenide hybrid waveguides (Invited)
14:25-14:40	Ziyao Feng (The Chinese University of Hong Kong, China)	Experimental observation of dissipatively coupled bound states in the continuum on an integrated photonic platform
14:40-14:55	Tea break	

Session: Electro-optics (Presider: Chao Lu)

14:55-15:20	Yang Li (Tsinghua University, China)	Integrated lithium niobate photonics: from communications to metrology (Invited)
15:20-15:35	Rebecca Cheng (Harvard University, USA)	Electro-optic-based optical isolator on thin-film lithium niobate
15:35-15:50	Hailong Han (Shanghai Inst. Microsys. Inform. Technol., CAS, China)	Cryogenic thin-film lithium niobate modulators with superconducting electrodes
15:50-16:05	Zhengyi Wan (Beijing Univ. Posts Telecomm., China)	Analytical solution for electro-optic ring modulators
16:05-16:20	Gongcheng Yue (Tsinghua University, China)	Integrated lithium niobate optical phased array for two-dimensional beam steering
16:20-16:45	Zejie Yu (Zhejiang University, China)	High-speed integrated lithium niobate electro-optic modulator and large-capacity link (Invited)
16:45-17:00	Best Paper Award (Picasso)	

Dec. 8th, Poster Session, Room Monet
(11:30--13:10)

Poster #	Presenter	Title
LiNC-P02	Lei Wang (Shandong University, China)	Modal Phase Matching in dual-layered thin film lithium niobate
LiNC-P03	Yujie Ma (Shenzhen Technology University, China)	On-chip polarization beam splitter at visible wavelengths with LNOI ridge waveguide
LiNC-P04	Xiaopeng Hu (Nanjing University, China)	Periodically poled LNOI for nonlinear integrated photonics
LiNC-P05	Ke Zhang (The City University of Hong Kong, China)	Power-efficient electro-optic comb generation in a multi-pass lithium niobate phase modulator
LiNC-P06	Xiang Yin (Suzhou InnovSemi Co., Ltd., China)	Ultra-high modulation efficiency for thin-film lithium niobate electro-optical modulator
LiNC-P07	Yiwen Zhang (The City University of Hong Kong, China)	High performance millimeter-wave optic modulator in thin-film lithium niobate platform
LiNC-P08	Gengxin Chen (Zhejiang University, China)	First demonstration of differential-driven push-pull Mach-Zehnder modulators on thin-film lithium niobate
LiNC-P09	Sha Zhu (Beijing University of Technology, China)	Multi-format microwave signal generation based on thin-film lithium niobite
LiNC-P10	Xijie Wang (Zhejiang University, China)	Fourier transform spectrometer based on thin-film lithium niobate
LiNC-P11	Junjie Yi (Zhejiang University, China)	AWG optical filter based on thin-film x-cut lithium niobate photonic platform
LiNC-P12	Toijam Sunder Meetei (Gwangju Institute of Science and Technology, South Korea)	Study of argon ion beam milling on lithium niobate single crystal for integrated photonics
LiNC-P13	Mai Wang (Zhejiang University, China)	Robust thin-film lithium niobate modulator on a silicon substrate with back-side holes
LiNC-P14	Ziliang Ruan (Zhejiang University, China)	An FSR-free add-drop filter based on thin-film lithium niobate
LiNC-P15	Yifan Qi (Tsinghua University, China)	110-GHz bandwidth integrated lithium niobate modulator without direct lithium niobate etching
LiNC-P16	Chengfei Shang (The City University of Hong Kong, China)	Photonic inverse design on thin-film lithium niobate platform
LiNC-P17	Yan Gao (Chalmers University of Technology, Sweden)	Dispersion-engineered ultralow-loss tightly confined lithium niobate long waveguides

Dec. 8th, Poster Session, Room Monet
(11:30--13:10)

Poster #	Presenter	Title
LiNC-P18	Bin Chen (Zhejiang University, China)	High-performance edge coupler with crossed tapers on thin-film lithium niobate
LiNC-P19	Jian Cheng (Huazhong Univ. Sci. Technol., China)	Enhanced second harmonic generation in high-Q Fabry-Perot microresonator on thin film lithium niobate
LiNC-P20	Ting'an Li (Huazhong Univ. Sci. Technol., China)	QAM signal measured by thin-film lithium niobate electric field sensor
LiNC-P21	Fei Ma (Sun Yat-Sen University, China)	Low-pump-power and high-efficiency up-conversion single photon detector based on lithium niobate on insulator
LiNC-P23	Xiaodong Zeng (Univ. Sci. Technol. China, China)	Barometric stress response of spin defects in two-dimensional materials
LiNC-P24	Zhenhua Li (Sun Yat-Sen University, China)	Solving MAXCUT problems under light source noise on lithium niobate-based optoelectronic ising machine
LiNC-P25	Yuancheng Zhang (Nanyang Technological Univ., Singapore)	Physics-aware analytic-gradient training in quantum computing chips
LiNC-P26	Lu Qi (South China Normal University, China)	Polarization-insensitive electro-optical modulator based on thin-film lithium niobate multimode waveguide
LiNC-P27	Tian Gao (South China Normal University, China)	Thin-film lithium niobate waveguide bending for TM-mode

