

## Table 12

### Publications

#### Philip J. Bos

##### Books and Chapters in Books

*Mobile Displays, Technology and Applications*, A. Bhowmik, Z. Li, P. Bos, eds., Wiley Publisher (2008).

A. Bhowmik, Z. Li, P. Bos, "Introduction to mobile display technologies" Chapter 1 in, *Mobile Displays, Technology and Applications*, A. Bhowmik, Z. Li, P. Bos, eds., Wiley Publisher (2008).

##### Peer Reviewed Journals

Y.K. Jang, P. Bos, "Universal off-axis light transmission properties of the bright state in perfectly compensated liquid crystal devices," *J. Applied Physics*, **102** (2007).

Y.K. Jang, P. Bos, "Optimization of the white state director configuration for perfectly compensated pi-cell devices," *Japanese J. Applied Physics* **46** (2007).

P. J. Bos, H. Garcia, V. Sergan, "Wide-angle achromatic prism beam steering for infrared countermeasures and imaging applications: solving the singularity problem in the two-prism design," *Optical Engineering* **46** (2007).

Y.K. Jang, P. Bos, "Comparison and analysis of off-axis color shift properties of compensated liquid crystal devices," *Japanese J. Applied Physics* **46** (2007).

C. Chen and P. Bos, "Anchoring transitions of liquid crystals on SiO<sub>x</sub>," *Liquid Crystals* **35** (2008).

##### Conference Proceedings and Technical Reports

M. Dorjgotov, P. Bos, "Liquid crystal etalon device for reflective displays," *Society for Information Display 2008 International Symposium, Digest of Technical Papers*, **XXXIX**, p. 568-571.

M. Reznikov, B. Wall, M. Handschy, P. Bos, "Mono domain alignment of the SmC liquid crystalline phase for analog display applications," *Society for Information Display 2008 International Symposium, Digest of Technical Papers*, **XXXIX**, p. 1811-1814.

Y. Huang, K.H. Kim, J.K Jang, H.S Kim, P. Bos, "Dynamic simulation of Pi-cell liquid crystal displays with transverse field," *Society for Information Display 2008 International Symposium, Digest of Technical Papers*, **XXXIX**, p.1865-1869.

#### Liang-Chy Chien

##### Books and Chapters in Books

*Emerging Liquid Crystal Technologies III*, L.C. Chien, Proceeding of SPIE Vol. 6911, 2008.

L.C. Chien, C.O. Catanescu, L. Li, "Spatially-ordered polymers self-assembled in ordered liquid crystal templates," in *Crosslinked Liquid Crystalline Systems: From Rigid*

*Polymer Networks to Elastomers*, D. Broer, G.P. Crawford, and S. Zumer, eds., Taylor and Francis. (2009).

#### Peer Reviewed Journals

S.-Y. Lu, L.-C. Chien, "A polymer-stabilized single layer color cholesteric liquid crystal display with anisotropic reflection," *Appl. Phys. Lett.* **91**, 131119-131119-3 (2007).

S.-Y. Lu, L.-C. Chien, "Carbon nanotube doped liquid crystal OCB cells: physical and electro-optical properties," *Optics Express* **16**, 12777-12785 (2008).

N. Kim, J. Choi, L.-C. Chien, T. Kyu, "Phase equilibrium of mixture of side-chain liquid crystalline polymer and low molecular mass liquid crystal," *Macromolecules* **40**, 9582-9589 (2008).

#### Conference Proceedings and Technical Reports

S.-Y. Lu, Y.-H. Lin, L.-C. Chien, "Single-layer color cholesteric liquid crystal displays," *IMID 07 Digest*, 982-985 (2007).

J.Y. Hwang, H. Wonderly, L.-C. Chien, "Liquid crystal alignment on the inkjet printed polyimide by using new alignment method," *IMID 07 Digest*, 506-508 (2007).

M.-H. Lee, H.J. Choi, K.-U. Jeong, L.-C. Chien, "A photochromic main-chain liquid crystalline polymer and its photo-stimulated actuating properties," *SPIE* **6911**, 69110B-1-69110B-4 (2008).

