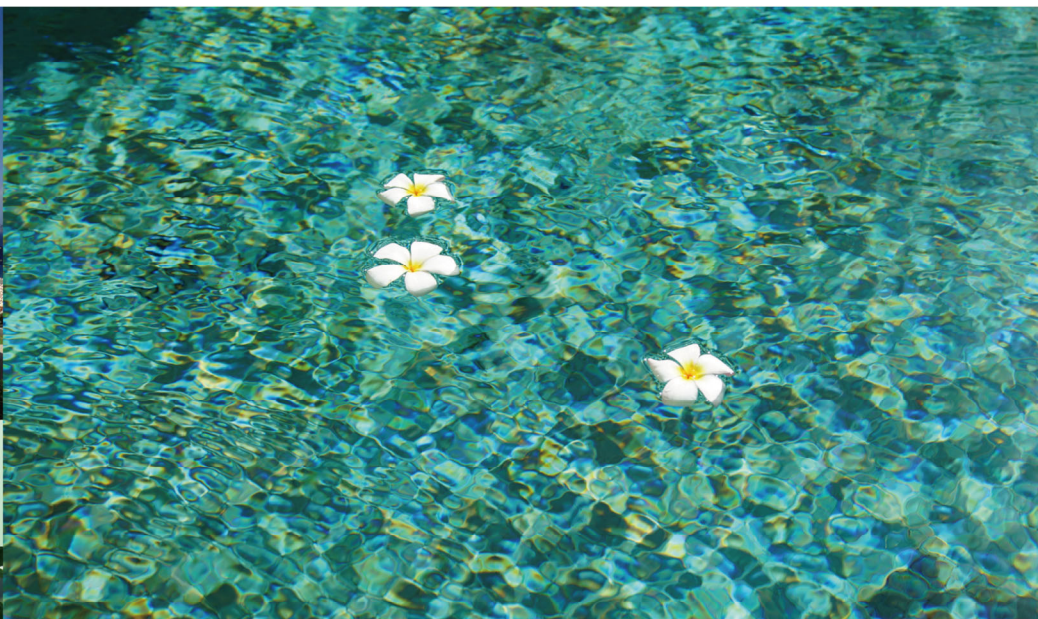




Program book of OLC2021 Okinawa

2021/9/26-10/1
Bankoku Shinryokan



ガラスも♪ 化学も♪

AGC

たとえば、橋や飛行機の外装に使われるフッ素樹脂、

水道水の消毒に使われる次亜塩素酸ソーダ、

道路の塗装のためのセラミックスにも

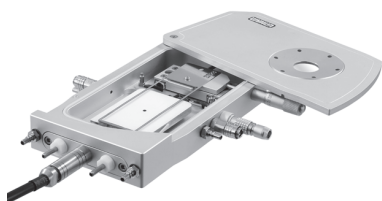
AGCの素材が使われています。

私たちはこれからも幅広い素材と技術によって、

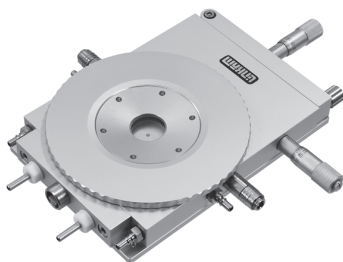
人々の想いの先、夢の実現に挑んでいきます。

Your Dreams, Our Challenge

AGC株式会社



−100 ~ 420°C
Heating/Cooling Stage
for Large Samples



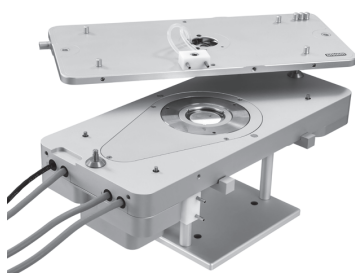
−190 ~ 600°C
Heating/Cooling Stage
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Heating/cooling rate can be flexibly controlled between 0.01—150C/min.
- One same stage can be used without any modification for an optical microscope, a stereotype microscope, an infrared microscope, a Raman microscope, laboratory SAXS and a synchrotron radiation facility.
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万国津梁館

Bankoku Shinryokan
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万国津梁館 学会スペシャルプラン

2021.4.1(Thu.) - 2023.3.31(Fri.)

これまでご愛顧いただいたお客様、関係者の皆様へ、感謝の気持ちを込めて
利用時間よりお選びいただける大変お得な“学会スペシャルプラン”をご用意いたしました。
全室オーシャンビューの開放感あふれる環境の中、
学会・セミナー・会議等、様々なスタイルのご利用に最適なプランとなっております。

Special Plan Just For You

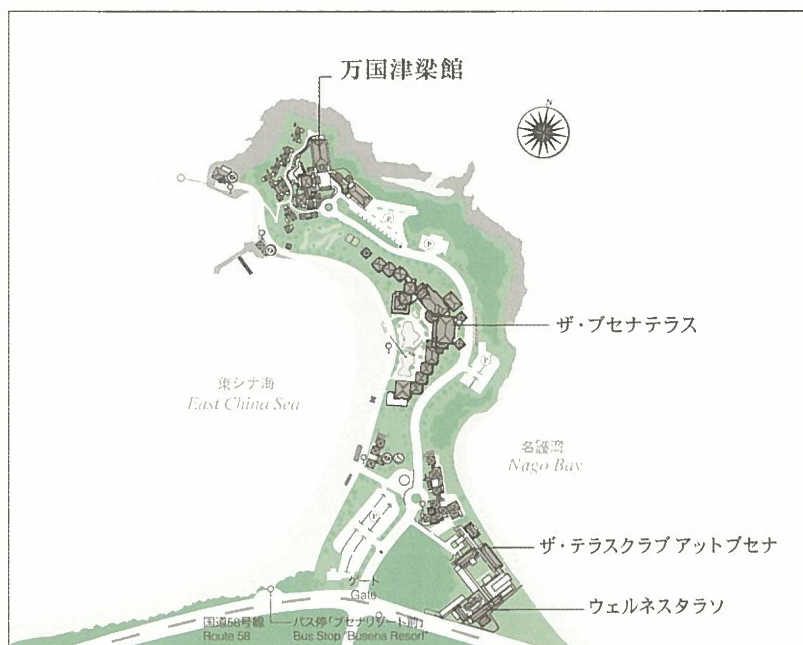
～プランの特徴～

- ・複数日ご利用(2日間以上)限定
- ・会議に伴う懇親会会場費無料
- ・「一日一組限定」のプレミアプラン

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Foreword

On behalf of the organizing committee, I would like to welcome all participants of Optics of Liquid Crystals 2021 (OLC 2021) at Bankoku Shinryokan Conference Hall at Okinawa, Japan. In Okinawa, even in late September, the summer sun shines, and you can enjoy the pleasant sea breeze and the bright red hibiscus flowers. I hope that all the participants will enjoy the nature and culture of main island of Okinawa and latest topics in the science of optics of liquid crystals.

