

ILCC2022

28th International Liquid Crystal Conference

24th to 29th July 2022, NOVA School of Science and Technology, Lisbon, Portugal

Poster Sessions online (Padlet)

Liquid Crystal Art Exhibition (Library)

Registration (entrance Building IV)

Tuesday, 26th July					
Grand Auditorium					
Chair: John Goodby					
08:45-09:35	PL-2 Maria Blanca Ros				
09:35-10:00	Coffee Break				
	Grand Auditorium	Building IV Amph.I	Building IV Amph.II	Building IV Amph.III	Building IV Amph.IV
	Chair: Sabine Laschat	Chair: Jonathan Selinger	Chair: Michel Mitov	Chair: Teresa López-León	Chair: Jan Lagerwall
10:00-10:15	ILK-7-GA: Corrie Imrie	ILK-4-AI: Alain Goriely (online)	ILK-4-AII: Francesc Sagués	ILK-5-AIII: Hiroshi Yokoyama	IL-3-AIV: Tae-Hoon Yoon (online)
10:15-10:30					
10:30-10:45	DO-10: S. Yoshida (online)	EO-12: J. Fukuda (online)	AO-8: B. Loewe	CO-16: J. Song (online)	FO-5: H. Nishikawa (online)
10:45-11:00	DO-11: N. Huang (online)	EO-13: R. Chowdhury (online)	AO-9: O. Bantysh	CO-17: S. Santer (online)	FO-6: J. Tsung (online)
11:00-11:15	DO-12: V. Vishwakarma (online)	EO-14: E. Velasco	AO-10: V. Jampani	CO-18: L. Honaker	FO-7: Z. Wang (online)
11:15-11:30	DO-13: N. Godman	EO-15: K. Hedlund (online)	AO-11: M. Goral	CO-19: Z. Meijs	FO-8: A. Bhardwaj
11:30-11:45	IL-8-GA: Matthias Lehmann	IL-5-AI: Harald Pleiner (online)	IL-5-AII: Camilla Parmeggiani	IL-6-AIII: Mohan Srinivasarao	FO-9: L. Lucchetti
11:45-12:00					FO-10: I. Carvalho
12:00-13:55	Lunch				
Grand Auditorium - Chair: Ingo Dierking					
13:55-14:15	Tribute to Mark Warner - Peter Palffy-Muhoray, Eugene Terentjev, Carl Modes -				
	Grand Auditorium	Building IV Amph.I	Building IV Amph.II	Building IV Amph.III	Building IV Amph.IV
	Chair: Ewa Górecka	Chair: Timothy Bunning	Chair: Yoshiaki Uchida	Chair: Alberta Ferrarini	Chair: Dirk Broer
14:25-14:40	IL-9-GA: Alenka Mertelj	IL-6-AI: Eugene Terentjev	IL-6-AII: Michel Mitov	IL-7-AIII: Ingo Dierking	FO-11: J. Beekman
14:40-14:55					FO-12: D. Pasha
14:55-15:10	DO-14: M. Pawlak	BO-14: M. Osipov	AO-12: Y. Shen	EO-16: Z. Karasz	FO-13: D. Coursault
15:10-15:25	DO-15: S. Ettinger	BO-15: L. Larios-López	AO-13: S. Shiyanoskii	EO-17: R. Hendrikse	FO-14: Z. Gradwell
15:25-15:40	DO-16: R. Walker	BO-16: J. Yamamoto	ILK-7-AII: Cristina Marchetti (online)	ILK-8-AIII: Igor Musevic	ILK-4-AIV: Wei Lee
15:40-15:55	DO-17: A. Vanakaras	BO-17: S. Dhara			
15:55-16:15	Coffee Break				
	Grand Auditorium	Building IV Amph.I	Building IV Amph.II	Building IV Amph.III	Building IV Amph.IV
	Chair: Frank Giesselmann	Chair: Mikhail Osipov	Chair: Janusz Parka	Chair: Oleg Lavrentovich	Chair: Francesc Sagués
16:15-16:30	IL-10-GA: Antal Jakli	BO-18: M. Rosenberg	CO-20: F. Ciuchi (online)	EO-18: Z. Kos	FO-15: J. Lagerwall
16:30-16:45		BO-19: J. Wie	CO-21: S. Liu	EO-19: D. Revignas	FO-16: J. Schmidtke
16:45-17:00	DO-18: P. Rybak (online)	BO-20: I. Marín	CO-22: N. Podoliak	EO-20: J. Salmeron-Hernandez	FO-17: M. Prévôt
17:00-17:15	DO-19: V. Williams (online)	BO-21: R. Kizhacidathazhath	CO-23: C. Ertman	ILK-9-AIII: Claudio Zannoni	FO-18: B. Berteloot
17:15-17:30	DO-20: M. Chen (online)	BO-22: H. Zhao (online)	CO-24: S. Norouzi (online)		FO-19: K. George (online)
17:30-19:30	Poster Session II - Onsite (Ágora Room) + Online (Padlet and Zoom)				

