

17th EUROPEAN CONFERENCE ON LIQUID CRYSTALS

SUNDAY, JUNE 1, 2025

15:00 - 19:00	Registration
19:00 - 21:00	Welcome Drink

MONDAY, JUNE 2, 2025

08:00 - 12:00	Registration
---------------	--------------

Chair: Name Surname

09:00 - 09:15	Opening
09:15 - 10:05 PL 01	Cellulose and chitin liquid crystalline phases M. H. Godinho
10:05 - 10:30	Coffee Break

SESSION I (MON)

Chair: Name Surname

10:30 - 11:00 IL 01	Micellar lyotropic liquid crystal gels: A new class of self-assembled anisotropic hydrogels M. Herbst, S. Dieterich, M. Dombrowski, N. Preisig, T. Sottmann, C. Stubenrauch, F. Giesselmann
11:00 - 11:30 IL 02	Oligomer-derived photoresponsive liquid crystal elastomers with optimum operating temperature for biotechnological applications N. Najiya, J. P. F. Lagerwall
11:30 - 11:45 O 01	Engineering functional materials from liquid crystal emulsions: New horizons in sensing, optics, and 3D printing A. Concellón , C. Álvarez-Solana, M. Vera-Arévalo, M. B. Ros, E. Blasco, T. M. Swager
11:45 - 12:00 O 02	Tuning and shaping liquid crystal-like ordering in self-assembled structures of pillar-[5]-arenes and perfluorinated diacids L. W. Honaker , K. R. de Graaf, T.N. Gao, T. V. M. Bogaardt, P. Vink, T. Stürzer, G. Kociok-Köhn, H. Zuilhof, F. M. Miloserdov, S. Deshpande
12:00 - 12:15 O 03	Welding complex-shaped actuators from dynamic liquid crystal elastomers J. Jiang , H. Guo, H. Zeng, A. Priimagi
12:15 - 12:30 O 04	Electric-field-induced reorientation of ferroelectric platelets in the nematic liquid crystal M. Škarabot , M. Maček Kržmanc, L. Rupnik, I. Muševič
12:30 - 14:00	Lunch

SESSION I (MON)

Chair: Name Surname

14:00 - 14:30 IL 03	Programmable shape-memory and mechanical properties in polymer dispersed liquid crystal elastomers M. Lavrič, D. Kuščer, G. Cordoyiannis, V. Domenici, N. Novak, B. Zalar, A. Rešetič
14:30 - 14:45 O 05	Chemical and physical properties of orthoconic liquid crystals: 2H NMR spectroscopy and molecular dynamics simulations A. Drzewicz, M. Rossi, M. Cifelli, G. Saielli, M. Tykarska, V. Domenici
14:45 - 15:00 O 06	Dynamics and pretransitional behavior in a series of polar phase sequences A. Erkoreka , J. Martinez-Perdiguero, C. J. Gibb, J. Hobbs, R. J. Mandle, N. Sebastián, A. Mertelj
15:00 - 15:05 SO 01	Photochromic room temperature liquid crystals incorporating a dithienylcyclopentene mesogen Ch.-Ch. Tsao , H.-H. Chen
15:05 - 15:10 SO 02	Aligning molecules of liquid crystal elastomers via laser-based patterning Z. Dziekan , M. Rogóż, P. Wasylczyk

15:10 - 15:15 SO 03	Simple, new LC compounds? <u>J. Grolík</u> , A. Deptuch, M. Pawlak, P. Reka, K. Stadnicka
15:15 - 15:20 SO 04	Chromenonaphthophenanthridine-based columnar mesogens: Synthesis, self-organization and charge-transport properties <u>V. Bhat Subraya</u> , D. P. Singh, M. Depriester, S. Kumar
15:20:15:25 SO 05	Resolving the nanostructure and phase behaviour of an all-aromatic prototypical nematic liquid crystal <u>H. Adenusi</u> , L. Muccioli, M. Lanciotti, T. J. Dingemans, E. T. Samulski, F. Vita, O. Francescangeli

SESSION II (MON)