L. Li, C.O. Catanescu, L.-C. Chien, "Dynamics of phase separation and morphology of polymer stabilized liquid crystals," *SPIE* **6911**, 69110L-1-69110L-8 (2008).

J.-Y. Hwang, L.-C. Chien, "Alignment of liquid crystal with inkjet printed polyimide for flexible liquid crystal displays," *SID 08 Digest*, 1801-1803 (2008).

S.-Y. Lu, L.-C. Chien, "Carbon nanotube doped liquid crystal OCB cells: dielectric and electro-optical properties," *SID 08 Digest*, 1853-1856 (2008).

### **Daniele Finotello**

#### Conference Proceedings and Technical Reports

L. Tortora, H.-S. Park, K. Antion, D. Finotello, O.D. Lavrentovich, "Lyotropic chromonic liquid crystals as materials for optical and biosensing applications," *Proceedings of SPIE* **6487**, p. 6487OI-1-6487OI-15 (2007).

H.-S. Park, L. Tortora, R.M. Vasyuta, A.B. Golovin, D. Finotello, O.D. Lavrentovich, "Lyotropic chromonic liquid crystals: effects of additives and optical applications," International Meeting on Informational Displays, Digest, p. 307-310 (2007).

### **Antal Jákli**

#### Peer Reviewed Journals

E. Dorjgotov, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, A. Jákli, "Viscosities of a bent-core nematic liquid crystal," *Liq. Cryst.* **35**, No. 2, 149-155 (2008).

C. Bailey, A. Jákli, “The role of molecular shape on bent-core smectic structure,” *Phys. Rev. Lett.* **99**, 207801 (2007).

A. Jákli, J. Harden, C. Notz, C. Bailey, “Piezoelectricity of phospholipids: A possible mechanism for mechano-, and magneto-receptions in biology,” *Liq. Cryst.* **35** (4), 395-400 (2008). Preprint posted in *electronic-Liquid Crystal Communications*, [http://www.elc.org/docs/2007\\_04\\_09\\_12\\_01\\_56](http://www.elc.org/docs/2007_04_09_12_01_56).

L. Li, S-W Kang, J. Harden, Q. Sun, X. Zhou, L. Dai, A. Jákli, S. Kumar, Q. Li, “Bio-inspired light-harvesting liquid crystalline porphyrins for organic photovoltaics,” *Liq. Cryst.* **35** (3), 233-239 (2008).

D. Wiant, K. Neupane, S. Sharma, A. Jákli, J.T. Gleeson, S. Sprunt, “Observation of a possible tetrahedric phase in bent-core liquid crystals,” *Phys. Rev. E* **77**, 061701 (2008).

G.G. Nair, C.A. Bailey, S. Taushanoff, K. Fodor-Csorba, A. Vajda, Z. Varga, A. Bóta, A. Jákli, “Electrically tunable color using mixtures of bent-core and rod-shape molecules,” DOI: 10.1002/adma.200800067, *Advanced Materials* 9999, 1-5 (2008).

#### Conference Proceedings and Technical Reports

A. Jákli, M. Chambers, J. Harden, M. Majumdar, R. Teeling, J. Kim Q. Li, G.G. Nair, N. Éber, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, “Extraordinary properties of nematic phases of bent-core liquid crystals,” *Proc. of SPIE* (Society of Optical Engineers), **6911**, 5 (2008).

K. Fodor-Csorba, A. Jákli, A. Eremin, V. Hamplova, M. Kaspar, V. Novotna, M. Kohout, K. Gomola, D. Pochiecha, A. Vajda, C.A. Veracini, G. Galli, “Chiral and achiral banana shaped liquid crystals: synthesis and characterization,” p15-18, Abstracts of 36<sup>th</sup> German Topical Meeting on Liquid Crystals, Arbeitstagung Flüssigkristalle, Magdeburg, March 12-14 (2008).

C.A. Bailey, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, A. Jákli, “Properties of bent-core isotropic fluids,” p:25-28 (I-5) Abstracts of 36<sup>th</sup> German Topical Meeting on Liquid Crystals, Arbeitstagung Flüssigkristalle, Magdeburg, March 12-14 (2008).

