

Updated Program of the International Workshop on Liquid Crystals for Photonics

April 26-28 2006, Gent (Belgium)



Wednesday April 26th

9:00 Registration

Session 1 (chair K. Neyts)

9:30 Welcome Message

9:50 Invited I-01 I. Jánossy
Elastic anchoring and gliding of nematic liquid crystals on polymer layers

10:30 Oral O-01 V. G. Chigrinov, H. S. Kwok, H. Takada and H. Takatsu
Photoaligning Technology for Display and Photonics Applications

10:50 Oral O-02 A. Muravsky, V. Chigrinov, S. Studentsov, V. Brezhnev, N. Zhukov, B. Gorfinkel
Photo-induced alignment technology for 3-D surface profiles of LCD substrates

11:10 Coffee break

Session 2 (chair P. Rudquist)

11:40 Oral O-03 M. Nespoulous, C. Blanc and M. Nobili
Ultra-weak azimuthal anchoring of a nematic liquid crystal on a planar orienting photopolymer

12:00 Oral O-04 J. Yamamoto and I. Nishiyama
Isotropic Photonic Band-gap Liquid Crystals with Spherical Symmetry

12:20 Oral P-05 V.A.Enikeeva, V.A.Makarov, I.A.Ozheredov, A.P.Shkurinov and A.S.Zolot'ko
Light-induced second harmonic generation by femtosecond laser pulses in nematic liquid crystal

12:40 Lunch

Session 3 (chair M. Haelterman)

14:00 Invited I-02 G. Assanto
Linear and nonlinear light propagation in liquid crystalline photonic lattices

14:40 Oral O-07 J.F. Henninot, J.F. Blach and M. Warengem
Experimental analysis of non-locality associated with spatial soliton propagation in bias free nematic liquid crystal cell

15:00 Oral O-08 M. A. Karpierz, K. Jaworowicz, K. A. Brzdakiewicz, M. Sierakowski
Spatial Solitons in Twisted Nematic Layer

15:20 Oral O-09 A. Fratolocchi, G. Assanto, K. A. Brzdakiewicz and M. Karpierz
All-Optical Zener-Tunneling in Liquid Crystalline Waveguide Lattices

15:40 Oral O-10 J. Beeckman, K. Neyts, X. Hutsebaut and M. Haelterman
Observation of the out-coupling of a nematicon

16:00 Poster session A & Coffee break

18:00 Reception @ City Hall

Thursday April 27th

Session 4 (chair A. d'Alessandro)

9:10 Invited I-03 Dick K.G. de Boer
Polarised colour separation by diffractive gratings based on liquid-crystalline materials

9:50 Oral O-11 M. Fally, I. Drevenšek-Olenik, M. A. Ellabban and H. Urši
Strongly overmodulated diffraction gratings in holographic polymer-dispersed liquid crystals

10:10 Oral O-12 H. Bensaïd, L. Benkhaled, T. Bouchaour and U. Maschke
Development and characterization of materials intended for Holographic Polymer Dispersed Liquid Crystal (H-PDLC) systems

10:30 Oral O-13 M. Krueger and F. Giesselmann
Tunable diffraction gratings from SmC liquid crystals: Principles, problems and surprises*

10:50 Coffee break

Session 5 (chair T. Nasilowski)

- 11:20 Invited I-04 T. R. Wolinski
Photonic liquid crystal fibers - a new challenge for fiber optics and liquid crystals photonics
- 12:00 Oral O-14 K. Szaniawska, T. Nasilowski, T. Wolinski and H. Thienpont
Light propagation solid-core photonic liquid crystal fibers analyzed by the Finite Difference Method
- 12:20 Oral O-15 R. Ferrini, P. El-Kallassi, L. Zuppiroli, L. Andrea Dunbar, N. Le Thomas, R. Houdré, A. Talneau, A. Berrier and S. Anand
Planar photonic crystals infiltrated with liquid crystals: tuning of the optical properties
- 12:40 Oral O-16 A. E. Miroshnichenko, I. Pinkevych and Y. S. Kivshar
Optical tunability and switching in photonic crystals with infiltrated liquid-crystal defects
- 13:00 Lunch

Session 6 (chair I. Manolis)