Chair: Name Surname

14:00 - 14:30 IL 04	From dual frequency and low threshold voltage nematics to ferroelectric twist-bend nematics – molecular evolution towards polar nematics <u>P. Kula</u> , J. Karcz, J. Herman, N. Rychłowicz, D. Węglowska, M. Bakiera, J. Żukowska
14:30- 15:00 IL 05	From chemistry to optoelectronics: Exploring advanced liquid crystal materials <u>H.-H. Chen</u> , H.-Ch. Yang
15:00 - 15:15 O 07	Calamitic-discotic (5mA-Colr) phase transition by thermotropic and photonic processes for the ester-linked tetradecyloxazobenzenes-triphenylene mesogen <u>Y. Shimizu</u> , H. Nakamura, A. Oka, M. Hara, T. Seki, T. Kawai, K. Uchida
15:15 - 15:30 O 08	Caloric effects in liquid crystal-based materials for new heat-management technologies <u>M. Lavrič</u> , A. Rešetič, B. Zalar, Z. Kutnjak

15:30 - 16:00 Coffee Break

SESSION I (MON)

Chair: Name Surname

16:00 - 16:15 O 09	Molecular structure vs vitrification and crystallization processes of liquid crystalline terphenyl derivatives <u>A. Drzewicz</u> , S. Folta, H. Szary, M. Żak, P. Kula, E. Juszyńska-Gałązka
16:15 - 16:30 O 10	Investigating the effect of molecular structure on the formation of lamellar and heliconical ferroelectric liquid crystals <u>G. Strachan</u> , E. Gorecka, D. Pociecha
16:30 - 16:45 O 11	Chiral phases in the ferroelectric nematic realm <u>R. Walker</u> , M. Judoka, S. J. Ramsay, D. Pociecha, G. J. Strachan, E. Gorecka, J. M. D. Storey, C. T. Imrie
16:45 - 17:00 O 12	Liquid crystal microspheres-based external and internal stimuli-responsive smart drug delivery systems <u>K. Chubinidze</u> , G. Petriashvili, A. Chanishvili, N. Ponjavidze, Sh. Makatsaria, A. Petriashvili, I. Burjanadze
17:00 - 17:15 O 13	Liquid crystal composites as photocatalytic adsorbents for water purification <u>A. Martínez-Bueno</u> , V. Spinoso, V. D'Agostino, A. Lanfranchi, D. Martella

SESSION II (MON)

Chair: Name Surname

16:00 - 16:15 O 14	Liquid crystalline phase engineering of non-symmetric silyl-branched azobenzene polycatenars <u>C. Anders</u> , Y. Cao, F. Liu, C. Tschierske, M. Alaasar
16:15 - 16:30 O 15	Challenging synthesis and charge carrier transport in low melting siloxane-substituted BTBT semiconductors <u>L. Fink</u> , D. P. Singh, L. Mager, M. Lehmann
16:30 - 16:45 O 16	Numerical simulation of toroidal polar topology in liquid-matter helielectrics <u>E. Lin</u> , J. Yang, Y. Zou, M. Huang, S. Aya
16:45 - 17:00 O 17	Multiscale modelling techniques for topological solitonic physics <u>G. Poy</u>

17:20 - 20:00

POSTER SESSION I

TUESDAY, JUNE 3, 2025

Chair: Name Surname

09:00 - 09:50	Aerogels from chiral nanocellulose-based liquid crystals for window applications <u>I. I. Smalyukh</u>
PL 02	

09:50 - 10:30	Coffee Break
---------------	--------------

SESSION I (TUE)

Chair: Name Surname

10:30 - 11:00	Shear-induced electrical current generation and extraordinary rheology of polar nematic phases <u>P. Salamon</u> , H. Nishikawa, F. Araok, M. T. Máthé, A. Jáklí
IL 06	
11:00 - 11:30	Reduced polarization of ferroelectric nematics in cells with concentric electrodes <u>T. Bellini</u>
IL 07	
11:30 - 11:45	Do circuits of confined ferroelectric nematics obey Kirchhoff-type rules? <u>F. Caimi</u> , G. Nava, P. Paiè, R. Osellame, T. Bellini
O 18	
11:45 - 12:00	Twisting polar smectic blocks in polar fluids based on achiral mesogens <u>H. Nishikawa</u> , Y. Okumura, D. Kwaria, A. Nihonyanagi, F. Araoka
O 19	
12:00 - 12:15	Tunable macroscopic defect patterns induced by low-frequency AC electric field in ferroelectric nematics <u>N. Podoliak</u> , L. Lejček, M. Cigl, V. Novotná
O 20	
12:15 - 12:30	Modified maier-saupe theory for ferroelectric nematics <u>V. Reshetnyak</u> , D. Nikolova, T. Raistrick, H. Gleeson
O 21	

