Poster Presentations

Monday, September 1, 2025 18:35-20:30

POSTER SESSION A

P-A01	**Ion-induced space-charge polarization in nematic liquid crystals and its electrothermal characteristics** **Bing-Shiue Huang**[1] and Wei Lee[2] [1] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan* [2] *Institute of Imaging and Biomedical Photonic, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*
P-A03	**Modulation of liquid crystal alignment via azo dye adsorption and electrophoretic silica nanoparticles** Hui-Chi Lin, Kuan-Chi Wu, and **Hao-Wei Chu** *Department of Electro-Optical Engineering, National Formosa University, Taiwan*
P-A05	**Eigenmodes of light propagating in Cholesteric Liquid Crystal** **Ke Xu**, Pouya Nosratkhah, Le Zhou, and Kristiaan Neyts *State Key Laboratory of Advanced Displays and Optoelectronics Technologies, Hong Kong University of Science and Technology, Hong Kong*
P-A06	**Bistable and dynamically tunable scattering device based on silica-nanoparticle-doped liquid crystals** Hui-Chi Lin, Yue-Gang Wu, and **Hao-Wei Chu** *Department of Electro-Optical Engineering, National Formosa University, Taiwan*
P-A07	**Interface-induced molecular tilt in ferroelectric nematic fluids** **Hirokazu Kamifuji**[1], Kazuma Nakajima[1], Kenjiro Fukuda[1], Hirotsugu Kikuchi[2], and Masanori Ozaki[1] [1] *Graduate School of Engineering, The University of Osaka, Japan* [2] *Institute for Materials Chemistry and Engineering, Kyushu University, Japan*

P-A08

Thermal effects and electric field control of the nonlinear optical properties of liquid crystals using chromium films

Ying Chan Lin, Yi Kai Fan Chiang, and Tsung-Hsien Lin

Department of Photonics, National Sun Yat-Sen University, Taiwan

P-A09

Photoinduced generation and refreshing mechanism of Helfrich-Hurault deformation of cholesteric liquid crystals

Yi-Kai Chung, Chia-Liang Li, Zhi-Qun Wang, and Chia-Rong Lee

Department of Photonics, National Cheng Kung University, Tainan, Taiwan

P-A10

Refractive indices of cyanobiphenyl liquid crystals in the visible and near-infrared spectrum

Bo-Jun Guo[1] and Wei Lee [2]

[1] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-A11

Orientation control in blue phase liquid crystals

Cheng-You Lai, **Cheng-Jui Wang**, and Hui-Yu Chen

Department of Physics, National Chung Hsing University, Taiwan

P-A13

Effects of electric field and chiral dopants on the structural and optical properties of twist-bend nematic liquid crystals

Yun-Jie Wang, **Wei-Chung Hsueh**, and Hui-Yu Chen

Department of Physics, National Chung Hsing University, Taiwan

P-A14

Effect of CB7CB concentration on voltage-induced optical switching in heliconical cholesteric liquid crystal systems

Nien-Chen Li and Hui-Yu Chen

Department of Physics, National Chung Hsing University, Taichung

P-A15

Asymmetry of selective light reflection by cholesteric under planar–conical boundary conditions

M. A. Lesnoy[1], M. N. Krakhalev[1,2], W. Lee[3], and V. Ya. Zyryanov[1]

[1] *Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Russian Federation*

[2] *Institute of Engineering Physics and Radioelectronics, Siberian Federal University, Russian Federation*

[3] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-A16

Fabry-Pérot cavity with photo-controlled cholesteric layer

Abylgazy S. Abdullaev[1], Mikhail N. Krakhalev[1,2], Anton S. Zuev[1], Vladimir A. Gunyakov[1], Ivan V. Timofeev[1,2], and Victor Ya. Zyryanov[1]

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[2] *Institute of Engineering Physics and Radio Electronics, Siberian Federal University, Russia*

P-A17

Patterned photoalignment of liquid crystals: mitigating SLM deviations for novel applications

Pouya Nosratkhah, Ke Xu, Le Zhou, and Kristiaan Neyts

State Key Laboratory of Advanced Displays and Optoelectronics Technologies, Hong Kong University of Science and Technology, Hong Kong