### **Jack R. Kelly**

#### Peer Reviewed Journals

O.P. Pishnyak, S. Tang, J.R. Kelly, S.V. Shiyakovskii, O.D. Lavrentovich, “Levitation, lift and bidirectional motion of colloidal particles in an electrically-driven nematic liquid crystal,” *Phys. Rev. Lett.* **99**, 127802 (2007).

### **Satyendra Kumar**

#### Peer Reviewed Journals

X. Zhou, S. Kang, S. Kumar, R. Kulkar, S. Z. D. Cheng, Q. Li, “Self-assembly of porphyrin and fullerene supramolecular complex into highly ordered nanostructure by thermal annealing,” *Chemistry of Materials* **20**, 3551-3553 (2008).

L. Li, S. Kang, J. Harden, Q. Sun, X. Zhou, L. Dai, A. Jákli, S. Kumar, Q. Li, "Nature inspired light-harvesting liquid crystalline porphyrins for organic photovoltaics," *Liquid Crystals* **35**, 233-239 (2008).

S. Kang, Q. Li, B. D. Chapman, R. Pindak, J. O. Cross, L. Li, M. Nakata, S. Kumar, "Micro-focus x-ray diffraction study of the columnar phase of porphyrin-based mesogens," *Chemistry of Materials* **19**, 5657-5663 (2007).

### **Oleg D. Lavrentovich**

#### Books and Chapters in Books

Y. Yin, S.V. Shiyankovskii, O. D. Lavrentovich, "Fast switching of nematic liquid crystals by an electric field: effects of dielectric relaxation on the director and thermal dynamics," Chapter 10 in, *Thermotropic Liquid Crystals*, A. Ramamoorthy, ed., Springer, Dordrecht Publishers: The Netherlands, ISBN 978-1-4020-5327-6, pp. 277-295 (2007).

#### Peer Reviewed Journals

O.P. Pishnyak, S. Tang, J.R. Kelly, S.V. Shiyankovskii, O.D. Lavrentovich, "Levitation, lift and bidirectional motion of colloidal particles in an electrically-driven nematic liquid crystal," *Phys. Rev. Lett.* **99**, 127802 (2007).

B.G. Saar, H.-S. Park, X.S. Xie, O.D. Lavrentovich, "Three-dimensional imaging of chemical bond orientation in liquid crystals by coherent anti-Stokes Raman scattering microscopy," *Optics Express* **15**, 13585-13596 (2007).

D.K. Yoon, M.C. Choi, Y.H. Kim, M.W. Kim, O.D. Lavrentovich, H.T. Jung, "Internal structure visualization and lithographic use of periodic toroidal holes in liquid crystals," *Nature Materials* **6**, 866-870 (2007).

M. Gu, Y. Yin, S.V. Shiyankovskii, O.D. Lavrentovich, "Effects of dielectric relaxation on the director dynamics of uniaxial nematic liquid crystals," *Phys. Rev. E.* **76**, 061702 (2007).

K.V. Kaznatcheev, P. Dudin, O.D. Lavrentovich, A.P. Hitchcock, "X-ray microscopy study of chromonic liquid crystal dry film texture," *Phys. Rev. E.* **76**, 061703 (2007).

S.V. Shiyankovskii, A.B. Golovin, Y. Yin, O.D. Lavrentovich, "Effects of dielectric relaxation on the dynamics and dielectric heating of nematic liquid crystals," *Mol. Cryst. Liquid Crystals* **480**, 111-128 (2008).

M. Gu, Y. Yin, S.V. Shiyankovskii, O.D. Lavrentovich, "Polarity-dependent dielectric torque in nematic liquid crystals," *Phys. Rev. Lett.* **100**, 237801 (2008).

#### Conference Proceedings and Technical Reports

L. Tortora, H.-S. Park, K. Antion, D. Finotello, O.D. Lavrentovich, "Lyotropic chromonic liquid crystals as materials for optical and biosensing applications," *Proceedings of SPIE* **6487**, p. 6487OI-1-6487OI-15 (2007).