SESSION II (TUE)

Chair: Name Surname

10:30 - 11:00	Controlling THz radiation with hybrid liquid crystal metasurfaces <u>O. Buchnev</u>
IL 08	
11:00 - 11:30	Charge transport in columnar materials and their optoelectronic applications <u>D. P. Singh</u> , S. Kumar
IL 09	
11:30 - 11:45	Liquid crystal smart glass with adjustable unidirectional light transmission for privacy protection and indoor lighting Ch.-T. Wu, P. Selvaraj, Y.-Ch. Tsai, Ch.-T. Huang, Ch.-Ch. Sun, <u>K.-T. Cheng</u>
O 22	
11:45 - 12:00	Switchable whiteness in liquid crystal polymer networks <u>R. Nasare</u> , H. Panula, T.P. Ruko, C. Liang, H. Zhang, H. Guo, A. Priimagi
O 23	
12:00 - 12:15	Application of liquid crystals to switchable privacy <u>T. Rauch</u>
O 24	
12:15 - 12:30	Off-axis reflective phase-only holograms with chiral liquid crystal <u>M. Stebryte</u> , E. Raffin, P. Ropač, Y.-T. Hsiao, K. Neyts, J. Beekman
O 25	

12:30 - 14:00	Lunch
---------------	-------

SESSION I (TUE)

Chair: Name Surname

14:00 - 14:30	Ferroelectric nematics for complex non-linear optical structures M. Lovšin, A. Petelin, B. Berteloot, N. Osterman, S. Aya, M. Huang, I. Drevenšek-Olenik, R. J. Mandle, K. Neyts, A. Mertelj, <u>N. Sebastian</u>
IL 10	
14:30 - 15:00	Optical poling of ferroelectric liquids <u>L. Lucchetti</u>
IL 11	
15:00 - 15:15	Two thermodynamic potentials for the ferroelectric nematic phase, theory of the dielectric susceptibility and ferroelectric switching <u>M. A. Osipov</u>
O 26	
15:15 - 15:30	Can flow drive the polarization alignment in ferroelectric nematic liquid? <u>P. Medle Rupnik</u> , N. Sebastián, N. Osterman, U. Jagodič, R. J. Mandle, A. Mertelj
O 27	