P-A18

Photo-induced expansion of crystal domain in molecular-motor-based blue phase liquid crystals

Min-Che Lin, Hsing-Yi Chou, Yan-Rong Jiang, and Chia-Rong Lee

Department of Photonics, National Cheng Kung University, Taiwan

P-A19

Control of orientational orderliness of deformed superstructures

Zhi-Qun Wang, Yu-Jun Wong, and Chia-Rong Lee

Department of Photonics, National Cheng Kung University, Taiwan

P-A20

Chiral bound states in the continuum enabled by liquid crystals in dielectric metasurfaces

Wei-Ruei Chen[1], **Ting-Yi Zeng**[2], and Kuo-Ping Chen[1,2]

[1] *Institute of Photonic System, College of Photonics, National Chiao-Tung University, Taiwan*

[2] *Institute of Photonics Technologies, National Tsing Hua University, Taiwan*

P-A21

Effect of incidence angle and voltage on polarization of light passed through cholesteric under planar-conical alignment

Denis A. Kostikov[1], Mikhail N. Krakhalev[1,2], Stepan V. Nabol[1], Pavel S. Pankin[1,2], Dmitrii N. Maksimov[1,2], Ivan V. Timofeev[1,2], and Victor Ya. Zyryanov[1]

[1] *Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Russia*

[2] *Institute of Engineering Physics and Radio Electronics, Siberian Federal University, Russia*

P-A22	**Photoaligned crystalline diffraction gratings in azo-dye-doped liquid crystal cells for electro-optical modulation** Hui-Chi Lin[1], Yen-Ting Liu[1], **Chu-Yu Cheng**[1], and Hsing-Chih Liang[2] [1] *Department of Electro-Optical Engineering, National Formosa University, Taiwan* [2] *Institute of Physics, National Yang Ming Chiao Tung University, Taiwan*
P-A23	**Highly efficient realigning of misaligned cholesteric liquid crystals** **Wei-Shiang Chiu** and Jia-De Lin *Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan*
P-A24	**Optical modulation of oblique helicoidal cholesteric liquid crystal** Chien-Yeh Sung, **Yi-Chen Wu**, and Hui-Yu Chen *Department of Physics, National Chung Hsing University, Taiwan*
P-A25	**Smart window-enabled light modulation using azobenzene and gelator-doped liquid crystals** Hui-Chi Lin, Jia-You Lian, and **Xiang-Hong Zheng** *Department of Electro-Optical Engineering, National Formosa University, Taiwan*
P-A26	**Patterned polymer-stabilized cholesteric liquid crystals by two-photon polymerization direct laser writing** Kun-Zhong Wu, Pei-Sheng Hsieh, **Yu-Cheng Pan**, Chun-Wei Wang, and Jia-De Lin *Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan*
P-A27	**Scattering element with controllable speckles - polymer-dispersed liquid crystals** **Chen-Wei Tu**[1], Duan-Yi Guo[1,3], Yan-Ting Liu[1], Iam Choon Khoo[2], and Tsung-Hsien Lin[1] [1] *Department of Photonics, National Sun Yat-sen University, Taiwan* [2] *Department of Electrical Engineering, The Pennsylvania State University, USA* [3] *Brilliant Optronics, Taiwan*
P-A28	**Integration of fluidic gain medium and cholesteric liquid crystal defect mode cavity** **Han-Ping Lin**, Yu-Hsien Wu, and Jia-De Lin *Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan*

P-A29

Inkjet printing of polymerizable chiral liquid crystals

Živilė Čerškutė[1], Kristiaan Neyts[1,2], and Inge Nys[1]

[1] *Liquid Crystals and Photonics, Ghent University, Belgium*

[2] *State Key Laboratory of Displays and Opto-Electronics, The Hong Kong University of Science and Technology, Hong Kong*

P-A30

Transformation of toroidal structure in oblate cholesteric droplets under electric field

Oxana Prishchepa[1], Vladimir Rudyak[2], Vadim Barbashov[3], Roman Kazantsev[4], and Anna Gardymova[1,4]