Jun Yamamoto

Chair of Optics of Liquid Crystals 2021 (OLC 2021)

Kyoto University



Committees

Organizing Committee

Chair	Jun Yamamoto	Kyoto University / Vice President of JLCS & ILCS
Honorable Chair	Tomiki Ikeda	Chuo University
Vice-Chair	Masanori Ozaki	Osaka University
Vice-Chair	Hirotsugu Kikuchi	Kyushu University / President of JLCS
Vice-Chair	Shoichi Ishihara	Osaka Institute of Technology
	Takeaki Araki	Kyoto University
	Hiroshi Moritake	National Defense Academy
	Yuka Tabe	Waseda University
	Isa Nishiyama	Japan Advanced Institute of Science and Technology
Secretary	Maya Wazumi	Polaris Secretaries Office Co., Ltd.

International Advisory Board

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	Sin Do Lee	South Korea
	Stefania Residori	France
	Yi-Hsin Lin	Taiwan
	Antonio Martins Figueiredo Neto	Brazil
	Kristiaan Neyts	Belgium
	Jun Yamamoto	Japan

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	Masahiro Funahashi	Kagawa University

Registration

Leader	Akihiko Matsuyama	Kyushu Institute of Technology
	Yumiko Naka	Tokyo University of Science
	Toshiaki Nose	Akita Prefectural University.
	Hiroyuki Yoshida	Osaka University

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	Yasuyuki Kimura	Kyushu University
	Yoshiaki Uchida	Osaka University

Conference

Leader	Hirosato Monobe	National Institute of Advanced Industrial Science and Technology
	Shohei Saito	Kyoto University
	Makina Saito	Tohoku University
	Yoshiko Takenaka	National Institute of Advanced Industrial Science and Technology

Events

Leader	Takahiro Yamamoto	National Institute of Advanced Industrial Science and Technology
	Sadahito Uto	Osaka Institute of Technology
	Ryotaro Ozaki	Ehime University
	Yuji Sasaki	Hokkaido University

Transportation

Leader	Go Watanabe	Kitasato University
	Takahiro Ichikawa	Tokyo University of Agriculture and Technology
	Jun Yoshioka	Ritsumeikan University
	Shizuka Anan	Kyushu University

Industry

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	Koichi Miyachi	JSR Corporation
	Masaru Inoue	/ Vice president of JLCS
	Naoki Tomikawa	TOYOTech LLC
		Seiko Epson Corporation

Program Committee

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Rumiko Yamaguchi	Akita University
Koki Takatoh	Tokyo University of Science, Yamaguchi
Masaki Hasegawa	Huawei Technologies Japan
Kiyoaki Usami	Osaka Sangyo University

Organizers and Sponsors

Organized by

- Organizing Committee, OLC2021
- The Japanese Liquid Crystal Society
- The International Liquid Crystal Society

Supported by

- Bankoku Shinryokan
- Okinawa Convention & Visitors Bureau (OCVB)
- Okinawa Prefectural Government

Sponsorship of

- The Kajima Foundation
- The Kyoto University Foundation

General Information

Headquarters and Secretariat:

September 26 - October 1.

Sunset Lounge, Bankoku Shinryokan.

Oral and Poster presentations:

All presentations will be held on-line in Zoom Breakout rooms.

Public Lecture:

Date: 13:00-14:30, Sunday, September 26.

Venue: Zoom

*Advance reservation is necessary for participation.

Opening Ceremony:

Date: 10:15-10:25, Monday, September 27.

Venue: Summit Room (Zoom)

Closing Ceremony:

Date: 11:50-12:00, Friday, October 1.

Venue: Summit Room (Zoom)

