46th German Liquid Crystal Conference
46. Arbeitstagung Flüssigkristalle
Paderborn, March 27 – 29, 2019

Schedule of the Meeting

Wednesday, 27 March, 2019	
11:00 h – 13:00 h	Registration
13:00 h – 13:10 h	Welcome address: Prof. Dr. Johannes Blömer, Vice President of Paderborn University
Chair: Alexander Lorenz	
13:10 h – 13:40 h	I-01. Pawel Perkowski: Dielectric spectroscopy of the chiral smectic phases. How does the racemization process influence the dielectric response of the anticlinic smectics?
13:45 h – 14:05 h	O-01. Korinna Bader: De Vries-like ionic liquid crystals with a fluorenone core
14:10 h – 14:30 h	O-02. Christian Haege: Molecular electron density distribution and the X-ray diffraction patterns of liquid crystals – A simulation study
14:35 h – 14:55 h	O-03. Matthias Wagner: New complex mesophases of star-shaped bolapolyphiles
15:00 h – 15:30 h	Coffee break
Chair: N.N.	
15:30 h – 16:00 h	I-02. Peter Collings: Chromonic Liquid Crystals: Always Dynamic and Almost Always Chiral
16:05 h – 16:25 h	O-04. Bingru Zhang: DNA nanocomposite with a lyotropic chromonic liquid crystal
16:30 h – 16:50 h	O-22. Fatemeh Jahanbakhsh, Lukas Wolfram, Zhen Gong, Samuel L. Schafforz, Gaby Nordendorf, and Alexander Lorenz (University of Kassel): Experimental investigations on copolymer network liquid crystals
16:55 h – 17:15 h	O-06. Christoph Klopp: Self-organized lattices and coalescence of droplets in freely suspended liquid crystal films
17:20 h – 17:45 h	O-07. Johanna R. Bruckner: Mesoporous materials produced by lyotropic liquid crystal templating
18:30 h – 21:30 h	Visit to the Tractor Museum Paderborn (Beer & Pretzel)

Thursday, 28 March, 2019	
Chair: Rudolf Zentel	
08:30 h – 09:00 h	I-03. Lech Longa: Chiral symmetry breaking in nematics
09:05 h – 09:25 h	O-08. Kurachkina Marharyta: Peculiarities of elastic and polar dynamic properties of photo-switchable bent-core mesogens
09:30 h – 09:50 h	O-09. Atefeh Habibpourmoghadam: Simulations of localized defect formation in hybridized LC test cells addressed via photovoltaic fields
09:55 h – 10:15 h	O-10. Patrick Huber: Liquid-crystal-infused nanoporous solids as photonic metamaterials
10:20 h – 10:50 h	Coffee break
Chair: Matthias Bremer	
10:50 h – 11:10 h	O-11. Meenu Murali: Vertical interconnects of networks of carbon nanotubes in liquid crystals
11:15 h – 11:35 h	O-12. Marco Saccone: Stabilization of liquid crystalline Blue Phases by hydrogen bonding
11:40 h – 12:00 h	O-13. Gaby Nordendorf: Polarizing optical microscopy of liquid crystals in samples with large graphene islands
12:05 h – 12:25 h	O-14. Moritz Dechant: Filled liquid crystals – A general concept for the formation of donor-acceptor materials
12:30 h – 12:40 h	Photograph of the Conference Participants
12:40 h – 14:00 h	Lunch break
14:00 h – 15:30 h	Poster session I
15:30 h – 16:00 h	Coffee break
Chair: Frank Gießelmann	
16:00 h – 16:20 h	Alfred Saupe Prize ceremony, Patron: Brigitte Saupe
16:20 h – 16:50 h	I-04. Pawel Pieranski: Flexo-electricity and electro-osmosis in the dowser texture
16:55 h – 17:15 h	O-15. Nikolay Popov: Shell- and tube-shaped elastomeric liquid crystal actuators
17:20 h – 17:40 h	O-16. Zoey Davidson: Electromechanical actuation of liquid crystal elastomer muscles
17:45 h – 18:05 h	O-17. Andreas M. Menzel: Self-propelled microswimmers in liquid crystals and dynamic liquidcrystalline order in microswimmer suspensions
18:15 h – 19:15 h	Annual meeting of the German Liquid Crystal Society
20:00 h – 22:00 h	Conference dinner (Aspethera Hotel)