[1] *Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Russia*

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[3] *Lebedev Physical Institute of RAS, Russia*

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P-A31

Local reorientations of liquid crystals induced by focused laser on ITO electrode

Cheng-Wei Li, **Ming-Yu Tsai**, and Jia-De Lin

Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan

P-A32

Asymmetric lasing emissions from pattern-aligned liquid crystal lasers

Jhen-Rong Chen, **Wan-Jing Chen**, and Jia-De Lin

Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan

P-A33

Tunable Memory Effect in CdS QDs doped nematic liquid crystal composites for electro-optical memory devices

Prabhat Singh Raghav[1], Sandeep Kumar[2,3], Praveen Malik[4], and Gautam Singh[1]

[1] *Department of Applied Physics, Amity Institute of Applied Sciences, Amity University Uttar Pradesh, India*

[2] *Raman Research Institute, India*

[3] *Department of Chemistry, Nitte Meenakshi Institute of Technology, India*

[4] *Liquid crystal Lab, Department of Physics, Dr B R Ambedkar NIT, India*

P-A34	**Photo-induced manipulation of anisotropic particles dispersed in nematic media** **Jae-Hui Kang**[1], Jun-Yong Lee[2], and Jong-Hyun Kim[1,2] [1] *Department of Physics, Chungnam National University, Republic of Korea* [2] *Institute of Quantum Systems, Chungnam National University, Republic of Korea*
P-A36	**Refraction light near air bubbles in nematic liquid crystals** **Hyeonji Son**[1], Jeong-Seon Yu[2], and Jong-Hyun Kim[1,2] [1] *Department of Physics, Chungnam National University, Korea* [2] *Institute of Quantum Systems, Chungnam National University, Korea*
P-A37	**Molecular design of sulfur-containing ferroelectric nematogens** **Yuki Arakawa**[1], Qiong Ning[2,3], Subramani Karthick[2,3], and Satoshi Aya[2,3] [1] *Department of Applied Chemistry and Life Science, Graduate School of Engineering, Toyohashi University of Technology, Japan* [2] *South China Advanced Institute for Soft Matter Science and Technology (AISMST), School of Emergent Soft Matter, China* [3] *Guangdong Provincial Key Laboratory of Functional and Intelligent Hybrid Materials and Devices, South China University of Technology, China*
P-A38	**Synthesis of fluorinated liquuid crystals with 3-propylcyclopentane end group** Tien-Hsin Lee and **Chain-Shu Hsu** *Department of Applied Chemistry, NatioanI Yang Ming Chiao Tung University, Taiwan*
P-A39	**Structural modification of highly fluorescent nematic liquid crystals for lowering crystalline–nematic phase transition temperature** **Yoshiya Omori**[1], Masaki Shimizu[2], and Tsuneaki Sakurai[2] [1] *Graduate School of Science and Technology, Kyoto Institute of Technology, Japan* [2] *Faculty of Molecular Engineering, Kyoto Institute of Technology, Japan*
P-A40	**Steric effect-stabilized room temperature ferroelectric columnar liquid crystal via a double-helical supramolecular structure** **Hikaru Takahashi**[1], Michinari Kohri[1,2], and Keiki Kishikawa[1,2] [1] *Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, Chiba University, Japan* [2] *Molecular Chirality Research Center, Chiba University, Japan*