Timetable

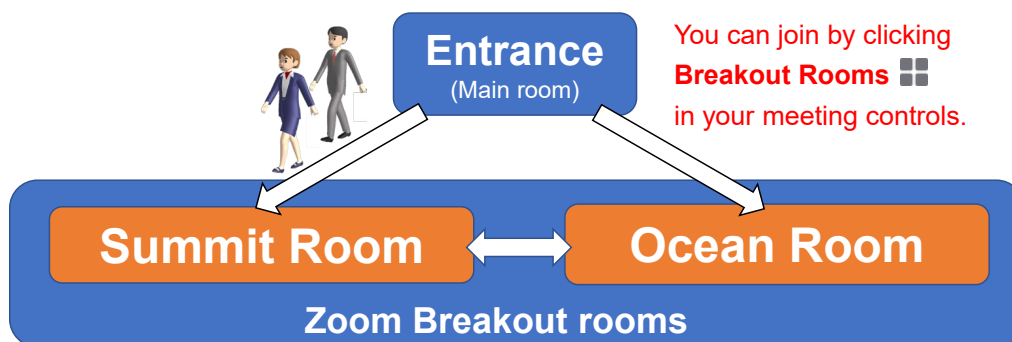
				Sunday 2021/9/26		Monday 2021/9/27	Tuesday 2021/9/28	Wednesday 2021/9/29	Thursday 2021/9/30		Friday 2021/10/1
MST	EST	CET	JST	Summit	Ocean	Summit	Summit	Summit	Summit	Ocean	Summit
17:30	19:30	1:30	8:30			Tutorial T5 Hiroshi Yokoyama	Poster 1B	Poster 2B	Ind. Invite I2 Michio Kitamura	O17 Shoichi Kutsumizu	Keynote K9 Amy Shen
18:00	20:00	2:00	9:00						O12 Shizuka Anan	O18 Yoshiaki Uchida	O37 Nobuyoshi Miyamoto
			9:30			Tutorial T6 Iam Choon Khoo	Coffee & Room Setting	Coffee & Room Setting	O13 Pravinraj Selvaraj	O19 Masayuki Kishino	O38 Kiyoshi Kanie
19:00	21:00	3:00	10:00				Keynote K4 Oleg Lavrentovich	Plenary PL2 Liang-Chy Chien	Invite I10 Tigran Galstian	O20 Takuya Ohzono	Invite I16 Koki Sano
			10:30			Opening			Coffee Break	Coffee Break	Coffee Break
20:00	22:00	4:00	11:00			Plenary PL1 Sin-Doo Lee	Keynote K5 Antonio Martins Figueiredo Neto	Invite I9 Rumiko Yamaguchi	Ind. Invite I3 Yukito Saitoh	O21 Tomoki Shigeyama	Invite I17 Daigo Miyajima
			11:30			Keynote K1 Ivan Smalyukh	O4 Akshiko Matsuyama	O10 Takeaki Araki	O14 Mareena Antony	O22 Kaho Ogata	O39 Shunto Arai
21:00	23:00	5:00	12:00			Keynote K2 Nelson Tabiryan	Ind. Invite I1 Hisao Iokuma	Keynote K8 Shunsuke Kobayashi	O15 Olena Iadovska	O23 Go Watanabe	O40 Yo Shimizu
			12:30						O16 Yazi Wang	Invite I11 Masahiro Funahashi	O41 Keiki Kishikawa
22:00	0:00	6:00	13:00			Lunch	Lunch				Closing
22:30	0:30	6:30	13:30		Public Lecture	Invite I1 Takahiro Seki	Keynote K6 Wei Lee		Ind. Invite I4 Takahiro Sasaki	O31 Hiroshi Kakiuchida	Optics
23:00	1:00	7:00	14:00			O1 Shohei Saito	Invite I6 Hsiu-Hui Chen		O24 Samran Chandran Thodika	O32 Kyohei Hisano	Polymer
			14:30			O2 Hiroya Nishikawa	O6 Sayuri Hashimoto		O25 Ryota Ito	O33 Yohei Zushi	Lyocel
0:00	2:00	8:00	15:00	Tutorial T1 Ingo Dierking		Invite I2 Marcin Muszyński	O7 Kenji Urayama		O26 Brecht Berteloot	O34 Yoichi Takanishi	Device
			15:30	Tutorial T2 Claudio Zannoni		Coffee Break	Coffee Break		O27 Piotr Lesiak	Invite I13 Yasushi Okumura	Photocatal
1:00	3:00	9:00	16:00			Invite I3 Guilhem Poy	Invite I7 Masaki Hada		Coffee Break	Coffee Break	Topological
			16:30	Tutorial T3 Siobodan Zúmer		O3 Jun-ichi Fukuda	O8 Jun Yoshioka		Ind. Invite I5 Christian Weickmann	Invite I14 Kenji Katayama	Blue/Cubic
2:00	4:00	10:00	17:00			Invite I4 Inge Nys	O9 Makina Saito		O28 Jacek Szczytko	O35 Yuji Sasaki	Theory
			17:30	Tutorial T4 Pawel Pieranski		Invite I5 Etienne Brasselet	Invite I8 Guang Chu		O29 Migle Stebryte	O36 Fumito Araoka	Dyn/Non-E
3:00	5:00	11:00	18:00			Keynote K3 Miha Ravnik	Keynote K7 Maria Helena Godinho		O30 Artur Geivandov	Invite I15 Hiroyuki Yoshida	Conduction
			18:30			Coffee & Room Setting	Coffee & Room Setting		Invite I12 Janusz Parka		
						Poster 1A	Poster 2A				

Instructions for Presenters and Participants

Oral session

General information:

- All oral presentations will be held on-line in Zoom Breakout rooms.
- The Zoom link at conference was sent by e-mail by September 10th.
- Each participant will receive an individual Zoom link tied to the registered email address.
- Zoom link can be also confirmed in the MyRegistration page on OLC2021 website.
- Single oral sessions (9/26~29,10/1) will run in Zoom Breakout room "Summit room".
- Parallel oral sessions (9/30) will run in Zoom Breakout rooms "Summit room" and "Ocean room".
- Presentation times are 45 min (Tutorial), 30 min (Plenary), 25 min (Keynote), 20 min (Invite), 15 min (Contribute), respectively.
- Additional question-and-answer period is 5 min for all types of presentations including presenters-exchange time.



***Any recording (audio, visual) is not permitted.**

Outline for Presenters:

- Presenters will give live presentations from the Zoom Breakout rooms.
- Use a wired internet connection. If you cannot use a wired connection, please prepare a strong and stable Wi-Fi environment.
- Use your own computer with your headset or earphones with a microphone to avoid sound trouble.
- Attend the Zoom meeting at least 15 minutes before your talk.
- Change your name as "Presentation Number + Name", e.g., "O70 John Okinawa".
- Move to the designated Breakout room "Summit room" or "Ocean room".
- Push the "Share Screen" tab, and then choose the window of your slides.
- After a short introduction by the chair, please push "Unmute" and start your presentation.
- Keep in mind that a timer will be displayed at the video thumbnail window.
- In the case of some troubles, contact to the host or the chair by any means.
- When you finish your presentation, please stop the screen sharing in Zoom.

Outline for Participants:

- Participants should install the Zoom application and update to the newest version (over 5.7.6) in advance.
- Your <full name> must be displayed during the session. Edit your Zoom profile if needed.
- Keep your microphone and camera off except for question time.
- Please follow these rules, otherwise you may be forced to leave the presentation room.
- When you have questions, use the "Raise Hand" function of Zoom.
- After permission of the chair, turn on your microphone and ask questions directly.

Poster session

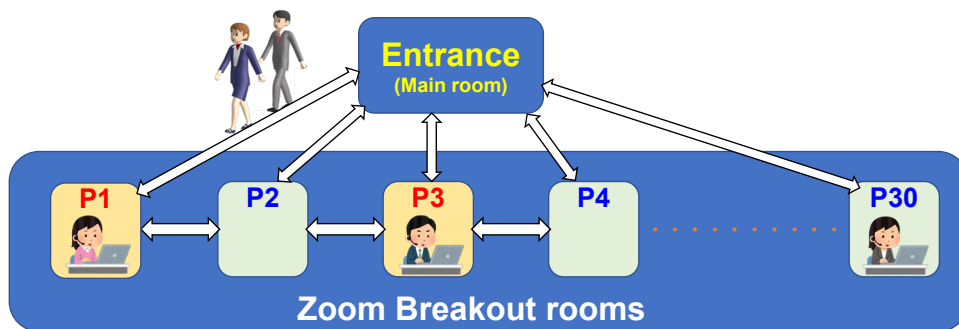
General information:

- All poster presentations will be held online in Zoom Breakout Rooms.
- The zoom link at conference was notified by e-mail by September 10th.
- Each participant will receive an individual Zoom link tied to the registered email address.
- Zoom link can be also confirmed in the MyRegistration page on OLC2021 website.
- We will have two poster sessions Poster1 and Poster2. Considering the time difference of countries, each poster session will be held two times (Poster1A/Poster1B and Poster2A/Poster2B).