- 14:00 Invited I-05 N. Collings
Phase modulating LCOS for optical interconnects
- 14:40 Oral O-17 D. Donisi, B. Bellini, R. Asquini, R. Beccherelli, and A. d'Alessandro
Polarization properties of near-infrared light confined in nematic liquid crystal channel waveguides embedded in SiO₂/Si grooves
- 15:00 Oral O-18 P. C. Lallana, C. Vázquez, J. M. S. Pena and D. Sánchez
Reconfigurable Optical Multiplexer Based on Liquid Crystal for Polymer Optical Fiber
- 15:20 Oral O-19 C. Desimpel, K. Neyts, S. Verstuyft, D. Van Thourhout, K. D'havé, P. Rudquist
Optical measurements on a new reconfigurable liquid crystal wave plate
- 15:40 Poster session B & Coffee Break

Session 7 (chair I. Janossy)

- 17:10 Invited I-06 L. Dupont
Liquid crystal shutters for welding applications
- 17:50 Oral O-22 L. M. Blinov, V.V. Lazarev, S.P.Palto, G. Cipparrone and P.Pagluisi
Lasing From A Nematic Liquid Crystal In The Plane Waveguide Geometry

18:20 Boat Trip (± 40 min.)

20:00 Workshop dinner

Friday April 28th

Session 8 (chair F. A. Fernandez)

- 9:10 Invited I-07 Y. Reznikov
Ferroelectric particles in liquid crystals; physics and applications
- 9:50 Oral O-23 E. Willman, R. James, F. A. Fernández and S. E. Day
2D and 3D Modelling of Liquid Crystal Hydrodynamics Including Order Parameter Changes
- 10:10 Oral O-24 X. Hutsebaut, C. Cambournac, M. Haelterman, J. Beeckman and K. Neyts
Induced modulation instability and recurrence in nematic liquid crystals
- 10:30 Oral O-25 T. J. Sluckin and V. Yu. Reshetnyak
Surface-Mediated Non-Linear Optical Effects in Liquid Crystals
- 10:50 Coffee break

Session 9 (chair R. Dabrowski)

- 11:20 Invited I-08 M. Kaczmarek
Photosensitive, hybrid liquid crystal structures for photonic processing
- 12:00 Oral O-20 G. Chilaya, A. Chanishvili, G. Petriashvili, R. Barberi, R. Bartolino, G. Cipparrone, A. Mazzulla and P. V. Shibaev
LEDs-controlled reversible smooth tuning of lasing in azoxy-based cholesteric liquid crystal
- 12:20 Oral O-21 S.P. Palto, N.M. Shtykov, B.A. Umansky, M.I. Barnik and L.M. Blinov
General properties of lasing effect in chiral liquid crystals
- 12:40 Oral O-28 J. Schmidtke, W. Stille, S. Kniesel, B. Chen and H. Finkelmann
Cholesteric elastomers as mechanically tunable photonic band gap materials
- 13:00 Closing remarks
- 13:10 Lunch
- 14:00 Excursion to Bruges
- 17:30 Return in Gent

Poster session A

Wednesday 26 April 2006 at 16h00

- P-01 K. A. Brzdakiewicz, G. Lukasiak¹, M. A. Karpierz, T. R. Wolinski, J. Wójcik
Nonlinear properties of photonic crystal fiber filled with nematic liquid crystal
- P-02 H. Khoshshima, A. Ghanadzadeh, H. Tajalli, R. Dabrowski
Electro-optical Kerr effect of new tolane-based nematic liquid crystals
- P-03 V. Presnyakov, K. Asatryan, T. Galstian, V. Chigrinov
Tunable polarization gratings using liquid crystals aligned with azo-dye command layers
- P-04 J. Da Sylva, V. Lorman
Influence of anchoring in AFLC cells: Electro optical scanning
- P-06 N. Gallé, M. Ismaïli
Frequency dependences of the electro-optical characteristics of FLC Twisted SmC Cells*
- P-07 I. G. Manolis, J. Beeckman, C. Desimpel, D. Donisi, R. Asquini, R. Beccherelli, A. d'Alessandro, K. Neyts
Finite Elements numerical analysis of the dynamic response of POLICRYPS gratings
- P-08 A. Mikulko, R. Dabrowski, M. Marzec, S. Wróbel
Electrooptic study of antiferroelectric mixtures for display application
- P-09 F. Goc, Ch. Blanc, V. Lorman, W. Kuczyński, M. Nobili, S. J. Cowling, A. W. Hall, J. W. Goodby
Ferroelectric-like Properties of a Racemic Liquid Crystal
- P-10 K. Skrzypek, M. Tykarska, W. Piecek
The electrophysical properties of the system CN-H6Bi - 5H3B with induced antiferroelectric phase
- P-11 R. Dabrowski, J. Dziaduszek, A. Ziólek, A. Szczucinski, Z. Stolarz, G. Sasnouski, V. Bezborodov, W. Lapanik, S. Gauza, Shin-Tson-Wu
Low Viscous High Birefringence Liquid Crystalline Compounds and Mixtures with High Positive Dielectric Anisotropy
- P-12 V. Bezborodov, V. Lapanik, A. Lugovski, G. Sasnouski
Luminescent LC compounds and dyers
- P-13 C. A. R. Yednak, E. K. Lenzi, L. R. Evangelista