P-A41	**Dielectric properties of dual-frequency liquid crystal doped with cetyltrimethylammonium bromide** **Chih-Chun Hsiao** and Wei Lee *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*
P-A42	**Dielectric characterization of liquid crystals at microwave frequencies via resonant cavity perturbation** **Yuh-Chyi Chang**, Tien-Lun Ting, and Tsung-Hsien Lin *Department of Photonics, National Sun Yat Sen University, Taiwan*
P-A43	**Fast response and erasable memory effect of electro-optics in PDLC with ferroelectric nematic liquid crystals** **Raita Takahashi**[1], Masaki Yamaguchi[1], Keiko Kojima[2], Hiroyuki Matsukizono[2], Yasushi Okumura[2], and Hirotsugu Kikuchi[2] [1] *IGSES, Kyushu University, Japan* [2] *IMCE, Kyushu University, Japan*
P-A44	**Molecular relaxation behaviour and Raman spectroscopic properties for the nematogen liquid crystal dimer E-4-((4-((6-bromhexyl) oxy) phenyl) diazenyl) benzonitrile by using planar alignment geometry with function of frequency and temperature.** **Vershika Singh** and Pankaj Kumar Tripathi *Department of Physics, Sharda University, India*
P-A45	**Liquid crystal-based sensor to detect sialic acid using bis-boronic acid functionalized amphiphilic ligand** **Rajib Nandi** and Chih Hsin Chen *Department of Chemistry, Tamkang University, Taiwan*
P-A46	**Copper nanoparticles based signal enhancement for detecting human albumin serum by liquid crystal-based immunoassay** **Muhammad Umer Saeed**[1,2], Wei-Ssu Liao[2], and Chih-Hsin Chen[1] [1] *Department of Chemistry, Tamkang University, Taiwan* [2] *Department of Chemistry, National Taiwan University, Taiwan*
P-A47	**Boosting electro-optical properties of liquid crystal modified with carbon nanotubes: a comparative study of homogenous and twisted states** **Pankhuri Srivastava**, Sonam Sharma, Atul Srivastava, and Rajiv Manohar *Liquid Crystal Lab, Department of Physics, University of Lucknow, India*
P-A48	**Effect of temperature variation on the electrochromic material DDAB combined with nematic liquid crystal E7** **Chu Chen**, Yi-Xuan Lin, Chun-Ting Wu, and Ko-Ting Cheng *Department of Optics and Photonics, National Central University, Taiwan*

P-A49	**Phototunable polarization volume gratings via hydrazone-based molecular chiral switches** **Artem Boichuk**[1], Lauri Uosukainen[1], Ivan Aprahamian[2], and Arri Priimägi[1] [1] *Faculty of Engineering and Natural Sciences, Tampere University, Finland* [2] *Department of Chemistry, Dartmouth College, USA*
P-A50	**High contrast guest-host cholesteric liquid crystal devices** **Wei-Hsien Wu**[1], Li-Min Chang[1], Hsiu-Hui Chen[2], and Chun-Ta Wang[1] [1] *Department of Photonics, National Sun Yat-Sen University, Taiwan* [2] *Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan*
P-A51	**The fabrication of liquid crystal networks structures using two-photon technology** **Wei-Ting Hsu**, Po-An Tsou, and Yu-Chieh Cheng *Department of Electro-Optical Engineering, National Taipei University of Technology, Taiwan*
P-A52	**Photonic cholesteric liquid crystal films incorporating CNT-modified hydrogel for sensitive and selective calcium ion detection** **Ayushi Singh**[1], Bhupendra Pratap Singh[2], and Shug-June Hwang[2] [1] *Department of Mechanical and Chemical Engineering, National United University, Taiwan* [2] *Department of Electro-Optical Engineering, National United University, Taiwan*
P-A53	**Size-dependent deformations of photothermal liquid crystal elastomer films** **Chun-Huang Tsai** and Jia-De Lin *Department of Opto-Electronic Engineering, National Dong Hwa University, Taiwan*
P-A54	**Helical MoS_2 liquid crystal fibers for photodetection and multi-stimuli response** **Simon Kim**, Jun Hyun Park, Su Eon Lee, Ho Jun Jin, and Bong Hoon Kim *Department of Robotics and Mechatronics Engineering, DGIST, Republic of Korea*
P-A55	**Development of photothermal polydopamine-coated liquid crystal fibers for soft actuation under infrared irradiation** **Yeongyeong Ha** and Dae Seok Kim *Department of Polymer Engineering, Pukyong National University, Korea*