AFR Company Profile

Advanced Fiber Resources (AFR), established in 2000, is a leading supplier of fiber optical components. With its strong R&D and design capabilities, high efficient manufacturing process and strict quality control, AFR designs and manufactures standard and custom components, modulators, and provides contract manufacturing solutions to our customers. Our products are widely used in fiber laser, telecom, data center, fiber sensing, autonomous driving, biomedical equipment, as well as research institutes and universities around the globe. AFR's products have been sold to customers in more than 40 countries and regions worldwide.



23
Years of History



2017
IPO in China



2,000+
Employees



1,186,000+
Sq-ft Floor Space



170+
Patents



600+
Customers



Advanced Fiber Resources

No. 399, Chuangxin 3rd Road, Tangjia, Zhuhai, China 519080
Tel: +86 756 389 8088
Fax: +86 756 389 8080
E-mail: sales@fiber-resources.com



www.fiber-resources.com

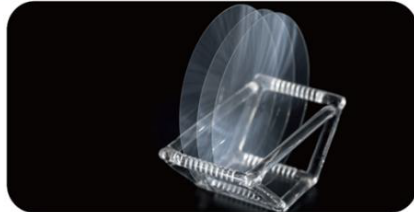
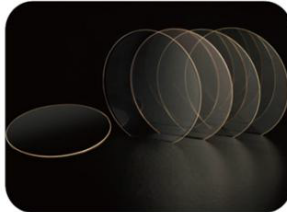
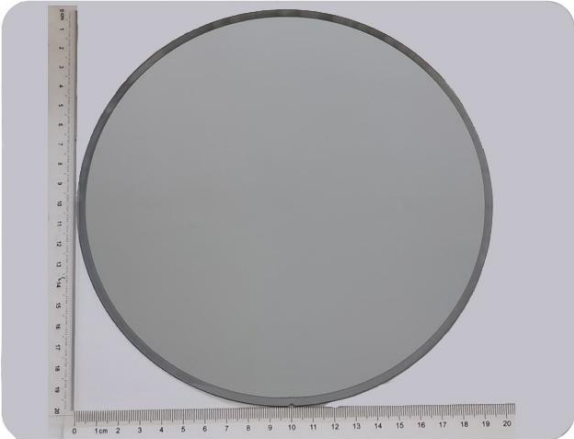
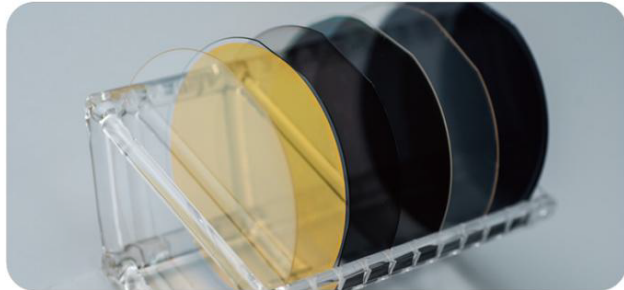
NANOLN

Jinan Jingzheng Electronics Co., Ltd.

Add: Jingshidong Road, High-tech Zone, Jinan, P. R. China

E-mail: cathy@nanoln.com

Web: www.nanoln.com



LITHIUM NIOBATE THIN FILMS
LITHIUM TANTALATE THIN FILMS

Lithium Niobate Thin Films (LNOI)			
Top Functional Layer			
Diameter	3, 4, 6, 8 inch	Orientation	X, Z, Y etc.
Material	LiNbO ₃	Thickness	300–900 nm 5 – 50 μm
Isolation Layer			
Material	SiO ₂	Thickness	500–4700 nm etc.
Substrate			
Material	Si, LN, Quartz, Fused Silica etc.		
Optional Electrode Layer			
Material	Pt, Au, Cr	Thickness	100–400 nm

APPLICATIONS:

- Thin Film E–O Modulator
- Non–linear Optics
- Ferroelectric Memory
- PPLN
- Detectors