A - Liquid Crystals in Biology and Active Matter	
B - Macromolecular Liquid Crystals	
C - Confined Liquid Crystals	
D - Design of New Materials	
E - Mathematical Modelling, Symmetry and Topology	
F - Novel Applications	

Tuesday, 26th July

Room: **Grand Auditorium**

08:45-09:35

Chair: John Goodby

PL-2 - *“Exploiting our know-how in liquid crystals: strategies to benefit from mesogens' supramolecular interactions”* M.B. Ros; M. Castillo-Vallés; C. Auría-Soro; M. Martínez-Abadía; R. Giménez; T. Sierra.

Coffee Break

10:00-12:00

Chair: Sabine Laschat

ILK-7-GA - *“Structure-Property Relationships and the Twist-Bend Phases”* C.T. Imrie.

DO-10 - *“Mechanism of chirality induction in photoresponsive chiral nematic liquid crystals”* S.Y. Yoshida; S.M. Morikawa; K.U. Ueda; K.K. Kaneko; T.H. Hanasaki; K.A. Akagi.

DO-11 - *“Crystalline order in lyotropic solution of supramolecular hollow nanotubes”* N. Huang; G. Ungar.

DO-12 - *“New Class of Pyrazino[2,3-g]quinoxaline Derivatives Based on Donor-Acceptor-Donor (D-A-D) Architectures”* V.K. Vishwakarma; A.S. Achalkumar.

DO-13 - *“Hybrid inorganic chalcogenide/organic liquid crystalline composites”* C.P. Ambulo; M.K. Lauer; K.J. Carothers; M.E. McConney; S.T. Iacono; N.P. Godman.

IL-8-GA - *“Double and Triple Nanosegregation in Complex Soft Materials – Impact of Topology and Intrinsic Free Space”* M. Lehmann; M. Dechant; M. L. Ambov; L. Gerbig; T. Ghosh; K. Noll; M. Baumann.

Lunch

13:35-14:15

Chair: Ingo Dierking

Tribute to Mark Warner – P. Palffy-Muhoray; E.M. Terentjev; C. Modes.

14:25-15:55

Chair: Ewa Górecka

IL-9-GA - *“Ferroelectric nematic phases and splay deformation”* A. Mertelj; N. Sebastián; L. Cmok; M. Lovšin; M. Čopič; N. Osterman; A. Petelin; I. Drevenšek-Olenik; R.J. Mandle; S. Aya; M. Huang; B. Berteloot; K. Neyts.

DO-14 - *“Tuneable helices of plasmonic nanoparticles using liquid crystal templates”* M.P. Pawlak; M. Bagiński; W. Lewandowski.

DO-15 - *“Rods in a lyotropic chromonic liquid crystal: emergence of chirality, alignment, and angular diffusion”* S. Ettinger; C.F. Dietrich; C.K. Mishra; C. Miksch; D.A. Beller; P.J. Collings; A.G. Yodh.

DO-16 - *“The Effect of Intrinsic Chirality on Modulated and Polar Nematic Phases”* R. Walker; D. Pocięcha; E. Cruickshank; J.M.D. Storey; E. Gorecka; C.T. Imrie.

DO-17 - *“New Nematic Phase with Nanoscale Modulations”* E.T. Samulski; D. Reyes-Arango; A.G. Vanakaras D.J. Photinos.

Coffee Break



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16:15-17:30

Chair: Frank Giesselmann

IL-10-GA - *“Ionic Liquid Crystal Elastomers: Actuators, sensors and organic transistors”* C.P.H. Rajapaksha; C. Feng; P. Paudel; B. Lüssem; T. Kyu; A.I. Jáklí.

DO-18 - *“Giant ‘antichiral’ unit cell made of chiral columns”* P. Rybak; A. Krowczynski; J. Szydłowska; D. Pocięcha; E. Gorecka.

DO-19 - *“Conformational Dynamics and Self-Assembly in Liquid Crystals”* C.O. Zellman; V.E. Williams.

