This article was downloaded by: [University of California, San Diego]

On: 11 August 2012, At: 10:35 Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH,

UK



# Molecular Crystals and Liquid Crystals

Publication details, including instructions for authors and subscription information: <a href="http://www.tandfonline.com/loi/gmcl20">http://www.tandfonline.com/loi/gmcl20</a>

## Poster Contributions

Version of record first published: 18 Oct 2010

To cite this article: (2004): Poster Contributions, Molecular Crystals and Liquid

Crystals, 409:1, 21-21

To link to this article: http://dx.doi.org/10.1080/15421400490430869

#### PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <a href="http://www.tandfonline.com/page/terms-and-conditions">http://www.tandfonline.com/page/terms-and-conditions</a>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Mol. Cryst. Liq. Cryst., Vol. 409, pp. xxi–cv, 2004 Copyright © Taylor & Francis Inc.

ISSN: 1542-1406 print/1563-5287 online DOI: 10.1080/15421400490430869



#### POSTER CONTRIBUTIONS

- P.1 Photoregulation of Helix Pitch in Mixtures of Chiral-Photochromic Cholesteric Polymers with Triplet Sensitizer A Yu Bobrovsky\*, N I Boiko and V P Shibaev Moscow State University, Russia
- P.2 Carbosilane LC Dendrimers with Photoresponsive Terminal Mesogenic Groups

N I Boiko\*, A Yu Bobrovsky, A A Pakhomov and V P Shibaev Moscow State University, Russia

- P.3 Thermotropic Liquid Crystals of Hydrogen-Bonded Complexes of Surfactants with an Ionic Tail-End Polyamphiphile
  - C Brodin\* and C G Bazuin Université Laval, Canada
- P.4 UV Light Induced Colour Change in Photoisomerizable Cholesteric Mixtures

A Chanishvili, G Chilaya\* and G Petriashvili Georgian Academy of Science, Georgia

- P.5 Nematic Liquid Crystal Polarization Gratings by Modification of Surface Alignment
  - B Wen, R G Petschek and C Rosenblatt\* Case Western Reserve University, USA
- P.6 Large, Continuously Controllable Nematic Pretilt from Vertical Orientation
  - G P Sinha, B Wen and C Rosenblatt\* Case Western Reserve University, USA
- P.7 Planar Nematic Anchoring Due to a Periodic Surface Potential
  - B Wen and C Rosenblatt\* Case Western Reserve University, USA
- P.8 Disruption of Surface-Induced Smectic Order by Nanoscopic Surface Corrugations
  - G P Sinha, C Rosenblatt\* and L V Mirantsev Case Western Reserve University, USA
- **P.9** Suppression of T<sub>NI</sub> at Nanopatterned Surfaces
  B Wen and C Rosenblatt\* Case Western Reserve University, USA

### P.10 First Order Fréedericksz Transition above the Nematic-Smectic A Phase Transition

B Weng and C Rosenblatt\* Case Western University, USA

- P.11 A Self-Supporting Liquid Crystal Composite
  J Cleaver\*, D Vollmer, J Blackstock, W Poon and J Crain *University of Edinburgh*, *UK*
- P.12 Self-Alignment of Inorganic Biomimetic Liquid Crystals:
   Effect of Magnetic Field
   L J Martinez-Miranda\*, A R Douglas and O C Wilson Jr University of Maryland, USA
- P.13 Effects of Electric Fields as a Function of Depth in a Smectic Film
  T K Misra and L J Martínez-Miranda\* University of Maryland, USA
- P.14 Small angle study of a biological molecule and a magnetic nanoparticle
  I Koh, B Cipriano, S Ehrman and L J Martinez-Miranda\* University of Maryland, USA
- P.15 Observation of Tilt Profile Dynamics in a Hybrid Aligned
   Nematic Liquid Crystal Cell
   S A Jewell\* and J R Sambles University of Exeter, UK
- P.16 Iron-Containing Mesogen as Possible Liquid-Crystalline Ferroelectromagnetic
   N E Domracheva\*, I V Ovchinnikov and V N Kostantinov

Zavoisky Physical-Technical Institute, Tatarstan, Russia

P.17 Hybrid Surface-Stabilized Ferroelectric Liquid Crystals Having an Intervening Interfacial Layer with a Graded Transition Temperature

H Furue\*, I Nishiyama, J Yamamoto and H Yokoyama Japan Science & Technology Corporation, Japan

- P.18 Model of Frederiks Transition and Hysteresis Effect in Polymer Stabilized Nematic Liquid Crystals
   P A Kossyrev\*, J Qi, N V Priezjev, R Pelcovits and G P Crawford Brown University, USA
- P.19 Unusual Thickness-Dependent Heat-Capacity Anomaly in Free-Standing Hexatic Liquid-Crystal Films
  C Y Chao\*, C R Lo, T C Pan, M Veum, C C Huang, V Surendranath and J T Ho National Central University, Taiwan, ROC

- P.20 Unusual Thermal Behavior and Anticlinic Ordering in Chiral Smetic Free-Standing Liquid-Crystal Films
  C Y Chao\*, C R Lo, P J Wu, Y H Liu, D R Link, J E Maclennan, N A Clark, M Veum, C C Huang and J T Ho National Central University, Taiwan, ROC
- P.21 Optical Textural Study of Surface Phase Transitions Involving Tilted Hexatic Phases in Free-Standing Liquid-Crystal Films

  C-Y Chao and J T Ho National Central University, Taiwan, ROC
- P.22 Direct Layer-by-Layer Freezing Transitions in Free-Standing Smectic-A 14S5 Films
   T-C Pan\*, Y-H Liu, C-C Lee, J T Ho and C-Y Chao National Central University, Taiwan, ROC
- P.23 Unusual Multiple Electron Scattering in Ultrathin Free-Standing Crystal-B Films
  C-Y Chao, T-C Pan\*, Y-H Liu, C-F Chou and J T Ho National Central University, Taiwan, ROC
- P.24 Influence of Polarizing Electric Fields and High Temperature Exposure on Optical Transmission of PMMA based PDLC-type Devices

  D Manaila-Maximean\* and C Rosu Universite de Nice, France
- P.25 Thermally Stimulated Depolarization Currents and Optical Transmission on Liquid Crystal/Cellulose Derivative Composite Devices

  C Rosu, D Manaila-Maximean\*, P L Almeida and M H Godinho LPMC, CNRS, Universite de Nice, France
- P.26 Interfacial Properties of Polymer-Liquid Crystal Mixtures
  A Matsuyama\* Mie University, Japan
- P.27 Re-entrant Isotropic Phenomenon and its Molecular Weight
   Dependence in Polypeptide Liquid Crystals
   M K Mitra\*, T Hiejima and A Abe Bangabasi Morning College,
   India
- P.28 Spectroscopic Characterization of Self-Assembled Aggregates in Catanionic Mixtures

  K K Karukstis\*, C A Zieleniuk, T M McQueen, C A Devereaux and K F Goto Harvey Mudd College, USA
- P.29 Determination of Lyotropic Phase Diagrams by Differential Scanning Calorimetry: Alkyl-Maltosides and Water Systems M S Nelson and G R Van Hecke\* Harvey Mudd College, USA

- P.30 Fractal Growth Aggregates at the Isotropic-Liquid Crystal-Crystalline Phase Transitions of Bent-Core Molecules
  I Dierking\* Technische Universität Darmstadt, Germany
- P.31 Domain Growth Dynamics During Ferroelectric Switching of Hexatic Phases with Rotated Layer Geometry
  I Dierking\*, A K Ghosh and W Haase Technische Universität Darmstadt, Germany
- P.32 Localization and Imaging of Shunts in Solar Cells using Short Pitch Cholesteric PDLCs
  I Dierking\* and J Schmidt Technische Universität Darmstadt, Germany
- P.33 Polarization-Independent Phase Modulation by a Film Nano-Sized Droplets of Liquid Crystal: Theoretical Study V Loiko\* and A Konkolovich Institute of Physics of the NASB, Belarus
- P.34 A Model for Multiple Scattering of Light in Polymer Dispersed Liquid Crystal Films
  V A Loiko\* and V V Berdnik Institute of Physics of the NASB, Belarus
- P.35 Electrically Induced Reorientation in a Polymer Network-Stabilized Nematic E7 Liquid Crystal System
   O R Fernandez\*, A Z Francia Jr and Z B Domingo National Institute of Physics, University of the Philippines
- P.36 Electro-Optic Response of Twisted-Nematic E7 Liquid Crystal to a Frequency-Varying Voltage Source

  M Estonactoc, R Amor, L Davila and Z Domingo University of the Philippines, Philippines
- P.37 Thermal Behaviour of the Thermotropic Cubic Mesogen
  4'n-Alkyloxy-3'-Nitrobiphenyl-4-Carboxylic Acid Under
  Pressure
  Y Maeda\*, S Kutsumizu and S Yano National Institute of
- Advanced Industrial Science & Technology, Japan
   P.38 Adsorption Energy Influence on the Dielectric Contribution to the Anchoring Energy in Nematic Liquid Crystals
   H A Pereira, L R Evangelista\*, D Olivero and G Barbero Universi
- P.39 External Electric Field Effect on the Nematic Anchoring
  Energy

  D. Olivara, L. P. Evangeliete\*, and C. Parhara, Universidade

dade Estadual de Maringa, Brazil

D Olivero, L R Evengelista\* and G Barbero *Universidade Estadual de Maringa, Brazil* 

- P.40 Nonlinear Optical Spectroscopic Studies of Polymer Surfaces for Liquid Crystal Alignment
  - M Oh-e\*, S-C Hong and Y R Shen *Hitachi Ltd*, *Japan*
- P.41 Synthesis and Mesomorphic Properties of Chiral Liquid Crystals Derived from (R)-3-Ethylmercapto-2-Methylpropanol
  - M-C Yu\*, S-L Wu and B-L Lin Tatung University, Taiwan, ROC
- P.42 Optical Excitation of Surface Plasmons in Hybrid Aligned
   Nematic Liquid Crystal Cells
   J A Kerslake and J R Sambles University of Exeter, UK
- P.43 Ordered Nanoscale Polymer/LC Composites
  T J Bunning\*, L V Nataragan, V P Tondiglia, R L Sutherland and
  D W Tomlin Air Force Research Laboratory, USA
- P.44 Smectic Liquid Crystals that Tilt Without Layer Contraction: Theory and Experiment
   P Collings, J V Sellinger, B R Ratna and R Shashidhar Swartmore College, USA
- P.45 Synthesis and Mesomorphic Properties of New Liquid Crystals Derived from (2S)-2-(6-Hydroxy-2-Napthyl)
  Propionic Acid and Azobenzene

  V Surendrnanth\* Kent State University, USA
- P.46 Synthesis and Characterization of New Liquid Crystallines containing Non-Activated Indolinobenospiropyranyl Group. Part  $4^{*1}$  S-R Keum, J-J Lee, J-T Shin, S-H Lee, H-R Jang, S-M Ahn and D-Y Kim Korea University, South Korea
- P.47 Synthesis and Mesomorphic Properties of New Azomethine
   Polymers Containing Banana-shaped Mesogens
   E-J Choi\*, S-C Ahn, L-C Chien, C-K Lee, W-C Zin, D-C Kim and
   S-T Shin Kumoh National University of Technology, Korea
- P.48 Crystallographic Aspects of Adenosine Triphosphatase Functioning as a Macromolecular Biomotor S A Pikin, E Loginov and W Haase\* Darmstadt Technical University, Germany
- P.49 Refractive Indices, Density and Order Parameter for some Biphenyl Cyclohexanes Series
  H J Müller and W Haase\* Technische Universität Darmstadt, Germany

- P.50 Optimization of Smetic C Phase in the Binary Mixtures of Heptyloxy and Decycloxybenzoic Acids
  - R Dhar\*, R S Pandey and V K Agrawal *University of Allahabad*, *India*
- P.51 Induced Mesomorphism in the Binary Mixtures of Cholesteric and Nematic Liquid Crystals

R Dhar\*, A K Srivastava and V K Agrawal *University of Allahabad*, *India* 

- P.52 Synthesis, Characterization and Mesomorphic Properties of N-(4-N-Alkoxy-2-Hydroxybenzylidene)Carbethoxyaniline and their Copper Complexes
  - B Singh, M K Sing, R Dhar\* and A K Srivastava *University of Allahabad*, *India*
- P.53 Thermodynamical and Optical Studies of Ternary Mixtures of Heptyloxy Benzoic Acid, Decyloxy Benzoic Acid and Cholesteryl Caprylate

R Dhar\*, M B Pandey and V K Agrawal *University of Allahabad*, *India* 

- P.54 Orientational Order Parameter of the Mesogen 4-Pentyl Cyclohexyl-4-(4-Propyl Cyclohexyl) Benzoate from Optical Studies
  - K Bhowmick and A Mukhopadhyay\* Jadavpur University, India
- P.55 The Temperature Dependence of the Orientational Order Parameter of the Mesogens: 4'-N-Propyl Phenyl-4-(4'-N-Pentyl Cyclohexyl)Benzoate and Trans-4-Propyl Cyclohexyl-4(Trans-4-Pentyl Cyclohexyl)Benzoate
  - K Bhowmick and A Mukhopadhyay\*  $Jadavpur\ University, India$
- P.56 Birefringence and Texture Studies of the Odd Members of Cyanocyclohexyl Cyclohexanes
   K Bhowmick, A Mukhopadhyay\* and C D Mukherjee Jadavpur
  - K Bhowmick, A Mukhopadhyay\* and C D Mukherjee Jadavpur University, India
- P.57 Mesomorphic Characterisation of New Liquid Crystalline Homologous Series Involving Ester-Azo as a Central Linkage with Lateral and Different Terminal Substiuents B T Thaker and C J Vyas\* South Gujarat University, India
- P.58 Nematic Deformation in Inhomogeneous Electrical Field of Slit Liquid Crystal Microlense

G E Nevskaya and I B Yudin\* NSTU, Russia

- P.59 Thermotropic Liquid Crystalline Behaviour of Piperzinium and Homopiperazinium Alkylsulfates
  - A Nikavoura, D Tsiourvas, Z Sideratou and C M Paleos\* *Institute* of Physical Chemistry, NCSR, Greece
- P.60 Novel Liquid Crystals Derived from Cholesteryl Poly (propylene lmine) Dendrimeric Derivatives

  D Tsiourvas\*, T Felekis, Z Sideratou and C M Paleos Institute of Physical Chemistry, NCSR, Greece
- P.61 Liquid Crystals for Quantum Computing
  B M Fung\*, A K Khitrin and V L Ermakov University of Oklahoma, USA
- P.62 Orientational Order of Nematic Liquid Crystal Droplets
  Confined in a Polymer Matrix
  F Roussel, C Canlet and B M Fung\* University of Oklahoma, USA
- **P.63** A Liquid Crystal Mixture for Potential IR Applications B M Fung\* and C Tan *University of Oklahoma*, USA
- P.64 Electroclinic Liquid Crystals with Unusual Smectic Order
  M S Spector\*, B Weslowski and R Shashidhar Naval Research
  Laboratory, USA
- P.65 Alignment Method of Liquid Crystals Which Exhibit N\* to SmC\* Phase Transition for the Enlargement Optical System J-M Wang\*, Y-J Kim, C-J Kim and C-W Hong Samsung Electronics, Korea
- P.66 Curing Temperature Dependence of Polymer Stabilized FLC with N\*-Smc\* Phase Transition Sequence
  Y-J Kim\*, J-M Wang and J-K Park Samsung Advanced Institute of Technology, Korea
- P.67 Structures of the Liquid Crystalline Phases Formed in the Mesogens with Perfluorinated Substituents

  E Nishikawa, J Yamamoto and H Yokoyama\* Yokoyama Nano-structured LC Pro, Japan
- P.68 Search for the B phase in an achiral non-symmetric banana-shaped materials
   T Niori\*, J Yamamoto and H Yokoyama Japan Science and Technology Corporation, Japan
- P.69 Dynamics of the nematic phase formed by an achiral banana-shaped materials
   T Niori\*, J Yamamoto and H Yokoyama Japan Science and Technology Corporation, Japan

- P.70 Sensitized Fluorescence of Dichroic Dye in Emissive Type Liquid Crystal Displays
  - R Yamaguchi\*, H Nagato, H Hafiz and S Sato Akita University, Japan
- P.71 A Novel Patterning Method of Liquid Crystal Alignment by Anchoring Control

R Yamaguchi\*, Y Goto and S Sato Akita University, Japan

P.72 Fundamental properties of Liquid Crystal in Microwave and millimeter wave range
 T Kamei, Y Utsumi\*, H Moritake and K Toda National Defence

Academy, Japan

- P.73 Dielectric Permittivity Measurements of Liquid Crystal using Inductive Coupled Ring Resonator in Microwave Range Y Utsumi\* and T Kamei National Defence Academy, Japan
- P.74 Nematic Order Parameter as Determined from the Relaxation Data and Other Methods
   S Urban\*, B Gestblom, W Kuczynski, S Pawlus and A Wuerflinger Jagellonian University, Poland
- P.75 Temperature-pressure Phase Diagrams for Smectogen cyanobiphenyls (9CB, 10CB, 11CB and 12CB)

  S Urban\*, M Massalska-Arodz, A Wuerflinger and R Dabrowski Jagellonian University, Poland
- P.76 DTA and Dielectric Relaxation Studies of 14CB at Atmospheric and Elevated Pressures
   S Urban\*, A Würflinger, B Gestblom and R Dabrowski Jagiellonian University, Poland
- P.77 Metallomesogens based on 2- and 3-Stilbazoles
  D M Huck\*, H L Nyguyen, B Donnio, D Guillon and D W Bruce
  AMRSC, France
- P.78 Structural Transitions in Holographic Polymer Dispersed Liquid Crystals
   I Drevensek Olenik, M Jazbinsek, M Copic\*, A K Fontecchio and G P Crawford J. Stefan Institute, Slovenia
- P.79 Electro-Optical behaviour determination for Cellulose Derivative PDLC Type Cells
  J L Figueirinhas, P L Almeida\* and M H Godinho FCT/UNL, Portugal
- P.80 UV Stability of High Birefirngence Liquid Crystals
  P T Lin and S-T Wu\* University of Central Florida, USA

- P.81 New Chiral Mesogens Based on 2-Arylidene-p-Menthan-3-One Skeleton
  - V V Vashchenko\*, J W Goodby, L A Kutulya, M N Pivnenko and A S Petrenko *Institute for Single Crystals*, *Ukraine*
- P.82 Molecular Fluctuation of Chiral Smectic Liquid Crystals Studied by 13C-NMR

K Miyayama, T Seki, M Kanekiyo, K Hiraoka\* and Y Uematsu *Tokyo Institute of Polytechnics, Japan* 

P.83 Surface Un-Stabilized Effect in Smectic Subphases of a Chiral Smectic Liquid Crystal, MHPBC

K Hiraoka\*, T Maruyama, Y Noguchi and Y Uematsu *Tokyo Institute of Polytechnics*, *Japan* 

- P.84 X-Ray Studies on Smectic Liquid Crystalline Elastomers
  K Hiraoka\*, P Stein and H Finkelmann Tokyo Institute of Polytechnics, Japan
- P.85 Transport of Nano-Particles in Lyotropic Lamellar Phase
  D Mizuno, Y Kimura\* and R Hayakawa University of Tokyo,
  Japan
- P.86 Dielectric Response in Lamellar and Sponge Phases
  Y Kimura\*, D Mizuno, T Nishino and R Hayakawa University of Tokyo, Japan
- P.87 Influence of Spacer and Terminal Group Lengths of the Smectic Ordering of Cholesterol Containing Dimer Liquid Crystals

A T M Marcelis\*, A Koudijs and E J R Sudhölter Wageningen University, The Netherlands

- P.88 Director Configuration of a Nematic Liquid Crystal Around a Spherical Particle: Numerical Analysis Using Adaptive Mesh Refinement
  - J-i Fukuda\*, M Yoneya and H Yokoyama Yokoyama Nanostructured LC Project, Japan
- P.89 Interaction Between Spherical Particles in a Deformed Liquid Crystal

J-i Fukuda\*, B I Lev, K M Aoki and H Yokoyama Yokoyama Nano-structured LC Project, Japan

P.90 Electrooptical Switching with Banana-Shaped Dimer Liquid Crystals

R Achten\*, A T M Marcelis and E J R Sudhölter Wageningen University, The Netherlands

- P.91 Optical and Statistical Properties of Cholesteric Liquid Crystals with the Large Pitch
  - E V Aksenova\*, V P Romanov and A Yu Val'kov St Petersburg State University, Russia
- P.92 Enhancement of Nonlinear Optical Frequency Conversion in Chiral Smectics

V A Belyakov\* L.D. Landau Institute for Theoretical Physics, Russia

- P.93 Unwinding of the Helix in Thin Planar Cholesteric Layers
  V A Belyakov\* L.D. Landau Institute for Theoretical Physics,
  Russia
- P.94 Temperature and Field Hysteresis of the Pitch Variations in Thin Planar Layers of Cholesterics
   V A Belyakov\*, E I Kats and S P Palto L.D. Landau Institute for Theoretical Physics, Russia
- P.95 Phase Modulation Time Dependence Measurement
  G M Long\*, T D Wilkinson and W A Crossland University of Cambridge, UK
- P.96 Cholesteric-Nematic Transition in the Film with Twofold Degenerate Surface Anchoring A N Zakhlevnykh\* and V S Shavkunov Perm State University, Russia
- P.97 Relaxation Processes in Chiral Ferronematics
  A N Zakhlevnykh\* and A N Selivanov Perm State University,
  Russia
- P.98 Searching for Nano-Structures of the Thermotropic Cubic Mesophase with Molecular Dynamics Simulations
   M Yoneya\*, E Nishikawa and H Yokoyama Yokoyama Nano-Structured Liquid Crystal Project, Japan
- P.99 Molecular Dynamics Simulation Study of Spontaneous Enantiomeric Resolution of Racemic β-Me-TFMHPOBC
   M Yoneya\*, I Nishiyama and H Yokoyama Yokoyama Nano-Structured Liquid Crystal Project, Japan
- P.100 Molecular Dynamics Simulations of Liquid Crystal Molecules of Air–Water Interface
   M Yoneya\*, K M Aoki, Y Tabe and H Yokoyama Yokoyama Nano-Structured Liquid Crystal Project, Japan
- P.101 The Synthesis and Characterization of Alkenyl- and Pentamethyldisiloxyl-Terminated Isoxazole Liquid Crystals

  D H Brown\* and P Styring The University of Sheffield, UK

- P.102 Structure of Intermediate Ferrielectric Phases
  M Cepic, E Gorecka\*, N Vaupotic, D Pociecha, R Dabrowski and B Zeks Warsaw University, Poland
- P.103 Light Induced Control of the Friedericksz Transition in a
   Cell with a Fullerene-Containing Alignment Layer
   V Boychuk, A Furaseva, E Ouskova\*, K Singer, V Reshetnyak and
   Y Reznikov Institute of Physics, NAS, Ukraine
- P.104 Effects of Flexoelectricity and Flow in a Bistable Nematic Device

  A J Davidson\* and N J Mottram University of Strathclyde, UK
- P.105 Patterns' Formation in a Bi-Soft Segment Urethane Elastomer A C Trindade\*, M H Godinho, M Simões and J L Flgueirinhas