Session		Poster1A		Poster1B	
		First Obligation	Second Obligation	First Obligation	Second Obligation
JST	GMT+9	9/27 18:00-18:30	9/28 18:30-19:00	9/28 8:30-9:00	9/28 9:00-9:30
CET	GMT+2	9/27 11:00-11:30	9/28 11:30-12:00	9/28 1:30-2:00	9/28 2:00-2:30
EST	GMT-4	9/27 5:00-5:30	9/27 5:30-6:00	9/27 19:30-20:00	9/27 20:00-20:30
MST	GMT-6	9/27 3:00-3:30	9/27 3:30-4:00	9/27 17:30-18:00	9/27 18:00-18:30

Session		Poster2A		Poster2B	
		First Obligation	Second Obligation	First Obligation	Second Obligation
JST	GMT+9	9/28 18:00-18:30	9/28 18:30-19:00	9/29 8:30-9:00	9/29 9:00-9:30
CET	GMT+2	9/28 11:00-11:30	9/28 11:30-12:00	9/29 1:30-2:00	9/29 2:00-2:30
EST	GMT-4	9/28 5:00-5:30	9/28 5:30-6:00	9/28 19:30-20:00	9/28 20:00-20:30
MST	GMT-6	9/28 3:00-3:30	9/28 3:30-4:00	9/28 17:30-18:00	9/28 18:00-18:30

- Presenters from Asian countries are recommended to talk two times.
- Presenters from EU can skip their midnight session (Poster1B or Poster2B), while the US presenters can skip their early morning session (Poster1A or Poster2A).
- Session and poster numbers are shown in Poster Program.
- Breakout Rooms will be fixed with each poster number and presenter name. Participants can switch the Breakout Rooms anytime. Presenters have an obligation time for the real-time discussion.
- Obligation time: Odd numbers; first 30 min, Even numbers; second 30 min.



***Any recording (audio, visual) is not permitted.**

Outline for Presenters:

- Poster presenters should set your name as “poster index + your name”, e.g., "P70 John Okinawa".
- Share your poster by "Share Screen" and turn on your microphone and camera, and then start your presentation.
- Poster presenters can visit other Breakout Rooms in non-obligation time.
- Participants should turn OFF your microphone except for question times.
- Participants can refer to the "Poster PDF" file anytime on the Web (e.g., in the case a presenter is absent).
- If you have any troubles, please contact to the host by using the "Chat" function of Zoom in the main room.
- After the poster session, the host will close the Zoom session.

Outline for Presenters / Participants:

- Use a wired internet connection. If you cannot use a wired connection, please prepare a strong and stable Wi-Fi environment.
- Use your own computer with your headset or earphones with a microphone to avoid sound trouble.

Poster PDF:

- Only participants can access to the PDF files in the MyRegistration page on OLC2021 website during the conference.
- The recommended poster size is W 297 mm x H 210 mm (A4 size) in landscape – not portrait. You can use the poster template on OLC2021 website.
- The font size is must be larger than 8 point (recommended over 10.5 point) for display in sufficient resolution.

Disclaimer:

- The organizer cannot support problems with the microphone or camera.
- The connection status of the video conferencing system depends on the presenter's own network environment. The organizer cannot handle problems such as screen freezes and voice interruptions.
- Even if you cannot successfully connect to the online meeting, the presentation will be valid because the poster PDF and/or abstract have been published.

Poster Award

OLC2021 “Shimakutuba” Poster Award

The OLC2021 will offer “Shimakutuba Poster Awards” to outstanding poster presentations by young researchers (postdocs) and students to encourage their academic activities. The judges appointed by the OLC2021 Poster Awards Committee will review and evaluate the posters according to the following criteria:

- Excellence and/or originality of the research
- Clarity in presentation including the poster layout
- Scientific knowledge in a discussion at the poster session

The OLC2021 Poster Awards Committee will decide the awardees on the basis of the results of the judges’ votes. The evaluation will be done by members of the committee during the poster session. It will be “blind” evaluation, with which the presenters cannot distinguish referees. The winners will be announced at the closing session.

Programs (Tutorial)

*****Note that the time format is Japan Standard Time (JST)***

Sunday, September 26

Summit Room		Sunday-PM, Sept. 26
14:30-15:15	T1	<Tutorial> Ingo Dierking (University of Manchester) Alternatives to ITO: concepts and material performance
15:20-16:05	T2	<Tutorial> Claudio Zannoni (Universita' di Bologna) Computer simulations and our understanding of liquid crystal behavior
16:10-16:55	T3	<Tutorial> Slobodan Zumer (University of Ljubljana) Optical imaging of complex topological defect structures
17:00-17:45	T4	<Tutorial> Pawel Pieranski (Université Paris-Saclay) Collisions of topological defects

Monday, September 27

Summit Room		Monday-AM, Sept. 27
8:30-9:15	T5	<Tutorial> Hiroshi Yokoyama (Kent State University) Pancharatnam-Berry Phase and Patterned Photoalignment
9:20-10:05	T6	<Tutorial> Iam Choon Khoo (Pennsylvania State University) Liquid crystalline chiral photonic crystals for ultrafast (linear and nonlinear) photonics

Programs (Oral)

***Note that the time format is Japan Standard Time (JST)*

Monday, September 27

Summit Room	Monday-AM, Sept. 27
--------------------	----------------------------

10:15-10:25	Opening
-------------	----------------

Summit Room	Monday-AM, Sept. 27
--------------------	----------------------------

Chairperson: Masanori Ozaki (Osaka University)

10:25-10:55	PL1	<Plenary> Sin-Doo Lee (Seoul National University) Toward New Applications of Reactive Mesogens for Quantum-Dot Displays and Anticounterfeiting
-------------	-----	--

11:00-11:25	K1	<Keynote> Ivan Smalyukh (University of Colorado Boulder) Guiding optical solitons by liquid crystal topology
-------------	----	--