DO-20 - *“Asymmetric Electro-optic Response of a Glassy Ferroelectric Nematic Monodomain at Room Temperature”* M. Chen; X. Chen; C. Bennett; E. Korblova; C. Park; M. Glaser; J. MacLennan; D. Walba; N. Clark.

17:30-19:30

Poster Session II - Onsite (Ágora Room) + Online (Padlet and Zoom)

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Room: **Building IV – Amphitheater I**

10:00-12:00

Chair: Jonathan Selinger

ILK-4-AI - “*The Soft Anelasticity of Liquid Crystal Elastomers Instabilities, Pattern Formation, and Dimensional Reduction in Liquid Crystal Elastomers*” A. Goriely; L.A. Mihai.

EO-12 - “*Twin boundaries in cholesteric blue phase: A simulation study*” A. Yamashita; J. Fukuda.

EO-13 - “*Using Machine Learning to Study 2D Hydrodynamics and Topological Defect Annihilation in Freely-Suspended Smectic Films and Bubbles*” R.A. Chowdhury; K. Hedlund; E. Hedlund; A.A.S. Green; C.S. Park; J. E. Maclennan; N.A. Clark.

EO-14 - “*Exotic liquid crystalline phases in monolayers of vertically vibrated metallic particles*” E. Velasco; Y. Martinez-Ratón.

EO-15 - “*Freely-Suspended Films of the Novel Smectic Z Phase*” K.G. Hedlund; X. Chen; C.S. Park; J.E. Maclennan; N.A. Clark.

IL-5-AI - “*Two-fluid Hydrodynamics for Ordered Mesophases*” H. Pleiner; H. R. Brand.

Lunch

14:25-15:55

Chair: Timothy Bunning

IL-6-AI - “*Dynamically Crosslinked Liquid Crystalline Elastomers (xLCE)*” E.M. Terentjev.

BO-14 - “*Molecular theory of liquid crystalline properties of rod-coil block copolymers*” M.A. Osipov; M.V. Gorkunov; A.A. Antonov.

BO-15 - “*Photo-induced molecular alignment of azotolane-based liquid crystal polymers*” L. Larios-López; R. Rodríguez-González; I. Felix-Serrano; D. Navarro-Rodríguez.

BO-16 - “*Direct observation of critical fluctuation and dynamic heterogeneity in phantasmagoric liquid crystals*” J.Y. Yamamoto.

BO-17 - “*Flow and dynamics of a sheared twist-bend nematic liquid crystals*” S. Dhara.

Coffee Break

16:15-17:30

Chair: Mikhail Osipov

BO-18 - “*Understanding the dynamic susceptibility of nematic magnetic nanoplatelet suspensions*” M. Rosenberg; H. Nadasi; M. Küster; F. Ludwig; A. Eremin; P.A. Sanchez; S.S. Kantorovich.

BO-19 - “*Programmable and Continuous Light-Fueled Jumping of Polymer Monoliths*” J.J. Wie; J. Jeon.

BO-20 - “*Preparation of films for nanoporous membranes: in-situ polymerization.*” I. Marín; J. Barberá; J.L. Serrano.

BO-21 - “*Dye doped cholesteric liquid crystal elastomer films as tensile and pressure sensors for applications in structural health monitoring*” R. Kizhacidathazhath; Y. Geng; J.P.F. Lagerwall.

BO-22 - “*Polymer-like assembly of torons in chiral liquid crystals*” H. Zhao; I.I. Smalyukh.

17:30-19:30

Poster Session II - Onsite (Ágora Room) + Online (Padlet and Zoom)



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Room: **Building IV – Amphitheater II**

10:00-12:00

Chair: Michel Mitov

ILK-4-AII - “Active Liquid Crystals” F. Sagues; B. Martinez-Prat; P. Guillamat; T. Lopez-Leon; J. Ignés-Mullol.

AO-8 - “Passive Janus Particles are Self-propelled in Active Nematics” B. Loewe; T.N. Shendruk.

AO-9 - “Quasi-Laminar Active Nematic Flows Under Confinement” O.B. Bantysh; F. Sagués; J. Ignés-Mullol.

AO-10 - “Elasticity-driven self-shaping liquid crystals” K. Peddireddy; S. Kopar; K.V. Le; I. Musevic; Ch. Bahr; V.S.R. Jampani.

AO-11 - “Individual and collective swimming dynamics of E-coli bacteria in nematic liquid crystals” M. Goral; E. Clement; A. Lindner; T. Lopez-Leon.