Universidade Nova de Lisboa, Portugal

- P.106 Ferroelectric Liquid Crystals-Chirality Transfer in SmC\*
  Liquid Crystal Mixtures
  T Hegmann\* and R P Lemieux Queen's University, Canada
- P.107 Novel Atropisomeric Dopants for Ferroelectric Liquid Crystal Mixtures: Axially Chiral 3,3'-Bipyridine Dopants and Bridged 2,2'-Bipyridine Dopants with a Helical Topography T Hegmann\* and R P Lemieux Queen's University, Canada
- P.108 Ellipsometric Studies of Liquid Crystal Phases Formed by Bent-Core Molecules

  D A Olson, X F Han, A Cady, W Weissflog and C C Huang\* University of Minnesota, USA
- P.109 Temperature Evolution of the Short Helical Pitch in the  $SmC_{\alpha}^*$  Phase
  A Cady, D A Olson, X F Han, H T Nguyen and C C Huang\* University of Minnesota, USA
- P.110 Internal Chain Dynamics of Flexible Mesogens with Increasing Chain Lengths: Modeling of the deuteron spin-lattic relaxation rates

  R Y Dong\* Brandon University and University of Manitoba, Canada
- P.111 Two Shear Flow Regimes in Nematic Liquid Crystals: Near a Charged Surface and in the Bulk
  A V Zakharov and R Y Dong\* Brandon University, Canada
- P.112 Fluctuation Spectrum of Director in Cholesteric Phase with External Field

  M Yamashita\* Mie University, Japan

P.113 Mesogenic and Luminescent Properties of Liquid Crystalline Materials Containing Three- and Five-Conjugated Rings

H-C Lin\*, J-M Tsai and G-H Huang National Chiao Tung University, Taiwan (ROC)

- **P.114** Structural Characterisation of Biphenyl-Based LCS S J Gupta and R A Gharde\* *University of Mumbai, India*
- P.115 Viscous Properties of Nematic Mixtures at Variation of PVT-State Parameters

  A N Larionov, S V Pasechnik\* and N N Larionova Moscow State

A N Larionov, S V Pasechnik\* and N N Larionova Moscow State Academy of Instrument Engineering and Computer Science, Russia

P.116 Orientational Dynamics in Decay Poiseuille Flow of Nematic Liquid Crystals

S V Pasechnik\*, I.Sh. Nasibullayev, D V Shmeliov, A P Krekhov and V A Tsvetkov *Moscow State Academy of Instrument Engineering and Computer Science*, Russia

P.117 Orientational Oscillations in Homeotropic Layers of Liquid Crystals Induced by Low Frequency Pressure Gradient at the Prescence of Stabilizing and Destabilizing Electric Field

S V Pasechnik, A V Torchinskay, D V Smeliova\* and T N Yurmanova Moscow State Academy of Instrument Engineering and Computer Science, Russia

- P.118 Diffraction of the Phase Grating in a Planar-Parallel Aligned Cholesteric Liquid Crystal (CLC) Film

  J-J Wu\*, F-C Chen, Y-S Wu and S-H chen National Taipei University of Technology, Taiwan
- P.119 Cholesteric Liquid Crystal (CLC) Phase Grating used as a Prepolarizer
  S-H Chen\*, Y-S Wu and F-C Chen National Chiao Tung University, Taiwan
- P.120 Improvement of the Optical Rising Response of a Quasi-Homeotropic Liquid Crystal Cell C-Y Hsieh\* and S-H Chen National Chiao Tung University, Taiwan
- P.121 Magnetic Field Effects on the Electroconvection Patterns of a Homeotropic Nematic

N Eber\*, S Németh, Ágnes Buka and L Kramer *Hungarian Academy of Sciences*, *Hungary* 

- P.122 Liquid Crystalline lonic Polymers, Prepared from New Poly(acrylate)s and Poly(methacrylate)s with Propyl Spacer-separated Pyridine Cores
  - L Cui and G Lattermann\* Universität Bayreuth, Germany
- P.123 Instabilities in Nematic Liquid Crystal Under Oscillatory Flow and Additional Electric Field
  - I. Sh. Nasibullayev\* and A P Krekhov Russian Academy of Sciences, Ufa, Russia
- P.124 Dynamics of Fluctuations in Confinded Nematic Liquid Crystals
  - I. Sh. Nasibullayev\*, M V Khazimullin and A P Krekhov *Russian Academy of Sciences*, *Russia*
- P.125 Anomalous Field Induced Director Deformation in a Homogeneous Thin Nematic Liquid Crystal Cell
   D Ishino\*, S Ishihara and A Sugimura Osaka Sangyo University, Japan
- P.126 Calorimetric investigation of the smetic A to chiral nematic transition in chiral/nonchiral liquid crystal mixtures

  P Jamée\*, G Pitsi and J Thoen Katholieke Universiteit Leuven, Belgium
- P.127 A systematic adiabatic scanning calorimetric study of the effect of aerosil density on the NI transition in 7CB

  P Jamée\*, G Pitsi and J Thoen Katholieke Universiteit Leuven, Belgium
- P.128 Critical Behavior of Refractive Index, Dielectric Constant and Thermal Conductivity for 5...8CB Liquid Crystals in the Nematic Phase

  M. Chirtoc, M. Marinelli, F. Mercuri, I. Chirtoc, C. Glorieux\* and
- P.129 Critical Behavior of Density in the Nematic and Isotropic Phases of nCB (N=5...8) Liquid Crystals I Chirtoc, M Chirtoc, C Glorieux\* and J Thoen KU Leuven, Belgium

J Thoen KU Leuven, Belgium

P.130 Deuteron NMR Studies of 5CB Molecular Surface Depositions

D. Zelan, D. Plina, S. Zuman, T. Jim and D. Finetelle\*, I. Stafano

B Zalar, R Blinc, S Žurner, T Jin and D Finotello\* *J. Stefan Institute*, *Slovenia* 

- P.131 <sup>2</sup>H-NMR Characterization of Liquid Crystalline Phases in Aqueous Disodium Cromoglycates
   P W Westerman, M Malmer, T Schneider, O D Lavrentovich, T Jon and D Finotello\* Kent State University, USA
- P.132 Optical Properties of the Two Stable States in a Nematic Liquid Crystal Cell Containing a Surface Relief Grating
   E G Edwards\*, C V Brown, E E Kriezis, L A Parry-Jones and S J Elston University of Oxford, UK
- **P.133** Film Tension of Smectic Films with Different Thicknesses F Schneider\* *Universität Siegen*, Germany
- P.134 Nonlinear Optical Behaviour of Liquid Crystals Induced by Surface Modifications
   F Simoni, L Lucchetti\*, D E Lucchetta and O Francescangeli Università di Ancona, Italy
- P.135 Optical Storage of Hidden Images in Ultraviolet-Cured Polymer Dispersed Liquid Crystals

  L Lucchetti\*, S Di Bella and F Simoni Università di Ancona, Italy
- P.136 Structure of DNA-Liposome-Metal Complexes
  O Francescangeli\*, L Gobbi, D E Lucchetta, P Bruni, M lacussi and G Tosi Università di Ancona, Italy
- P.137 X-Ray Diffraction Study of New "Banana-Shaped" 1,2,4-Oxadiazoles
  O Francescangeli\*, S I Torgova, L A Karamysheva, T A Geivandova, A Strigazzi, V Stanic, C Ferrero and I Dolbnya Università di Ancona, Italy
- P.138 Detection of Ultrasound in Air Using Freely Suspended Film of Ferroelectric Liquid Crystal H Moritake\* and K Toda National Defense Academy, Japan
- P.139 Electrorheology Effect of Nematic Liquid Crystal Observed Under Shear Horizontal Wave Propagation

  M Inoue, H Moritake\* and K Toda National Defense Academy, Japan
- P.140 The prediction of Helical Twisting Powers for Liquid Crystal Chiral Dopants

  D J Earl\* and M R Wilson University of Durham, UK
- P.141 Parameterization and Validation of a Force Field for Liquid Crystal Molecules

D L Cheung\*, S J Clark and M R Wilson  ${\it University~of~Durham}, {\it UK}$ 

- P.142 Designing of Smectic Layer Alignment by Optical Patterning Using Smectic Layer Rotation
  - K Nakayama\*, J Ohtsubo, M Ozaki and K Yoshino *Shizuoka University*, *Japan*
- P.143 Photoaddressable Polymers for LC Alignment
  S Lucht\*, D Neher, A Yasuda, G Nelles, T Miteva, R Hagen and
  S Kostromine *University of Potsdam*, *Germany*
- P.144 Synthesis and Mesomorphic Characterisation of Azoesters with A Sec-Butyl Group
  J S Dave and P R Patel\* M.S. University of Baroda, India
- **P.145** Magnetic Field Alignment of Liquid Crystalline Thiophenes I O Shklyarevskiy\*, P C M Christianen and J C Maan *University of Nijmegen*, The Netherlands
- P.146 Chiral Phases Induced by Doping Non-Mesogenic Component into Mesogenic Esters

  J S Dave, M R Menon\* and P R Patel M.S. University of Baroda,
  India
- P.147 The Synthesis and Mesogenic Properties of Side Chain Polymethacrylates with Terminal Branched Groups
  J S Dave\* and P R Patel M.S. University of Baroda, India
- P.148 (Polymer/Liquid Crystal) Composite of Polyvinyl Ether Copolymers and LC's
   T Gunjima\*, R Kimura, H Hasuo, H Yang, R Kumar, N Kaiya, N Amaya, H Kikuchi and T Kajiyama Fukuoka IST Foundation Core Research Laboratory, Japan
- P.149 Formation and Evolution of Spatial-Temporal Patterns in Nematic Cells in the non-Fréedericksz Twist-Geometry
  J P Casquilho\* and J L Figueirinhas Universidade Nova de Lisboa, Portugal
- P.150 Experimental Study of Transient Patterns in the Non-Fréedericksz Twist-Geometry L N Gonçalves, J P Casquilho $^*$  and J L Figueirinhas DF/FCT/UNL, Portugal
- P.151 Calculation of Rotational Viscosity and Flexoelectric Co-efficients of a Nematic Liquid Crystal by Atomistic Computer Simulation

  D L Cheung, S J Clark and M R Wilson\* University of Durham, UK

P.152 Physical Properties of Cholesteric Liquid Crystals Designed for Use in SSCT Devices

D LeClere, A Mughal and H F Gleeson\* University of Manchester, UK

P.153 Physical Properties and Reflection Spectra of SMC\* Sub-Phases

N Roberts, H F Gleeson\*, N Bowring, A Seed, L Nassif, M Hird and J Goodby *University of Manchester*, *UK* 

P.154 Contrast Enhancement of Radiological Images Using Liquid Crystal Devices

H F Gleeson\*, R Whitehouse and R Winlow *University of Manchester*, *UK* 

P.155 The Effects of Highly Chiral Dopants on the Smectic C\* Sub-Phase Sequence

L S Hirst, S J Watson\* and H F Gleeson *University of Manchester*, *UK* 

P.156 Optical Properties of a Series of Cholesteric Materials Used in Surface Stabilised Cholesteric Texture Devices

S J Watson\*, J-P S Guillou, H F Gleeson, N Roberts, I Kirar, E O Arikainen *University of Manchester*, *UK* 

- P.157 Switching in Liquid Crystal Filled Polymer Structures
  S Coulston\* and G Lester University of Exeter, UK
- P.158 Computer Simulations of Large Liquid Crystal Systems
  L M Stimson\*, J M llnytskyi and M R Wilson University of Durham, UK
- P.159 Chiral Supramolecular Materials from Columnar Liquid Crystals

K R Villazor\* and T M Swager  ${\it Massachusetts~Institute~of~Technology,~USA}$ 

P.160 Incorporating Catalytic Function into Chiral Supramolecular Materials

K R Villazor\* and T M Swager Massachusetts Institute of Technology, USA

P.161 Ferroelectric Liquid Crystal OASLMs for Image Tiling and Autostereoscopic Display

N Collings\*, S Mias, R Chittick, T Davey, T Wilkinson, A Travis and B Crossland *Cambridge University Engineering Dept.*, *UK* 

- P.162 Dielectric Regime of Electroconvection in Twisted
  Nematics

  V. A. Dolov and A. P. Krokhov\* University at Property Community

  On the Community Community

  On the Community Community

  On the Community Community

  On the Community Community

  On the Community

  On
  - V A Delev and A P Krekhov\* *Universitaet Bayreuth*, *Germany*
- P.163 Dynamics of Cholesteric Fingers Under an Electric Field O S Tarasov, A P Krekhov\* and L Kramer Universitaet Bayreuth, Germany
- P.164 The Role of Attractive Interactions in Rod-Sphere Mixtures

  D Antypov\*, D J Cleaver and C M Care MRI, Sheffield Hallam University, UK
- P.165 Volumetric and Birefringence Studies of Hexaheptyloxy-Triphenylene Discotic Liquid Crystal V Gunyakov\* and S M Shibli *Universidade de São Paulo*, *Brazil*
- P.166 Structural Ordering and Molecular-Optical Properties of Discotic Liquid Crystal D<sub>ho</sub>
   V Gunyakov\* and S M Shibli Universidade de São Paulo, Brazil
- P.167 Photoinduced Molecular Motion of the Azobenzene Monolayer Investigated by Maxwell Displacement Current Technique
  - T Manaka\*, Y Nakajima and M Iwamoto Tokyo Institute of Technology, Japan
- P.168 Anisotropic molecular orientation of liquid crystal monolayers in contact with polymide films exposed to polarized UV light

  K Usami\*, K Sakamoto and S Ushioda RIKEN, Photodynamics Research Center, Japan
- P.169 Improvement of Mechanical and Optical Properties for Plastic LCD and its Application to Novel Rewriting Cards S Sanada\* and N Koide Science University of Tokyo, Japan
- P.170 Synthesis and Thermal Properties of Side-Chain Type Liquid Crystalline Polymers Containing Carbazolyl Group K Matsumoto\*, K Arai, T Mihara and N Koide Science University of Tokyo, Japan
- P.171 Preparation of Photocrosslinked Films of New Chalcone-Based Side Chain Type Liquid Crystalline Polymers and its Application to Alignment Film

T Mihara\*, M Tsutsumi and N Koide Science University of Tokyo, Japan

- P.172 Synthesis and Physical Properties of Poly(phenylene Vinylene)s Having Oligo(ethylene oxide) in the Side Chain T Mihara\*, T Yada and N Koide Science University of Tokyo, Japan
- P.173 Cubic Phases of 4'-n-Docosyloxy-3'-Nitrobiphenyl-4-Carboxylic Acid (ANBC-22)
   S Kutsumizu\*, M Yamada, S Yano, K Tadano, S Nojima and T Yamaguchi Gifu University, Japan
- P.174 Structural Control of Cubic Phases in 4'-n-Alkoxy-3'-Nitrobiphenyl-4-Carboxylic Acid (ANBC-n)
   S Kutsumizu\*, K Morita, M Yamada, S Yano, K Tadano, S Nojima and T Yamaguchi Gifu University, Japan
- P.175 Improved Performance of A Single-Polarizer Reflective DTN-LCD with a Retardation Film

  I Fukuda\*, T Izoe and S Yunoki Kanazawa Institute of Technology, Japan
- P.176 Relationship Between Liquid Crystalline States and Gel States of 5-Cyanotropones with a 3,4,5-Trialkoxybenzoylamino Group at C-2 A Mori\*, M Hashimoto and S Ujiie Kyushu University, Japan
- P.177 Troponoid Twin Dimers with Four Rings: Synthesis and Mesomorphic Properties

  A Mori\*, M Takemoto and S Ujiie Kyushu University, Japan
- P.178 Thermotropics as Qasi-Binary Systems: Thermodynamic Point of View

  K Saito\* and M Sorai Osaka University, Japan
- P.179 Azamacrocylic Liquid Crystals with Monocyclic Troponoids E Yamamoto\*, K Jubo, A Mori and S Ujiie Kyushu University, Japan
- P.180 Mesomorphic Properties of 5-Cyanotropones with Fluorinated Di-or Trialkoxybenzoylamino Group at C-2

  M Hashimoto\*, A Mori, X H Cheng and C Tschierske Kyushu University, Japan
- P.181 Anisotropy of a Polyimide Film with Azobenzene Units in the Main Chain Irradiated by Linearly Polarized UV Light K Sakamoto\*, K Usami, M Kikegawa and S Ushioda *Tohoku University*, Japan

- P.182 Studies in the Mesogenic Properties of CU(II) and NI(II)
  Complexes of BI and TRI Dentate Schiff Bases Derived
  from 4-n-Alkoxy-2-Hydroxy Benzaldehyde
  D Patel\* and P K Bhattacharya M.S. University of Baroda,
  India
- P.183 Effective Control of Molecular Aggregations by Doping: Generation of Smectic C<sub>A</sub> Phase by Addition of a Long Bent-Rod Molecule Possessing a Central Strong Dipole K Kishikawa\*, N Muramatsu, S Kohmoto and M Yamamoto Chiba University, Japan
- P.184 Spontaneous Polarization Vector Reorientation Photore-fractive Effect in Ferroelectric Liquid Crystals
   T Sasaki\*, A Katsuragi and Y Nakazawa Tokyo University of Science, Japan
- P.185 Thermal Annealing Effect on the Optomechanical Properties of Reactive Mesogen Films

  J Vedrine\*, D R Cairns and G P Crawford Brown University, USA
- P.186 Mesogenicity of Poly(Benzyl Alkyl Dithioether)s and Poly (Benzyl Alkylcarboxyldithioether)s
  H Isogai and S Yano\* Gifu University, Japan
- P.187 Mesogens with Substituted Diphenyl Methane Moiety
  R Mahajan, A Vora\* and A Pathak M. S. University of Baroda,
  India
- P.188 Symmetrical Azomesogens Possessing O-Dianisidine
  Nucleus

  R Mahajan, H Nandedkar and A Vora\* M.S. University of Baroda,
  India
- P.189 Observation of the Orientational Fluctuation in a Nematic Liquid Crystal by Focusing a Laser Beam
  H Orihara\* and K Naruse Nagoya University, Japan
- P.190 LC Electrohydrodynamic Pump

  V A Tsvetkov\*, S V Pasechnik and J A Salov Moscow State

  Academy of IE&CS, Russia
- **P.191 Effect of Electrical Defloration in Liquid and Solid Crystals** V A Tsvetkov\* *Moscow State Academy of IE&CS, Russia*
- P.192 Investigation of Memory Effect in Dichroic Dyes Based
   PDLC Films
   S I Torgova\*, G N Dorozhkina, N V Novoseletskii, E K Prudnikova
   and B A Umanskii Federal State Unitary Enterprise, Russia

- P.193 Random Smectic C Phases in Monomesogen Low Molar Mass Organosiloxane Liquid Crystal Materials
   R Mehdi, C Carboni\*, A K George, S H Al-Harthi, J Naciri and B R Ratna Sultan Qaboos University, Oman
- P.194 Dielectric Response in the Smectic A and Smectic C\* Phases of a Ferroelectric Liquid Crystal in the Low Frequency Region

  M Al-Hinai, A K George\*, D M Potukuchi, C Carboni, S H Al-Harthi and J Naciri Sultan Qaboos University, Oman
- P.195 Bubble Domains at the Cholesteric to Homeotropic-Nematic Transition in Confined Chiral Nematic Liquid Crystals

  A Al-Lawati, C Carboni, A K George\* and S H Al-Harthi Sultan

A Al-Lawati, C Carboni, A K George\* and S H Al-Harthi Sultan Qaboos University, Oman

- P.196 Effect of a Lateral Chlorogroup on Azo Mesogens Containing Naphthalene Moiety

  A K Prajapati\* and H M Pandya M.S. University of Baroda, India
- P.197 New Mesogenic Homologous Series of Schiff Base Cinnamates Comprising a Naphthalene Moiety
   A K Prajapati, V Thakkar and N Bonde\* M. S. University of Baroda, India
- P.198 Azomesogens with Chloroethyl Tail
  A K Prajapati, H M Pandya and M Patel\* M.S. University of Baroda, India
- P.199 Azodyes as Photo-Alignment Materials for Liquid Crystals B A Umanskii\*, N V Novoseletskii, S I Torgova and G N Dorozhkina Federal State Unitary Enterprise, Russia
- P.200 Polarised Photoluminescence of Fluorescent Dyes Dissolved in Liquid Crystalline Matrices
   B A Umanskii\*, V G Bolenko, A N Trufanov, B P Bespalov and S I Torgova FSUE SRC, Russia
- P.201 Onset of Periodic Distorted Nematic Director Structures in the Intermediate Fréedericksz Transition Geometries

  J L Fiqueirinhas\*, L N Goncalves and J P Casquilho CFMC-UL & IST-UTL, Portugal
- P.202 The Order and the Polarization of the System Composed of Polar Gay-Berne Molecules with Bend
  T Miyazaki\* and M Yamashita DENSO Corporation, Japan

- P.203 Determination of Tilt Angle in Nematic Liquid Crystal-Ag Layer and its Anchoring Energy by ATR Method K-Y Lo\*, C-H Lin and A Ying-Guey Fuh National Chia Yi University, Taiwan
- P.204 TGB Phases in the Binary Mixtures of Liquid Crystalline Compounds
   J Mahadeva, K Hemalatha, S K Naveen Kumar, T N Govidaiah and Nagappa\* University of Mysore, India
- P.205 Induced Chiral Smectic Phase in the Binary Mixture of Nematic and Cholesteryl Compounds
   J Mahadeva, T N Govindaiah, Nagappa\*, S K Naveen Kumar, K Hemalatha and Sathyanarayana University of Mysore, India
- P.206 Mechanical Rotor Model for Liquid Crystal Systems H Ma\*, J Xu, H Okada, S Sugimori, H Onnagawa and K Toriyama Toyama University, Japan
- P.207 Variation of the Entropy of The Transition in Nematic Mixtures
   S K Naveen Kumar\*, B T Raju, K Hemalatha, and Nagappa R Somashekar University of Mysore, India
- P.208 Micellar Nematic Lyophase in the Binary Mixture of Two No-Mesogenic Compounds
   S K Naveen Kumar, Nagappa, T N Govindaiah, R Hanumantha Nayak, G Nagendrappa University of Mysore, India
- P.209 Induced Chiral Smectic Phase in the Binary Mixture of Nematic and Cholesteryl Compounds
   S K Naveen Kumar\*, T N Govindaiah, and Nagappa Yathirajan University of Mysore, India
- P.210 Liquid Crystal Mixtures with Low Birefringence for Active-Matrix LCD
   Y Iwashita, Y Umezu, S Kawakami, K Takeuchi, T Kusumoto\*,
   S Takehara and H Takatsu Dainippon Ink & Chemicals Inc,
   Japan
- P.211 Hybrid Aligned Nematic Liquid Crystal Cell Controlled by Complex Field
   S H Hong, Y H Jeong, H Y Kim, D-S Seo, M-H Lee and S H Lee\*
   Chonbuk National University, Korea
- P.212 Liquid Crystal Aligning Capabilities and EO Characteristics of the Photoaligned TN-LCD on a Photo-crosslinkable Polyimide Based Polymer

J-Y Hwang, D-S Seo\* and D-H Suh Yonsei University, Korea

- P.213 Effects of Cinnamoly Group for LC Aligning Capabilities on the PCEMA Surfaces by Photodimerization Method
  H-T Lee, J-Y Hwang, D-S Seo\* and D H Suh Yonsei University,
  Korea
- P.214 EO Performance of the Photoaligned VA-1/4  $\pi$  Cell on a Homeotropic Photopolymer Surface