11:30-11:55	K2	<Keynote> Nelson Tabiryan (BEAM Co.) Giant Optical Nonlinearity
-------------	----	---

Lunch

Summit Room	Monday-PM, Sept. 27
--------------------	----------------------------

Chairperson: Hirotugu Kikuchi (Kyushu University)

13:30-13:50	I1	<Invited> Takahiro Seki (Nagoya University) Photo-triggered mass transport driven from the film surface
-------------	----	---

13:55-14:10	O1	Shohei Saito (Kyoto University) Light-melt adhesives: Structural design and adhesive performances
-------------	----	---

14:15-14:30	O2	Hiroya Nishikawa (RIKEN) A Photovisible Capacitor with Enormous Capacitance Tunability Realized by A Polar Nematic Fluid
-------------	----	--

14:35-14:55	I2	<Invited> Marcin Muszynski (University of Warsaw) Optical tomography of momentum-resolved emission of dye-doped monocrystalline blue phase (I)
-------------	----	--

Break

Summit Room	Monday-PM, Sept. 27
-------------	---------------------

Chairperson: Hiroyuki Yoshida (Osaka University)

15:30-15:50	I3	<Invited> Guilhem Poy (University of Ljubljana) Optical solitons and chirality-enhanced nonlinear optical response in frustrated cholesterics
-------------	----	---

15:55-16:10	O3	Jun-ichi Fukuda (Kyushu University) Lattice orientation of cholesteric blue phases imposed by planar surface anchoring
-------------	----	--

16:15-16:35	I4	<Invited> Inge Nys (Ghent University) Multistable ring-shaped liquid crystal configurations through patterned planar photo-alignment
-------------	----	--

16:40-17:00	I5	<Invited> Etienne Brasselet (CNRS, Université de Bordeaux) Imprinting the vectorial nature of light in liquid crystals
-------------	----	--

17:05-17:30	K3	<Keynote> Miha Ravnik (University of Ljubljana) Liquid crystal metamaterials for light guiding
-------------	----	--

Break

Summit Room	Monday-PM, Sept. 27
-------------	---------------------

18:00-19:00	Poster 1A
-------------	-----------

Tuesday, September 28

Summit Room

Tuesday-AM, Sept. 28

8:30-9:30

Poster 1B

Summit Room

Tuesday-AM, Sept. 28

Chairperson: Jun-ichi Fukuda (Kyushu University)

9:50-10:15 K4

< Keynote > **Oleg Lavrentovich** (Kent State University)
Photopatterned liquid crystal elastomers to control
microparticles and living tissues

10:20-10:45 K5

<Keynote> **Antonio Martins Figueiredo Neto** (University of São Paulo)
Effect of the presence of the dye Sunset Yellow on the
stabilization of the amphiphilic-lyotropic uniaxial and biaxial
nematic phases

10:50-11:05 O4

Akihiko Matsuyama (Kyushu Institute of Technology)
Theory of aqueous liquid crystals

11:10-11:25 O5

Jun Yamamoto (Kyoto University)
Flow induced deformation and orientation of micelles in
phantasmagoric nematic liquid crystals near continuous I-N
phase transition

11:30-11:50 II1

<Invited-Industrial> **Hisao Inokuma** (AGC Inc.)
“WONDERLITE®Dx” – Light control window for automotive
glazing

Lunch

Summit Room

Tuesday-PM, Sept. 28

Chairperson: Toru Ube (Chuo University)

13:30-13:55 K6

<Keynote> **Wei Lee** (National Yang Ming Chiao Tung University)
Liquid Crystal Film on a Single Substrate for Biosensing

14:00-14:20 I6

<Invited> **Hsiu-Hui Chen** (National Taipei University of Technology)
Synthesis and Characterization of Photochromic Controllable
Mesomorphic Diarylethene Derivatives

14:25-14:40 O6 **Sayuri Hashimoto** (Tokyo Institute of Technology)
Formation of surface structures by photoinduced molecular diffusion

14:45-15:00 O7 **Kenji Urayama** (Kyoto Institute of Technology)
Soft Elasticity Effects in Nematic Elastomers Revealed by Various Types of Deformation

Break

Summit Room **Tuesday-PM, Sept. 28**

Chairperson: Kenji Urayama (Kyoto Institute of Technology)

15:35-15:55 I7 <Invited> **Masaki Hada** (University of Tsukuba)
Ultrafast collective motions of liquid-crystalline azobenzene molecules observed by ultrafast time-resolved electron diffraction

16:00-16:15 O8 **Jun Yoshioka** (Ritsumeikan University)
Marangoni convection driven by temperature gradient near an isotropic-nematic transition point

16:20-16:35 O9 **Makina Saito** (Tohoku University)
Development of novel spectroscopy systems to directly observe microscopic translational molecular dynamics in various liquid crystal phases

16:40-17:00 I8 <Invited> **Guang Chu** (Aalto University)
Liquid Crystal Colloids Printing for Custom-tailored Photonics

17:05-17:30 K7 <Keynote> **Helena Godinho** (Universidade NOVA de Lisboa)
Cellulose nanocrystals (CNCs) colloidal liquid crystals in water: slight changes, huge differences

Break

Summit Room **Tuesday-PM, Sept. 28**

18:00-19:00 Poster 2A

Wednesday, September 29

Summit Room	Wednesday-AM, Sept. 29
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8:30-9:30	Poster 2B
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Summit Room	Wednesday-AM, Sept. 29
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Chairperson: Tomiki Ikeda (Chuo University)

9:50-10:20	PL2	<Plenary> Liang-Chy Chien (Kent State University) Laser speckle reduction solution with a liquid crystal diffuser
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Chairperson: Go Watanabe (Kitasato University)

10:25-10:45	I9	<Invited> Rumiko Yamaguchi (Akita University) Quasi Twisted Nematic Mode Using Asymmetry Polar Anchoring in Hybrid Aligned Cell
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10:50-11:05	O10	Takeaki Araki (Kyoto University) A simple molecular model showing ferroelectric nematic order
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11:10-11:25	O11	Hirotsugu Kikuchi (Kyushu University) Controlling the temperature range of ferroelectric nematic phases based on eutectic phenomenon
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11:30-11:55	K8	<Keynote> Shunsuke Kobayashi (Sanyo-Onoda City University) Dynamic Retarder for Asymmetric Optically Compensated LCDs
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Thursday, September 30