IL-5-AII - “Liquid crystal elastomer for biomedical applications: from functional artificial muscles to instructive cell scaffolds” C. Parmeggiani; D. Martella; L. Sacconi; B. Grandinetti; S. Querceto; T. Fiaschi; R. Squecco; C. Ferrantini.

Lunch

14:25-15:55

Chair: Yoshiaki Uchida

IL-6-AII - “Cholesteric biomimicry of insect cuticles” M. Mitov; C. Boyon; A. Scarangella; V. Soldan.

AO-12 - “Emergent collective behavior of electrically driven dynamic solitons in chiral nematic films” Y. Shen; I. Dierking.

AO-13 - “Directrons: New Solitary Waves of Director Distortions in Nematic Liquid Crystals” S.V. Shiyonovskii; B.X. Li; R.L. Xiao; O.D. Lavrentovich.

ILK-7-AII - “Dynamics of active fluid interfaces” M.C. Marchetti.

Coffee Break

16:15-17:30

Chair: Janusz Parka

CO-20 - “Confinement effects in chiral doped chromonic liquid crystals” F. Ciuchi; L. Spina; C.M. Tone; R. Barberi; M.P. De Santo.

CO-21 - “Two-step Photoalignment Patterning” S. Liu; I. Nys; K. Neyts.

CO-22 - “Topological analysis of long-range gold nanoparticle networks in liquid crystals” N. Podoliak; I. Membrillo Solis; T. Orlova; G. D'Alessandro; J. Brodzki; M. Kaczmarek.

CO-23 - “High-resolution multi-pattern photoalignment of liquid crystal molecules with automated setup based on digital micromirror device” S. Ertman; J. Różycka; N. Wasilewska; M. Kwaśny.

CO-24 - “Mechano-Optical Response of Stabilized Blue Phase Liquid Crystal Droplets” S. Norouzi; A. Casale; J. Martinez-Gonzalez; M.S.M. Sadati.

17:30-19:30

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10:00-12:00

Chair: Teresa López-León

ILK-5-AIII - “*Designer liquid-crystal disclinations by tailored confinement*” H.Y. Yokoyama.

CO-16 - “*Widely tunable lens using lyotropic liquid crystalline nano-colloid of 2D nanoparticles*” P.A.N.S. Priyadharshana; S.H. Hong; J.K. Song; T.Z. Shen.

CO-17 - “*Laser-excited flows in confined liquid crystals*” D. Shmeleva; S. Pasechnik; M. Umlandt; S. Santer; A. Zakharov.

CO-18 - “*Gazing into the (Liquid) Crystal Ball: In Vitro and In Vivo Sensing with Chiral Nematic Liquid Crystal Droplets*” L.W. Honaker; C. Chen; S. Brugman; S. Deshpande.

CO-19 - “*Patterning of defects in nematic/smectic-A liquid crystals by colloidal arrays*” Z.C. Meijs; H.S. Yun; Y. Fu; G. Park; D.K. Yoon; L. Isa.

IL-6-AIII - “*Spontaneous Emergence of Chirality in Achiral Systems*” M. Srinivasarao; K. Nayani; J. Fu; R. Chang; J.O. Park.

Lunch

14:25-15:55

Chair: Alberta Ferrarini

IL-7-AIII - “*Identification of Liquid Crystal Phases and Transitions via Machine Learning*” I. Dierking; J. Dominguez; J. Harbon; J. Heaton.

EO-16 - “*Optics of Nematic Liquid Crystal Spherical Caps Lenses in Competing Magnetic & Electric Fields*” Z. Karaszi; M. Mate; P. Salamon; A. Buka; A. Jakli.

EO-17 - “*Using Dissipative Particle Dynamics for Investigating Surfactant Solutions Under Shearing*” R.L. Hendrikse; A. Bayly; X. Lai; P. Jimack.

ILK-8-AIII - “*Skymions in Blue Phases of Chiral Liquid Crystals*” J. Pisljar; S. Ghosh; S. Turlapati; N.S.V. Rao; M. Skarabot; A. Mertelj; A. Petelin; A. Nych; M. Marincic; A. Pusovnik; M. Ravnik; I. Musevic.

Coffee Break

16:15-17:30

Chair: Oleg Lavrentovich

EO-18 - “*Nematic bits and universal logic gates*” Z. Kos; J. Dunkel.

EO-19 - “*The elusive saddle-splay elasticity of nematics*” D. Revignas; A. Ferrarini.