H.-S. Park, L. Tortora, R.M. Vasyuta, A.B. Golovin, D. Finotello, O.D. Lavrentovich, "Lyotropic chromonic liquid crystals: effects of additives and optical applications," International Meeting on Informational Displays, Digest, p.307-310 (2007).

## Quan Li

### Books and Chapters in Books

Q. Li, J.M. El Khoury, X. Zhou, A. Urbas, L. Qu, L. Dai, "Synthesis of the thiol surfactant with tunable length as a stabilizer of gold nanoparticles," Chapter 4 in, *Nanoparticles: Synthesis, Passivation, Stabilization, and Functionalization*, R. Nagarajan and T. A. Hatton, eds., Oxford University Press (2008, ISBN 978-0-8412-6969-9).

### Peer Reviewed Journals

X. Zhou, S. Kang, S. Kumar, R. Kulkar, S.Z.D. Cheng, Q. Li, "Self-assembly of porphyrin and fullerene supramolecular complex into highly ordered nanostructure by thermal annealing," *Chemistry of Materials* **20**, 3551-3553 (2008).

L. Li, S. Kang, J. Harden, Q. Sun, X. Zhou, L. Dai, A. Jákli, S. Kumar, Q. Li, "Nature inspired light-harvesting liquid crystalline porphyrins for organic photovoltaics," *Liquid Crystals* **35**, 233-239 (2008).

Q. Li, L. Green, N. Venkataraman, I. Shiyankovskaya, A. Khan, A. Urbas, J.W. Doane, "Reversible photoswitchable axially chiral dopants with high helical twisting power," *Journal of the American Chemical Society* **129**, 12908-12909 (2007).

Q. Sun, L. Dai, X. Zhou, L. Li, Q. Li, "Bilayer- and bulk-heterojunction solar cells using liquid crystalline porphyrins as donors by solution processing," *Applied Physics Letters* **91**, 253505/1-253505/3 (2007).

C.V. Yelamaggad, I. Shashikala, Q. Li, "Liquid crystal trimers composed of banana-shaped and rod-like anisometric segments: synthesis and characterization," *Chemistry of Materials* **19**, 6561-6568 (2007).

S. Kang, Q. Li, B.D. Chapman, R. Pindak, J.O. Cross, L. Li, M. Nakata, S. Kumar, "Micro-focus X-ray diffraction study of the columnar phase of porphyrin-based mesogens," *Chemistry of Materials* **19**, 5657-5663 (2007).

X. Zhou, T. Narayanan, Q. Li, "New mesogen with thermotropic cubic phase: 3,4,5-Tris-(11,11,12,12,13,13,14,14,15,15,16,16-tridecafluoro-hexadecyloxy)-benzoic acid," *Liquid Crystals* **34**, 1243-1248 (2007).

### Conference Proceedings and Technical Reports

L. Green, X. Zhou, Q. Li, "Liquid crystals: from photodisplays to organic photovoltaics," Abstracts, 40th Central Regional Meeting of the American Chemical Society, Columbus, OH, CRM-449 (2008).

E. Montbach, N. Venkataraman, A. Khan, I. Shiyankovskaya, T. Schneider, J.W. Doane, L. Green, Q. Li, "Novel optically addressable photochiral displays," *2008 Society for Information Display*, 60.2.

A. Jákli, M. Chambers, J. Harden, M. Madhabi, R. Teeling, J. Kim, Q. Li, G. Nair, N. Eber, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, “Extraordinary properties of nematic phases of bent-core liquid crystals,” *Proceedings of SPIE* (2008).

Q. Li, L. Green, L. Li, J. Kim, “Synthesis of novel reversible photoswitchable chiral dopants with unusually high helical twisting power”, Abstracts of Papers, 234th ACS National Meeting, Boston, MA, ORGN-356 (2007).

Q. Li, J.M. El Khoury, X. Zhou, “Synthesis of thiol monolayer-protected gold nanorods”, Abstracts of Papers, 234th ACS National Meeting, Boston, MA, COLL-100 (2007).