P-A56	**Energy dissipation behavior of liquid crystal elastomer foams with RM44 versus PETMP crosslinkers** **Ji Won Lee** and Dae Seok Kim *Department of Polymer Engineering, Pukyong National University, Korea*
P-A57	**Formation of photoinduced anisotropic adhesion layer of *N*-benzylideneaniline liquid crystalline polymer based on axis-selective photoreaction** **Yuina Uehara**, Mizuho Kondo, Daisuke Okai, Hiroki Adachi, and Nobuhiro Kawatsuki *Department of Applied Chemistry, Graduate School of Engineering, University of Hyogo, Japan* *Department of Materials and Synchrotron Radiation Engineering, Graduate School of Engineering, University of Hyogo, Japan*
P-A58	**Self-healable and multi-stimuli-responsive liquid crystal polymer actuators containing polydimethylsiloxanes, cyanostilbene-functionalized poly(thiourethane)s, and iron oxide nanoparticles** A. Khan[1], T. T. K. Cuc[1], T. W. Chien[1], S. T. Hsiao[1], **C. Y. Chien**[1], W. T. Chuang[2], H. H. Chen[3], M. Kohout[4], and H. C. Lin[1] [1] *Department of Materials Science and Engineering, National Yang Ming Chiao Tung University, Taiwan* [2] *National Synchrotron Radiation Research Center, Taiwan* [3] *Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan* [4] *Department of Organic Chemistry, University of Chemistry and Technology, Czech Republic*
P-A59	**Soft liquid crystal elastomeric actuators integrated with liquid metal layers for enhanced strain sensing and flexible signal electronics** A. Khan[1], T. T. K. Cuc[1], **S. T. Hsiao**[1], T. W. Chien[1], W. T. Chuang[2], H. H. Chen[3], M. Kohout[4], and H. C. Lin[1] [1] *Department of Materials Science and Engineering, National Yang Ming Chiao Tung University, Taiwan* [2] *National Synchrotron Radiation Research Center, Taiwan* [3] *Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan* [4] *Department of Organic Chemistry, University of Chemistry and Technology, Czech Republic*

Poster Presentations

Tuesday, September 2, 2025 18:35-20:30

POSTER SESSION B

P-B01	**Preparation of N-benzylideneaniline main-chain liquid crystal elastomers for light-responsive detachable pressure sensitive adhesives** **Satoru Kamata,** Mizuho Kondo, and Nobuhiro Kawatsuki *Department of Applied Chemistry, Graduate School of Engineering, University of Hyogo, Japan*
P-B02	**Reducing back-coupling loss to enhance efficiency in ar waveguides through polarization volume grating** **Yu Ching Huang** and Yu Chieh Cheng [1] *Department of Electro-Optical Engineering, National Taipei University of Technology, Taiwan*
P-B03	**All-optical omnidirectionally bendable polarization-responsive cholesteric liquid crystal elastomers** **Hung-Chi Huang**, Yan-Song Zhang, Zhi-Qun Wang, and Chia-Rong Lee *Department of Photonics, National Cheng Kung University, Taiwan*
P-B04	**Photoactuatable blue phase elastomer films with abnormal bending behaviors** **Che-Lun Yang**, Tse Lo, Yan-Song Zhang, Zhi-Qun Wang, and Chia-Rong Lee *Department of Photonics, National Cheng Kung University, Taiwan*
P-B05	**Photo-steering of flexible lasers based on dye-infiltrated blue phase photonic superstructures** **Zong-Han Cai**, Jing-Ting Ciou, Yan-Song Zhang, and Chia-Rong Lee *Department of Photonics, National Cheng Kung University, Taiwan*
P-B08	**Advanced planar chiro-optics with full-spectrum tunability and reversible chirality** Ching-Han Yang, Pei-Ru Song, **Yi-Chen Shen**, Anup Kumar Sahoo, and Chia-Rong Lee *Department of Photonics, National Cheng Kung University, Taiwan*

P-B09

Ion-doped cholesteric liquid crystals with lying helix structure for high-contrast reflective displays

Kuan-Peng Chen[1], Pin-Jui Su[1], Kuan-Wu Lin[2], Cheng-Chang Li[2], and Tsung-Hsien Lin[1]

[1] *Department of Photonics, National Sun Yat-sen University, Taiwan*

[2] *Brilliant Optronics, Taiwan*

P-B10

3D virtual image projection in augmented reality utilizing electrical tunable progressive liquid crystal lenses