EO-20 - “*GENERIC micromechanical modeling predicts isotropic-nematic emulsions with diffuse interfaces*” J. Salmeron-Hernandez; R. Zhang; A. Mozaffari; N. Atzin, H.C. Ottinger; J. J de Pablo.

ILK-9-AIII - “*Some Progresses in the Computer Simulations of Liquid Crystals*” C. Zannoni.

17:30-19:30

Poster Session II - Onsite (Ágora Room) + Online (Padlet and Zoom)

Room: **Building IV – Amphitheater IV**

10:00-12:00

Chair: Jan Lagerwall

IL-3-AIV - “*In-plane-Switching of an Asymmetrically-anchored Liquid Crystal Cell for Display and Photonics Applications*” Y. Choi; S.-W. Oh; T.-H. Yoon.

FO-5 - “*A Photovisible Condenser with Enormous Capacitance Tunability Based on the Ferroelectric Nematic*” H. Nishikawa; K. Sano; F. Araoka.

FO-6 - “*Milky Translucent Haze of a Large-Scale Topological Defect Array in Nematic Liquid Crystal*” Y.Z. Wang; S.K. Yao; J.K. Chou; J.W. Tsung.

FO-7 - “*Full-Wavelength-Tunable and Chirality-Invertible Solar-Powered Devices Based on Molecular-Motor-Doped Cholesteric Liquid Crystals*” Y.-S. Zhang; Z.-Q. Wang; W.-C. Chuang; C.-R. Lee.

FO-8 - “*Epsilon-Near-Zero tuning in a Self-assembled Liquid Crystal – Nanoparticle Hybrid material*” A. Bhardwaj; V. Sridurai; S.A. Bhat; C.V. Yelamaggad; G.G. Nair.

FO-9 - “*Ferroelectric liquid on ferroelectric solid: experimental evidence of jets ejected by ferroelectric droplets at the Rayleigh instability point.*” R. Barboza; F. Ciciulla; F. Ali Mir; S. Samroot; S. Marni; N.A. Clark; M.A. Glaser; G. Nava; F. Caimi; T. Bellini; L. Lucchetti.

FO-10 - “*Cellulose Nanocrystalline based Guided Wave Random Laser*” Y.D.R. Machado; G.C.M. Germano; S.N. Fernandes; A.S.L. Gomes; E. Pecoraro; I.C.S. Carvalho.

Lunch

14:25-15:55

Chair: Dirk Broer

FO-11 - “*Liquid Crystal Tunable High-Contrast Gratings*” K. De Geest; X. Xue; J. Lauwaert; J. Beeckman.

FO-12 - “*Ferroelectric versus Nematic Liquid Crystal Retarders for Fast Spectral Information Extraction*” D.P. Pasha; M.J. Abuleil; I. August; E. Pozhidaev; I. Abdulhalim.

FO-13 - “*Imprinting the polarization state of light in liquid crystals*” N. Bruni; C. Loussert; M. Rafayelyan; T. Orlova; D. Coursault; E. Brasselet.

FO-14 - “*Doping Liquid Crystals with a Surface Relief Grating to Improve Bistable Capabilities*” Z.R. Gradwell; S.A. Jones; B. Snow; J.C. Jones.

ILK-4-AIV - “*Liquid Crystal Cells for Biosensing: Texture Observation and Beyond*” W. Lee; M.-J. Lee.

Coffee Break

16:15-17:30

Chair: Francesc Sagués

FO-15 - “*Enabling Societal and Technological Revolutions with Cholesteric Spherical Reflectors*” Y. Geng; H. Agha; R. Kizhakidathazhath; X. Ma; D.I. Avsar; J.P.F. Lagerwall.

FO-16 - “*Resonances and Coupled Modes in Cholesteric Ring Resonators*” J. Schmidtke.

FO-17 - “*An Inkjet-Printed, Zero-Power, Liquid Crystal-based ppt- to ppm-Level Toxic Gas and Vapor Sensor*” M.P. Prévôt; C. Callison; T. Cull; E. Hegmann; T. Hegmann.

FO-18 - “*Development of Flat Liquid Crystal Microlenses*” B. Berteloot; J. Beeckman; K. Neyts.

FO-19 - “*Chiral Photonic Nanostructures Based on Hydroxypropyl Cellulose*” K. George; M. Esmaeili; N. Taheri-Qazvini; M. Sadati.

17:30-19:30

Poster Session II - Onsite (Ágora Room) + Online (Padlet and Zoom)