Friday, 29 March, 2019	
09:00 h – 10:30 h	Poster session II
10:30 h – 11:00 h	Coffee break
Chair: Jürgen Schmidtke	
11:00 h – 11:30 h	I-05. Ewa Górecka: Multilevel chirality of liquid crystalline structures made of achiral molecules
11:35 h – 11:55 h	O-18. Matthias Bremer: Synthesis of 7,7’-disubstituted 2,2’-methylenedioxy-1,1’-binaphthyls: Powerful chiral inducers in nematic liquid crystals
12:00 h – 12:20 h	O-19. Harald Pleiner: Dissipative or reversible contributions to macroscopic dynamics? The role of time-reversal symmetry and entropy production
12:25 h – 12:45 h	O-20. Lawrence W. Honaker: Microfluidic wet-spinning of core-sheath elastomer-liquid crystal fibers
12:50 h – 13:10 h	O-21. Kirsten Harth: Wrinkling of freely floating smectic bubbles
Chair: Heinz Kitzerow	
13:15 h	Young Researchers Award
13:30 h	End of the meeting

Invited Lectures

No.	Authors and Title	Abstract: Page
I-01	Pawel Perkowski: Dielectric spectroscopy of the chiral smectic phases. How does the racemization process influence the dielectric response of the anticlinic smectics?	
I-02	Peter Collings: Chromonic Liquid Crystals: Always Dynamic and Almost Always Chiral	
I-03	Lech Longa: Chiral symmetry breaking in nematics	
I-04	Pawel Pieranski: Flexo-electricity and electro-osmosis in the dowser texture	
I-05	Ewa Górecka: Multilevel chirality of liquid crystalline structures made of achiral molecules	

Contributed Lectures

No.	Authors and Title	Abstract: Page
O-01	Korinna Bader and Sabine Laschat: De Vries like Ionic Liquid Crystals with a Fluorenone Core	
O-02	C. Haege, S. Jagiella and F. Giesselmann: Molecular Electron Density Distribution and the X-Ray Diffraction Patterns of Liquid Crystals – A Simulation Study	
O-03	Matthias Wagner, Marco Poppe, Silvio Poppe, Feng Liu, and Carsten Tschierske: New complex mesophases of Star-Shaped Bolapolyphiles	
O-04	Bingru Zhang, Kevin Martens, Luisa Kneer, Timon Funck, Susanne Kempter, Jürgen Schmidtke, Tim Liedl, and Heinz-S. Kitzerow: DNA nanocomposite with lyotropic chromonic liquid crystal	
O-05	Katja Steck, Jan H. van Esch, David K. Smith, and Cosima Stubenrauch: Tuning gelled lyotropic liquid crystals – the influence of different low molecular weight gelators on the phase diagram of the system H2O/NaCl – Genapol LA070	
O-06	Christoph Klopp, Torsten Trittel, Kirsten Harth, Alexey Eremin and Ralf Stannarius: Self-organized lattices and coalescence of droplets in freely suspended liquid crystal films	

O-07	Johanna R. Bruckner, Ann-Katrin Beurer, Yvonne Traa, and Frank Giesselmann: Mesoporous materials produced by lyotropic liquid crystal templating	
O-08	M. Kurachkina, A. Eremin, M. Alaasar, and C. Tschierske: Peculiarities of elastic and polar dynamic properties of photoswitchible bent-core mesogens	
O-09	Atefeh Habibpourmoghadam, Alexander Lorenz: Simulations of localized defect formation in hybridized LC test cells addressed via photovoltaic fields	
O-10	Mark Busch, Kathrin Sentker, Andriy V. Kityk, and Patrick Huber: Liquid-Crystal-Infused Nanoporous Solids as Photonic Metamaterials	
O-11	Meenu Murali, Hakam Agha and Giusy Scalia: Vertical interconnects of networks of carbon nanotubes in liquid crystals	
O-12	Marco Saccone, Michael Pfletscher, Ronald Y. Dong, Carl A. Michal, and Michael Giese: Stabilization of liquid crystalline Blue Phases by hydrogen bonding	
O-13	Gaby Nordendorf, Philipp Braeuninger-Weimer, Stephan Hofmann, Timothy Wilkinson: Polarizing optical microscopy of liquid crystals in samples with large graphene islands	
O-14	Moritz Dechant, Matthias Lehmann: Filled liquid crystals – A general concept for the formation of donor-acceptor materials	
O-15	Nikolay Popov, Venkata Subba Rao Jampani, Jan Lagerwall: Shell- and Tube-Shaped Elastomeric Liquid Crystal Actuators	
O-16	Zoey S. Davidson, Hamed Shahsavan, Yubing Guo, Lindsey Hines, Yu Xia, Shu Yang, Metin Sitti: Electromechanical actuation of liquid crystal elastomer muscles	
O-17	Andreas M. Menzel, Christian Hoell, Abdallah Daddi-Moussa-Ider, and Hartmut Löwen: Self-propelled microswimmers in liquid crystals and dynamic liquidcrystalline order in microswimmer suspensions	
O-18	Matthias Bremer, Christian Kühn, and Peter R. Schreiner: Synthesis of 7,7'-Disubstituted 2,2'-Methylenedioxy-1,1'-binaphthyls: Powerful Chiral Inducers in Nematic Liquid Crystals	
O-19	H. Pleiner, D. Svenšek, and H. R. Brand: Dissipative or Reversible Contributions to Macroscopic Dynamics? The Role of Time-reversal Symmetry and Entropy Production	
O-20	Lawrence W. Honaker, Shameek Vats, Manos Anyfantakis, and Jan P.F. Lagerwall: Microfluidic Wet-Spinning of Core-Sheath Elastomer-Liquid Crystal Fibers	
O-21	Kirsten Harth,Torsten Trittel, Kathrin May, and Ralf Stannarius: Wrinkling of Freely Floating Smectic Bubbles	