  J-B Park, J-Y Hwang, J-H Kim, S-H Nam and D-S Seo\* Yonsei University, Korea
- P.215 Viewing Angle Characteristics of the PDT-VA cell on a Polymer Surface
  S-K Lee, J-U Lee, J-H Kim, J-Y Hwang and D-S Seo\* Yonsei University, Korea
- P.216 Control of High Pretilt Angle for a Nematic Liquid on Homeotropic Polyimide Surface by *In-Situ* Photoalignment Method

  Y-J Jeon, J-Y Hwang and D-S Seo\* *Yonsei University*, *Korea*
- P.217 Dielectric Anisotropy Effects on Pretilt Angle Generation for Nematic Liquic Crystals on a Polymer Layer
  D-S Seo\*, S-K Lee, J-U Lee, J-H Kim and S-H Nam *Yonsei University*, *Korea*
- P.218 EO Performances of the Photoaligned VA-LCD on the Polynorbornene Derivative Layer

  J-Y Hwang, D-S Seo\*, K-S Park and D H Suh *Yonsei University*,

  Korea
- P.219 Wide Viewing Angle Characteristics of a New Multi-domain VA Cell on a Homeotropic Photopolymer Layer

  J-H Kim, J-Y Hwang, S K Lee, S-H Nam and D-S Seo\* Yonsei University, Korea
- P.220 LC Aligning Capabilities and EO Characteristics of the Photoaligned TN-LCD on the Photopolymer Based N-(phenyl)maleimide Homopolymers by New Photodimerization Method
  - J-Y Hwang and D-S Seo\* Yonsei University, Korea
- P.221 Control of High Pretilt Angle in Nematic Liquid Crystal of Negative Dielectric Anisotropy on a Blending Polymer Surfaces

J-Y Hwang and D-S Seo\* Yonsei University, Korea

P.222 LC Aligning Ability and EO Characteristics of the Photoaligned VA-LCD on a Photopolymer Layers Containg N-(phenyl)maleimide

J-Y Kim, J-Y Hwang, T-H Kim and D-S Seo\* *Yonsei University*, *Korea* 

P.223 Wide Viewing Angle Characteristics of the VA-1/ $6\pi$  Cell on a Rubbled Polymer Layer

Y-G Lee, J-Y Hwang, S-K Lee and D-S Seo\* Yonsei University, Korea

P.224 Liquid Crystal Aligning Capabilities and EO Characteristics of the TN-LCD with lon Beam Exposure on a New Diamond-like Carbon Thin Film Layer

Y-M Jo, J-Y Hwang, S J Rho, D K Lee, H K Baik and D-S Seo\* *Yonsei University, Korea* 

P.225 Voltage Holding Ratio and Residual DC Property of the IPS-LCD on a Rubbed Polymer Layers by Voltage-Transmittance Hysteresis Method

Y-J Jeon, H-Y Kim, S-H Lee and D-S Seo\* Yonsei University, Korea

P.226 Quetelet Interference from Liquid Crystal Polymer Dispersion Films

C-Y Huang\*, M-S Tsai, C-H Lin and A Ying-Guey Fuh Kun Shan University of Technology, Taiwan, ROC

- P.227 Liquid Crystal Applications in Fiber Optics
  V G Chigrinov\* Hong Kong University of Science and Technology, Hong Kong, China
- P.228 Synthesis and Properties of AZO-Dyes for LC Photo-Aligning V G Chigrinov\*, E K Prudnikova, V M Kozenkov, H S Kwok, Z Ling, H Akiyama, T Kawara, H Takada and H Takatsu University of Science and Technology, Hong Kong
- P.229 Dynamics of Fast Nematic LC Shutters
  G V Simonenko, V G Chigrinov\*, S A Studentsov and V A Brezhnev
  University of Science and Technology, Hong Kong
- P.230 LCD-Design: Universal System for Optimization and Modeling of LC Devices

D A Yakovlev\*, G V Simonenko, V I Tsoi, V G Chigrinov, N A Khokhlov and Y B Podyachev *University of Science and Technology*, *Hong Kong* 

- P.231 Optimization of Reflective LCDS with Phase Compensators D A Yakovlev\*, V G Chigrinov and H S Kwok University of Science and Technology, Hong Kong
- P.232 Birefringence Measurements of Photo-Aligning AZO-Dye Film

  M Khazimullin, V G Chigrinov\* and H S Kwok University of Science and Technology, Hong Kong
- P.233 Accurate Determination of Photo-Induced Nematic LC Pretilt Angle by Improved Crystal Rotation Method

  M Khazimullin, V G Chigrinov\* and H S Kwok University of Science and Technology, Hong Kong
- P.234 Spectral Photosensibilization of Optical Anisotropy in Poly-(Vinylcinnamate) Photo-Alignment Layers

  V M Kozenkov, V G Chigrinov\* and H S Kwok University of Science and Technology, Hong Kong
- P.235 Photoanisotropic Effects in Poly-(Vinylcinnamate) Derivatives and Their Applications
   V M Kozenkov and V G Chigrinov\* University of Science and Technology, Hong Kong
- Prevention of Smectic-A LC Mixtures Electrolytic Degradation
   M V Mitrokhin\*, L Johnsen, R Fagerberg, C Kristiansen, F J Farrand, K H Holm, R Palm, K Netland and V L Aristov SINTEF Electronics and Cybernetics, Norway
- P.237 Synthesis and Properties of New Banana-Shaped Molecules with Chiral Tails
   C-K Lee\*, S-S Kwon, E-J Choi, S-T Shin, J-H Kim, J-H Song and L-C Chien Gyeongsang National University, Korea
- P.238 A New Type of Liquid Crystals with a Benzothiophene Core M Kurfürst, J Svoboda\*, V Novotná, P Vaněk and M Glogarová Institute of Chemical Technology, Czech Republic
- P.239 Banana-Type Liquid Crystals Based on Naphthalene-2,
  7-Diol with a Lateral Group
  V Kozmík\*, J Svoboda, V Novotná, P Vaněk, M Glogarová, W Weissflog, G Pelzl and S Diele Institute of Chemical Technology,
  Czech Republic
- P.240 Chiral Benzothieno[3,2-b]Benzothiophene Based Liquid Crystals Exhibiting SMC\*<sub>A</sub> Phase
   B Košata\*, J Svoboda, V Novotná, P Vaněk and M Glogarová Institute of Chemical Technology, Czech Republic

- P.241 A New Polyimide with Multifunction of Alignment and Plananrization
  - M-H Lee\*, X-D Li, W C Kim and S H Lee *Chonbuk National University*, Korea
- P.242 Properties of New Orthoconic Antiferroelectric Liquid Crystal Mixtures

P Rudquist, K D'have\*, W Drzewinksi, R Dabrowski and S T Lagerwall Chalmers University of Technology, Sweden

- P.243 Switchable Microlens Array using Ferroelectric Liquid Crystals

  Y-J Seo, I Kim and J-H Kim\* Hallym University, Korea
- **P.244 DNA Detection Using Liquid Crystal Alignment**I Kim, T-S Kim and J-H Kim\* *Hallym University*, *Korea*
- P.245 Field Effect on Anisotropic Phase Separation of Liquid Crystal and Polymer Composite Materials
  Y-J Seo, I Kim and J-H Kim\* Hallym University, Korea
- P.246 Flustration Caused by Competition between Interlayer and Intralayer Interactions in the Chiral Smectic Phase
  A Yoshizawa\*, K Yamaguchi and T Kusumoto *Hirosaki University*,

  Japan
- P.247 Molecular Recognition in the Smectic A Phase of Non-Symmetric Dimeric Liquid Crystals
   A Yoshizawa\*, S Hatai, K Yamamoto, H Dewa, T Narumi, N Araake, I Nishiyama, J Yamamoto and H Yokoyama Hirosaki University, Japan
- P.248 Phase Transition Behaviour of a Symmetric and Non-Symmetric Dimeric Liquid Crystals
   A Yoshizawa\*, K Yamaguchi and S Hatai Hirosaki University, Japan
- P.249 3-D Simulations of Light Propagation in Periodic Liquid Crystal Microstructures
   Em.E. Kriezis\*, C J P Newton, T P Spiller and S J Elston University of Oxford, UK
- P.250 Synthesis and Supramolecular Chemistry of Discotic Liquid Crystals from Hexa- Peri-Hexabenzocoronene

  N Tchebotareva\*, M Watson, T Pakula and K Müllen Max-Planck-Institute für Polymerforschung, Germany

- P.251 Synthesis and Liquid Crystalline Properties of Lanthanide Complexes with Perfluoralkylsulfate Counterion

  F K Gajnullina, L V Malykhina, G I Ivanova and Yu. G. Galyametdinov\* Kazan Physical Technical Institute RAN, Russia
- P.252 Synthesis and Characterisation of New Antiferroelectric Liquid Crystalline Materials with a Keto Group and Two Lactate Groups

  V Hamplová, A Bubnov\*, M Kašpar, V Novotná and M Glogarová Institute of Physics, CAS, Czech Republic
- P.253 High Resolution Calorimetry of Coexistence Region at a First Order Phase Tansition

  M Marinelli\*, F Mercuri and U Zammit University of Rome "Tor Vergata", Italy
- P.254 Ferro-Electric Nematic Liquid Crystals
  A Buchnev, Y Reznikov\*, A Tereshchenko, V Reshetnyak, A Glushchenko, J West, K D Singer and R S Kurti Institute of Physics, Ukraine
- P.255 Quantitative and Qualitative Comparision of the Predicitions of the Nordio-Rigatti-Segre Theory with the Dielectric Spectroscopy Data

  W Otowski\* Cracow University of Technology, Poland
- P.256 Optimization of a Reflective Antiferroelectric Liquid Crystal Display using the 2 x 2 Jones Matrix
  C-J Yu\*, D-H You, J-H Son and S-D Lee Seoul National University, Korea
- P.257 Molecular Distribution and Reorientation of a Liquid Crystal on a Surface Relief Polymer J-H Park\* and S-D Lee Seoul National University, Korea
- P.258 Independently Tunable Long Period Fiber Gratings Cladded with a Liquid Crystal
   H-R Kim\*, Y-H Kim, Y Jeong, S Baek, Y Wook Lee, B Lee and S-D Lee Seoul National University, Korea
- P.259 Detection of Chemical Contamination Based on a Hybrid System of a Ligand-Receptor and a Liquid Crystal Y Choi\*, S Oh, H Kwon and S-D Lee Seoul National University, Korea

- P.260 Control of the Effective Pitch in a Cholesteric Liquid Crystal Using a Photoreactive Material
  - C Jeong\*, J-H Park, H Baac, D-H Choi and S-D Lee  $Seoul\ National\ University,\ Korea$
- P.261 Polycatenar Metallomesogens of [M(Salen)] Type N Hoshino-Miyajima\*, T Satoh, S Ohsato, S Sakuta, Y Ogawa and N Matsumoto Hokkaido University, Japan
- P.262 Bifurcations in Pattern Formation During the Homeotropic-Focal Conic Transition
  T-Y Yoon\*, C Jeong, J-H Park, C-J Yu and S-D Lee Seoul National University, Korea
- P.263 Nonlinear Dielectric Spectroscopy of Liquid Crystalline Materials
   P Kedziora\*, J Jadżyn and L Hellemans Institute of Molecular Physics, PAS, Poland
- P.264 New Optical Memory Effects in Polymer-Stablized Cholesteric LCs Due to Pitch Changes During the UV-Curing M Mitov\*, E Nouvet, C Binet and C Bourgerette CEMES-CNRS, France
- P.265 Langmuir and Langmuir-Blodgett Films of Azo Dye-Liquid
   Crystal Mixtures
   T Martyński, A Biadasz and D Bauman\* Poznan University of Technology, Poland
- P.266 The Application of Cyclic Voltammetry to the Investigation of Redox Properties of Discotic Liquid Crystals L Mason\*, R J Bushby, N Taylor and S Kumar University of Leeds, UK
- P.267 Relationship Between Azimuthal Anchoring Energy and Linearly Polarized UV Dosage of Photoaligned Liquid Crystal at the Beginning of Alignment

  M Hasegawa\* IBM Research, Japan
- **P.268** Computer Simulations of Dipolar Bent-Core Molecules P J Camp\* and A Dewar *University of Edinburgh*, *UK*
- P.269 Phase Behavior, Crystallization Kinetics and Morphology or Monotropic Liquid Crystalline Poly(ester-imide)s with a Decamethylene Spacer

  S Ouk Kim, C Min Koo, I Jae Chung and H-T Jung\* Korea Advanced Institute of Science & Technology, South Korea

- P.270 The Optics of Reflective Cholesterics
  H P M Huck\*, D De Boer and I Staupe Philips Research, The Netherlands
- P.271 Surface Morphologies of the Self-Assembled Amphiphilic Liquid Crystals

  D K Yoon\*, H-T Jung, Y K Lo, M Lee and W-C Zin Korea Advanced Institute of Science and Technology, Korea
- P.272 Advances in the Synthesis of Functionalised Derivatives of Hexaalkoxytriphenylenes

  R J Bushby, Q Liu, Z Lu and S McLaren\* University of Leeds, UK
- P.273 Tetrathiafulvalene Based Discotic Liquid Crystals
  G Cooke, N Boden, R J Bushby, Z Lu, O Lozman and
  P Vanderstraeten\* Heriot-Watt University, UK
- P.274 Mesomorphic and Physical Properties of Ferroelectric Mixtures Based on Lactic Acid Derivatives
   A Bubnov\*, V Hamplová, A Vajda, M Kašpar, K Fodor-Csorba and N Éber Institute of Physics, CAS, Czech Republic
- P.275 Output-Power Control in ND-Doped Fiber Lasers with Cholesteric Liquid-Crystal Reflectors

  B Meziane, C Li, P Carette, M Warenghem\* and M Mitov Université d'Artois, France
- P.276 Thermally Induced Narrow Isotropic Channels in Dye Doped Nematic Liquid Crystal

  J F Henninot, F Derrien, M Debailleul and M Warenghem University of Artois, France
- P.277 Mesomorphic Phase Behavior of Bithiophene Derivatize Schiff's Base M-G Choi\*, B-H Han Yonsei University, Korea
- P.278 Rodlike Gigantocyclic Mesogens
  E Ariño, M Contel, C Diaz, A Negredo\* and F Navarro Universidad de Zaragoza-CSIC, Spain
- **P.279** Molecular Simulation of a Liquid Crystal Chevron
  R Webster and D J Cleaver Sheffield Hallam University, UK
- P.280 A Lattice Boltzmann Algorithm for the Flow of a Nematic Liquid Crystal with Variable Order Parameter C M Care\*, I Halliday and K Good Sheffield Hallam University, UK

- P.281 Electroclinic Effect Around a Smectic A-Chiral Nematic Phase Transition
  - C L Folcia, J Ortega and J Etxebarria\* *Universidad del Pais Vasco*, *Spain*
- P.282 Determination of the Helical Pitch in the Smectic  $C\alpha^*$  by Means of Gyrotropy Measurements

J Ortega, C L Folcia, J Etxebarria\*, P Karahaliou and M B Ros Universidad del Pais Vasco, Spain

P.283 Large LC Droplets in Polymer Matrix
S J Klosowicz\*, A Walczak, E Nowinowski-Kruszelnicki and D

S J Klosowicz<sup>\*</sup>, A walczak, E Nowinowski-Kruszelnicki and D Manaila-Maximean *Military University of Technology, Poland* 

P.284 Polarization Properties of Optic Fiber with PDLC in Elliptical Core

S J Klosowicz\*, L R Jaroszewicz and E Nowinowski-Kruszelnicki Military University of Technology, Poland

P.285 Synchronization of Zig-Zag Defect Vibrations in Ferroelectric Liquid Crystals

A P Fedoryako and E V Popova\* Institute for Single Crystals, Ukraine

P.286 Large Scale Synthesis and Resolution of Ferroelectric Liquid Crystal Dopants Based on Atropisomeric Biphenyl Cores

C S Hartley\* and R P Lemieux Queen's University, Canada

P.287 Synthesis and Properties of New Banana-Shaped Liquid
Crystalline Monomers and their Mixtures

K Fodor-Csorba\* G Galli A Vaida D Demus and A Iákli

K Fodor-Csorba\*, G Galli, A Vajda, D Demus and A Jákli Hungarian Academy of Sciences, Hungary

P.288 Chirality Transfer in Induced Smectic C\* Ferroelectric Liquid Crystals: Secondary Dopants as Probes for Chiral Cooperativity

C S Hartley\* and R P Lemieux Queen's University, Canada

P.289 The Role of Electrostatic Interactions and Coordinate Bonds in the Mesophase Formation in Side-Chain Liquid Crystalline lonomers

D A Pelbalk\*, N V Koval, M V Barmatova, E B Barmatov and V P Shibaev *Moscow State University, Russia* 

- P.290 The Effect of Molecular Structure of Alkyl-4-N-Nonyloxy Bifenyl-4'-Carboxylates on its Thermophysical Properties

  S M Yayloyan\*, A M Yayloyan, Z V Baghdasaryan and K K Vardanyan Institute of General and Inorganic Chemistry, Armenia
- P.291 An Investigation of Dielectric Properties of Smectic C\*
   Liquid Crystals
   Z V Baghdasaryan, K K Vardanyan and S M Yayloyan\* Institute of Applied Problems of Physics, Armenia
- P.292 Fluoroalkylated Discotic Metallomesogens
  B Bilgin-Eran\*, C Tschierske and S Diele Universität Halle-Wittenberg, Germany
- P.293 Synthesis and Mesomorphism of Mesogenic Salicylideneamines with Fluorocarbon Chains and their Metal Complexes

  B Bilgin-Eran\* and C Tschierske Universitaet Halle-Wittenberg, Germany
- P.294 Siloxane and Oligosiloxane Substituted Bent-Core Mesogens: Novel Mesophases by Structural Variations
  G Dantlgraber\*, C Tschierske, A Eremin, S Diele, G Pelzl, H Kresse and A Hauser *Universität Halle, Germany*
- P.295 Study of High Frequency Relaxation Processes on Homologous 4,4'-Dialkyl-[CIS(Trans)]-[1,1'Bicyclohexyl]-4-Carbonitriles (CCN'S) with Negative Dielectric Anisotropy

  D Ganzke and W Haase\* Darmstadt Universit of Technology,
  Germany
- P.296 Effect of Added Ions on Lyomesomorphic Behavior of Deoxyguanosine 5'-Monophosphate
   L Spindler\*, I Drevenšek Olenik, M Čopič and P Mariani University of Maribor, Slovenia
- P.297 Numerical Optimisation of Reflective TN Display
  J Zielinski\* and M Olifierczuk Institute of Applied Physics, MUT,
  Poland
- P.298 The Frequency and Temperature Dependence of the AC Mobility of Interacting Coulombic Charges in Quasi-One-Dimensional Systems

  L Gallos, L Siebbeles and B Movaghar\* SOMS Centre, University of Leeds, UK
- **P.299** Hydrodynamic Study of Defect Annihilation in Nematics D Svenšek\* and S Žumer *Univerza v Ljubljani*, *Slovenia*

- P.300 Water Soluble Liquid Crystalline Polymers
  S Viale\* and S J Picken Delft University of Technology, The Netherlands
- P.301 Uniformity of Characteristics for PTFE Aligned Rapid Prototype LCDS

  G Lester\* University of Exeter, UK
- P.302 Study of Nematic Liquid Crystal Alignment on Nano-Patterned ITO and PMMA Surfaces

  M Behdani\*, A Rastegar, J Gerritsen, S H Keshmiri and Th Rasing
  Ferdowsi University, Iran
- P.303 Tunable Morphological System Obtained from HPC Aqueous Liquid Crystalline Solutions
   M H Godinho\*, J G Fonseca, A C Ribeiro, L Melo and P Brogueira Universidade Nova de Lisboa, Portugal
- P.304 Anchoring Properties of Nematic Liquid Crystals on Anisotropic Cellulose Derivative Films

  J G Fonseca\*, M H Godinho and A C Ribeiro Universidade de Lisboa, Portugal
- P.305 Raman Spectroscopy Studies in SmC<sub>FI</sub>\* Phases
   P Simeão Carvalho\*, Y I Yuzyuk, A Almeida, M R Chaves, F Pinto,
   C da Cruz and H T Nguyen Universidade do Porto, Portugal
- P.306 Metallomesogens Derived from Tris[2-(Salicylideneamino)Ethyl]-Amine. A Molecular Meccano. A Versatile Plastic Ligand.

  J Barberá, F Durán, M Marcos\*, A Omenat, J L Serrano Universidad de Zaragoza-CSIC, Spain
- P.307 Light Propagation through Liquid Crystal Cells with Three Dimensional Director Variations
  G Panasyuk, J Kelly, D W Allender\* and E C Gartland Kent State University, USA
- P.308 Rigid Phenylene Ethynylene Units Linked by V-Shaped Centres A New Approach to Biaxial Nematogens?