Summit Room	Thursday-AM, Sept. 30
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Chairperson: Keiki Kishikawa (Chiba University)

8:30-8:50	II2	<Invited-Industrial> Michio Kitamura (SHINTECH, Inc.) Numerical Modeling for Design and Development of LC Optical Devices
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8:55-9:10	O12	Shizuka Anan (Kyushu University) Development weak anchoring surface for nematic liquid crystal reorientation modified with silane coupling reagents
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9:15-9:30	O13	Pravinraj Selvaraj (National Changhua University of Education) Superior electro-optical response in Organic molecules doped in the nematic liquid crystal device: present status and future perspectives
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9:35-9:55	I10	<Invited> Tigran Galstian (Universite Laval) In-fiber switchable polarizer by capillary-aligned liquid crystals
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Break

Ocean Room	Thursday-AM, Sept. 30
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Chairperson: Yoichi Takanishi (Kyoto University)

8:30-8:45	O17	Shoichi Kutsumizu (Gifu University) Preferred Photo-Induction of Ia3d Cubic Phase in ANBC-22/Azo Binary Mixture
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8:50-9:05	O18	Yoshiaki Uchida (Osaka University) Immobilization, Reorientation and Migration of Cholesteric Shells for Photonic Applications
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9:10-9:25	O19	Masayuki Kishino (Tokyo Institute of Technology) Quantification of internal strain in bent silicone elastomers via selective reflection of cholesteric liquid crystals
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9:30-9:45	O20	Takuya Ohzono (AIST) Polarized microscopy of domain textures of nematic elastomers
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Break

Summit Room	Thursday-AM, Sept. 30
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Chairperson: Ryotaro Ozaki (Ehime University)

10:30-10:50	II3	<Invited-Industrial> Yukito Saitoh (FUJIFILM Corporation) New Brightest Transparent Screen Using Tilted Cholesteric Liquid Crystals for Rear Projection
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10:55-11:10	O14	Mareena Antony (National Changhua University of Education) Large aperture liquid crystal lens using the hybrid alignment layer with titanium dioxide nanoparticle and polyimide composite
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11:15-11:30	O15	Olena Iadlovskaya (Kent State University) Bragg diffraction of light at oblique helicoidal cholesteric structures
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11:35-11:50	O16	Yazi Wang (National Chiao-Tung University) The Two-dimension Diffraction and the Milky Haze of a Large-scale Topological Defect Array in Nematic Liquid Crystal
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Lunch

Ocean Room	Thursday-AM, Sept. 30
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Chairperson: Shoichi Kutsumizu (Gifu University)

10:30-10:45	O21	Tomoki Shigeyama (Ritsumeikan University) Super-Monodispersed Cholesteric-Liquid-Crystal Polymer Microparticles with Three-Dimensionally Controlled Molecular Orientation
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10:50-11:05	O22	Kaho Ogata (Tokyo Institute of Technology) Unidirectional alignment of polymer-grafted ZnO nanorods in liquid-crystalline polymer films
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11:10-11:25	O23	Go Watanabe (Kitasato University) A Molecular Dynamics Study of Helical Columnar Liquid Crystals Based on Propeller-Shaped Metallomesogens
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11:30-11:50	I11	<Invited> Masahiro Funahashi (Kagawa University) High open circuit voltage in double chiral ferroelectric liquid crystals comprising an extended p-conjugated unit
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Lunch

Summit Room	Thursday-PM, Sept. 30
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Chairperson: Toshiaki Nose (Akita Prefectural University)

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| 13:30-13:50 | II4 | <Invited-Industrial> Takahiro Sasaki (Sharp Display Technology Corporation)
Development of Full Color Transflective and Reflective IGZO-TFT LCDs with Twisted-VA Modes |
| 13:55-14:10 | O24 | Samlan Chandran Thodika (CNRS, Université de Bordeaux)
Nonlinear geometric phase lensing from liquid crystals |
| 14:15-14:30 | O25 | Ryota Ito (Akita Prefectural University)
Twisted Nematic Liquid Crystal Device Using Hydrogen-Bonded Liquid Crystal for Terahertz Frequency Region |
| 14:35-14:50 | O26 | Brecht Berteloot (Ghent University)
Embedded optical ring resonators based on photoalignment |
| 14:55-15:10 | O27 | Piotr Lesiak (Warsaw University of Technology)
Polymerizable self-organizing photonic structures based on nematic liquid crystals |

Break

Ocean Room	Thursday-PM, Sept. 30
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Chairperson: Yasuyuki Kimura (Kyushu University)

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|--------------------|------------|---|
| 13:30-13:45 | O31 | Hiroshi Kakiuchida (AIST)
Selective light diffusion of polymer network liquid crystals formed through photopolymerization induced phase separation by nonuniform photoirradiation |
| 13:50-14:05 | O32 | Kyohei Hisano (Ritsumeikan University)
Fast and Slow Tuning of Molecular Recovery Response of Cholesteric Liquid Crystal Elastomers in Layered System |
| 14:10-14:25 | O33 | Yohei Zushi (University of Tokyo)
Confocal Observation of Reconnecting disclination lines in Nematic Liquid Crystal |
| 14:30-14:45 | O34 | Yoichi Takanishi (Kyoto University)
Low voltage fast driving of vertical aligned ferroelectric liquid crystal devices by nano-phase separation and gelation of ionic liquid |

14:50-15:10 I13 <Invited> **Yasushi Okumura** (Kyushu University)
 Observation of Polymer Structure and Electric-field Response of
 Liquid Crystal Director in Composite Films Consisting of Liquid
 Crystal and Highly Oriented Polymer

Break

Summit Room

Thursday-PM, Sept. 30

Chairperson: Yo Shimizu (NAIST)

15:45-16:05 II5 <Invited-Industrial> **Christian Weickmann** (ALCAN Systems GmbH)
 Application of Liquid Crystal Materials in the Microwave and
 Millimetre Wave Range for 5G and Satellite Communication
 Antennas

16:10-16:25 O28 **Jacek Szczytko** (University of Warsaw)
 Tunable liquid crystal optical microcavities for topological
 photonics

16:30-16:45 O29 **Migle Stebryte** (Ghent University)
 Reflective optical components based on chiral liquid crystal for
 head-up displays

16:50-17:05 O30 **Artur Geivandov** (Russian Academy of Sciences)
 Liquid crystal microlenses based on binary surface alignment