Wei-Cheng Cheng and Yi-Hsin Lin

Department of Photonics, College of Electrical and Computer Engineering, National Yang Ming Chiao Tung University, Taiwan

P-B11

Liquid Crystal devices as spectral modulators for enhanced computational spectral imaging

Doron Pasha[1], Majd Abu Aisheh[1], Issac Y. August[2], and Ibrahim Abdulhalim[1]

[1] *Department of Electro-optics and Photonics Engineering and the Ilse Katz Institute of Nanoscale Science and Technology, ECE-School, Ben Gurion University of the Negev, Israel*

[2] *Department of Electrical Engineering and Physics, Sami Shamoon College of Engineering, Israel*

P-B12

Large-aperture liquid crystal photonic devices based on a microstructure transmission line technique

Noureddine Bennis[1], Tomasz Jankowski[1], Przemek Morawiak[1], Anna Spadło[1] and Jose Francisco Algorri[2]

[1] *Faculty of Advanced Technologies and Chemistry, Military University of Technology, Poland*

[2] *Photonics Engineering Group, University of Cantabria, Spain*

P-B14

Low-cost, high impact: LC RIS Structure for wireless networks

Yi-Chan Hung, Yuh-Chyi Chang , Tien-Lun Ting , and Tsung-Hsien Lin

Department of Photonics, National Sun Yat-Sen University

P-B15

Innovative cholesteric liquid crystal biosensor for label-free, high-sensitivity immunodetection of CA125 via haze measurement

Tien-Hong Peng[1], **Chih-Tung Chu**[2], Mon-Juan Lee[3], and Wei Lee[4]

[1] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Institute of Photonic System, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

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[4] *Institute of Imaging and Biomedical Photonic, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-B16

Highly sensitive label-free biosensor utilizing cholesteric liquid crystals for haze measurement in protein assays

Tien-Hong Peng[1], **Chia-Tung Chang**[1], Mon-Juan Lee[2], and Wei Lee[3]

[1] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Department of Chemical and Materials Engineering, National Kaohsiung University of Science and Technology, Taiwan*

[3] *Institute of Imaging and Biomedical Photonic, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-B17

Electro- and thermo-optic effects in a one-dimensional photonic-crystal/liquid-crystal structure for near-infrared photonic applications

Yu-Chen Liou[1], **Pei-Chieh Hsieh**[2], Min-Han Lu[2], and Wei Lee[3]

[1] *Institute of Photonic System, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[3] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-B18

Ionic modulation effects in dual-frequency cholesteric liquid crystals with thermally responsive chirality

Zhen-Yi Huang[1] and Wei Lee[2]

[1] *Institute of Photonic System, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-B19

Security device with easy image modulation using liquid crystals on simple plasmonic metasurfaces

Hyun-Su Kim[1], Jeong-Seon Yu[2], Jong-Hyun Kim[1,2]

[1] *Department of Physics, Chungnam National University, Republic of Korea*

[2] *Institute of Quantum Systems, Chungnam National University, Republic of Korea*

P-B20

Deep learning-based optimization of driving conditions for cholesteric liquid crystal displays reflectance prediction