  M Lehmann\* and J Levin Free University of Brussels, Belgium
- P.309 New Star-Shaped Mesogens with Three Different Arms at A
  1,3,5-Substituted Benzene Core

  M Lehmann\* Free University of Brussels, Belgium
- P.310 Droplet Structure Transformation in Nematic Emulsion Under the Action of Magnetic Field

  B Lev\*, A Nych, U Ognysta, D Reznikov, V Nazarenko, I Smalyuh and O Lavrentovich Institute of Physics NAS, Ukraine

- P.311 Adsorption Phenomena and Macroscopic Properties of Ferronematics Caused by Orientational Interactions
   S V Burylov, V I Zadoroshnii\*, I P Pinkevich, V Yu Reshetnyak and
   T J Sluckin Kyiv Taras Shevchenko University, Ukraine
- P.312 Magentically Controlled Anchoring of Liquid Crystals O Buluy, A Gluschchenko, E Ouskova, V Reshetnyak\*, Y Reznikov and J West Kyiv University, Ukraine
- P.313 Ferroelectric Liquid Crystal Electro-Optical Devices Using HPC as Alignment Layers
   D Pires, C Cruz\*, M H Godinho, J Almeida and P Brogueira C.F.M.C. Universidade de Lisboa, Portugal
- P.314 Packing Model for a Smectic C Phase of a Mesogenic Organo-Siloxane Multipode
   C Cruz\*, C Costa, A C Ribeiro, T Meyer and G Mehl Centro de Fisica da Materia Condensada, Lisboa, Portugal
- P.315 Synthesis and Properties of Polymerizable Bent-Core Mesogens
  A C Sentman\* and D L Gin University of Colorado, Boulder, USA
- P.316 Highly Ordered Non-Wetting Nematic Regions at Surfaces
  When the Bulk Phase is Isotropic

  D W Allender\* Kent State University, USA
- P.317 Photomodulating the Spontaneous Polarization of a SmC\*
  Phase Using Liquid Crystalline Thioindigo Derivatives with
  Siloxane End-Groups
  J Z Vlahakis and R P Lemieux\* Queen's University, Canada
- P.318 Photoisomerization of Dithienylethene Dopants in Ferroelectric Liquid Crystals K E Maly and R P Lemieux\* Queen's University, Canada
- P.319 Universality in the Miesowicz's coefficients
   M Simões\* and S M Domiciano Universidade Estadual de Londrina, Brazil
- **P.320** Light Propagation in Liquid Crystalline Blazed Gratings
  C Titus, B Wang, J Shi and P J Bos\* Kent State University, USA
- P.321 Observation of the Amplitude Mode in Smectic- $C_{\alpha}^*$  Phase by Means of Electrooptical Measurement A Fajar\* and H Orihara Nagoya University, Japan
- P.322 Nanostructured Lyotropic Chromonic Liquid Crystals
  H Lui, T Schneider and O D Lavrentovich\* Kent State University,
  USA

- P.323 Tactoidal Droplets in Lyotropic Chromonic Liquid Crystalline Systems
  - T Schneider and O D Lavrentovich\* Kent State University, USA
- P.324 Observation on One-Dimensional Spinodal Decomposition in a Nematic Liquid Crystal
  - T Nagaya\* and J-M Gllli Okayama University, Japan
- P.325 A Ginzburg Landau Study of Electroconvection in Nematic Liquid Crystals
  G Dangelmayr and I Oprea\* Colorado State University, USA
- P.326 TBG Phases Induced in Some Mixtures Containing Laterally Substituted Chiral Twin and/or Monomer

  I Nishiyama\*, J Yamamoto, J W Goodby and H Yokoyama Yokoyama Nano-Structured LC Project, Japan
- P.327 Influence of the Tribological Properties on the Liquid Crystal Molecular Alignment in the Micro-Rubbing Process

  M Honma\* and T Nose Akita Prefectural University, Japan
- P.328 Mesomorphic behaviors and charge transport in terthiophene derivatives
   M Funahashi\* and J-i Hanna Tokyo Institute of Technology, Japan
- P.329 Regular Defect Array Formed After Shear in Water-in-Cholesteric Liquid Crystal Emulsions

  M Yada\*, J Yamamoto and H Yokoyama Yokoyama Nano-structured Liquid Crystal Project, Japan
- P.330 Monte Carlo Model of Light Scattering in Polymer Dispersed Liquid Crystal: Polarization Effects

  S Delica\* and C M Blanca University of the Philippines, Philippines
- P.331 Angular Distribution of Multiply-Scattered Light in a Polymer Dispersed Liquid Crystal: A Monte Carlo Model
  S Delica\* and C M Blanca University of the Philippines,
  Philippines
- P.332 Switching of a Bistable Device using a Nematic Liquid Crystal of which Dielectric Anisotropy is Dependent on the Electric Field

  J-H Kim\*, M Yoneya and H Yokoyama Yokoyama Nano-Struc-

tured LC Project, Japan

- P.333 Complex Refractive Index Determination of the Nematic Liquid Crystal Materials in the Millimeter-Wave Region
  T Nose\*, M Honma, T Nozokido and K Mizuno Akita Prefectural University, Japan
- P.334 Correlation Between Order Parameter of Liquid Crystal Mixture and Dichroic Ratio of its Guest-Host System H lchinose\*, H Sato and S Naemura Merck, Japan
- P.335 Study of Orientational Order Parameters of 4-Octyl-4'-n-Cyanobiphenyl Langmuir Films by Maxwell Displacement Current Measurement Coupled with Optical Second Harmonic Generation Measurement

  A Tojima\*, R Hiyoshi, H Fujimaki, T Manaka and M Iwamoto Tokyo Institute of Technology, Japan
- P.336 Detection of Phase Transition of 4-Heptyloxy-4'-n-Cyanobiphenyl Langmuir Films by Maxwell Displacement Current and Optical Second Harmonic Generation Measurement A Tojima\*, H Fujimaki, H Ootake, R Hiyoshi, T Manaka, M Iwamoto and Z C Ou-Yang Tokyo Institute of Technology, Japan
- **P.337** A Liquid Crystal Lens of Novel Structure M Ye\* and S Sato Akita University, Japan
- P.338 Investigations of refractive indices of Free-Standing Film by ellipsometry
  Y Okumoto\*, N Matsuhashi, M Yoshida, T Tadokoro, M Kumura and T Akahane Nagaoka University of Technology, Japan
- P.339 Synthesis and Characteristics of Liquid Crystalline Semiconducting Materials, Dialkyl-2-phenylnapthalene Derivatives-Liquid Crystalline Behaviour and Photoconductivity-

Y Takayashiki and J-I Hanna Tokyo Institute of Technology, Japan

- P.340 Evaluation of the Refractive Indices and their Wavelength Dispersion of the Liquid Crystal by using the Ellipsometry N Tanaka\*, M Kimura and T Akahane Nagaoka University of Technology, Japan
- P.341 Ferroelectric Nematic Monolayer
  Y Tabe\*, T Yamamoto, I Nishiyama, M Yoneya and H Yokoyama
  National Institute of Advanced Industrial Science & Technology, Japan

- P.342 Electro-optical Characteristics of Twised Nematic Liquid Crystal Device Based upon in-plane Switching
  S Oka\*, Y Toko, M Kimura and T Akahane Nagaoka University of Technology, Japan
- P.343 SHG-CD Measurement in the B4 Phase of Achiral Bent-Shaped Molecular System
  F Araoka\*, Y He, J Thisayukta, Y Takanishi, K Ishikawa, J Watanabe and H Takezoe *Tokyo Institute of Technology*, *Japan*
- P.344 Blue Phases Induced on Adding Non-Chiral Molecules to a Chiral Nematic Liquid Crystal
   M Nakata\*, D R Link, Y Takanishi, K Ishikawa and H Takezoe Tokyo Institute of Technology, Japan
- **P.345** Pockels Effect of Chiral Bent-Shaped Molecular Systems Y He\*, F Araoka, J Thisayukta, Y Takanishi, K Ishikawa, J Watanabe and H Takezoe *Tokyo Institute of Technology, Japan*
- P.346 Liquid Crystal Element for Fine Tuning of Laser Wavelength

  R-P Pan\*, Y-P Lan, C-Y Chen and C-L Pan National Chiao Tung
  University, Taiwan (ROC)
- P.347 Terahertz Probing of the Nematic Liquid Crystal 5CB
  R-P Pan\*, T-R Tsai, C-Y Chen, C-L Pan and X-C Zhang National
  Chiao Tung University, Taiwan (ROC)
- P.348 Effects of Particle Modification on Properties of Particle/
  Liquid-Crystal Composites

  T Yamamoto\*, M Yada and H Yokoyama Yokoyama NanoStructured LC Project, Japan
- P.349 Photochemical Manipulation of Glycerol Droplets in Nematic Liquid Crystals

  T Yamamoto\*, J Yamamoto, B I Lev and H Yokoyama Yokoyama Nano-Structured LC Project, Japan
- P.350 Determination of Anchoring Energy in Nematic LC Cells
  With Controllable Twist Angles by Using a Strokes Parameter Method

  M Kawamura\*, Y Goto and S Sato Akita University, Japan
- P.351 Liquid-Crystal-Based Tunable Filter for WDM ( $\lambda = 1550 \text{ nm}$ ) C-L Pan\*, M Huang and R-P Pan National Chiao Tung University, Taiwan, China

- P.352 Biaxial Anchoring and V-Shaped Switching in a Novel Binary Mixture System of Smectics Frustrated Between Ferro- and Antiferro-Electricity
  - T Matsumoto, M Johno, T Ando, A Fukuda\*, N Hayashi, T Kato, S Kawanda, S Kondo, A Fajar and H Orihara *Shinshu University*, *Japan*
- P.353 Short- and Long-Range Interactions Stabilizing Two Staircases in Smectics Frustrated Between Ferro- and Antiferro-Electricity

A Fukuda\*, H Hakoi and M A Osipov Shinshu University, Japan

P.354 End Chain Length Effect on the Layer Structure in Bent-Shaped Dimer Liquid Crystals

M Toshimitsu\*, N Takada, M Nakata, Y Takanishi, K Ishikawa, J Watanabe and H Takezoe *Tokyo Institute of Technology*, *Japan* 

- P.355 Low-threshold and Tunable Lasing in Soluble Polymer
  Dye-Doped Cholesteric Liquid Crystals
  K-C Shin\*, F Araoka, Y Takanishi, K Ishikawa, H Takezoe, Z Zhu.
  - K-C Shin\*, F Araoka, Y Takanishi, K Ishikawa, H Takezoe, Z Zhu, T M Long and T M Swager *Tokyo Institute of Technology*, *Japan*
- P.356 Analysis of Twisted Conformation of Molecules in an Achiral Banana-Shaped Liquid Crystal by Polarized FT-IR Spectroscopy

K Yamamoto\*, M Nakata, D R Link, Y Takanishi, K Ishikawa, J Watanabe and H Takezoe *Tokyo Institute of Technology*, *Japan* 

- P.357 A New High Twisting Power Material For Use as a Single Asymmetric Dopant in Cholesteric Displays With a Temperature Independence of the Helical Twisting Power A J Seed\*, J W Doane, A Khan and M E Walsh Kent State University, USA
- P.358 Laterally Fluorinated Thiophene-Containing Mesogens. A New Class of Ferroelectric Materials with Very Low Viscosity, Fast Response Time and Chevron-Free Structures A A Kiryanov, P Sampson, A Jakli and A J Seed\* Kent State University, USA
- P.359 Novel Alkoxythiophene-Containing Mesogens, Synthetic Aspects, Mesomorphic Behavior and Stability

A J Seed\*, V M Sonpatki, A A Kiryanov, M R Herbert and P Sampson *Kent State University*, *USA* 

- P.360 Does the Biaxial Nematic Exist in Bent-Core Mesogens?

  I Miyake\*, M Nakata, C H Lee, Y Takanishi, K Ishikawa,
  J Watanabe, T Yamamoto and H Takezoe Tokyo Institute of
  Technology, Japan
- P.361 Evaporated Liquid Crystalline Films Thinner Than Monolayer Studied by Surface Second Harmonic Generation
  Y Okada\*, T Shioda, F Araoka, Y Takanishi, K Ishikawa, B Park and
  H Takezoe Tokyo Institute of Technology, Japan
- P.362 Molecular Dynamics Simulation Methods for Anisotropic Liquids

  K M Aoki\*, M Yoneya and H Yokoyama Yokoyama NanoStructured Liquid Crystal Project, Japan
- P.363 Molecular Dynamics Simulation of Smectic C Phase Appearing in Langmuir Layers
   K M Aoki\*, Y Tabe, M Yoneya and H Yokoyama JST Yokoyama Nano-structured LC Project, Japan
- P.364 Domain Boundary of Gay-Berne Nematics
  K Kiyohara\*, H Monobe, N Terasawa and Y Shimizu AIST Kansai,
  Japan
- P.365 Change of Liquid Crystal Domains by Polarized Infrared Irradiation for a Columnar Liquid Crystal

  H Monobe\*, K Kiyohara, M Heya, K Awazu and Y Shimizu National Institute for Advanced Industrial Science and Technology, Japan
- P.366 Alignment Behaviour of Discotic Nematic and Rectangular Columnar Phases on Self-assembled Monolayers of Alkanethiol and Asymmetrical Disulfide

  H Monobe\*, H Azehara, A Nakasa, N Terasawa, K Kiyohara, M Fujihara and Y Shimizu National Institute for Advanced Industrial Science and Technology, Japan
- P.367 Structure Control of Polymer Cholesterics by Conformational Transitions of Constituent Polymers
   K Yoshiba\*, A Teramoto, N Nakamura and T Sato Ritsumeikan University, Japan
- P.368 Alignment of Liquid Crystals by Grooved Glass Surfaces
  Y-F Lin\*, M-C Tsou, T Hwang and R-P Pan National Chiao Tung
  University, Tawain

- P.369 New Ferroelectric Liquid Crystals with Azo Group in the Core
  - V Hamplová\*, M Kašpar, A Bubnov, S Pirkl and M Glogarová *Insitute of Physics*, CAS, Czech Republic
- P.370 Study of Ferroelectric Liquid Crystals with 2-Alkoxypropionate Chiral Group by X-Ray Measurements
   M Garié\*, D Ž Obadović, A Bubnov, V Hamplová, M Kašpar and M Glogarova Institute of Physics, CAS, Czech Republic
- P.371 Study of Polarisability Tensor of CB 5 Molecule for Different Light Wavelengths
   P Adamski and A Bubnov\* Institute of Physics, CAS, Czech Republic
- P.372 The Effect of Increasing Number of Lactate Units in Chiral Chain on Mesogenic Behaviour
  V Hamplová, A Bubnov\*, M Kašpar, V Novotná and M Glogarová Institute of Physics, CAS, Czech Republic
- P.373 On Modelling of the Collective Relaxation Processes in Liquid Crystals with Dipole Ordering

  A Bubnov\* and T V Guy Institute of Physics, CAS, Czech Republic
- P.374 New Liquid Crystals with Several Lactate Units in the Chiral Part
   V Hamplová\*, M Kašpar, V Novotná and M Glogarová Institute of Physics, CAS, Czech Republic
- P.375 A Note on Observability of Pseudo-Casimir Interaction in Nematic Mesophase

  P Ziherl\* and I Muševic University of Ljubljana, Slovenia
- P.376 Studies on Alignment Mechanism and Rubbing Nonuniformity Using Double Surface Treatments Technique
   D-H Chung\*, T Shioda, Y Takanishi, K Ishikawa and H Takezoe Tokyo Insitute of Technology, Japan
- P.377 Competitive Effects of Grooves and Photoalignment on ematic Liquid Crystal Alignment Using Azobenzene Polymer

  D-H Chung, T Fukuda, H Matsuda, Y Takanishi, K Ishikawa, M A Osipov and H Takezoe Tokyo Institute of Technology, Japan
- P.378 New Banana Shaped Liquid Crystals with a Lateral Methoxy Substitution Exhibiting the B<sub>2</sub> Phase
   V Novotná\*, M Glogarová, V Hamplová and M Kašpar Institute of Physics, CAS, Czech Republic

- P.379 External Field Effects in Chiral Liquid Crystals A Computer Simulation Study of Helical Unwinding-R Memmer\* and O Fliegans Universität Kaiserslautern, Germany
- **P.380** Phase Transition in Mesomorphic Organophosphazenes K Moriya\*, T Yamane, T Suzuki, S Yano and M Kajiwara *Gifu* University, Japan
- P.381 New Hybrid Metal-Mesogenic Nanosystems Obtained via Low Temperature Co-Deposition T I Shabatina\* Moscow State University, Russia
- P.382 Order Parameter Fluctuations in Ferro- and Antiferroelectric Phases of Two Selected Fluorinated Compounds
   S Wrobel, M Marzec, J Czub, A Koniarz, D Ganzke, W Haase, K Czuprynski and R Dabrowski Jagiellonian University, Poland
- P.383 Electrooptic, Dielectric and DSC Studies of Ferroelectric and Sub-Phase Alpha of a Highly Polar Compound
   M Marzec, A Mikulko, S Wrobel, R Dabrowski, D Ganzke and W Hasse Jagiellonian University, Poland
- P.384 Landau-Peierls Instability in Smectic-A Films: New Aspects
  E V Aksenova and A Yu Val'kov\* St Petersburg State University,
  Russia
- P.385 Investigation on Parasitic Capacitances in AM-LCDs
  C-S Lee, S-H Yoon, J-S Jung, S-I Yoon and T Won\* Inha University, Korea
- P.386 Three-Dimensional Dynamic Analysis of Liquid Crystal Cell for High-Performance Display Panel
  S-H Yoon\*, J-S Jung, C-S Lee and T Won *Inha University*, *Korea*
- P.387 Generation of TE<sub>01</sub> and TM<sub>01</sub> Modes from Doubly Clad Fiber with NLC Outer Cladding T-J Chen, Y-H Lin and S-H Chen\* Ching Yun Institute of Technology, Taiwan, ROC
- P.388 Holographical Fabrication of Periodically Aligned Domain Structure using AZO-Dye Doped Ferroelectric Liquid Crystal Having N\*-C\* Phase Sequence

  T Matsui\*, E Yusuf, M Ozaki and K Yoshino Osaka University, Japan
- P.389 Flexible Lasers Made from Cholesteric Liquid Crystal Polymers

  T Matsui\*, K Kasano, M Ozaki and K Yoshino Osaka University, Japan

P.390 Dielectric Relaxation Study of the Weakly Polar Dihexylazoxybenzene in the Nematic and Isotropic Phases

A Oka\*, A Hourri and J Thoen Katholieke Universiteit Leuven, Belgium

- P.391 On Short Surface Waves in Nematic Liquid Crystals
  A G Kalugin\* Moscow State University, Russia
- P.392 "Bird-shaped" LCs (BSLC)—A New Non-conventional LC-Arthitecture

  T Peglow\*, M Z Cherkaoui and C Benecke ROLIC Research Ltd,
  Switzerland
- P.393 Molecular Dynamics Simulations of Binary Mixtures of Liquid Crystal and Non-Liquidcrystal
   S Mita, N Higuchi, M Ishikawa and S Kondo Tokyo University of Science, Japan
- P.394 Applications of Birefringent Elements Made of Polymer Liquid Crystal
  G Boer and T Scharf\* CSEM S.A. Zürich, Switzerland
- P.395 Liquid Crystal Alignment on Replicated Nanostructured Surfaces

  T Scharf\*, A Shlayen, H Schift, J Gobrecht, H P Park, C Padeste, N Basturk, C Gernez and J Grupp University of Neuchâtel, Switzerland
- P.396 Discotic Liquid Crystals as Molecular Wire Interconnects in 3D Stacked Computer Chips
   A McNeill\*, R J Bushby, S D Evans, O R Lozman and B Movaghar University of Leeds, UK
- P.397 Smectic Liquid Single Crystal Hydrogels (LSCH) and Hygroelastic Measurements

  M Hickl, A Amigó Melchior, P Fischer, H Finkelmann\*, Albert-Ludwigs-Universität Freiburg, Germany
- P.398 Alignment of Smectic Liquid Crystals on Newly Synthesized Chalcone Derivatized Polyimide
  D-M Shin\*, J-H Kim and D-M Song Hong-ik University, Korea
- P.399 Application of Photo-Alignment Techniques to Antiferroelectric Liquid Crystal Cell
   D-M Shin\*, J-H Moon, D-M See and Y-B Kim Hongik University, Korea

P.400 Sensitive Methods for Estimating the Anchoring Strength of Nematic Liquid Crystals on Langmuir-Blodgett Monolayers

V S U Fazio, F Nannelli and L Komitov\* Chalmers University of Technology, Sweden

- P.401 Photo-Manipulation of the Anchoring of a Photochromic Nematic Liquid Crystal
  - L Komitov\*, G Barbero, L R Evangelista, J Yamamoto and H Yokoyama *Chalmers University of Technology, Sweden*
- P.402 Photo-Induced In-Plane Switching of a Photochromic Nematic Liquid Crystal L Komitov\*, J Yamamoto and H Yokoyama Chalmers University of Technoloy, Sweden
- P.403 Electrically Commanded Surfaces (ECS): New Concept for Fast In-Plane Switching of Liquid Crystals

  L Komitov\*, B Helgee, G Andersson, I Dhal and J Felix Chalmers University of Technology, Sweden
- P.404 Nano-size Polymer Dispersed Liquid Crystals For Advanced
   Optical Applications
   D E Lucchetta\*, A Manni, R Karapinar and F Simoni Ancona University, Italy
- P.405 Curvature Dependent Director Tilt Angle in Spherical Smectic-C Domains
   K Fujihara\*, M Todorkihara and H Naito Oskaka Prefectual University, Japan
- P.406 Boundry Effect of Polarization Reversal Behavior in Transferred Ferroelectric Liquid Crystal Film K Nakano\*, M Ozaki and K Yoshino Osaka University, Japan
- P.407 Theory of the Polar Uniaxial and Biaxial Nematic phases of a Thermotropic Liquid Crystal formed from Rod-like Polyster Molecules

  B Mettout, P Toledano, H Takezoe\* and J Watanabe Tokya Institute of Technology, Japan
- P.408 Electrooptical Response of Freely Suspended Liquid Crystal Film in the SmA, SmC\* and SMC<sub>A</sub>\* Phasese K Nakano\*, M Ozaki and K K Yoshino Osaka University, Japan
- P.409 Film Vibration Analysis of a Freely Suspended Liquid Crystal Film

  K Nakano\*, M Ozaki and K K Yoshino Osaka University,
  Japan

- **P.410** Molecular Theory on Liquid Crystalline Mixtures
  H Matsuda\* and H Kimura Yamaqata University, Japan
- P.411 Local Layer Structure in the Smectic Phase of Bent-Shaped Molecules Observed by X-Ray Microbeam Diffraction
   Y Takanishi\*, M Nakata, M Toshimitsu, K Ishikawa, H Takezoe, Y Takahashi and A Lida Tokyo Institute of Technology, Japan
- P.412 Rapid and Reliable Characterisation of LIquid Crystal
  Cells
  S Klein\* and C J P Newton Hewlett-Packard Laboratories, UK
- P.413 Experimental Studies on Highly Polar Compounds Exhibiting the N-N Transition

  V Manjuladevi\* and N V Madhusudana Raman Research Institute,
  India
- P.414 Enhancement of Oriental Order Parameter of Nematic Liquid Crystals in Thin Cells S Dhara\* and N V Madhusudana Raman Research Institute, India
- P.415 Helical Tubular Filaments of a Smectic-A Phase in an Isotropic Phase
   M Todorokihara\*, K Fujihara and H Naito Oskaka Perfecture University, Japan
- P.416 Observation of Defects in a Smectic-A Phase in an Isotropic Phase
   M Todorokihara\*, Y Murakami, K Fujihara and H Naito Oskaka Perfecture University, Japan
- P.417 Nonlinear Optical Properties of Liquid Crystalline Azobenzene Films
   B Villacampa\*, C Sánchez, R Alcalá, L Oriol and M Millaruelo Zaragoza University, Spain
- P.418 Investigations of Liquid Crystal Cells by Mueller Matrix Measuremets

  1 Dhal\* and G Andersson Chalmers University, Sweden
- P.419 Influence of Fluorine Substituent on the Mesomorphic Properties of Five-Ring Esters of Banana-Shaped Achiral Molecules

R Amaranatha Reddy and B K Sadashiva\* Raman Research Institute, India

- P.420 Synthesis and Mesomorphic Properties of Compounds Exhbiting the Undulated Twist Grain Boundry Smectic C\* Phase
  - S Shubashree and B K Sadashiva\* Raman Research Institute, India
- P.421 Banana-Shaped Mesogens: Occurrence of Nematic, Smectic A and Biaxial Smectic A Phases in the Same Series of Compounds

R Amaranatha Reddy and B K Sadashiva\* Raman Research Institute, India

- P.422 Observation of Filamentary Growth Patterns at the Isotropic Liquid Smectic C Phase Transition in Unsymmetrical Compounds Composed of Bent-Core Molecules

  H N Shreenivasa Murthy and B K Sadashiva\* Raman Research Institute, India
- P.423 Direct Studies of Surface Electroclinic Effect by Second Harmonic Generation
  S Soria\*, Y Fokin, T V Murzina, G Marowsky and O A Aktsipetrov Laser Laboratorium Goettingen e.V., Germany
- P.424 Holographic Grating Based on Dye-Doped SSFLC Films
  A Ying-Guey Fuh and T-S Mo, C-R Lee\* National Cheng Kung
  University, Taiwan, ROC
- P.425 Polymer-Stabilized Reflective Fingerprint Cholesteric Texture Grating