Poster Presentations

No.	Authors and Title	Abstract: Page
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P-02	Heiner Detert, Daniel Limbach, Natalie Tober, Thorsten Rieth and Matthias Lehmann: Tangential-Radial Isomerization of Liquid-Crystalline Tristriazolotriazines	
P-03	Anna M. Risse and Jürgen Schmidtke: Probing the angular- and polarization-dependent photonic band structure of cholesteric liquid crystals by fluorescent guest molecules	
P-04	Steffen Riebe, Marco Saccone, Michael Giese, Jens Voskuhl: Towards luminescent liquid crystals based on aggregation-induced emission	
P-05	Mohamed Alaasar, Marko Prehm, Sebastian Belau, Nerea Sebastián,Margarita Kurachkina,Alexey Eremin, Changlong Chen, Feng Liu and Carsten Tschierske: Mirror Symmetry Breaking and Photoswitching of Chirality and Polarity in Bent-core Liquid Crystals	
P-06	Kathrin Sentker, Arda Yildirim, Andreas Schönhals, Sabine Laschat, and Patrick Huber: Structure and thermotropic phase behavior of a confined ionic liquid crystal forming a hexagonal columnar phase	
P-07	Matthias Spengler, Marco Saccone, Arri Priimägi, and Michael Giese: Unravelling the Impact of Halogen Bonding in Supramolecular Liquid Crystals	
P-08	Marco André Grunwald, Johannes Christian Haenle, Katharina Christina Kreß, Robert Forschner, Tobias Wöhrle, Wolfgang Frey, Frank Giesselmann, and Sabine Laschat: Novel Cyanobiphenyl Dimers with a Central Malonate Unit: Synthesis and Mesomorphic Properties	
P-09	Katharina Schmitt, Manuel M. Neidhardt and Sabine Laschat: Amino acid based ionic liquid crystals: The effect of the side chains	
P-10	Fatemeh Jahanbakhsh, Alexander Lorenz:	

	Switching Properties in Presence of Various Non-Mesogenic Building Blocks in Copolymer Network Liquid Crystals	
P-11	Chenjuan Zhang, Alexander Lorenz: Manipulation dielektrischer Fluide mit der photovoltaischen Pinzette	
P-12	Samuel L. Schafforz, Alexander Lorenz: Chiral Nematic LCs In Photovoltaic Test Cells As Canvas For Laser Patterning	
P-13	Zhen Gong, Alexander Lorenz: Polymer-Netzwerk Flüssigkristalle: Messung der dielektrischen Konstante während der Photopolymerisation	
P-14	Carolin Isenberg, Eireen B. Käkel, Tobat P. I. Saragi, Birgit Weber, Alexander Lorenz: Self-Assembled Twisted Filaments In a Conductive Copper Complex	
P-15	Nadia Kapernaum, Klaudia Opri, Eugen Wuckert, Sabine Laschat, Frank Giesselmann: Influence of the Counterion on the Structure and Stability of the Smectic C Phase in Ionic Liquid Crystals	
P-16	Sonja Dieterich, Thomas Sottmann, Sylvain Prévost and Frank Giesselmann: SANS Investigations on Gelled Lamellar Liquid Crystals	
P-17	Clarissa F. Dietrich,Thomas Sottmann, Per Rudquist and Frank Giesselmann: Spontaneous Mirror Symmetry Breaking by Small Twist Elastic Modulus in Achiral Micellar Lyotropic Liquid Crystals	
P-18	Lisa Gerbig, Matthias Lehmann: Star-shaped porphyrine-oligo(phenylenevinylene)-fullerene triads – new mesogens for organic bulk heterojunction materials?	
P-19	Florian Malotke, Michael Pfletscher, Michael Giese: Hydrogen bond-induced chiral mesophases – an investigation of supramolecular liquid crystals serving as potential photonic sensors	
P-20	Gaby Nordendorf, Samuel L. Schafforz, Eireen Käkel, Alexander Lorenz: Ellipsometric Investigation of Monolayers of Various Benzophenonesilanes	