Tilt angle profiles in nematic liquid crystals limited by inhomogeneous surfaces

- P-14 M. Petrov, B. Katranchev, H. Naradikian
Mechanism of thermal and electroconvective dendrites in dimerized nematic liquid crystals
- P-15 A. Zhukov, AU P. Tong, V. Chigrinov, E. Pozhidaev
Photo-alignment bistable flexible FLC cells based on regular polymeric net
- P-16 W. A. Stanczyk, T. Ganicz, E. Bialecka-Florjanczyk
Liquid crystals anchored on silicone MQ resins
- P-17 N. Bennis, A. SpadLo R. Dabrowski, E. Martinelli, G. Galli, X. Quintana, J.M. Otón, M. A. Geday
Low threshold voltage asymmetric antiferroelectric liquid crystal cells
- P-18 G. Stojmenovik, F. Beunis, K. Neyts, S. Vermael, A. R. M. Verschueren
Monte Carlo algorithm for drift and diffusion of ions in anisotropic, non-homogeneous media
- P-19 L. Dolgov, O. Yaroshchuk
PDLC doped with inorganic nanoparticles: electro-optics and morphological peculiarities
- P-20 S. P. Palto, M. I. Barnik
Bistability in Dual-frequency Nematic Liquid Crystals
- P-21 R. van der Heijden, B. K. C. Kjellander, C. F. Carlström, J. A. P. Snijders, H. H. J. E. Kicken, R. W. van der Heijden, C. W. M. Bastiaansen, D. J. Broer, F. Karouta, R. Nötzel, E. van der Drift, H. W. M. Salemink
Liquid crystal in InP-based planar photonic crystals
- P-22 P. Lesiak, T. R. Wolinski, K. Slusarz, S. Ertman, A. W. Domanski, R. Dabrowski
Temperature tuning of polarization mode dispersion in single-core and two-core photonic liquid crystal fibers
- P-23 J. Zielinski, M. Olifierczuk
The Optimization Procedure in a Colour Reflective Liquid Crystal Display with a TN Effect
- P-24 K. Inglot, R. Wilk, D. Bauman, M. Koch
A terahertz phase shifter based on 5CB
- P-25 A. Walczak
Tuned wave guided structures over organic junction
- P-26 B. Bellini, M. A. Geday, N. Bennis, A. Spadlo, X. Quintana, R. Dabrowski, J. M. Otón

Design and simulation of single-electrode liquid crystal phased arrays

- P-27 H. Margaryan, V. Aroutiounian, N. Hakobyan
Influence of electric field on switching time of semiconductor-liquid crystal structures
- P-28 R. Karapinar, M. O'Neill, S. M. Kelly
Photoalignment layers for liquid crystals

Poster session B

Thursday 27 April 2006 at 15h40

- P-29 C. M. van Heesch, M. J. Escuti, C. W. M. Bastiaansen, D. J. Broer
Diffraction of generalized continuous LC gratings
- P-30 A. Aslanyan, A. Galstyan
Effective period for diffraction grating recorded in polymer dispersed liquid crystals.
- P-31 Y. J. Lim, J. Y. Lee, T. H. Kim, J. W. Ryu, S. H. Lee
Light Modulation in the Fringe-Field Switching (FFS) Liquid Crystal Mode
- P-32 A. Spadlo, N. Bennis, M. D. Carboneras, P. L. Castillo, R. Dabrowski, J. M. Otón
Influence of the manufacturing process on the electrooptical response of orthoconic AFLCs cells
- P-33 Y. Reznikov, P. Korniychuk, O. Tereshchenko
Surface-mediated Photorefraction of Nematic Liquid Crystals; Association with Electrical Characteristics of the Cell
- P-34 G. Zakharyan, A. Galstyan
Mixed phase and absorption thin gratings diffraction
- P-35 S. Bugaychuk, G. Klimusheva, Y. Garbovskiy, A. Grydyakina, A. Sadovenko, T. Mirnaya, A. Ischenko
Nonlinear optical and electrical properties of composites based on conductive metal-alkanoate liquid crystals
- P-36 A. W. Domanski, D. Budaszewski, T. R. Wolinski
Depolarization of partially coherent light in liquid crystals
- P-37 D. Dardas, W. Kuczynski, J. Hoffmann
Non-linear effect in chiral liquid crystals detected by electrooptic measurements in weak electric field
- P-38 V. Urruchi, N. Gaona, J. M. Sánchez Pena, B. Bellini, J. M. Otón, M. A. Geday
Induced phase delay and state of polarization in V shape smectic liquid crystals
- P-39 E. Pozhidaev, V. Chigrinov, L. Xihua, A. Muravski, H. S. Kwok
Low voltage bistability of photo-aligned ferroelectric liquid crystal cells with tilted smectic layers