  C-H Lin, A Y-G Fuh, T-S Mo, C-Y Huang, and C-R Lee\* National Cheng Kung University, Taiwan, ROC
- P.426 Mirrorless Lasing in Cholesteric Polymer Networks
  J Schmidtke\*, W Stille, S Kniesel, H Finkelmann and S Tae Kim
  Albert-Ludwigs Universität Freiburg, Germany
- P.427 Smectic and Columnar Liquid Crystalline Phases Through Charge-Transfer Interactions
   D Goldmann, A Nordsieck, D Janietz\*, T Frese, C Schmidt and J H Wendorff Fraunhofer Institute for Applied Polymer Research, Germany
- P.428 Glass Forming Nematic-Discotic Oligomesogens
  A Grafe and D Janietz\*, Fraunhofer Institute for Applied
  Polymer Research, Germany

- P.429 Photoalignment Polymers for Liquid Crystal Displays: Synthesis and Properties
  - G Marck, A Schuster\* and H Seiberle ROLIC Research Ltd, Switzerland
- P.430 Electrooptic Behavior of Nematic Liquid-Crystalline Physical Gels

N Mizoshita\*, Y Suzuki, K Hanabusa and T Kato *The University of Tokyo*, *Japan* 

P.431 Mesogens with Hockey-Stick Molecular Shape Exhibiting Unusal Phase Behaviour

B A Das\*, S Grande, M W Schröder, A Eremin, S Diele, G Pelzl, H Kresse and W Weissflog Martin-Luther-Universität Halle, Germany

P.432 Monte Carlo Simulation of an Ideally Aligned Polar Gay-Berne System

G Cholewiak, W Józefowicz\* and L Longa *Jagellonian University*, *Poland* 

P.433 Simulations of X-Ray Scattering by Aligned Tilted and Orthogonal Smectic Phase Consisted of Rod-Like and Bent-Core Molecules in Fiber Geometries

> A Eremin\*, V M Kaganer, B I Ostrovskjj and S Diele Martin-Luther-Universität Halle, Germany

P.434 Phase Transitions Between B<sub>2</sub> Phases and Smectic Phasees (SmA, SmC) in New 4-Cynao-, 4-Chloro- and 4,6-Dichloro-resorcinol Derivatives

H Nádasi, U Dunemann, W Weissflog\*, A Eremin, S Grande, M W Schröder, G Pelzl and S Diele *Martin-Luther-Universität Halle-Wittenberg*, *Germany* 

P.435 Random and Regular Anchoring of Liquid Crystal on Photoaligning Surface

N Aryasova, A Lljin\* and D Kurysh *Institute of Physics*, *NASU*, *Ukraine* 

**P.436** Mesogenic 4-Hydroxybenzylalcohol Derivatives
K Pelz, W Weissflog\* and S Diele Martin-Luther-Universität

Halle-Wittenberg, Germany

P.437 Study of Factors Affecting Shear-Induced Structures in a Commercial Lyotropic Liquid Crystalline Surfactant System

M S Liaw\* and G D Moggridge University of Cambridge, UK

- P.438 External Field-Induced Switching in Nematics with Dispersed Polymer Networks: A Monte Carlo Study
  C Chiccoli, P Pasini, G Skačej\*, C Zannoni and S Žumer University of Ljubljana, Slovenia
- P.439 Tranitions Between "Banana Phases" and Nematic or Usual Smectic Phases in Binary Systems of Bent-Shaped Mesogens with Calamitic Compounds

  M W Schröder, S Diele\*, G Pelzl, N Pancenko and W Weissflog Martin-Luther-Universität Halle-Wittenberg, Germany
- P.440 The Influence of Lateral Perfluorinated Chains in Bolaamphiphile Mesogens on the Mesophase Structure M K Das\*, S Diele, C Tschierske, X Chenq Martin-Luther-Universität Halle-Wittenberg, Germany
- P.441 Electronic Transport of a Hybrid Organic Metallic Thin
   Film Device: CuPc on Ultra Thin Gold
   A Bourlange, B Hickey, S Evans, A Pecchia, B Movaghar\* and
   N Boden SOMS Centre University of Leeds, UK
- P.442 Optical and Electric properties of Ionic Metal Alkanoate
   Smectics with Different Dyes
   G Klimusheva, A Koval'chuk, A Kozlenko, N Volynets, L Yatsenko,
   T Mirnaya and A Ishchenko Institute of Physics, NASU, Ukraine
- P.443 5CB Liquid Crystal as a Specific Probe for Surface Studies of Metal-Doped TiO<sub>2</sub> Nanoparticles
  T Bezrodna\*, G Puchkovska, V Shimanovska and J Baran Institute of Physics, NASU, Ukraine
- P.444 Dynamic Behavior of Some 4-n-Alkyl-4'-Cyanobiphenyls
   Confined to Nanoporous Matrices
   I Gnatyuk, T Gavrilko, G Puchkovskaya\*, J Baran and H Ratajczak
   Institute of Physics, NASU, Ukraine
- P.445 Grid Patten Instability Induced in Plain Grandjean Texture
   by Pressure
   A Kozachenko\* and L Komitov Kyiv National University for
   Technology and Design, Ukraine
- P.446 Influence of the Surfaces on the Nucleation Process in Cholesteric-Nematic Transition

  A Kozachenko\* and L Komitov Kyiv National University for Technology and Design, Ukraine

- P.447 Photoelectrical Reorientation in Different Rod-Like Nematic Liquid Crystals
  - G Hauck\*, G Heppke and H Sawade Technische Universität Berlin, Germany
- P.448 Modulated Lamellar Phases Induced by Hydrogen Bonding D Pociecha\*, D Kardas, E Gorecka, J Szydlowska, J Mieczkowski, and D. Guillon Warsaw University, Poland
- P.449 2-D and 3-D Modulated Phases Formed by Bent-Shaped Molecules

J Szydlowska\*, J Mieczkowski, D Pociecha, J Matraszek, E Gorecka, D Guillon D W Bruce Warsaw University, Poland

- P.450 Investigation of the  $SmC_{\alpha}^{*}$  Phase by Dielectric Measurements
  - J Rutkowska, P Perkowski\*, J Kedzierski, Z Raszewski, S Klosowicz, R Dabrowski, K Czuprynski and S Gauza *Military University of Technology*, *Poland*
- P.451 Substitution Fluorine for Hydrogene and Its Influence on Appearing Sm C\* Phase Between Sm A\* and Sm C<sub>A</sub>\* Phases P Perkowski\*, Z Raszewski, J Kędzierski, W Piecek, J Rutkowska, S Klosowicz and J Zieliński Institute of Applied Physics, MUT, Poland
- P.452 Frozen Liquid-Crystal Droplets: A Model System for Rotational Diffusion

H Stark\*, A Mertelj, K Sandomirski, T Gisler and G Maret *Universitaet Konstanz*, *Germany* 

- P.453 3-Dimensional Simulation of Multi-Domain Vertically
  Aligned Liquic Crystal Displays with Dielectric Ribs
  S-M Jung\* and W-S Park Inha University, Korea
- P.454 3-Dimensional Simulation of the Electro-optical Properties of In-Plane-Switching Liquid Crystal Displays
   S-M Jung, I- Park\* and W-S Park Inha University, Korea
- P.455 Study on the Validity of the Vector and Tensor Approaches
  Through a 3-Dimensional Simulation
  S-M Jung and W-S Park\* Inha University, Korea
- P.456 Symmetric Chiral Liquid Crystalline Dimers, Synthesis and Electro-optical Characterisation

N Olsson\*, G Andersson\* and B Helgee\* Chalmers University of Technology, Sweden

- P.457 Temperature Dependence of the Director Reorienation of Dye-Doped Nematic Liquid Crystals and its Relation with the Non-Linear Absorption Coefficient

  J Esteves and A M Fiqueiredo Neto\* Universidade de São Paulo, Brazil
- P.458 Phase Transition Induced by Wetting at the Interface between a Glass and a Sponge Lyotropic Phase
   M Magalhães\*, P Tolédano and A M Figueiredo Neto Universidade de São Paulo, Brazil
- P.459 Cubic and Columnar Liquid-Crystalline Phases formed
   Through Self-Assembly of Folic Acid Derivatives
   M Nishi\*, T Matsuoka, Y Kamikawa, K Kanie, S Ujiie and T Kato
   The University of Tokyo, Japan
- P.460 Phenanthroline-based Mesogens
  E Fernández Iglesias\*, S J P Bousquet and D W Bruce University of Exeter, UK
- P.461 Photonics with Dye-Doped Chiral Nematic Liquid Crustals
   I: Circularly polarized light Sources
   M Voidt, M Chambers and M Grell\* University of Sheffield, UK
- P.462 Photonics with Dye-Doped Chiral Nematic Liquid Crystals
  II: Lasers

  M Voigt, M Chambers and M Grell\* University of Sheffield, UK
- P.463 UV-Induced Photoalignment of Nematic LCs by Thin Films of Provitamin D<sub>3</sub>
   I A Gvozdovskyy\* and I P Terenetskaya Institute of Physics, Ukraine
- P.464 Effect of Aerosil particles on the SmA-SmC\* Liquid Crystal
   Phase Transition Dynamics
   Z Kutnjak, S Kralj\*. S Žumer Jozef Stefan Institute, Slovenia
- P.465 Freely Suspended Strands and Filaments of Smectic Phases of Banana-Shaped Molecules
   A Jákli\*, G G Nair and D Krüerke Kent State University, USA
- P.466 Rheological and Piezoelectric Studies of a Glassy Ferroelectric Liquid Crystal
   A Jákli\*, T Tóth-Katona, T Scharf, A Saupe and M Schadt Kent State University, USA

P.467 Self-Assembly of Ionic Liquids and Hydroxyl-Terminated Liquid Crystals: Anisotropic Ion Conduction in Layered Nanostructures

M Yoshio\*, T Mukai, M Yoshizawa, H Ohno and T Kato *The University of Tokyo*, *Japan* 

- P.468 Phase Transitions in Thin Free-Standing Films
  H Schüring, R Köhler and R Stannarius\* University of Leipzig,
  Germany
- P.469 Are Hockey Sticks Bananas?
  R Stannarius\*, J Li and W Weissflog University of Leipzig,
  Germany
- P.470 Thermal Conductivity Behaviour at the AC and AB Transitions
  F Mercuri\*, M Marinelli, U Zammit, C C Huang and D Finotello University of Rome "Tor Vegata", ITaly
- P.471 Stability of a SmA Bookshelf Structure with Edge Dislocations
   M Ambrožič, M Slavinec\*, S Kralj, S Žumer and T J Sluckin University of Maribor, Slovenia
- P.472 Field Induced Transformations in the Core of Nematic Defects of Strength M=1R Repnik\*, S Kralj and E G Virga Unviversity of Maribor, Slovenia
- P.473 Atomistic Computer Simulations of Terraced Wetting of Model 8CB Molecules at Crystal Surfaces

  A J McDonald and S Hanna\* University of Bristol, UK
- **P.474** Computer Simulation of Langevin Lennard-Jones Chains M Ciesla\*, L Long and F A Oliveria Jagellonian University, Poland
- P.475 Correlations in the Istropic Phases of Chiral Liquid Crystals
  L Longa\*, M Ciesla and H-R Trebin Jagellonian University, Poland
- **P.476** Local Density Functional Analysis of Biaxial Phases
  P Grzybowski\* and L Longa Jagellonian University, Poland
- P.477 The Effect of Polymer Network on Ferroelectric Liquid Crystals
  S N Lee\*, S Suresh and L-C Chien Kent State University, USA

- P.478 High Birefringence Nematic Liquid Crystals for Display and Telecom Applications
  - C O Catanescu\*, L-C Chien and S T Wu $\mathit{Kent\ State\ University},\ \mathit{USA}$
- P.479 Low Viscous Liquid Crystal Compounds Containing 2,3,4-Trifluorophenyl Unit for TFT-LCDs

  I K Huh\* and Y B Kim Konkuk University, South Korea
- P.480 Novel Liquid Crystal Compounds of *Trans*-2,3,4'-Trifluoro-3'-Isothiocyanato-4-(4-n-alkylcyclohexyl)-Biphenyl Series
  Y B Kim\* and S D Roh *Konkuk University*, South Korea
- P.481 Low Viscous Liquid Crystal Compounds Containing 2,3,4-Trifluorophenyl Unit for TFT-LCDs I K Huh\* and Y B Kim Konkuk University, Korea
- P.482 Synthesis and Properties of Homeotropic Alignment Materials
  Y B Kim\* and B R Han Konkuk University, Korea
- P.483 The Mesomorpic and Physical Properties of Liquid Cyrstalline Compounds with a Lateral Isothiocyanato Phenyl Unit I K Huh\* and Y B Kim Konkuk University, South Korea
- P.484 Measurements of Lateral Ion Transport in LCD Cells
  G Stojmenovik\*, K Neyts and S Vermael Electronics & Information Systems, Belgium
- P.485 Helix Unwinding Induced by Electric Fields and Boundary Effects
   N Baytch, R L B Selinger, J V Selinger\* and R Shashidhar Naval Research Laboratory, USA
- **P.486** Chiral and Antichiral Order in Bent-Core Liquid Crystals J V Selinger\* Naval Research Laboratory, USA
- P.487 Bistable Anchoring Induced by the First Adsorbed Layer in 8CB/MOS<sub>2</sub>
  E Lacaze\*, J P Michel, M Alba and M Goldmann GPS, CNRS, Universités Paris Vi et VII, France
- P.488 How a Single Crystal Can Induce Formation of Optical Gratings in Adsorbed Smectic A Phases

  J P Michel, E Lacaze\*, M Alba and M Goldmann GPS, CNRS, Universités Paris VI et VII, France

- P.489 Isotropic-Nematic Transition in Liquid-Crystalline Elastomeres
  - J V Selinger\*, H G Joen and B R Ratna Naval Research Laboratory, USA
- P.490 The Reorientation of the Nematic Liquid Crystalline P-cyanophenyl-p-n-alkylbenzoates in an Electric Field Studied by the Time-resolved FTIR Transmission and ATR Spectroscopy

E Klimov\*, M Fuelleborn and H W Siesler *Unversity of Essen*, *Germany* 

- P.491 Swollen Thermotropic Liquid Crystals
  - J Yamamoto, E Nishikawa, T Niori, I Nishiyama and H Yokoyma *ERATO*, *JST*, *Japan*
- P.492 Novel Transparent Iridescent Smectic Blue Phase in Chiral Twin/Monomer Commensurate Mixture
  J Yamamoto, I Nishiyama, C Saiga, Y Mitsuhashi, M Yoneya and H Yokyoyama ERATO, JST, Japan
- P.493 Anomalous Viscoelastic Relation in TGB Defect Lattice Systems

J Yamamoto\*, I Nishiyama, and H Yokyoyama ERATO, JST, Japan

- P.494 Dynamics in Bilayer Lyotropic and Thermotoropic (BLT)
  Sandwich Liquid Crystals

  J Yamamoto, T Niori and H Yokoyama ERATO, JST, Japan
- P.495 Electro-Optical Properties of Polymer Dispersed Short
   Pitch Ferroelectric Liquid Crystals
   F Dubois\*, A Daoudi, C Legrand, J-M Buisine and V Laux
   Université du Littoral Côte d'Opale, France
- P.496 A Monte Carlo Study of the Chiral Columnar Organisations of Chiral Discotic Mesogens
   R Berardi\*, M Cecchini and C Zannoni Università di Bologna, Italy
- P.497 Bilayered Mesophases from Tapered Molecules: A Computer Simulation Study
  R Berardi\*, M Ricci and C Zannoni Università di Bologna, Italy
- P.498 Dielectric Behaviour of a Ferroelectric Liquid Crystal
   Dispersed in Polymer Matrix
   F Dubois, A Daoudi\*, C Legrand, J-M Buisine and V Laux

Université du Littoral Côte d'Opale, France

- P.499 A Computer Simulation Study of Tilted Smectic Mesophases from Dipolar Mesogens
  - R. Berardi, S Orlandi\* and C Zannoni *Università di Bologna*, *Italy*
- P.500 Columnar Mesophases from Hemidisc-Like Metallomesogens Derived from 2,6-Bis[3,4,5-Tri(Alkoxy)Phenylimine]-Pyridines

F Morale, B Donnio\*, R W Date, C Wilson, A J Blake, M Schröder, D Guillon and D W Bruce IPCMS-GMO, France

- P.501 Main-Chain Liquid Crystalline Dendrimers
  L Gehringer\*, B Donnio and D Guillon IPCMS-GMO, France
- P.502 Linear Splay Elastic Constant in Induced Smectic Films R Najjar and Y Galerne\* *IPCMS-GMO*, *France*
- **P.503** Capillary Condensation in Nematic Liquid Crystals
  I Muševic\*, K Kocevar, A Borštnik and S Žumer *J Stefan Institute*,
  Slovenia
- **P.504** Atomic Force Spectroscopy of Nematic-Solid Interfaces I Muševic\* and K Kocevar J. Stefan Institute, Slovenia
- P.505 Synthesis and pH-dependant phase behaviour of Iyotropic epoxide-amine addition polymers

  F Weiss, H Finkelmann\* Albert-Ludwigs-Universität Freiburg i.

  Br., Germany
- P.506 Frustrated Structure of an Anticlinic-like Smectic C Phase P J Sebastião\*, P Simeão Carvalho, M R Chaves, N T Nguyen and A C Ribeiro Centro de Física da Matéria Condensada, Portugal
- P.507 Binary Separation in Very Thin Nematic Films: Thickness and Phase Coexistence

  D Van Effenterre\*, R Ober, M-P Valignant, A-M Cazabat and D Roux Collège de France, France
- P.508 Neutron Scattering Studies of Torsion Angle in Liquid Biphenyl

  R M Richardson\*, A Soper and A P Stafford University of Bristol,
- P.509 Specific Interactions in Discotic Liquid Crystals P H J Kouwer\*, W F Jager, W J Mijs and S J Picken University of Hull, UK
- **P.510 Discotic Liquid Crystalline Dendrimers**P H J Kouwer\*, G H Mehl, S J Picken and J W Goodby *University of Hull, UK*

P.511 Emissive Anisotropic Polymeric Materials Derived from Reactive Liquid Crystalline Fluorenes

M Millaruelo, L Oriol, D Otím, M Piñol\*, J L Serrano and A Viñuales Universidad de Zaragoza-CSIC, Spain

P.512 An X-Ray Study of Devices Containg a N\*→SMC\* Liquid Crystal

D Rodríguez Martín\*, R M Richardson and S Beldon  ${\it University~of~Bristol,~UK}$ 

P.513 Supramolecular H-Bonded Columnar Polymers
C. Almuzara, M. Millaruelo, L. Oriol\*, J. L. Serrano, and T.

C Almuzara, M Millaruelo, L Oriol\*, J L Serrano and T Sierra Universidad de Zaragoza-CSIC, Spain

P.514 Helical Columnar Organisations from Polycatenar Metallomesogens

J Barberá, E Cavero, M Lehmann, D López, R Piñol, J L Serrano, T Sierra and T Sugino *Universidad de Zaragoza-CSIC*, Spain

P.515 Structure-Property Relationships and Optical Behaviour of New Banana-Shaped Liquid Crystal Molecules

P Forcén, N Gimeno, L Puig, M B Ros\*, J L Serrano, T Sierra, C L Folcia, J Ortega and J A Gallastegui *Universidad de Zaragoza-CSIC*, Spain

P.516 Smectic Liquid Crystals from Supramolecular Guanidinium Alkylbenzenesulfonates

F Mathevet\*. J-F Nicoud, P Masson and A Skoulios *Groupe des Matériaux Organiques IPCMS*, France

P.517 Thermotropic Liquid Crystals Derived from Planar Chiral [2.2]Paracyclophane

V Rozenberg, E Popova\* and H Hopf *TU Braunschweig*, *Germany* 

- P.518 Photoinduced Enhancement of the Optical Kerr Effect in the Iso-Tropic Phase of Dye Doped Liquid Crystals

  E Benkler\*, D Makridis and T Tschudi Darmstadt University of Technology, Germany
- **P.519 Dynamics of Kinks in Biological Membranes**R Rosso\*, A M Sonnet and E G Virga *Università di Pavia*, *Italy*
- P.520 Design of Salicylaldiminate Metal Complexes for Columnar Mesophases

J Barberà\*, R Giménez, N Gimeno, A B Manrique, M Marcos, M C Pina and J L Serrano *Universidad de Zaragoza-CSIC*, *Spain* 

- P.521 Photoaligned Azo-Dye Polymers Anchoring Nematic Liquid Crystals
  - LT Thieghi, E A Oliveira, J J Bonvent\*, J A Giacometti, D T Balogh, G Russo and R Barberi *Universidade de Mogi das Cruzes*, *Brazil*
- P.522 Orientational Order of a Nematic Lyotropic Liquid crystal Probed by Second Harmonic Generation
  I H Bechtold, J Hohlfeld, Th Rasing, J J Bonvent\* and E A Oliveira University of Sao Paulo, Brazil
- P.523 Biperiodic Frederiks Instability of a Liquid Crystal Nematic Cell with Weak Anchoring: The Effect of the Saddle-Splay Elasticity

  M Becchi and A Strigazzi\* Dip. Di Fiscia del Politecnico and INFM, Italy
- P.524 Bidimensional Periodic Distortion in Antiferroelectric liquid crystals
   S Ponti, M Becchi, A Strigazzi\* and S Togova Dip. Di Fiscia del Politecnico and INFM, Italy
- **P.525** Polymer stabilized Diffraction Grating
  J S Martin and J T Gleeson\* Kent State University, USA
- P.526 Random Number Generator Based on Turbulent Electroconvection of Liquid Crystals
  J T Gleeson\* Kent State University, USA
- P.527 Photoinduced Surface Deformation in Liquid Cristalline and Amorphous Polymers Containing Azobenzene
  O Kulikovska, K G Hubmann and J Stumpe\* Fraunhofer Institute for Applied Polymer Research, Germany
- P.528 Demixing Transition in Microemulsions of Water in Thermotropic Liquid Crystals
   T Bellini\*, M Caggioni, N A Clark, F Mantegazza, A Maritan and A Pelizzola Universita di Milano, Italy
- P.529 Crucial Influence of Flow Effect on the Optical Response of Twisted  $3\pi/2$ -cell Liquid Crystal Devices
  C-L Yang\* and S-H Chen National Chiao Tang University, Taiwan, ROC
- P.530 Flow Dissipation Effects in a Nonlinear Nematic Fiber
  R F Rodriguez\* and J A Reyes National University of Mexico,
  Mexico

P.531 Synthesis and Characterization of Novel Quinone-Containing Triphenylene-Based Discotic Liquid Crystals

A J Paraskos\*, Y Nishiyama and T M Swager Massachusetts Institute of Technology, USA

P.532 The Interaction and Effects on Bend Angle, Lateral Dipole, Symmetry and Chirality on the Mesomorphism of Thiophene-Based Straight-Chain and Polycatenar Liquid Crystals

A J Paraskos\*, S Holger Eichhorn, K Kishikawa and T M Swager Massachusetts Institute of Technology, USA

- P.533 Optical Control of the Pitch in Cholesteric Liquid Crystals by Photoisomerization of Azobenzene