SESSION II (TUE)	
<i>Chair: Name Surname</i>	
14:00 - 14:30 IL 12	Machine learning with liquid crystals: new results and challenges I. Dierking , R. Betts, A. Quinn, A. Moyle, K. Skingle, J. Raidal, A. Roberts
14:30 - 14:45 O 28	Application of Siamese neural networks for distinguishing subtle phase transitions in liquid crystal and their glassy states N. Osiecka-Drewniak , E. Juszyńska-Gałązka, A. Deptuch
14:45 - 15:15 IL 13	Cholesteric optical tags M. Mitov , A. Scarangella, C. Boyon, V. Soldan
15:15 - 15:30 O 29	Adenine helical columnar superstructures: Supramolecular chirality and semiconductivity R. Giménez , T. Sierra, A. Martínez-Bueno, G. M. Valencia-Vásconez, J. Ortega, C. L. Folcia, A. Navarro, J. M. Granadino-Roldán, R. Termine, A. Golemme
15:30 - 16:00	Coffee Break
SESSION I (TUE)	
<i>Chair: Name Surname</i>	
16:00 - 16:15 O 30	Exploring polar nematic phases in charged rod-like particles A. Chrzanowska , L. Longa, S. Drzazga
16:15 - 16:30 O 31	Elastic and viscous properties of the smectic Za phase A. Paul, A. Ghimire, P. Guragain, M. Badu, R. Twieg, A. Jákli, S.N. Sprunt, J. T. Gleeson
16:30 - 16:45 O 32	Light induced polarization reorientation in ferroelectric nematic phase T. Tóth-Katona , I. Jánossy, P. Salamon, A. Jákli
16:45 - 17:00 O 33	Ferro-electrowetting in polar fluids M. T. Máthé , K. K. Székely, A. Jákli, P. Salamon
17:00 - 17:15 O 34	Elastic deformations in ferroelectric nematics analyzed in terms of a large effective splay elastic constant E. Grönfors , P. Rudquist
SESSION II (TUE)	
<i>Chair: Name Surname</i>	
16:00 - 16:15 O 35	Universal strategy for inorganic nanoparticle incorporation into mesoporous liquid crystal polymer particles D. K. Yoon
16:15 - 16:20 SO 06	Colossal dielectric permittivity and superparaelectricity in phenyl pyrimidine-based liquid crystals W. Jiang , Y. P. Panarin, N. Yadav, M. Sahai, Y. Tang, X. Zeng, O. E. Panarina, J. K. Vij, G. H. Mehl
16:20 - 16:25 SO 07	Stabilizing blue-phase liquid crystals using gold nanoparticles X. Zheng , T. Thiele, C. Abadie, S. Royer, Y. Prado, B. Gallas, A. Eremin, M. Giese, E. Lacaze
16:25 - 16:30 SO 08	Chirality, confinement, and chaos: Structural and flow dynamics in cholesteric liquid crystals I. Morawo , D. Grecov
16:30 - 16:35 SO 09	Solution-sheared photochromic dithienylcyclopentene-derivative incorporated semiconducting polymer films for organic field-effect transistors Y.-S. Du , H.-H. Chen
16:35 - 16:40 SO 10	Spontaneously homogeneous alignment of liquid crystals enabled by self-assembled triclinic crystal rubrene R. Nawaz , C.-J. Hsu, C.-Y. Huang
16:40 - 16:45 SO 11	Chiral liquid crystal pinwheel array by patterning nucleation of the isotropic droplet via capillarity-assisted particle assembly H. S. Yun , Y. Ma, H. Ren, Z. C. Meijs, L. Isa, R. Zhang, D. K. Yoon
16:45 - 16:50 SO 12	Phase transitions in ferroelectric nematic liquid crystals A. Vats , M. Ravník
16:50 - 17:05 O 36	Introducing the topic of liquid crystals to high school students: Didactic experiences and educational reflections V. Domenici
17:20 - 20:00	POSTER SESSION II (TUE)

WEDNESDAY, JUNE 4, 2025

Chair: Name Surname

09:00 - 09:50	Polar nematic and smectic phases with spontaneously broken mirror symmetry
PL 03	<u>D. Pocięcha</u>

09:50 - 10:30	Coffee Break
---------------	--------------

SESSION I (WED)

Chair: Name Surname

10:30 - 11:00	Polarization patterns of ferroelectric nematics
IL 14	<u>O. D. Lavrentovich</u>
11:00 - 11:30	Ferroelectric nematics: Materials with huge permittivity or low apparent resistivity?
IL 15	<u>N. Vaupotič</u> , V. Matko, T. Krajnc, J. Matraszek, D. Pocięcha, E. Gorecka
11:30 - 12:00	The interplay between flexoelectricity and electrostatic effects in ferro- and antiferroelectric nematic liquids
IL 16	<u>A. Mertelj</u> , P. Medle Rupnik, E. Hanžel, N. Sebastián, A. Sterle, M. Lovšin, N. Osterman, R. Mandle, C. J. Gibb, J. Hobbs
12:00 - 12:30	Ferroelectric phases in straight rigid polar molecules
IL 17	H. Nishikawa, <u>F. Araoka</u>

12:30 - 14:00	Lunch
---------------	-------

19:00 - 22:30	CONFERENCE DINNER
---------------	--------------------------

THURSDAY, JUNE 5, 2025

Chair: Name Surname

09:00 - 09:50	Photoalignment by spatial light modulator or interference illumination for 3D liquid crystal structures
PL 04	<u>K. Neyts</u> , K. Xu, P. Nosrathkhan, L. Zhou, B. Berteloot, M. Stebryte, S. Liu, Y.-T. Hsiao, R. Sharma, P. Ropač, M. Marinčič, M. Ravnik, J. Beeckman, I. Nys

09:50 - 10:30	Coffee Break
---------------	--------------

SESSION I (THU)