- P-40 M. H. Godinho, I. Costa, D. Filip, J. L. Figueirinhas
Photonic Structure under Uniaxial Stress of Cellulose Derivatives Cholesteric Liquid Crystalline Elastomers
- P-41 K. Slyusarenko, O. Buluy, Y. Reznikov
Formation and dynamics of easy axis in magnetic field on soft polymer surface
- P-42 T. J. Sluckin, V. Yu. Reshetnyak
Theoretical considerations concerning ferroelectric liquid crystal suspensions
- P-43 E. Lacaze, M. Goldmann, M. Alba
A study of smectic A alignment : Ultra-thin 8CB films on MoS₂ substrates
- P-44 M. Petit, A. Daoudi, M. Ismaïli, J. M. Buisine
Effect of the Network Density on the Electroclinic Susceptibility in the Polymer Stabilized Ferroelectric Liquid crystals
- P-45 N. Gallé, M. Ismaïli, A. Bubnov, V. Hamplova, M. Kaspar
Dielectric and electro-optical studies of a high polarisation ferroelectric liquid crystal with a twist inversion
- P-46 M. Petrov, T. Angelov, H. Naradikian, B. Katranchev, A. Zheltikov, K. Panajotov
An optical method for control of the nematic liquid crystal photonic bandgap fibers alignment
- P-47 O. Kurochkin, E. Ouskova, Yu. Reznikov, Yu. Kurioz, O. Tereshchenko, R. Vovk, D.-H. Kim, S.-K. Park, S.-B. Kwon
Photo-orientation of cholesteric liquid crystals on photosensitive materials
- P-48 S. Y. Jeon, I.-S. Baik, S. J. Jeong, S. H. Lee, K. A. Park, S. H. Jeong, K. H. An, Y. H. Lee
Studies on Interaction of Carbon Nanotubes with a Nematic Liquid Crystal
- P-49 R. Dabrowski, J. Dziaduszek, P. Henderson, P. Kula
Orthoconic Antiferroelectrics with Biphenyl or Terphenyl or Naphthyl Moiety
- P-50 V. A. Berenberg, N. L. Ivanova, M. V. Isaev, E. A. Konshina, A. P. Onokhov, M. A. Fedorov, A. N. Chaika, M. G. Tomilin, N. A. Feoktistov, V. Yu. Venediktov
Large-aperture optically addressed spatial light modulator for dynamic holographic correction of optical distortion
- P-51 R. Žmijan, M. Sutkowski, T. Grudniewski, J. Parka
Holograms and optical data storage in LC cells

- P-52 C. Kjellander, A. Prenen, L. J. van IJzendoorn, D. J. Broer
Modeling polymerization induced phase separation of polyacrylates and liquid crystals for photonic band-gap materials
- P-53 J. M. S. Pena, I. Pérez, V. Urruchi, J. C. Torres, J. M. Otón
Temporal Electrical Behavior of V/W-shaped Chiral Smectic Liquid Crystal Displays
- P-54 I. Pérez, J. M. S. Pena, J. C. Torres, C. Vázquez, R. Manzanares
Optoelectronic Digital Multiplexer based on Liquid Crystal for Optical Information Systems
- P-55 C. L. van Oosten, K. D. Harris, C. W. M. Bastiaansen, D. J. Broer
Optimization of molecular alignment configuration for photo-mechanical liquid crystal actuators
- P-56 M. A. Geday, N. Bennis, A. Spadlo, M. D. Carboneras, E. Martinelli, G. Galli, P. L. Castillo, X. Quintana, J. M. Otón
Addressing asymmetric antiferroelectric liquid crystal devices
- P-57 O. Yaroshchuk, R. Kravchuk, L. Dolgov, A. Dobrovolsky, A. Khakhlou, E. Telesh
Ion beam processing for liquid crystal alignment: etching vs. sputtering