  K Shirota\* and I Yamaguchi Optical Engineering Laboratory, RIKEN, Japan
- P.534 Second-Order Behabior of Heat Capacity and Density at the  $\mathbf{L_x}$ - $\mathbf{L_\alpha}$  Phase Transition of DLPC H Yao\*, K Ishige and K Ema Tokyo Institute of Technology, Japan
- P.535 Discotic Liquid Crystalline Tri-Block Copolymers: Interplay of Liquid Crystal and Phase Separated Structures
   O R Lozman, R Abeysekera, N Boden, R J Bushby, C Caillet, I W Hamley\*, Z Lu and A W Robards SOMS Centre, University of Leeds, UK
- P.536 Hydrodynamic Modes and Non-equilibrium Effects on the Light Scattering Spectrum of a Nematic

  J F Camacho\* and R F Rodriguez National University of Mexico,

  Mexico
- P.537 The Effect of Olefinic Terminal Chains on the Mesomorphic Properties of 4,4'-Disubstituted Diphenyldiacetylenes

  M E Neubert\*, D G Abdallah, S S Keast, J M Kim, S Lee, R M Stayshich, M E Walsh, R G Petschek and S T Wu Kent State University, USA
- P.538 The Effect of Terminal Chain Modifications on the Mesomorphic Properties of 4,4'-Disubstituted Diphenyldiacety-lenes

M E Neubert\*, M R Fisch, S S Keast, J M Kim, M C Lohman, R S Murray, K J Miller, M J Smith, R M Stayshich, R G Petschek, G A Lorenzo, D C Burrows and S M Oliver *Kent State Univeristy*, *USA* 

- P.539 Electric Field Induced Biaxial Switching in a Nematic Cell: Theory
  - A M Sonnet\*, E G Virga and G E Durand *University of Strath-clyde*, *UK*
- P.540 Modelling of the Formation of Non-Uniform Polymer Networks in Devices
   N Dessaud\* and E P Raynes University of Oxford, UK
- **P.541** Negative Retardation Films from Non-Traditional Materials T Sergan\*, O Yaroshchuk, J Kelly and L-C Chein *Kent State University*, *USA*
- P.542 Twisted Nematic Reflective Display with Internal Wire Grid Polarzier

  T Sergan\*, M Lavrentovich and J Kelly Kent State University, USA
- P.543 Dynamic Light Scattering Study of the  $N_L^*$  Phase in a Chiral Liquid Crystal

  A Adorjan, L Sukhomlinova, R Tweig and S Sprunt\* Kent State University, USA
- P.544 Phase Separation of a Reactive Monomer in an Elastically Distorted Liquid Crystal Host
  S W Kang\*, S Sprunt and L C Chien Kent State University, USA
- P.545 Dynamics of the Nematic Phase of a Bent-Core Liquid Crystal
   S Stojadinovic\*, A Adorjan, S Kumar, A Jakli and S Sprunt Kent State University, USA
- **P.546** Ray Tracing and Beam Size Effects on Hybrid Nematic Cells J A Olivares\*, R F Rodriguez and J A Reyes *Kent State University-LCI, USA*
- P.547 Dynamical Non Linear Diffraction Pattern in Dye Doped Nematics
   J A Olivares\*, P Palffy-Muhoray, T Kosa and R F Rodriguez Kent State University, USA
- P.548 Infrared Spectroscopy of Liquid Crystals in Fabry Perot Cells

  J A Olivares\*, A Jakli and J Kelly Liquid Crystal Institute, Kent State University, USA
- P.549 The Temperature Dependent Switching Curves for a Zenithally Bistable Nematic Liquid Crystal Device
  C V Brown\*, L Parry-Jones and S J Elston Oxford University, UK

- P.550 Determination of Material Constants of AFLC Mixture CS4001
  - L A Parry-Jones\*, E E Kriezis and S J Elston Oxford University, UK
- P.551 The Influence of Surface Profile on the Switching Properties of Zenithally Bistable Nematic Liquid Crystal Devices
  L A Parry-Jones\*, S J Elston and C V Brown Oxford University,
  UK
- P.552 Anchoring of Liquid Crystalline Supermolecular Structures
  Naturally Occurring in Polymer Aromatic Carbon Materials
  G P Crawford\*, F Hurt, G Krammer, K Jian and C Rullison Brown
  University, USA
- P.553 A Study of Monomer Functionality and Lattice Scale in 2D Photonic Arrays Formed with Liquid Crystal Polymer Dispersions
  - M J Escuti and G P Crawford\* Brown University, USA
- P.554 Optical Characterization and Morphological Studies of Holographically-formed Polymer Dispersed Liquid Crystal Bragg Gratings

A K Fontecchio\* and G P Crawford\* Brown University, USA

- P.555 Ordering of Polar Solutes in Nematic Solvents
  E T Samulski\*, C Wutz, T Dingemans, A F Teris and D J Photinos
  University of North Carolina, USA
- P.556 The Conformations of 1,2-Dimethoxyethane from NMR Studies in Nematic Solvents
  G P Kotsionopoulou\*, D J Photinos, C-D Poon, E T Samulski, H Torium and A G Vanakaras *University of Patras, Greece*
- P.557 Computer Modeling of Linear Dendronized Polymers
  D K Christopoulos, A F Terzis, A G Vanakaras\* and D J Photinos
  University of Patras, Greece
- P.558 Method for Determing Material Constants of Nematic Liquid Crystals by Use of Wedge Cells
   J Kędzierski, M A Kojdecki\*, Z Raszewski, L Lipińska, J Rutkowska, E Miszczyk and J Borycki Military University of Technology, Poland
- P.559 Biaxial Nematic Phase Exhibited by Bent-Core Molecules B R Acharya, A Primak, T J Dingemans, E T Samulski, P Toledano and S Kumar Kent State University, USA

- P.560 Morphological Anisotropy and Relaxation Dynamics of Surface Modified Thin Films for LC Alignment

  D M Agra-Kooijman and S Kumar\* Kent State University, USA
- P.561 Numerical Simulation of Smectic C Liquid Crystaline Flow Between Parallel Plates
   A Terada\* T Tsuji and S Chono Kochi University of Technology, Japan
- P.562 Ionic and Electronic Charge Transport in Calamitic Liquid Crystals

  J-I Hanna\*, M Funahashi, T Kamitani and H Fujita Tokyo Institute of Technology, Japan
- P.563 Mirrorless Lasing in a 3-D Photonic Band Gap Material: BP II
   W Cao, A Muñoz, P Palffy-Muhoray\* and B Taheri Kent State University, USA
- P.564 Light Avoiding Motion and Fast Electromechanical Response of Dye Doped Liquid Crystal Elastomers
   M Camacho-Lopez, H Finkelmann, T Kosa, M Shelley and P Palffy-Mulhoray\* Kent State University, USA
- P.565 An Approach to Determining the Generalized Force on the Order Parameter in the Mean Field Theory of Nematics
  R Ennis and P Palffy-Muhoray\* Kent State University, USA
- P.566 Liquid Crystalline Polymorphism of 4-Fluoro- and 4-lodo-4'-Hydroksyazobenzene 4-Alkoxybenzoates K Zielinska and Z Galewski\* *University of Wroclaw*, *Poland*
- **P.567** Ferroelectricity of Liquid Crystalline Azo Compounds A Hofmanska\* and Z Galewski *University of Wroclaw*, *Poland*
- P.568 Room Temperature Antifferroelectric Phase Studied by Electrooptic Methods
   M Marzec\*, E Gondek, S Wróbel, D Ganzke, R Dabrowski and W Haase Jagiellonian University, Poland
- **P.569** Laser Action in a Dye-Doped Chiral Smectic Liquid Crystals M Ozaki\*, M Kasano, T Kitasho, H Miyoshi, D Ganzke, W Haase and K Yoshino *Osaka University*, *Japan*
- P.570 Liquid Crystals in Periodically Aligned Nanoscale Voids of Polymer Opal and Inverse Opal
   K Yoshino, Y Shimoda, K Saisho and M Ozaki\* Osaka University, Japan

- P.571 Electrooptical Switching in Homeotropically Aligned Cell Geometry of Ferroelectric Liquid Crystal
  J S Jo, M Ozaki\* and K Yoshino Osaka University, Japan
- P.572 Edge detection with liquid crystal polarising filter
  A Walczak\*, E Nowinowski-Kruszelnicki and L R Jaroszewicz
  Institute of Applied Physics MUT, Poland
- P.573 Charge distribution inside thin liquid crystal layer A Walczak\* Institute of Applied Physics MUT, Poland
- P.574 Discotic Mesogens of 1,3,5-Tris(4-(3,4,5-trialkyloxybenzoy-loxy)benzoyloxy) Benzene Homologues

  L J Yu\* and C-C Cho Tamkang University, Taiwan
- P.575 Configurational Transition in Curved Liquid Crystal Films N Satyavathi, K Venu, V S S Sastry\* and K P N Murthy University of Hyderabad, India
- P.576 Influence of Underlying Smectic Phase on Nematic Order Fluctuations in Isotropic Phase
   B V N Phani Kumar, V Satheesh, G Venkateswarlu, K Venu\* and V S S Sastry University of Hyderabad, India
- P.577 Elastic Behaviour of Polymer Dispersed Liquid Crystals N Satyavathi, K Venu, V S S Sastry\* and K P N Murthy University of Hyderabad, India
- P.578 Investigation of Discotic Nematic Materials Attached to Silicone Cores
   K J Shepperson\*, P H J Kouwer, W F Jager, W J Mijs, J W Goodby, S J Picken and G H Mehl University of Hull, UK
- P.579 Main-Chain Liquid Crystalline Elastomers
  H Brandt, H Wermter, B Donnio and H Finkelmann\* Institut fur
  Makromolekulare Chemie, Germany
- P.580 Thermal Behavior and Mesophase Structure of Cyclic Oligosoloxanes

  J Soltysiak\*, E Bialecka-Florjańczyk, E Kowalczyk and J Przedmojski Industrial Chemistry Research Institute, Poland
- **P.581 Opto-Mechanical Response of LC Elastomers**S Höhn and H Finkelmann\* *Universitaet Freiburg, Germany*
- P.582 Modelling of V-Shape Electrooptical Switching in Surface Stabilized Ferroelectric Liquid Crystals
  S P Palto, L M Blinov\* and W Haase Insitute of Crystallography, Russia

- P.583 Dynamics of Electrooptical Switching an Antiferroelectric Banana-Shape Compound
  - L M Blinov\*, M I Barnik, N M Shtykov, F V Podgornov, G Pelzl and W Weissflog *Institute of Crystallography*, *Russia*
- P.584 One-Dimensional Materials Based on Group VIII Metalomesogens L Y Park\*, S L Fulmer and C P Jones Williams College, USA
- P.585 Fully-Leaky Guided Mode Determination of Azimuthal and Polar Anchoring Strength for a Nematic Liquid Crystal R E Smithen\* and J R Sambles University of Exeter, UK
- P.586 Protein Alignment Induced by a Liquid Crystalline Polymer
   Detected by EPR Spectroscopy
   J Caldeira\*, J L Figueirinhas and M H Godinho Universidade Nova de Lisboa, Portugal
- P.587 Hydrodynamics of Liquid Crystal with Magnetic and Electric Fields

  M-C Calderer\* and C Liu University of Minnesota, USA
- P.588 Domain Structure Studies in Phases of Bent-Shaped Molecules by Spatially Resolved Second Harmonic Microscopy
  O Morales-Saavedra\*, M Bulat, H J Eichler, S Rauch, Ph. Bault and G Heppke Optical Institute Sek. P1-1, TU-Berlin, Germany
- P.589 Synthesis and Mesogenic Properties of Dimeric Bent-Shaped Molecules A Lesac\*, S Narančić, H-L Nguyen, D W Bruce and V Šunjić *Rudjer* Boskovic Institute, Croatia
- P.590 Dynamic Director Profiles in a Twisted Nematic Cell using a Convergent Beam System

  L Z Ruan\* and J R Sambles University of Exeter, UK
- P.591 Temperature Dependence of Refractive Indexes Near the Reentrant Isotropic-Unixial Nematic Phase Transitions
   P A Santoro and A J Palangana\* Universidade Estadual de Maringá, Brazil
- P.592 Progression of 2-D Phases in  $AB_2$  Forked Compounds Y-S Liu\*, X-B Zeng, G Ungar and G Percec University of Sheffield, UK
- P.593 Application of Isomorphous Replacement in Structure
   Determination of Cubic and Columnar Phases
   D P Dukeson\*, G Ungar, V S K Balagurusamy, V Percec and G Johansson University of Sheffield, UK

- P.594 Silver Complexes of Stilbazole Dimers
  H Loc Nguyen\*, D Fazio and D W Bruce University of Exeter,
  UK
- P.595 Liquid-Crystalline Complexes of 4-Alkoxystilbazoles with Dodecyl Di-Silver Sulphate

  H Loc Nguyen\* and D W Bruce University of Exeter, UK
- P.596 Synthesis and Characterisation of Metal-Containing Mesoprous Silicate Catalysts via Liquid Crystal Templating
  D W Bruce, M J Danks, R W Date\*, H B Jervis, T A Maschmeyer, M Nowotny, M E Raimondi, J M Seddon and W Zhou University of Exeter, UK
- P.597 An Approach to the Thermotropic Biaxial Nematic Phase via Covalently Linked Rod-Disk Dimers
   D W Bruce, R W Date\*, J J Hunt, G R Luckhurst and B A Timimi University of Exeter, UK
- P.598 Electrical characterization of the B2 Phase of a Banana-Shaped Liquid Crystal
  R Douali\*, N Martin, C Legrand, H T Nguyen Laboratoire
  LEMCEL, France
- P.599 Optical Rotatory Power Investigations of an Antiferroelectric Liquid Crystal (S)-110F1M7
   V P Panov\*, J K Vij, D D Parghi, M Hird and J W Goodby Trinity College, University of Dublin, Ireland
- P.600 New LC Networks Based on Hyperbranched Polymers
  M-F Quincy, C Schmidt and H Frey\* Albert-Ludwigs-University
  Freiburg, Germany
- P.601 Grazing-Incidence Diffraction Study of Langmuir Films of Amphiphilic Monodendrons
   W-J Pao, F Zhang and P A Heiney\* University of Pennsylvania, USA
- P.602 Structural Studies of Novel Dendrimeric Liquid Crystals
  P A Heiney\*, W J Pao, G Ungar, V S K Balagurusamy, W D Cho, C
  Mitchell, S Uchida and V Percec University of Pennsylvania,
  USA
- P.603 Dielectric Study of an Asymmetric Banana Shaped Liquid Crystal
  S Diez, M R de la Fuente, M A Perez Jubindo, N Gimeno and B Ros

Universidad del Pais Vasco, Spain

- P.604 Dieletric Studies of a Laterally-Linked Siloxane Ester Dimer
  - P K Karahaliou, S Diez\*, M R de la Fuente, M A Perez Jubindo and D A Dunmur *Universidad del Pais Vasco*, *Spain*
- P.605 Dielectric Relaxation in Hexyloxyethoxycyanobiphenyl (6020CB) Near Glass Transition

M Massalska-Arodz, V Y Gorbachev, W Witko, L Hartmann and F Kremer *Institute of Nuclear Physics*, *Poland* 

- Photorefractive Effects in Pure Multicomponet Isothiocyanate Liquid Crystals under Low Power Illumination
   T Grudniewski\*, J Parka, R Dabrowski, Z Stolarz and A Miniewicz Warsaw University of Technology, Poland
- P.607 Electrooptical and Molecular Properties of Different Type
   Mesomorphic Dendrimers in Solutions
   N Yevlampieva\* and G Pavlov St Petersburg State University,
   Russia
- P.608 Anamalous Dielectric Behaviour of Para-, Ferro- and Ferrielectric Phases
   F Dubois, R Douali, Ch Legrand, A Fafara, S Wrobel and R Dabrowski Jagiellonian University, Poland
- P.609 Structural Investigations of the Antiferroelectric TGB Phase
  J G Meier\*, T Carlsson, P Rudquist, S T Lagerwall, M Nobili, M Brunet, A S Petrenko and J W Goodby Chalmers University of Technology, Sweden
- **P.610** Dielectric Properties of a Nematic Binary Mixture S Garg\* and T Spears *The College of Wooster*, *USA*
- P.611 Biphenyl Based Banana Shaped Compounds
   P Bault, Ch Selbman\*, S Rauch, H Sawade and G Heppke
   Technische Universitaet Berlin, Germany
- P.612 Electric Field Effects in a Wedge of Smectic C Liquid Crystal

  A A Smith\* and I W Stewart University of Strathclyde, UK
- P.613 Liquid Crystal Alignment by Photo-Buffing Azo-Sams
  G Fang, N A Clark, J E Maclennan, M Farrow and D M Walba
  University of Colorado, Boulder, USA

### P.614 Biaxial Model of the Surface Anchoring of Bent-Core Smectic Liquid Crystals

J E Maclennan, N A Clark and D M Walba *University of Colorado*, *Boulder*, *USA* 

## P.615 Smectic Layer Growth Structures Arising from Variable Rubbing Strength

D A Coleman\*, J E Maclennan and N A Clark *University of Colorado*, *Boulder*, *USA* 

#### P.616 BioSpinning

J Magoshi\*, Y Magoshi, T Tanaka, S-I Inoue, M Kobayashi, H Tsuda and M Becker *National Institute of Agrobiological Sciences Japan Science & Technology Corporation*, *Japan* 

#### P.617 Silk Fibroin Liquid Crystals

Y Magoshi\*, J Magoshi, T Tanaka, S-I Inoue, M Kobayashi, H Tsuda and M Becker *National Institute of Agrobiological Sciences Japan Science & Technology Corporation*, *Japan* 

# P.618 Optical Characteristics in Polymer-Stablized FLCDs Exhibiting V-Shaped Switching

J Xu\* and S Kobayashi Science University of Tokyo in Yamaguchi, Japan

## P.619 Miniature Concentration Sensors on the Basis of the LC Cell

V I Navumenka and K V Nazarava\* International Sakaharov Environmental University, Belarus

# P.620 Ferrielectric-like Conoscopic Behaviour in Ferroelectric Liquid Crystals and Surface Alignment in Planar Cells S S Seomun\*. T S Perova. J K Vii and A Fukuda Trinitu College.

S S Seomun\*, T S Perova, J K Vij and A Fukuda *Trinity College*, *University of Dublin*, *Ireland* 

# P.621 Study of Ionic Effects on the V-Shaped Switching Using Photo-Controlling Method

S S Seomun\*, J K Vij and A Fukuda *Trinity College*, *University of Dublin*, *Ireland* 

## P.622 Polymer Stabilized Stripe-Texture Ferroelectric Liquid Crystals

R Petkovsek, J Pirs, M Copic, M Kreft and P Bros *Josef Stefan Institute*, *Slovenia* 

# P.623 Reduction of Water Contamination of Liquid Crystal Displays

J Pirs, I Vilfan and B Zalar Josef Stefan Institute, Slovenia

- P.624 Dynamic FEM Analysis of Micro Grooves on Thin Film Cut by Ruling Engine System
  - M Sato\*, I Nakamura, J Uemura, Y Sato and H Seki *Hachinohe Institute of Technology*, *Japan*
- P.625 Switching Phenomenon in Chiral Smectics Investigated by
   Dielectric and Optical Methods
   F Goc and W Kuczynski Institute of Molecular Physics, Polish Academy of Sciences
- P.626 The Effects of Fan Shaped Mesogens on the Phase Behaviour of Mesomorphic Siloxanes
  R Alvarez-Rodriguez and G H Mehl\* University of Hull, UK
- P.627 Origins of Molecular Tilt in Tilted Smectics
  Y Lansac\*, N A Clark and M A Glaser University of Colorado,
  Boulder, USA
- P.628 Spontaneous Chiral Symmetry Breaking with Achiral Bent-Core Molecules
   Y Lansac\*, N A Clark and M A Glaser University of Colorado, Boulder, USA
- P.629 Observation of Smectic Layers Lacking Point Group Symmetry
   N Chattham\*, E Korblova, R Shao, D M Walba, J E Maclennan and N A Clark University of Colorado, Boulder, USA
- P.630 Synthesis, Mesomorphic and Optic Properties of Isothiocyanato-Tolanes
   A Spadio, J Dziaduszek, W Drzewinski, R Dabrowski\*, C Y Fan and S-T Wu Military University of Technology, Poland
- P.631 Synthesis and Mesomorphic Properties of Achiral Esters with High Tilted Synclinic and Anticlinic Phases
  J Gasowska\*, R Dabrowski, J Przedmojski, K Czuprynski, K Kenig and M Tykarska Military University of Technology, Poland
- P.632 Cooperative Effects Induced by Peripheral Proteins in Fluid Mixed Membranes
  P Schiller\* and H-J Mogel TU Freiburg, Germany
- P.633 The Measurement of Response Time in PDLC Receiving Dual Frequency Stimulation

  J-C Hsiao, C-F Lu\* and J-Y Lee National Taiwan University of Science & Technology, Taiwan
- P.634 Citronellyl-Opimb: A Chiral Bent-Core Liquid Crystal
  D R Link, M Nakata, J Thisayukta, H Niwano, Y Takanishi,
  K Ishikawa, J Watanabe and H Takezoe Harvard University, USA

- P.635 Analysis Structural Anisotropy Concentrated Cellulose Systems by Fractal Formalism
  - D V Loshadkin, O A Khanchich and E F Rozantsev *Moscow State University of Applied Biotechnology, Russia*
- P.636 The Effect of Lateral Long Hydrocarbon Chain on Mesomorphic Properties

T Tasaka, H Okamoto, Y Morita, K Kasatani and S Takenaka\* *Yamaguchi University*, *Japan* 

- P.637 Density Functional Theory (DFT) Calculations for some Mesogenic Cyanobenzoates
  - W Witko and Aharas Institute of Nuclear Physics, Poland
- P.638 Novel Liquid Crystal Materials having A (S)-3,7 Dimethyloctyl Group

  T Tasaka, H Okamoto, Y Morita, K Kasatani and S Takenaka\*

  Yamaquchi University, Japan
- P.639 The Effect of Terminal Furan Ring on Molecular Arrangement in Smetic A Phase
   H Okamoto\*, K Abe, Y Morita, K Kasatani and S Takenaka Yamaguchi University, Japan
- P.640 A Periodic Director Structure of Nematic Liquid Crystals in a High-Frequency Electric Field

  J-H Huh\*, Y Yusuf, Y Hidaka and S Kai Kyushu Institute of Technology, Japan
- P.641 A Development of the Liquid Crystal Mixture with Fast Speed and Wide Temperature Range for TFT-LCD-TV Device

  B-S Ban\*, B-S Seo, B-H Kim, Y-K Yun, D-S Sahkong, K-H Chung and Y-B Kim Samsung Electronics Co Ltd, Korea
- P.642 Liquid Crystalline Properties of Oligophenylenes
   D Navarro-Rodriguez\*, L Lario-Lopez, E Arias-Martin, I Moggio,
   J LeMoigne and D Guillon CIQA, Mexico
- P.643 Solar-Cells Made From Columnar Discotic, Liquid Crystalline Compounds

  T Hassheider, S A Benning, H Bock, K Muellen, H-S Kitzerow\*

  University of Paderborn, Germany
- **P.644** Bend Grain Boundary Phases: Can They Exist? H-S Kitzerow\* *University of Paderborn, Germany*
- P.645 Electrohydrodynamic Convection in Gel-Like Systems
  N Stich, K Kurschner, J Strauß and H-S Kitzerow\* University of Paderborn, Germany