Chair: Name Surname

10:30 - 11:00	Enhanced toughness and healability in dual-responsive liquid crystal elastomers by integrating azo-functionalized polythiourethanes and polysiloxanes with mechanically interlocked molecules for advanced soft actuator applications
IL 18	A. Khan, T. T. K. Cuc, T. H. Yang, C. Y. Chuang, T. W. Chien, T. M. Khang, W. T. Chuang, H. H. Chen, M. Kohout, <u>H. C. Lin</u>
11:00 - 11:30	Liquid crystal-based polymers and 3D nanoprinting: A path towards advanced integrated photonics
IL 19	F. Massarelli, S. Donato, F. Riboli, D. Martella, C. Parmeggiani, D. S. Wiersma, <u>S. Nocentini</u>
11:30 - 11:45	Electrically switchable multi-stable states in photo-aligned nematic liquid crystal cells
O 37	<u>I. Nys</u> , J. Neiryneck, Y.-T. Hsiao, M. Stebryte, K. Neyts
11:45 - 12:00	Programmable patterning of liquid crystal microdroplets
O 38	D. Choi, J.-H. Im, E. Cho, J. Kim, J. Back, J. S. Gwag, <u>Y.-K. Kim</u>
12:00 - 12:15	Enhancement radiation of nematic liquid crystals with dyes on metamaterial structures for photonic applications
O 39	K. Sielezin, U. Chodorow, <u>J. Parka</u>
12:15 - 12:30	Light-driven microparticle motions in free-surface liquid crystals
O 40	<u>S. Shvetsov</u> , T. Orlova, A. Hayrapetyan, A. Vasil'ev, M. Rafayelyan

SESSION II (THU)	
<i>Chair: Name Surname</i>	
10:30 - 11:00 IL 20	Boron-based liquid crystals: bulky boronates, luminescent boranes and the beauty of mixtures S. Laschat , C. Schilling, T. Wöhrle, J. A. Knöller, A. Zens, J. R. Bruckner, E. Zysman-Colman
11:00 - 11:30 IL 21	Structural coloration of solid films prepared from xanthan lyotropic liquid crystal solutions Y. Xiao, S. Itzigel, K. Dirnberger, J. R. Bruckner
11:30 - 11:45 O 41	Cellulose-based anisotropic morphochromatic sensor J. Malta, F. Sousa, P. L. Almeida, M. H. Godinho, A. P. C. Almeida
11:45 - 12:00 O 42	Dissipative singular twist waves in chromonics S. Paparini , E. G. Virga
12:00 - 12:15 O 43	Electrically active and thermally passive control of dye-doped, dual-frequency liquid crystal smart windows based on an in-plane switching cell T.-Ch. Tsai , Wei Lee
12:15 - 12:30 O 44	Structural insights in the self-assembly of roof-shaped, biaxial nematogens M. Lehmann , N. Scheuring, A.-C. Pöpler
12:30 - 14:00	Lunch
SESSION I (THU)	
<i>Chair: Name Surname</i>	
14:00 - 14:30 IL 22	Optical tuning of 3D Blue Phase photonic crystals E. Oton , M. Cigl, P. Morawiak, S. Mironov, W. Piecek, A. Bubnov
14:30 - 15:00 IL 23	Geometric phase photonic structures for polarization patterning and wavelength-selective diffraction H. Yoshida , T. Yoda
15:00 - 15:15 O 45	Reversible morphological change of an azo-doped 8CB liquid crystal droplet by UV and blue light irradiation Y. Takenaka , T. Yamamoto, M. Aizawa, U. Jagodič, A. Aizawa, I. Mušević
15:15 - 15:30 O 46	X-ray diffraction reveals the consequences of strong deformation in thin smectic films: Dilation and chevron formation J. D. Niyonzima, H. Jeridi, L. Essaoui, C. Tosarelli, A. Vlad, A. Coati, I. Trimaille, D. Constantin, D. Babonneau, Y. Garreau, B. Croset1, S. Kral, R. Kamien, E. Lacaze
15:30 - 15:45 O 47	Characterization of optical gain materials for microlasers by variable stripe length method M. Vellaichamy , I. Musevic
SESSION II (THU)	
<i>Chair: Name Surname</i>	
14:00 - 14:30 IL 24	Ferromagnetism and ferroelectricity in liquid crystalline colloidal hybrids H. Nádasí, A. Jarosik, Ch. Klopp, M. Küster, F. Ludwig, P. Boštjančič, D. Lisjak, P. Rupnik, N. Sebastián, A. Mertelj, A. Eremin
14:30 - 14:45 O 48	Liquid crystalline plasmonic thin films with dynamic tunability and moldability M. Bagiński , D. Szepke, M. Wasiluk, W. Lewandowski
14:45 - 15:00 O 49	Swimming of driven and active colloids in nematic fluids E. Caf, Ž. Kos
15:00 - 15:15 O 50	Dynamic magnetooptical response of a ferromagnetic liquid crystal H. Nádasí , T. Smulovics, A. Eremin, D. Lisjak, M. Küster, F. Ludwig
15:15 - 15:30 O 51	Metallomesogens as efficient modifiers of carbon-based electrochemical sensors E. I. Szerb , F. Manea, C. Cretu, S. Ilieş, B. Donnio
15:30 - 15:45 O 52	Ionic liquid crystals: From synthesis to confinement and applications A. F. M. Santos , J. L. Figueirinhas, M. Dionísio, L. C. Branco, M. H. Godinho
15:45 - 16:15	Coffee Break