P-21	Christina Abele and Frank Gießelmann: Structural and Dynamic Behaviour of Lyotropic Colloidal Graphene Oxide Liquid Crystals	
P-22	Lukas Pschyklenk, Katrin Schelski, Thorsten Wagner, Peter Kaul: Detection of amphetamine and furfural using chiral-nematic liquid crystals	
P-23	Natalie Tober, Thorsten Rieth, Matthias Lehmann and Heiner Detert: Tris(oxadiazolyl)triazines in contrast with Tris(oxadiazolyl)benzenes Analogous with different mesomorphic behavior	
P-24	C. Schilling, T. Wöhrle, R. Gündemir, W. Frey, F. Knecht, A. Köhn, and S. Laschat: Novel thermotropic MIDA boronate liquid crystals	
P-25	Shameek Vats, Lawrence W. Honaker, Anshul Sharma and Jan Lagerwall: Incorporating liquid crystals within textile fibers by means of co-axial electrospinning	
P-26	Meik Blanke and Michael Giese: A Systematic Approach Towards the twist-bend Nematic Phase- Breaking the Symmetry in Supramolecular Liquid Crystals	
P-27	Alexander Kappelt, Michael Pfletscher and Michael Giese: Novel Supramolecular Liquid Crystals based on Orthogonal Binding Sites	
P-28	Sebastian Marino, Nadia Kapernaum, Yannick Stöckl, Sabine Laschat, Frank Giesselmann: Smectic Clusters in the Isotropic Phase of Ionic Liquid Crystals	
P-29	Nikolai Scheuring, Matthias Lehmann: Azobenzene between two Peptide Ankers for Stimuli-Responsive Liquid Crystals – A Synthetic Challenge	
P-30	Maximilian Baumann, Matthias Lehmann: Star-shaped Trigonal Pyramidal Mesogens – formation of new polar or ferroelectric mesophases?	

P-31	Max Ebert, Sabine Laschat, Philipp Ehni, Kevin Guy, Stuart Beardsworth, Korinna Bader, Robert Forschner, Andrea Bühlmeyer, Noée Dumait, Claire Roiland, and Yann Molard: Tribenzo[18]crown-6 as building block for luminescent liquid crystalline hybrid materials	
P-32	Philipp Ehni, Sabine Laschat, Kevin Guy, Serge Paofai, Robert Forschner, Claire Roiland, Maria Amela-Cortes, Stéphane Cordier, and Y. Molard: Strongly emissive and stable hybrid mesogens on the base of [15]crown-5 derivatives	
P-33	J. Knelles, S. Beardsworth, J. Bruckner, S. Laschat, and F. Gießelmann: Tetracationic liquid crystals based on Tetraphenylethene	
P-34	T. Trittel, K. Harth, C. Klopp, A. Eremin and R. Stannarius: Marangoni flow in freely suspended smectic films	
P-35	Hannah Dengel, Matthias Lehmann: Fluorinated Porphyrins as chainless Star-Mesogens	
P-36	Martin Lambov, Matthias Lehmann: Structural Control in Supramolecular Polymers - Filling the Void of Star Mesogens with Tripeptides	
P-37	Lukas Wolfram, Victor Reshetnyak, Alexander Lorenz: Polymer Network Liquid Crystals: Experiments and Simulations	
P-38	Amine Missaoui, Kirsten Harth, Peter Salamon and Ralf Stannarius: Annihilation of Point Defect Pairs in Smectic free-standing Films	
P-39	MD Asiqur Rahman, Thuy-Kieu Truong, Ji Hyun Park, Dongseok Suh, Giusy Scalia: Carbon nanotube sheets for aligning and switching liquid crystal	
P-40	D. Chausov, A. Kurilov, A. Kazak, A. Smirnova, N. Rozkova, and N. Usol'tseva: Dielectric Properties of Liquid Crystalline Composites with Nanoscale Fragments of Graphene and Shungite Carbon	
P-41	Subrata Nath,Suraj Kumar Pathak, Joydip De, Santanu Kumar Pal and Ammathnadu S Achalkumar: Oxadiazole and Thiadiazoles based Star-shaped π-Gelators and their structure-property relationship	

P-42	Anna Margareta Risse, Roman Rennerich, Jürgen Schmidtke, Heinz Kitzerow: Performance and dynamics of a liquid crystal intensity modulator in the mid-infrared spectral range	
P-43	David Becker, Changmin Keum, Caroline Murawski, Malte C. Gather, Harald Bock and Heinz Kitzerow: Electroluminescence of a Columnar LC Studied in Different Organic Light-Emitting Diode Structures	