Pei-Tong Yang, Jun-Jie Lu, Duan-Yi Guo, Hung-Chang Jau, and Tsung-Hsien Lin

Department of Photonics, National Sun Yat-sen University, Taiwan

P-B21	**Two stacked cholesteric liquid crystal cells with electrothermally tunable hyper-reflective colors** Hsin-Kai Tseng[1], **Hong-Kun Chen**[2], Po-Chang Wu[3], and Wei Lee[1] *[1] Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan* *[2] Institute of Photonic System, College of Photonics, National Yang Ming Chiao Tung University, Taiwan* *[3] Unit of Product Optics Research, Cheng Mei Materials Technology Corporation, Taiwan*
P-B22	**Broadband NIR tunable linear polarization rotator** **Jin-Yu Chen**[1], Li-Min Chang[1,2], and Tsung-Hsien Lin[1] *[1] Department of Photonics, National Sun Yat-Sen University, Taiwan* *[2] Brilliant Optronics, Taiwan*
P-B23	**Polarization dependency of varifocal lenses via nematic liquid crystals** **Hao-Hsin Huang** and Yi-Hsin Lin *Department of Photonics, College of Electrical and Computer Engineering, National Yang Ming Chiao Tung University, Taiwan*
P-B24	**Millimeter-wave transmission properties of liquid-crystal-impregnated magnet array** **Yuki Sasayama**, Michinori Honma, Ryota Ito, and Toshiaki Nose *Akita Prefectural University, Japan*
P-B25	**Advanced electrotunable linear polarization rotator based on dye-doped 90°-twisted nematic liquid crystals** **Yi-Xuan Liu**, Pravinraj Selvaraj, Chi-Tang Huang, and Ko-Ting Cheng *Department of Optics and Photonics, National Central University, Taiwan*
P-B26	**Single pixel infrared imaging with enhanced sensitivity using optically addressed liquid crystal spatial light modulator and Si CMOS camera** **Tariq Abu Hussein** and Ibrahim Abdulhalim *Department of Electro-optics and Photonics Engineering and the Ilse Katz Institute of Nanoscale Science and Technology, ECE-School, Ben Gurion University of the Negev, Israel.*
P-B27	**Tunable polychromatic spatial phase modulation based on cholesteric liquid crystal** **Sergey A. Shvetsov**, Hayk Harutsunyan, Vahram Grigoryan, and Mushegh Rafayelyan *Institute of Physics, Yerevan State University, Armenia*

P-B28

Spectral features of photonic crystal microcavity with chiral liquid crystal layer

Stepan V. Nabol[1], Pavel S. Pankin[1,2], Dmitrii N. Maksimov[1,2], Daniil S. Buzin[1], Aleksey I. Krasnov[1], Vitaly S. Sutormin[1,2], and Denis A. Kostikov[1], Abylgazy S. Abdullaev[1], Mikhail N. Krakhalev[1,2], Nikita A. Zolotovskiy[1,2,3], Sergey V. Nedelin[1,2,3], Igor A. Tambasov[1,3], and Ivan V. Timofeev[1,2]

[1] *Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Russia*

[2] *Institute of Engineering Physics and Radio Electronics, Siberian Federal University, Russia*

[3] *LLC Research and Production Company "Spectehnauka," Russia*

P-B29

High FoM liquid crystal phase shifter with differential line and periodic loading

Chia-Wen Chang, Jia-Hau Chen, Yuh-Chyi Chang, Tien-Lun Ting, and Tsung-Hsien Lin

Department of Photonics, National Sun Yat-Sen University, Taiwan

P-B30

Tunable microwave bandpass filter based on liquid crystal-loaded periodic lines

Jing-Hua Ran, Yuh-Chyi Chang, Tien-Lun Ting, and Tsung-Hsien Lin

National Sun Yat-sen University Department of Photonics

P-B31

Solar-driven thermotropic smart windows for energy savings and advanced light modulation

You-Chieh Kuo, Chih-Cheng Lai, Pravinraj Selvaraj, and Ko-Ting Cheng

Department of Optics and Photonics, National Central University, Taiwan

P-B32

Bistable innovative smart windows featuring passive and active modes using dye-doped dual-frequency cholesteric liquid crystals

Zheng-Wei Lu[1], **Ping-Jui Wu**[1], Min-Han Lu[2], and Wei Lee[3]

[1] *Institute of Photonic System, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[2] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