SESSION I (THU)	
<i>Chair: Name Surname</i>	
16:15 - 16:45 IL 25	Clark
16:30 - 16:45 O 53	Neutron scattering as a mesoscale probe for liquid crystals O. Tomchuk , A. Drzewicz, O. Adamczyk, E. Juszyńska-Gałązka
16:45 - 17:00 O 54	Phase frustration and pattern formation in smectic films at the transition from the nematic phase B. Zappone

SESSION II (THU)	
<i>Chair: Name Surname</i>	
16:15- 16:30 O 55	Towards non-volatile memory devices: Liquid crystals doped with aerosil and magnetic nanoparticles N. Tomašovičová , K. Kónyová, D. Miakota, V. Lacková, S.-C. Jeng, F. Agresti, M. Jarošová, P. Kopčanský
16:30 - 16:45 O 56	A simple approach to precisely confine nanoparticles in liquid crystalline coatings with smectic focal-conic textures C.N. Mahyaoui, C. Goldmann, E. Garre, S. Mariot, I. Dozov, C. Meyer, P. Davidson
16:45 - 17:00 O 57	Planar alignment of nematic liquid crystal by direct laser writing of nanogroove patterns in 3D U. Jagodič , J. Pisljar, A. Jelen, M. Škarabot, I. Muševič
17:00 - 17:15 O 58	Dynamic pattern formation in ferromagnetic ferrofluids exposed to rotating magnetic fields M. Vilfan , M. Ocirk, N. Osterman, P. Hribar Boštjančič, D. Lisjak, A. Mertelj

FRIDAY, JUNE 6, 2025

SESSION I (FRI)	
<i>Chair: Name Surname</i>	
09:00 - 09:30 IL 26	Tribute Corrie T. Imrie († Jan. 2025) R.Walker
09:30 - 09:45 O 59	Topological foundation of ferroelectricity in solid and soft matter I. Lukyanchuk
09:45 - 10:30	Coffee Break

SESSION I (FRI)	
<i>Chair: Name Surname</i>	
10:30 - 11:00 IL 27	Electrically tunable spin-orbit coupled photonic lattice in a liquid crystal microcavity J. Szczytko , M. Muszyński, P. Kokhanchik, P. Oliwa, P. Kapuściński, R. Mazur, E. Oton, P. Morawiak, W. Piecek, P. Kula, W. Bardyszewski, H. Sigurdsson, B. Piętko, D. Solnyshkov, G. Malpuech
11:00 - 11:15 O 60	Multiphase organic molecular systems for light amplification J. Mysliwiec , A. Szukalski, P. Wojcicka, A. Szukalska
11:15 - 11:30 O 61	Multistable polar textures in micropatterned nematic liquid crystals U. Tkalec , S. Čopar, R. L. B. Selinger, U. I. Kara, B. Chen, X. Wang
11:30 - 12:00 IL 28	Topological decay of skeins of dislocations in cholesterics: knots, links, necklaces, tangles and bangles P. Pieranski , M. H. Godinho
12:00 - 12:30	CLOSING CEREMONY
12:30 - 14:00	Lunch