- P.646 Dependence of the Mesogenic Behaviour on Molecular Structure: A Statistical and a Neural Network Approach
  H Matthias, V Vill and H-S Kitzerow\* University of Paderborn,
  Germany
- P.647 Nematic Liquid Crystals from a Novel Discotic Core of 1,2,4,5-Tetraalkynylbenzene
  H-F Hsu\*, Y-H Lai and S-Y Lin Tamkang University, Taiwan
- P.648 The Optical Properties of Antiferroelectric Liquid Crystals S T Lagerwall\*, P Rudquist, K D'have and D S Hermann Chalmers University of Technology, Sweden
- P.649 Phase and Polarization Variations Induced by V-Shape Smectic Cells
   N Bennis\*, C Toscano, X Quintana, V Urruchi, J L Gayo and I M Oton ESI Telecomuncacion, Universidad Politecnica, Spain
- P.650 Addressing Waveforms for Asymmetric Antiferroelectric Liquid Crystal Displays
   J L Gayo\*, V Urruchi, X Quintana, N Bennis and J M Oton ESI Telecomuncacion, Universidad Politecnica, Spain
- P.651 Improving Electro-Optic Response in V-Shape Chiral Smectic Displays
   V Urruchi\*, J L Gayo, J M Oton, R Dabrowski and X Quintana Universidad Carlos III, Spain
- P.652 Phase Description in Polar Liquid Crystals Using Modified Weighted Density Approximation (MWDA)

  K Szumilin\* Warsaw University of Technology, Poland
- P.653 A Numercial Study of Director Dynamics Observed by Rheo-NMR in Cylindrical Couette Geometry
   L Orian, G Feio, A Veron, A Polimeno and A F Martins\* Universidade Nova de Lisboa, Portugal
- P.654 A Novel Description of Short-Range Orientational Interactions Acting on Apolar Molecules Dissolved in Nematics G Celebre\*, G De Luca and M Longeri *Universita della Calabria*, *Italy*
- P.655 Design of Europium-Containing Liquid-Crystal Mixtures for Use in Emissive LCDs
   D Moors, C Görller-Walrand and K Binnermans Katholieke Universiteit Leuven, Belgium

P.656 Spectral Response in V-Shape Chiral Smectic Liquid Crystal Devices

R Vergaz\*, J M S Pena, V Urruchi, J L Gayo and J M Oton Universidad Carlos III de Madrid, Spain

P.657 Flow Induced by Director Relaxation in Smectic C Materials

P D Woods\*, N J Mottram and I W Stewart *University of Strath-clyde*, *UK* 

P.658 The Liquid Crystal Display on the Effect of Cholesteric-Nematic Phase Transition

M Vistak and Y Vistak Lviv Medical University Ukraine

P.659 Photoreception as a Semiconductor-Optoelectronic Process in Retinal Liquid Crystal

G G Demirchoglyan\* All-Russian Institute of Physical Cuture & Sport Russia

- **P.660** Static Domain Wall Solutions for Smectic C Liquid Crystals R J Atkin\* and I W Stewart *University of Strathclyde*
- P.661 Self-Organization of Colloidal Inclusions in Free Standing
   Films
   P Cluzeau\*, V Bonnand, G Joly, V K Dolganov and H T Nguyen
  - P Cluzeau\*, V Bonnand, G Joly, V K Dolganov and H T Nguyen Université de Lille 1, France
- P.662 The Structure and Conformation of Flexible Molecules
  Obtained from the NMR Spectra of Samples Dissolved in
  Liquid Crystalline Solvents

  G. Colobro\* J. W. Emgley, G. Do Luce\*, M. Longeri, and G. Piloio

G Celebre\*, J W Emsley, G De Luca\*, M Longeri and G Pileio Universita Della Calabria, Italy

P.663 A Comprehensive Study of the Structure of De Vries SmA Phases

YU P Panarin\*, O E Kalinovskaya, and J K Vij *Dublin Institute of Technology*, *Ireland* 

P.664 Strcuture and Electrooptic Response of De Vries SmA Phases

Yu P Panarin\*, O E Kalinovskaya, M S Chang and J K Vij *Dublin Institute of Technology*, *Ireland* 

P.665 FTIR Study of the Structure of the Tilted SmA\* Phase
O E Kalinovskaya\*, Yu P Panarin and J K Vij Dublin Institute of
Technology, Ireland

- P.666 The Structure of Antiferroelectric Liquid Crystal Phases Described by Distorted Clock Model Using FTIR and Dieletric Spectroscopy
  - M M Jamishidi\*, Y P Panarin, O E Kalinovskaya and J K Vij Institute of Technology Tallaght, Ireland
- P.667 Liquid Crystal Based Optical Matrix Switches
  Yu V Semenova\*, Yu P Pananrin and G Farrell Dublin Institute of
  Technology, Ireland
- P.668 Improved Liquid Crystal Mixtures for STN Displays
  M Francis\*, D Ionescu, B Rieger, H Hirschmann, V Reiffenrath,
  M Goulding, K Adlem and A Kojima Merck Speciality Chemicals
  Ltd, UK
- P.669 Parallel Synthesis of 4-alkyl-4'-cyanobiphenyl liquid crystals M Goulding, R Tanner and K Adlem Merck Speciality Chemicals Ltd, UK
- P.670 Polymer Dispersed Orthoconic Antiferroelectric Liquid Crystals

  K D'Havé\*, P Rudquist and S T Lagerwall Chalmers University of Technology, Sweden
- P.671 Molecular Models of Helical Sense Inversions in Chiral Nematics
   A V Emelyanenko\*, M A Osipov and D A Dunmur University of Strathclyde, UK
- P.672 Phase Diagrams of Mixtures of Nematic Liquid Crystals and Linear or Crosslinked Polymers
   F Roussel, U Maschke\*, J-M Buisine, X Conqueret and M Benmouna Uiversité des Sciences et Technologies de Lille, France
- P.673 Photopyroelectric Measurements of Thermal Parameters
  Over Phase Transitions in Polymer/Liquid Crystals Systems
  S Delenclos, H Sahraoui, M Benmouna\*, J-M Buisine and
  U Maschke\* Universite de Lille 1, France
- P.674 Physical Properties of Electron Beam Cured Tri-Propylene Glycol Diacrylate and Liquid Crystal Systems
  S Kara-Slimane\*, A Olivier, B Carbonnier, T Pakula, Z Coqueret, M Benmouna\* and U Maschke\* Universite de Lille 1, France
- P.675 A Comparative Study of UV and EB Cured PDLC Films:
   Electro-Optical Properties
   L Benkhaled\*, L Mechernene, M Benmouna\*, J-M Gloaguen,
   X Coqueret and U Maschke\* Universite De Lille 1, France

- P.676 Lyotropic and Thermotropic Transiting in Polymeric Liquid Crystalline Systems
  - O A Khanchich\* Moscow State University of Applied Biotechnology, Russia
- P.677 Time Decay of the Off-State Transmission of Electron Bean Cured PDLC Films
  - L Benkhaled\*, R Benmouna, L Mechernene, A Berrayah, X Conqueret and U Maschke\* *Universite de Lille 1, France*
- P.678 A Study of Morphology, Structure and Elextro-Optical Responses of Polysiloxane and Liquid Crystal Systems
   N Gogibus, F Roussel, B Ewen, X Coqueret, J-M Buisine, M Benmouna\* and U Maschke\* Universite de Lille 1, France
- P.679 A Static and Dynamic Study of the Mechanical Properties of Electron Beam- and Ultraviolet-Cured PDLC Films
  A Olivier, A Best, T Pakula, B Ewen, M Benmouna\* and U Maschke\*
  Universite de Lille 1, France
- P.680 Selective Solubility of E7 Components in Poly(N-Butylacrylate)
   L Bedjaoui, T Bouchaour\*, M Benmouna\*, X Conqueret and U Maschke\* Universite de Lille 1, France
- P.681 Properties of Electron Beam Cured Reverse Mode PDLC Films

  R Vendamme\*, A Best, T Pakula, M Benmouna\* and U Maschke\*

  Universite de Lille 1, France
- P.682 Light Scattering from Monomeric and Electron Beam Cured Acrylate/E7 Systems
   E Carbonnier\*, A Best, T Pakula, B Ewen, M Benmouna\* and U Maschke\* Universite de Lille 1, France
- Phase Properties of Poly(2-Ethylhexylacrylate)/Liquid
   Crystal Systems
   S Kara-Slimane\*, F Benmouna, F Roussel\*, J-M Buisine,
   X Coqueret, M Benmouna\* and U Maschke\* Universite de Lille
- P.684 Swelling/Deswelling of Poly(Acrylate) Networks in Isotropic and Nematic Solvents

  T Bouchaour\* M Benmouna\*, X Coqueret and U Maschke\*

1, France

Universite de Lille 1, France

- P.685 Structure of Deuterated Polystyrene and 8CB Systems as Revealed by Small Angle Neutron Scattering
   U Maschke\*, N Gogibus, L Noirez\*, T Pakula, B Ewen, T Wagner and M Benmouna\* Universite de Lille 1, France
- P.686 Phase Diagrams and Thermophysical Properties of Poly (Siloxane) and Liquid Crystal Systems
   N Gobibus\*, F Benmouna, B Ewen, X Coqueret, M Benmouna\* and U Maschke\* Universite de Lille 1, France
- P.687 Morphology and Optical Properties of Polymer/Liquid
   Crystal Composites with Nanodroplets
   C Rachet, T Bouchaour\*, P Feneyrou, P Le Barny, M Benmouna\*,
   X Coquetet and U Maschke\* Universite de Lille 1, France
- P.688 Investigation of the Visco-Elastic Properties of Mixtures with Different Birefringence
  C Schott\*, D Ionescu H J Coles Merck NB-SC UK
- P.689 Rotational Dyamics of Liquid Crystal Dimers: Dielectric Studies
  A E Blatch, S Diez, D A Dunmur\*, A Ferrarini, M R de la Fuenta, P K Karahaliou, G R Luckhurst, G Mehl, T Meyer, G J Mojo, M A Perez Jubindo and D Photinos University of Southampton, UK
- P.690 Microrheology Studies of Langmuir Monolayers
   M Twardos and M Dennin\* University of California, Irvine, USA
- P.691 Improvement of Viewing Angle Properties of IPS-Mode LCD by Using a Super-Wide-Viewing-Angle Polarizer
  T Ishinabe, T Miyashita and T Uchida Tohoku University, Japan
- P.692 Synthesis and <sup>2</sup>H NMR Study Of Deuterium Labelled Ferroelectric Liquid-Crystalline Polymers
   D Catalano, L Chiezzi, V Domenici, D Galli and C A Veracini University of Pisa, Italy
- P.693 Synthesis and <sup>2</sup>H NMR Study of a Deuterium Labelled Ferroelectric Liquid-Crystal Monomer
   D Catalano, L Chiezzi, V Domenici, M Geppi, C A Veracini and K Fodor-Csorba University of Pisa, Italy
- **P.694** Hydrodynamics of Topologicl Defects in Liquid Crystals G Toth\*, C Denniston and J M Yeomans *University of Oxford*, *UK*
- P.695 Dielectric and <sup>2</sup>H NMR Relaxation Studies of the Same Smectogenic Liquid Crystal
   S Urban, B Gestbloom, V Domenici, C Gandolfo, M Geppi and C A Veracini\* Universitá degli Studi di Pisa, Italy

- P.696 Dynamics of a Ferroelectric Liquid Crystal by Means of <sup>2</sup>H Relaxation Measurements
  - L Chiezzi, V Domenici, R Y Dong, M Geppi and C A Veracini\* *Univerità delgi Studi di pisa*, *Italy*
- P.697 Hydrodynamics in the Alignment Tensor Description
  M Reichenstein\*, H Stark, J Stelzer and H-R Trebin *University of Stuttgart, Germany*
- P.698 Stabilisation of Charged Colloidal Particles in a Liquid Crystal
   C Pizzey\* and J S van Duijneveldt University of Bristol, UK
- P.699 Anthracenyl-Based Liquid Crystals S Mery\*, D Haristoy, J F Nicoud, D Guillon, H Monobe and Shimizu GMO-IPCMS, France
- P.700 Ultrasound-Induced Director Disorder In Nematics: an ESR Investigation
  P R Birkin, D Ionescu\* and G R Luckhurst Merck NBC UK
- P.701 Spatial Distribution of the Pyroelectric Coefficient in a Cell for the SmC\* Phase

  J K Vij\* and N M Shtykov Trinity College, University of Dublin, Ireland
- P.702 Optical Rotatory Power and Models of Structure of the Ferrielectric Phases of Antiferroelectric Liquid Crystals
  J K Vij\*, N M Shtykov, V Pano, J W Goodby and H T Nguyen Trinity College, University of Dublin, Ireland
- P.703 The Orientational Order and the Dynamic Behaviour of the Nematic Multipodes Based on Carbosilazane Cores Using Optical and Dielectric Spectroscopy

  J K Vij, A Kocot, K Merkel, L Tajber, J Zalewska-Rejdak, G H Mehl, R Elsäßer, J W Goodby and M Veith Trinity College, University of Dublin, Ireland
- P.704 The Novel TGB Structure of W376
  N A Clark\*, R F Shao, L Navailles, M Brunet, D M Walba and J R Rego University of Colorado, Boulder, USA
- P.705 The B4 Phase of Bent-Core Molecules: A Chiral-Line Liquid D Kreuke, N A Clark, H T Yang, H Zasadzinksi and D R Link University of Colorado, Boulder, USA
- P.706 Experimental and Theoretical Study of the Dynamics of Analog "V-Shaped" Electro-Optic Behavior In FLC's
   M O'Callaghan M D Wand, M R Meadows, N A Clark, J E Maclennan and D A Coleman University of Colorado, Boulder, USA

- P.707 Influence of Azimuthal Anchoring Strength on Aligning Properties of Antiferroelectric Liquid Crystals

  W S Park, J-W Kang, C G Jhun\*, K Y Han, T H Yoon and J C Kim Pusan National University, Korea
- P.708 New Design Technique for Driving Antiferroelectric Liquid Crystal Displays In Passive Matrix Using a Predetermined V-T Curve

  C G Jhun, W S Park, J W Kang, K-Y Han, T-H Yoon and J C Kim Pusan National University, Korea
- P.709 45°-Twisted Reflective Liquid Crystal Display
  K-H Park, J-S Gwag, S H Lee, K Y Han, T-H Yoon and J C Kim\*
  Pusan National University, Korea
- P.710 Reflective LCD Using a Chiral Homeotropic Mode for High Contrast Ratio and Low Voltage Driving
  W S Park, B J Baek, K Y Han, T-H Yoon And J C Kim\* Pusan National University, Korea
- P.711 Critical Behavior of the Layer Compression Elastic Modulus Near a Smectic C-Hexatic I Critical Point

  D Rogez\*, L B Benguigui and P Martinoty ULP-CNRS, France
- P.712 Hydrodynamic and Nonhydrodynamic Behavior of the Layer Compression Modulus B Near the Nematic-Smectic-A Transition

  D Rogez\*, D Collin and P Martinoty ULP-CNRS, France
- P.713 Electro-optic Characteristics of an In-Plane Switching Reflective Liquid Crystal Cell
  M-K Chang, D-Y Kim, S H Lee, K-Y Han. T-H Yoon and J C Kim
  Pusan National University, Korea
- P.714 High Pretilt Angle Measurement by Extended Crystal Rotation Method

  J S Gwag\*, S H Lee, H Ho-Park, W S Park, K-Y Han, T-H Yoon and J C Kim Pusan National University, Korea
- P.715 Characterization of Surface Liquid Crystal Orientation:
  New Development of Total-Reflection Spectroellipsometry
  and Scanning Near-Field Optical Microscopy
  H Toriumi\* University of Tokyo
- P.716 Linear Electro-Optical Effect in Suspension of Nematic Liquid Crystal with Ultra-fine Ferroelectric Particles
  A Buchnev\*, Y Reznikov and A Tereshchenko *Institute of Physics*, NASU

- P.717 Chiral Nematic Bimesogens: Properties and Applications
  M J Coles\*, A E Blatch and H J Coles WLCU, Comit Faraday Partnership, University of Southampton, UK
- P.718 Ferroelectric and Flexoelectric Liquid Crystal Mixtures
  Using Novel Host Materials and Fluorescent Dyes

  P de Hondt\*, S P Perkins, M J Peacock and H J Coles
  WLCU/Comit Faraday Patnership, University of Southampton, UK
- P.719 The Flexoelectric-Optic Switching Properties of a Series of Novel Chiral Nematic Systems
   M J Clarke\*, A E Blatch and H J Coles WLCU/Comit Faraday Partnership, University of Southampton, UK
- P.720 Influence of Additives on Surface Anchoring Energy of TN-LC Mixture

  Y-1 Cho\* and H J Coles WLCU/Comit Faraday Patnership, University of Southampton, UK
- P.721 Director Orientation in Nematics Under Orthogonal Magnetic and Electric Fields

  R Mackenzie\* and G Mckay University of Strathclyde, UK
- P.722 Novel Ferroelectric Fluorinated Organosiloxane Materials M N Pivnenko\*, S P Perkins and H J Coles WLCU/Comiot Faraday Partnership, University of Southampton, UK
- P.723 The Individual Viscotic and Elastic Constants Obtained Using an Applied Magnetic Field in a Novel Dynamic Light Scattering Experiment

  S M Morris\*, M J Coles, A E Blatch and H J Coles WLCU/Comit Faraday Partnership, University of Southampton, UK
- P.724 Correlations of Thermal Director Fluctuations in Filled Liquid Crystals

  A N Vasil'ev, I P Pinkevich\* and T J Sluckin Kyiv National Taras Shevchenko University, Ukraine
- P.725 Anchoring Screening of Disclinations Interaction in a Nematic Liquid Crystal
   M Nobili\*, A Bogi, P Martinot-Lagarde and I Dozov GDPC Université Montpellier II/CNRS, France
- P.726 Dimeric Chalcones: Optical Microscopy and X-Ray Diffraction

  M Veber\*, M Imperor-Clerc and A Gourbil Université Paris Sud, France

P.727 Cubic Phases of Cn-ANBC Bearing Secondary Alkoxy Chains: Studies by Optical Microscopy and X-ray Diffraction

M Veber\*, M Imperor-Clerc and A Gourbil *Université Paris Sud*, France

- P.728 Density Studies in 10.0120.10 and CB.0100.10 B Gogoi\*, P R Alapati and A L Verma *NERIST*, *India*
- P.729 Orientational Order of Solutes in Liquid Crystals
  E E Burnell\*, J-S J Lee, R Berardi and C Zannoni University of British Columbia, Canada
- P.730 Novel Surface Induced Modulated Texture in Nematic Samples
  G Barbero\* and I Lelidis LPMS-Université de Picardie, France
- P.731 Surface Induced Non-Spontaneous Nematic Phase
  I Lelidis\* and P Galatola LBHP, Université Paris 7, France
- P.732 Multi-Layer Organic Electroluminescence using Liquid Crystalline Polymer Networks

  S R Farrar, A E A Contoret, B Mansoor, M O'Neill\*, G J Richards, P Vlachos and S M Kelly University of Hull, UK
- P.733 Model for Liquid Crystal Photoalignment using Crosslinkable Coumarin Polymers
   P O Jackson, M O'Neill, W L Duffy and S M Kelly University of Hull, UK
- P.734 Highly Circular-Polarised Photoluminescence from a Chiral Liquid Crystal
   K L Woon\*, M O'Neill, G J Richards, M P Aldred and S M Kelly University of Hull, UK
- P.735 Dialkylfluorene/oligothiophene and Dialkylfluorene/
  Dithienylvinylene Althernating Copolymers

  U Asawapirom\*, R Güntner, M Forster, T Farrell and U Scherf
  Universität Potsdam, Germany
- P.736 Role of the Microscopic Defects in the Plasticity of Smectic Materials
   C Blanc\*, N Zuodar, I Lelidis, J-L Martin and M Kleman Université Montpellier II, France
- P.737 The Transition from the Splay State to the Bend State in the OCB Cell
   K Kuboki, T Miyashsita, T Ishinabe and T Uchida Tohoku University, Japan

- P.738 Design of Achiral Mesogenic Mixtures of Polymer-Monomers to Achieve High Polarization Responses
  - E A Soto Bustamante\*, R Vergara-Tolosa, D Saldano and P A Navarrete-Encina *Universidad de Chile*, *Chile*
- P.739 Combination of Monomer and Polymer Possessing Different Alkyl and Spacer Chain Lengths in Antiferroelectric Achiral Mixtures

R Vergara-Toloza\*, E A Soto Bustamante, D Saldano, P A Navarrete-Encina, D Ganzke and W Haase *Universidad de Chile*, *Chile* 

P.740 Lyotropic Liquid-Cristals and Micelles Media for the Decomposition of O-P-Nitrophenyl-O,O-Dimethylthiophosphate

R F Bakeeva\*, E M Kosacheva, A Rajewksa, L A Kudrijavtseva, V F Sopin, A I Kuklin and A H Islamov *Kazan State Technological University*, *Russia* 

P.741 Liquid Crystalline Polyfluorenes for Polarized Light Emitting Diodes

R Güntner\*, D Neher, U Scherf, H-G Nothofer, T Miteva, G Nelles and A Yasuda *Universität Potsdam*, *Germany* 

- P.742 Physical Characterisation of Side-Chain Coumarin Polymers for Photoalignment of Liquid Crystals
   G Bergmann\*, P O Jackson, J H C Hogg, M O'Neill, S Patzer, W L Duffy, S M Kelly and G F Clark University of Hull, UK
- P.743 How to Predict NLC Material's Surface Tension
  S M Pestov and M G Tomilin\* SI Vavilov State Optical Institute,
  Russia
- P.744 Electroluminescent Liquid Crystals
  M P Aldred, A J Eastwood, P Vlachos\*, S M Kelly, B Mansoor and M O'Neill University of Hull, UK
- P.745 UV-Transparent Nematics for PL-LCDs J Chapman\*, S M Kelly, A V Davey, H Xu and W A Crossland University of Hull, UK
- P.746 Investigation of the Mechanism of Non-Conjugated Diene Polymerisation

M P Aldred\*, P Vlachos, S M Kelly, B Mansoor and M O'Neill University of Hull, UK

- P.747 Resonant X-Ray Studies of Orientational Order in Chiral Smectic C Subphases and Phases Exhibited by Achiral Bent-Core Molecules
  - R Pindak\*, A Cady, C Chuang, P Barois, L Matkin, H Gleeson, S Watson, W Caliebe, N Tinh, J Goodby and W Wiessflot *Brookhaven National Laboratory*, *USA*
- P.748 The Synthesis and Transition Temperatures of 2,5- Disubstituted-1-benzofurans with Non-polar Terminal Groups M R Friedman, R J Kiddle $^*$ , K J Toyne, M Hird and J W Goodby University of Hull, UK
- P.749 High Resolution X-Ray Diffraction Studies on a Polymer-Stabilized Ferroelectric Liquid Crystal
  U Singh\* and A Primak University of the West Indies,
  Barbados
- P.750 Dynamic of Light-Induced Anchoring of Dye Doped Liquid Crystal on Not-Photosensitive Aligning Surface