17:10-17:30 I12 <Invited> **Janusz Parka** (Military University of Technology, Warsaw)
 Hyperbolic Metamaterials with Nematic Liquid Crystals and
 Dye in Spontaneous Emission Engineering

Ocean Room

Thursday-PM, Sept. 30

Chairperson: Daigo Miyajima (RIKEN)

15:45-16:05 I14 <Invited> **Kenji Katayama** (Chuo University)
 Photocontrollable Crystallization at the Topological Defect of a
 Liquid Crystalline Droplet

16:10-16:25 O35 **Yuji Sasaki** (Hokkaido University)
 Near-field diffraction from self-organized topological defects
 arrays in nematic liquid crystals

16:30-16:45 O36 **Fumito Araoka** (RIKEN)
 Helical Nanopores to Induce Chiroptic Function – Use of Empty

Spaces Created by Helical Nanofilaments

16:50-17:10 I15

<Invited> **Hiroyuki Yoshida** (Osaka University)

Optical Characterization of the (211) Twin in Cholesteric Blue Phase I

Friday, October 1

Summit Room		Friday, Oct. 1
		Chairperson: Yasushi Okumura (Kyushu University)
8:30-8:55	K9	<Keynote> Amy Shen (Okinawa Institute of Science and Technology Graduate University) Microfluidic shearing and extensional flows on the alignment of cellulose nanocrystals
9:00-9:15	O37	Nobuyuki Miyamoto (Fukuoka Institute of Technology) Perovskite nanosheet liquid crystal gel with mechanochemical structural color
9:20-9:35	O38	Kiyoshi Kanie (Tohoku University) Magnetic Field-Responsiveness of Lyotropic Liquid- Crystalline Polymer-Modified Fe ₃ O ₄ Nanoplates
9:40-10:00	I16	<Invited> Koki Sano (RIKEN CEMS; JST PRESTO) Dynamic Photonic Crystals Consisting of Inorganic Nanosheets and Water

Break

Summit Room		Friday, Oct. 1
		Chairperson: Masahiro Funahashi (Kagawa University)
10:25-10:45	I17	<Invited> Daigo Miyajima (RIKEN) Bulk Photovoltaic Effect for Polar Columnar Liquid Crystals
10:50-11:05	O39	Shunto Arai (University of Tokyo) Ultrathin-film formation of liquid-crystalline organic semiconductors for high performance transistors
11:10-11:25	O40	Yo Shimizu (NAIST) Photo-induced phase transitions of calamitic-discotic bimesomorphic azobenzene-triphenylene liquid crystals
11:30-11:45	O41	Keiki Kishikawa (Chiba University) Polarization-Maintainable Axially Polar Ferroelectric Columnar Liquid Crystal Phase Realized by Introducing Chirality

Summit Room		Friday, Oct. 1
11:50-12:00	Closing	

Programs (Poster)

*****Note that the time format is Japan Standard Time (JST)***

Summit Room

Poster 1: P1~P30

Monday, Sept. 27, 2021 18:00-19:00 Poster 1A

Tuesday, Sept. 28, 2021 8:30-9:30 Poster 1B

Poster 2: P31~P59

Tuesday, Sept. 28, 2021 18:00-19:00 Poster 2A

Wednesday, Sept. 29, 2021 8:30-9:30 Poster 2B

Poster 1: P1~P30

[P1]	Yamauchi Shogo	Kumamoto University	Development of Novel Chiral Molecules with High Helical Twisting Power
[P2]	Ryotaro Ozaki	Ehime University	Analysis of Angular Dependence of Band Edge Wavelengths in Cholesteric Mirror and Bragg-Berry Cholesteric Deflector
[P3]	Andriani Furoida	Ritsumeikan University	Aggregation Enhanced Room-Temperature Phosphorescence with Dual Emission from Rod-Like Gold(I) Complexes
[P4]	Akinori Ooka	Kyoto University	Dynamic coupling of gel network and nematic orientation order
[P5]	Atsushi Joto	Kyoto Institute of Technology	Shape classification of liquid crystal elastomers with twist director configurations
[P6]	Hidetsugu Kitakado	Kyoto University	Mechanoresponsive PDMS that reversibly changes fluorescence in sub-MPa stress
[P7]	Takehiro Yachi	Tohoku University	Dynamic Control of Array Structure Based on Fe ₃ O ₄ Magnetic Nanoparticles by Hybridization with Liquid-Crystalline Organic Dendron
[P8]	Chen Chun-Jui	National Taipei University of Technology	Synthesis of Polymerizable Tetrabenzocoronene Mesogen Carrying with Diacetylenic Side Chains
[P9]	Fuwa Yudai	Ritsumeikan University	Mechanical Response of Molecular Orientation in Liquid Crystal Elastomers Controlled by Multi-Layered System
[P10]	Kensuke Suga	Kyoto University	Two-step fluorescence color change of stress-responsive polyurethanes that incorporate a flapping molecule

[P11]	Shingo Yoshioka	Kyoto University of Science	Dynamic Coupling in Surfactant Lamellar and Colloid particles Mixtures
[P12]	Yuji Nakashima	Fukuoka Institute of Technology	Columnar Nematic Liquid Crystal of Monodisperse Titanate Nanosheets Exchanged with Dodecyltrimethylammonium
[P13]	Koki Sasaki	Osaka University	Photoreduction Synthesis of Gold Nanosheet in Hyperswollen Lyotropic Lamellar Phase
[P14]	Yoshiko Takenaka	National Institute of Advanced Industrial Science and Technology	Fabrication of nematic liquid-crystal necklaces and their physical properties
[P15]	Khoa Le	Tokyo University of Science	Iridescent Colors in Aqueous Solutions of Chromonic Disodium Cromoglycate Doped with Chiral Additives
[P16]	removed		
[P17]	removed		
[P18]	Trong Nghia Lang	National Defense Academy	High-performance liquid-crystal-loaded terahertz wave variable phase shifter with non-radiative dielectric waveguide structure
[P19]	Shota Harano	Akita University	Emitting Color-switching in TN display using transparent UV range polarizer
[P20]	Keita Saito	Kyushu University	Continuous rotation of a cholesteric liquid crystalline droplet by a circularly polarized optical tweezers
[P21]	Chikara Kawakami	Nagoya University	Specific molecular orientation and structure induction at the interface between nematic liquid crystal and azobenzene polymer film
[P22]	Yuri Saida	University of Tsukuba	Ultrafast time-resolved electron diffraction with double-pulse-excitation applied to the light-melt adhesive based on a flapping triphenylene liquid crystal
[P23]	Takahiro Yamamoto	National Institute of Advanced Industrial Science and Technology	Development of a photoreversible adhesive with two adhesion states using poly(methyl methacrylate) containing an azobenzene liquid-crystal plasticizer showing smectic E phase
[P24]	Daisuke Taguchi	Tokyo Institute of Technology	Precision polymerization of a degradable block copolymer containing a nematic liquid-crystalline polymer block
[P25]	Hirona Nakamura	Tokyo Institute of Technology	Two-dimensional molecular orientation directed by scanning wave photopolymerization with digital light processor