[3] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*

P-B33	**Polymer-stabilized dual-frequency liquid crystal with thermally responsive chiral dopant for versatile adaptive smart window** Tsung-Kang Hsu[1], **Hsin-Che Lee**[2], Min-Han Lu[2], and Wei Lee[1] [1] *Institute of Imaging and Biomedical Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan* [2] *Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University, Taiwan*
P-B34	**Pixelated dimming goggle for stroboscopic visual training** **Chia-Ming Chang**, Chung-Hsien Wu, Sung-Nan Chen, Chien-Chung Chen, and Hung-Shan Chen *Liqxtal Technology Inc., Taiwan*
P-B35	**Mesoporous hollow silica microspheres doped liquid crystal as a normally transparent smart window** **Niveen Huseen** and Ibrahim Abdulhalim *Department of Electro-Optics and Photonics Engineering and the Ilse Katz Institute for Nanoscale Science and Technology, ECE School, Ben-Gurion University of the Negev, Israel*
P-B36	**Bistable smart window using planar-aligned cholesteric liquid crystal in a normally bright mode** **Niveen Huseen** and Ibrahim Abdulhalim *Department of Electro-Optics and Photonics Engineering and the Ilse Katz Institute for Nanoscale Science and Technology, School of Electrical and Computer Engineering, Ben-Gurion University of the Negev, Israel.*
P-B37	**Pre-tilt patterning of liquid crystals using aligned polymer composite system and its electro-optical properties** **Taiga Obayashi**, Yo Inoue, and Hiroshi Moritake *Department of Electrical and Electronic Engineering, National Defense Academy, Japan*
P-B38	**Broadband visible reflection from a single-layer cholesteric liquid crystal film** **Po-Chun Shih**[1], Yu-Ming Huang[1], Chun-Ting Chen[1], Kuan-Wu Lin[2], Cheng-Chang Li[2], and Chun-Ta Wang[1] [1] *Department of Photonics, National Sun Yat-Sen University, Taiwan* [2] *Brilliant Optronics, Taiwan*
P-B39	**High diffraction efficiency polarization volume gratings based on bilayer cholesteric liquid crystals** **Chun-Ting Chen**, Yu-Chieh Chang, Ting-Wei Gu, Yu-Chieh Li, Ta-Lung Chang, and Chun-Ta Wang *Department of Photonics, National Sun Yat-Sen University, Taiwan*

P-B40

Miniaturized liquid crystal waveguide switch devices and their fabrication techn

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P-B42

Confocal laser scanning microscopic study of the electric field response of ferroelectric blue phase liquid crystal gel microactuators

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P-B43

Versatile and thermoresponsive polymer-stabilized cholesteric liquid crystal smart window with varying transitional transparency and no surface orientation treatment

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P-B44

Pixelated switchable lens based on liquid crystal and geometric phase lens

Chia-Ming Chang, Guo-Lin Hu, Ming-Hsuan Chen, Chien-Chung Chen, Sung-Nan Chen, Hung-Shan Chen

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P-B45

Versatile and tunable smart window based on polymer-stabilized dual-frequency cholesteric liquid crystal incorporating a thermally responsive chiral dopant

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P-B46

Optimizing dimensional synergies of nanomaterials for high-performance PDLC smart windows

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P-B47

Label-free optical biosensing of COVID-19 nucleocapsid protein with the lyotropic chromonic liquid crystal sunset yellow

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P-B48

High-precision urinary glucose sensing using a TPP-cavity-integrated asymmetric photonic platform

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P-B49

Dielectric modulation of metamaterial resonator using liquid crystals for biomedical urea sensing

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P-B50

Spatially patterned homeotropic and planar alignment with brilliant yellow photoalignment layers

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P-B51

Improving transmission of a fast-response parallel-aligned liquid crystal device with virtual walls using dual-electrode design for virtual reality (VR) applications

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P-B52

Improving transmission of a fast-response vertically-aligned liquid crystal device with virtual walls using multi-electrode design for virtual reality (VR) applications

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P-B53

Programmable acoustic sculpting of hierarchical chiral nematic superstructures for adaptive and reconfigurable photonic functions

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P-B54

Thermo-responsive smart glass based on an eco-friendly aqueous solution

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P-B55

Liquid crystal pretilt control on single crystal rubrene via homeotropic polyimide doping

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P-B56

Electric field-assisted control of pretilt angle in rubrene-doped nematic liquid crystals

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P-B57	**Alignment behavior of the hybrid PDVT/HBCs under various solution shearing conditions in OFETs applications** **Zih-Sian Yang** and Hsiu-Hui Chen *Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan*
P-B58	**Investigation of microstructure and charge transport in photocontrollable OTFTs based on PDVT/ DTCP hybrid systems** **Po-Chun Lien**, You-Sheng Du, and Hsiu-Hui Chen *Department of Molecular Science and Engineering, National Taipei University of Technology, Taiwan*