  D Fedorenko\*, O Francescangeli, L Lucchetti, Yu Reznikov, F Simoni and S Slussarenko Institute of Physics, NASU, Ukraine
- P.751 Liquid Crystalline Epoxy Resins as Nonlinear Materials
  B Szczepaniak, S Klosowicz\*, J Rejdych, D Wieczorek and A Bankowska Industrial Chemistry Research Institute, Poland
- P.752 Steric and Chiral Indices for Liquid Crystal Molecules
  M P Neal\* Coventry University, UK
- P.753 Sodium Salt of Cellulose Acetate Sulfate as a Polymer Able to Form Liquid-Crystalline Structures in Aqueous Solutions
  - D Grinshpan\*, S Tret'yakova, N Tsygankova and T Savitskaya Belorussian State University, Belarus
- P.754 Variable Focal Length Lens Based on Polymer-Stabilized Nematic Liquid Crystals V V Presnyakov\* and T V Galstian *Université Laval*, Canada
- P.755 Light Polarizer Based on Anisotropic Nematic Gel with Electrically Controlled Anisotropy of Scattering
  V V Presnyakov\* and T V Galstian Université Laval, Canada
- P.756 Performance of UV-stable STN Mixtures for PL-LCDS
   H Xu\*, A B Davey, T D Wilkinson, W A Crossland, S M Kelly and
   J Chapman Cambridge University, UK

- P.757 Director Reorientation Processes in a Monodomain Thin Nematic Liquid Crystal Film: A Deuterium NMR Spectroscopy Study

  G. R. Luckhurst, M. Nakatsuii, T. Miyamoto, A. Sugimura\* and R. A.
  - G R Luckhurst, M Nakatsuji, T Miyamoto, A Sugimura\* and B A Timini *Osaka Sangyo University*, *Japan*
- P.758 Field-induced Director Dynamics of 4-Octyl-4'-Cyanobiphenyl: A Deuterium NMR Spectroscopy Study
  G R Luckhurst, A Sugimura\*, B A Tinimi and H Zimmermann Osaka Sangyo University, Japan
- P.759 Length of Alkyl/Alkoxy Chains in Determining Liquid Crystalline Characteristics of the Aryl Substituted β Diketonates of Cu(II) Metallomesogens: Self Assembly

  M Bose\* and K Ohta Saha Institute of Nuclear Physics, India
- P.760 Numerical Prediction of Helical Twisting Power for Chiral Dopants Using the Scaled Chiral Index H Kamberaj\*, R J Low and M P Neal Coventry University, UK
- P.761 Molecular Arrangement and Related Infrared Absorption Anisotropy of a Ferroelectric Liquid Crystal Cell Exhibiting V-Shaped Switching A A Sigarev\*, J K Vij, Yu P Panarin, S T Lagerwall and G Heppke Trinity College, University of Dublin, Ireland
- P.762 Orientational and Infrared Dichroic Properties of Various Subphases of an Antiferroelectric Liquid Crystal
  A A Sigarev\*, J K Vij, R A Lewis, M Hird and J W Goodby Trinity College, University of Dublin, Ireland
- P.763 The Effects of Molar Mass and Molar Mass Distribution on the Optical Recording on an LC Azobenzene Polymer
   L Andreozzi, M Faetti, D Palazzuoli, M Laus and G Galli\* University of Pisa, Italy
- P.764 Heterogeneity in the Dynamics of a Molecular Tracer in Liquid Crystalline Homo- and Co-polymers
   L Andreozzi, M Faetti, M Giordano, D Palazzauoli and G Galli\* University of Pisa, Italy
- P.765 The Synthesis and Mesophase Behaviour of Fluorinated 2-Vinylcyclopropane Polymers
   G Galli\*, S Gasperetti, M Bertolucci, E Chiellini and B Gallot University of Pisa, Italy
- P.766 Characterization of a Novel Chiral Liquid Crystal S Essid\*, M Manai, A Gharbi, J P Marcerou and N T Nguyeni Faculte des Sciences de Tunis, Tunisia

- P.767 Dynamic Light Scattering from Cholesteric Liquid Crystals
  M A Pantea\* and P H Keyes Wayne State University, USA
- P.768 Determining the Directions of the Easy Axes at the Surfaces in a Twisted Nematic Liquid Crystal Cell Using Guided Waves

F Yang\* and Z-C Ou-Yang Tsinghua University, Beijing, China

- P.769 Mesomorphism and Glass Formation of Phthalocyanine
   Metal Complexes with Bulky Substituents
   N Usol'tseva\*, V Bykova, G Ananjeva and N Zharnikova Ivanova
   State University, Russia
- P.770 The Induction of Mesomorphic Properties in Binary Systems Composed of Poly(propylene Imine) Dendrimers and Organic Solvents

  N Usol'tseva\*, G. Lattermann, A Facher, V Bykova, A Smirnova and M Gruzdev Ivanovo State University, Russia
- P.771 Experimental Method to Obtain Non-Linear Equivalent Electric Circuits of Thresholdless Antiferroelectric Liquid Crystal Cells

  J M S Pena, A B Gonzalo\*, I Perez, V Urruchi and C Vazquez Universidad Carlos III, Spain
- P.772 Analysis of Intermolecular Interaction Energies of Core Structures of Liquid Crystalline Compounds T Matsushita\*, H Hirose and S Koseki Chisso Corporation, Japan
- P.773 Induction of Cholesteric Mesophases in Liquid Crystalline
   Polymers: a <sup>2</sup>H NMR Study
   E Barmatov, L Calucci, D Catalano, L Chiezzi\*, K Fodor-Csorba,
   G Galli and C A Veracini Universita degli Studi di Pisa, Italy
- P.774 Study of the Mesomorphic Behaviour of Homologous Series Containing Trimellitimide Moiety R A Vora and M A Patel\* MS University of Baroda, India
- P.775 LB Monolayers Composed of Aminimide Derivatives Having Two Alkyl Chains. Surface Properties and Alignment of Liquid Crystals

  Y Matsuzawa\* and M Matsumoto NRI, National Institute of AIST, Japan
- P.776 Wide Viewing Angle and Fast Responding TN LCD
   S Chandrasekhar\*, V N Raja and S Krishna Prasad Centre for Liquid Crystal Research, India

- P.777 Synthesis and Properties of Novel Liquid Crystalline Compounds Having a Difluoromethyleneoxy Moeity as a Linkage Group
  - S Matsui\*, T Kondo and K Sago Chisso Petrochemical Corporation, Japan
- P.778 Theoretical Analysis of Polymer Cholesteric Solutions on a Molecular Basis

A Teramoto\*, K Yoshiba and N Nakamura *Ritsumeikan University*, *Japan* 

P.779 Dielectric Response and Quasielastic Light Scattering on Freely Suspended Films of  $SmC_{\alpha}$  Phase in an External Electric Field

M Conradi\*, I Musevic and M Cepic Jozef Stefan Institute, Slovenia

- P.780 The Effect of Rubbing strength on the Formation of ZigZag
  Defects in Surface Stabilised Ferroelectric Liquid Crystals
  W Zheng, B F Macdonald and R J Cole University of Edinburgh,
  UK
- P.781 On the Dynamics of the Nematic-Isotropic Transition Produced by Jumps in Temperature and Pressure. A Molecular Dynamics Simulation Study

G R Luckhurst and K Satoh\* University of Sourthampton, UK

- P.782 Macrodiscotic Phthalcyanines
  H Goppe\* and A N Cammidge University of East Anglia, UK
- P.783 Columnar Mesophase From a New Hybrid Siloxane-Triphenylene

R Zniber\*, R Achour, M Z Cherkaoui, B Donnio, L Gehrinnger and D Guillon *Université Mohammed V, Morroco* 

P.784 Photonic Structure on Deformation of Cholesteric Elastomers

P Cicuta, A R Tajbakhsh\* and E M Terentjev University of Cambridge, UK

P.785 Photochemical Transducers: Coupling UV to Shape in Nematic Elastomers

J Cviklinski, P M Hogan, A R Tajbakhsh\* and E M Terentjev  $University\ of\ Cambridge,\ UK$ 

P.786 Synthesis, Characterization, and Amphiphilic Liquid Crystallinity of Poly(oxyethylene)s Containing Alkylsufonylmethyl Side Groups

J-C Lee\*, M-Y Lim and J-Y Kim Seoul National University, Korea

- P.787 Dichotomous Molecular Architectures I: Non-Symmetrical Tetrameric Liquid Crystals

  I.M. Soga\* and J.W. Coodby, Vision equity, of Health, UK.
  - I M Saez\* and J W Goodby University of Hull, UK
- P.788 Dichotomous Molecular Architectures II: Liquid Crystal Materials with Segregated Hemispheres
  I M Saez\* and J W Goodby University of Hull, UK
- **P.789** Fullerene Dendrimers Exhibiting the Chiral Nematic Phase S Campidelli, C Eng, R Deschenaux, I M Saez and J W Goodby *University of Hull, UK*
- P.790 Vesicle-like Latex in a Nematic Lyotropic Phase
  V M Alves\*, E A de Oliveira, P Poulin and O Mondain-Moval
  Institute de Fisica USP, Brazil
- P.791 A New Interpretation of the Temperature-Electric Field Phase Diagram for the Ferroelectric C\*Phase
  F Ghoddoussi, M A Pantea, P H Keyes\*, R Naik and P Vaishava Wayne State University, USA
- P.792 The Effect of Closo-Boranes on Mesogenic Properties
  S Pakhomov, A G Douglass, W Piecek, J E Harvey, A Balinski and P Kaszynski\* Vanderbilt University, USA
- P.793 Synthesis and Properties of Highly Quadropolar Mesogens Derived from B<sub>10</sub>H<sub>10</sub>( $^{-2}$ )

  J E Harvey, A Balinski, W Piecek, S J Rzoska and P Kaszynski\*

  Vanderbilt University, USA
- P.794 3D Director Structures and Shape of Meniscus in Free Standing SmA Films Studied by Fluorescence Confocal Polarizing Microscopy

  I I Smalyukh\*, O P Pishnyak and O D Lavrentovich Liquid Crystal Institute, Kent State University, USA
- P.795 Solid State NMR of Fatty Acids as Phase Promoters in Phospholid Bilayers
   J A Clarke\*, R V Law, J M Seddon and R H Templer Imperial College, UK
- P.796 Holographic Image Formation in Dye-Doped Nematic Liquid
  Crystals
  R Amor\*, N Hermosa and M Daza Liquid Crystal Laboratory,
  University of the Philippines
- P.797 Transient Director Orientation Pattern of Creeping Plane
  Poiseuille Flow of a Nematic Polymer
  W H Han\*, J H Cho, J K Jeon, S G Noh and S T Koh Dong Yang
  University, South Korea

- P.798 Non-Isothermal Plane Shear Flow of a Nematic W H Han\* and J W Lee Dong Yang University, Korea
- P.799 Dynamical Simulations of Couette Flow of a Nematic W H Han\* Dong Yang University, Korea
- P.800 The Baffling Role of Electrostatics in Cholesteric Phase of Virus Suspensions

  E Grelet\* and S Fraden Brandeis University, USA
- P.801 Effect of Microgrove on Liquid Crystal Alignment
  Y Sato, H Seki\*, T Uchida and M Sato Hachinohe Institute of
  Technology, Japan
- P.802 Effect of Induced Biaxiality on Physical Properties of Nematics. Investigation of Molecular Models by Means of the Integral Education Method

  T G Sokolovska and R O Sokolovskii\* University of Edinburgh, UK
- P.803 Optical Properties of a Passive Cholestric Reflector Using a Composite Alignment
  P Sixou and C Gautier LPMC, Université de Nice, France
- P.804 Normal-Hemispherical Transmission and Reflection of a Polymer Stabilized Cholesteric Liquid Crystals

  P. Sixou\*, B. Chevalier, H. Guillard and V. Sterligoc LPMC, Université de Nice, France
- P.805 Dye Doped PDLC and PNLC H Guillard and P Sixou LPMC, Université de Nice, France
- P.806 Liquid Crystal Photosensitive Hybrid Cells as a Medium for Real-Time Digital Holograms
   J Parka\*, M Sutkowski and T Grudniewski Military Academy of Technology, Poland
- P.807 Photochromic Liquid Crystal Dimers
  M Frigoli\* and G H Mehl University of Hull, UK
- **P.808** Towards the Controlled Folding of Liquid Crystals M Frigoli\* and G H Mehl *University of Hull, UK*
- **P.809** The Photo-Controlled Folding of Liquid Crystals M Frigoli\* and G H Mehl *University of Hull, UK*
- P.810 Effects of Chloro and Methyl Substituents on the Dielectric Spectra of Ferroelectric Liquid Crystals

  F Gouda\*, J Abdul-Wahid and B Helgee Umm Al-Qura University, Saudi Arabia

- P.811 Effects of Lateral Polar Substituents on the Dieletric Spectra of Anti-Ferroelectric Liquid Crystals
  F Gouda\* and Y B Kim Umm Al-Qura University, Saudi Arabia
- P.812 Experimental Study of Dielectric Response of Binary Mixture of Nematic and Cholesteric Liquid Crystals G K Johri, R Sharma\* and M Johri D.A.V. College, India
- P.813 Phase Transition Dynamics of Ferroelectric Liquid Crystal in SmA SmC\*- SmX
   G K Johri, M Johri, K Srivastava and R Sharma\* D.A.V. College, India
- P.814 Determination of the Rotational Viscosity Coefficient of a Nematic Liquid Crystal Using ESR Spectroscopy
   S E Marchant-Lane\*, J Becker, D A Dunmur, C J Dunn, G R Luckhurst and B A Timimi University of Southampton, UK
- P.815 Tetrahedratic Bananas
  P E Cladis, H Pleiner and H Brand Advanced Liquid Crystal Technologies, USA
- P.816 Synthesis and Characterisation of Side-Chain Liquid Crystalline Block Copolymers
   Z Lu\*, C T Imrie, I A Ansari and I W Hamley University of Aberdeen, UK
- P.817 Liquid Crystal Chiral Dimers
  T Donaldson\*, C T Imrie and Z Lu University of Aberdeen, UK
- P.818 Liquid Crystalline Polymer Electrolytes
  R T Inkster\*, C T Imrie and M D Ingram University of Aberdeen,
  UK
- P.819 Influence of Electrostatic Interactions on the History-Dependent Rheology of Surfactant Hexagonal Phases M L Sushko, J M Seddon and R H Templer Imperial College, UK
- P.820 Electrooptic Properties of Mesogenic Carbosilane Dendrimers in Isotropic Melts
   S G Polushin, A V Lezov, V P Shibaev\*, E I Rjumtsev Saint-Petersburg State University, Russia
- P.821 Orientational Dynamics in the Melts of Mesogenic Copolymers with Hydrogen and Ionic Bonds from Kerr Effect Measurements

  S.G. Polyschin, A.V.Lozov, F.B. Barmatov and F.I. Diumteev, St. Paters.

S G Polushin, A V Lezov, E B Barmatov and E I Rjumtsev St Petersburg State University, Russia

- P.822 Electrooptical Properties of Carbosilane Liquid-Crystalline Dendrimers with a Different Terminal Mesogenic Groups in Solution
  - A V Lezov\*, G E Polushina, M E Mikhailova, V P Shibaev\* and E I Rjumtsev *St Petersburg State University, Russia*
- P.823 Self-assemble of terminal groups in carbosilane liquid-crystalline dendrimers

A B Mel'nikov\*, E A Antonov and A V Lezov St Petersburg State University, Russia

- P.824 Electro-Optics of LC Imbedded in a Micro-Sphere Array
  A Glushchenko\* and J L West Liquid Crystal Institute, Kent State
  University, USA
- P.825 Study of Ion Beam Alignment of Liquid Crystals on Polymer Substrates
   J E Fulghum, L Su\*, K Artyushkova, J Farrar, J L West and Y Reznikov Kent State University, USA
- P.826 Electro-optic Properties of Liquid Crystals in the Infrared L Su\*, J L West, R M Stayshich, J M Kim, M E Neubert *Kent State University*, USA
- P.827 Rapid Formation and Electro-Optic Behaviour of Opal-Liqiud-Crystal Composite Photonic Crystals

  D Kang\* and N A Clark Soongsil University, South Korea
- P.828 Cholesteric Liquid Crystal Formulations (Coconut-Based Cholesteryl Ester & TM74A): Thermal and Optical Characterization

GRA Cureg\*, AB Cruz, LG Cada and ZB Domingo *University of the Philippines*, *Philippines* 

- P.829 Nano-Phase Segrigation and the Polar Structure in Bent-Core Liquid Crystals
   M Ren, M Nakata\*, Y Takanishi, K Ishikawa, J Watanabe and H Takezoe Tokyo Institute of Technology, Japan
- P.830 Digital Modelling of Optical Properties of Birefringent Gratings with Surface Microrelief V V Belyaev\*, V I Tsov and A V Tarasishin Cometa Central R & D Institute, Russia
- P.831 Azimuthal Anchoring of Liquid Crystal on Polymeric Substrates with Periodic Microrelief Obtained by Stretching Method

V V Belyaev\*, V Konovalov, A Volynsky, L Chistovskaya and S Trofimov *Cometa Central R & D Institute, Russia* 

- P.832 Viscosity of Non-Mesogenic Solution of Nematic Azoxybenzilidene-Butylaniline Derivative Under High Pressure D L Bogdanov\*, V D Kuznetsov, V V Belyaev and A Y Kalashnikov Cometa Central R & D Institute, Russia
- P.833 New Bent-Core Mesogens: 3,4-Disubstituted Furoxanes
  V S Bezborodov, N N Kauhanka and V I Lapanik\* Institute of
  Applied Physics Problems, Belarus
- P.834 Thermodynamic Conditions of FLC Orientation in a Display Cell
  A Zhukov, E Pozhidaev\*, O Agapov, Y Chetverov, A Andreev and I Kompanets P.N. Lebedev Physical Institute, Russia
- P.835 Ferroelectric Mixtures of Smectic C 4-Hexyloxysalicylidene-4'-Hexylaniline and Nonmesogenic Chiral Dopant 1R,4R-p-Mentan-3-One Derivative

  E P Pozidaev\*, L A Kutulya, A L Andreev, V V Vaschenko, T B Fedosenkova, I N Kompanets and J W Goodby P. N. Lebedev Physical Institute, Russia
- P.836 Nanophase Segregation of Apolar Solvents in Smectic Liquid Crystals of Bent-Shape Molecules
   Y Huang, A M Pedreira, O G Martins, A M Figueiredo Neto, A Jákli\* Kent State University, USA
- P.837 Electro-Optical, Elastic and Dielectric Properties of Mesogenic Dimers and Trimers in Dilute Solutions and in Nematic State

  N V Tsvetkov\* and V V Zuev St Petersburg State University,
  Russia
- P.838 Electro-optical Properties of Cylindrical Dendrimers
  I V Ksenofontov\*, N V Tsvetkov, V O Kurakina, N V Girbasova and A Y Bilibin St Peterburg State University, Russia
- P.839 Electro-Optical Properties of Mesogenic Dimers of the "Siamese Twins" Type in Dilute Solutions
   V O Kurakina\*, N V Tsvetkov, I V Ksenofontov and V V Zuev St Petersburg State University, Russia
- P.840 Studies on Texture and Electrical Properties of Cyanobiphenyl Liquid Crystal Mixtures
   R N P Choudhary\*, R K Medya and P K Mahapatra Indian Institute of Technology, West Bengal, India

P.841 First Example of Triphenylene-Based Discotic Liquid Crystalline Polymers Containing Azobenzene Moieties

M R Luftor\*, S Silong, M Z A Rahman, M B Ahmad, W M Z Wan Yunus, M J Haron and C Tscheirske *University Putra Malaysia*, *Malaysia* 

P.842 Holographic Gratings in Dye-Doped Polymer-Liquid Crystal Composite

A Z Francia, Jr, N P Hermosa II, G A K Naceno and Z B Domingo\* *University of the Philippines*, *Philippines* 

P.843 Electro-optic Characterization of E48: TM74A:PMMA PDCLCs

C L E Mahinay, L T Davila, Z B Domingo\* and L G Cada National Institute of Phtysics, University of the Philippines

P.844 Structural Behavior of Cholesteric Mixture TM74A: E48 with Different Surface Alignments under Varying Electric Field

J E Muldera, N P Hermosa and Z B Domingo\* *University of the Philippines*, *Philippines* 

- P.845 Structural Effects of Estradiol on the Mitochondrial Membranes of Brain Cells of Mice Irradiated in utero

  V A Innis, C Deocaris, and Z B Domingo\* Liquid Crystal Laboratory, University of the Philippines
- P.846 Experimental Determination of Molecular Polarizability Components of Nematogens by Depolarized Rayleigh Scattering

K Yokota, M Nakata, T Shioda, Y Takanishi, K Ishikawa, H Takezoe\* and T Sekine *Tokyo Institute of Technology, Japan* 

- P.847 Characterisation of CLs Using Fabry-Perot Etalon
  S J Gupta\*, R A Charde and A Tripathi Mumbai University, India
- **P.848** Smectic Layer Reorientation Induced by AC Field
  J H Song, Y Bae Kim, S Kumar and S Tae Shin\* Korea University,
  Korea
- P.849 The Study of Alignment and Layer Structure in a Banana Shaped Achiral Molecule

J H Song, H K Kim, T K Lim, C K Lee, E-J Choi, S Kumar and S T Shin\* *Korea University*, *South Korea* 

- P.850 New Alignment Method of Liquid Crystals which Exhibit N\* to SmC\* Phase Transition
  - C J Kim\*, J-M Wang and Y J Kim Samsung Advanced Institute of Technology, Korea

- P.851 Evidence of Flexoelectricity in Lipid-Containing PDLC L Todorova, T Angelov, Y Marinov and A G Petrov\* Institute of Solid State Physics, Bulgaria
- P.852 Orientant Desorption in Homeotropic Nematic Layers
  Studied by Flexoelectric Spectroscopy
  L Todorova, Y Marinov, I Maslyanitsyn, S Torgova and A G Petrov\*
  Bulgarian Academy of Sciences, Bulgaria
- P.853 Interaction of Heavy Metal Ions with Liquid Crystal Lipid Bilayers Containing Ion Channels
   S Naydenova, A Zheliaskova, I Mellor, Y Marinov, R Ugrinov, A G Petrov\* and P N R Usherwood Bulgarian Academy of Sciences, Bulgaria
- P.854 Geometrical Optics of Dichroic and Gyrotropic Media
  J A Reyes Politecnico di Torino, Italy
- P.855 The Effect of a Substituent in the Central Ring on the Bend Elastic Modulus of 1,4-Di(4-Hexyloxyphenylcarbonyloxy)

  Benzene
  S K Filippov and I P Kolomiets St Petersburg State University,
  Russia
- P.856 Reentrant Optically Isotropic Translationally Disordered
   Phase in an Azobenzene Smectic Liquid Crystal
   J G Fernsler, M A Glaser, R Shao, D A Coleman, D R Link, N A
   Clark, C Chang, K Lanham, D M Walba, C Boyer and J A
   Zasadzinski University of Colorado, Boulder, USA
- P.857 Thermotropic and Lyotropic Coordination Polymers Based on Ruthenium Alkoxybenzoates: Structural Insights on Their Columnar Mesophases

  M C Rusjam\*, Z D Chaia, B Donnio, B Heinrich, F D Cukiernik and D Guillon INQUIMAE, Universidad de Buenos Aires, Argentina
- P.858 Field Sequential Full Color LCD using a Half-V-FLCD and LEDs
   H Furuta\*, K Ida, T Miyama and S Kobayashi LCI, Science

University of Tokyo in Yamaguchi, Japan