[P26]	Ryota Mikami	Hokkaido University	Patterning topological defects in nematic liquid crystals using area-selective surface modification
[P27]	Kamil Orzechowski	Warsaw University of Technology	Enhanced electric field tunability and thermal stability of photonic crystal fibers filled with gold nanoparticles-doped cubic blue phases liquid crystals
[P28]	Kentaro Tanaka	Kyushu University	Observation of three-dimensional structure in electro- hydrodynamic convective patterns of cholesteric liquid crystals by fluorescent confocal microscopy
[P29]	Masaru Inoue	TOYOTech LLC	Photoinduced Charge Behaviors in a Liquid Crystal Mixture on Different Measurement Frequencies
[P30]	Hirosato Monobe	National Institute of Advanced Industrial Science and Technology	Charge Transport Property of Butterfly-like Shape Liquid Crystals Based Fused-Thiophene as Organic Semiconductors

Poster 2: P31~P59

[P31]	Ryo Kimura	Kyoto University	Viscosity probing function of flapping fluorophores and their optical properties in a nematic liquid crystal
[P32]	Ryotaro Ozaki	Ehime University	Comparison of Characteristics between Electro-splayed Cholesteric Droplets and Cholesteric Cell
[P33]	Nozomi Sato	Chuo University	Phase transition mechanism of liquid crystal revealed by patterned-illumination time-resolved phase microscope
[P34]	Hiroyuki Yoshida	Osaka University	Polymerization Induced Fluorescence Enhancement of Aggregation-Induced Emission Dye-Doped Liquid Crystals
[P35]	Takuho Naraoka	Kyoto Institute of Technology	Detecting Soft Mode in Liquid Crystal Elastomers by Dynamic Mechanical Tests in Stretched State
[P36]	Azumi Akiyama	Chiba University	Realization of a Room-Temperature Ferroelectric Columnar Liquid Crystal by Introducing Branched Alkyl Chains.
[P37]	Akira Shiiyama	Fukuoka Institute of Technology	Synthesis of nanosheet liquid crystal/elastomer nanocomposite by using gel template
[P38]	Riko Horiai	Tohoku University	Self-organization in a nematic phase of Au nanorods modified with liquid-crystalline organic dendrons
[P39]	Yanagihara Maki	Ritsumeikan University	Optical Properties of Cholesteric-Liquid-Crystal Elastomers with Precisely Controlled Molecular Orientation by Photopolymerization

[P40]	Fukui Naoya	Ritsumeikan University	Cholesteric-Liquid-Crystal Polymer Particles with Controlled Orientation of Helical Axis and Their Application to Deformation Analyses
[P41]	Kazuki Tanaka	Fukuoka institute of Technology	Liquid crystallinity of silylated niobate nanosheets synthesized by using a degradable polymer gel
[P42]	Adele Parry	University of Leeds	Novel Liquid Crystal Droplets for the Detection of Bacterial Toxins
[P43]	Satoshi Arai	Tokyo University of Science	Synthesis of Asymmetric Liquid-Crystalline Viologen Salts
[P44]	Takuya Yamakado	Kyoto University	Ratiometric fluorescent force probe that works in organogels
[P45]	Sadahito Uto	Osaka Institute of Technology	Uniformly oriented cast film of hydroxypropyl cellulose liquid crystal
[P46]	Rentaro Yuri	Akita Prefectural University	Improvement of Switching Speed in Liquid Crystal Millimeter Wave Phase Shifter Under Bias Magnetic Field
[P47]	Yuji Tsukamoto	Osaka University	Generation of Focused Vortex Beam by Liquid Crystal Spiral Zone Plate with Homeotropic and Planer Patterned Alignment Layer
[P48]	Ito Teruki	Akita University	Reverse mode smart window by UV irradiation through hole patterned photomask
[P49]	Rumiko Yamaguchi	Akita University	Elastic constant of Hydrogen Bonded Liquid Crystals Fashioned Between 4-m-Alkyl Cyclohexane Carboxylic Acids and 4-n-alkylbenzoic Acids (nBA)
[P50]	Katarzyna Rutkowska	Warsaw University of Technology	Electrically and optically-tuned LC:PDMS photonic devices
[P51]	Tomoaki Konishi	Kyoto University	Molecular liquid crystal adhesive that melts by light: Mechanism elucidation of the photomelting function
[P52]	Hikaru Sanada	Ryukoku University, Japan	Calamitic-discotic bimesomorphic azobenzene-triphenylene liquid crystals : photo-induced phase transitions of the alkyl homologues
[P53]	Yumiko Naka	Tokyo University of Science	Synthesis of Liquid-Crystalline Viologens Exhibiting Photo-Responsive Properties
[P54]	Yuki Yamamoto	University of Tsukuba	Ultrafast Time-Resolved Electron Diffraction Capturing Layer Stacking Dynamics of Graphene Oxide
[P55]	Takuto Ishiyama	Tokyo Institute of Technology	Scanning wave photopolymerization: effect of molecular diffusion of liquid-crystalline monomers on polymerization behavior
[P56]	Kenji Katayama	Chuo University	Controlled Formation of Topological Defects of Liquid Crystals in Micro-Chambers

[P57]	Kodai Miyagi	Kyushu Institute of Technology	Isotropic-nematic phase transitions in binary mixtures of banana-shaped liquid crystalline molecules
[P58]	Takumi Fujiwara	Tokyo University of Science	Electroconvection controlled by patterned electrodes
[P59]	Junki Yokota	Tokyo Institute of Technology	Nonlinear optical molecular reorientation of oligothiophene-doped fluorinated liquid crystals