R.R. Kulkarni, Q. Li, K.U. Jeong, M. Durstock, B.L. Farmer, F.W. Harris, S.Z.D. Cheng, “Structure and morphology of porphyrin based discotic liquid crystals”, Abstracts of Papers, 234th ACS National Meeting, Boston, MA, PMSE-236 (2007).

### **Peter Palfy-Muhoray**

#### Peer Reviewed Journals

P. Palfy-Muhoray, “Comment on: ‘Intense nonlinear magnetic dipole radiation at optical frequencies: molecular scattering in a dielectric liquid’,” *Phys. Rev. Lett.* 18, **99**, 189401, November (2007).

P. Palfy-Muhoray, “The diverse world of liquid crystals”, *Physics Today*, 54-60, September (2007).

### **Jonathan Selinger**

#### Peer Reviewed Journals

E.V. Timofeeva, A.N. Gavrilov, J.M. McCloskey, Y.V. Tolmachev, S. Sprunt, L.M. Lopatina, J.V. Selinger, “Thermal conductivity and particle agglomeration in alumina nanofluids: experiment and theory,” *Phys. Rev. E* **76**, 061203 (2007).

#### Conference Proceedings and Technical Reports

R.L.B. Selinger, B.L. Mbanda, J.V. Selinger, “Modeling liquid crystal elastomers: actuators, pumps, and robots,” *SPIE Proceedings* **6911** (2008).

### **Robin Selinger**

#### Conference Proceedings and Technical Reports

R.L.B. Selinger, B.L. Mbanda, J.V. Selinger, “Modeling liquid crystal elastomers: actuators, pumps, and robots,” *SPIE Proceedings* **6911** (2008).

### **Samuel Sprunt**

#### Peer Reviewed Journals

E. Dorjgotov, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, A. Jákli, “Viscosities of a bent-core nematic liquid crystal,” *Liq. Cryst.* **35**, 2, 149–155 (2008).

D. Wiant, K. Neupane, S. Sharma, A. Jákli, J. T. Gleeson, S. Sprunt, “Observation of a possible tetrahedric phase in bent-core liquid crystals,” *Phys. Rev.E* **77**, 061701 (2008).

E.V. Timofeeva, A.N. Gavrilov, J.M. McCloskey, Y.V. Tolmachev, S. Sprunt, L.M. Lopatina, J.V. Selinger, "Thermal conductivity and particle agglomeration in alumina nanofluids: experiment and theory," *Phys. Rev. E* **76**, 061203 (2007).

#### Conference Proceedings and Technical Reports

A. Jákli, M. Chambers, J. Harden, M. Majumbar, R. Teeling, J. Kim, Q. Li, G.G. Nair, N. Éber, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, "Extraordinary properties of nematic phases of bent-core liquid crystals," *Proc. of SPIE (Society of Optical Engineers)*, **6911**, 5 (2008).

C.A. Bailey, K. Fodor-Csorba, J.T. Gleeson, S. Sprunt, A. Jákli, "Properties of bent-core isotropic fluids," p:25-28 (I-5) Abstracts of 36<sup>th</sup> German Topical Meeting on Liquid Crystals, Arbeitstagung Flüssigkristalle, Magdeburg, March 12-14 (2008).

### **Qi-Huo Wei**

#### Peer Reviewed Journals

B.P. Joshi, Q.H. Wei, "Cavity resonances of metal-dielectric-metal nanoantennas," *Optics Express* **16**, 10315(2008).

F.S. Zhou, Q.H. Wei, "Scaling laws for nanoFET sensors," *Nanotechnology* **19**, 015504 (2008).

### **John L. West**

#### Peer Reviewed Journals

E.A. Büyüktanir, K. Zhang, A. Gericke, J.L. West, "Raman imaging of nematic and smectic liquid crystals," *Molecular Crystals & Liquid Crystals* **487**, 39-51 (2008).

### **Deng-Ke Yang**

#### Books and Chapters in Books

D.-K. Yang, "Reflective cholesteric liquid crystal displays," Chapter 16 in, *Mobile Displays*, A. Bhowmik, Z. Li, P. J. Bos, eds., John Wiley & Sons, Ltd., (2008), 443-466, Invited.

#### Peer Reviewed Journals

D.-K. Yang, Y. Yin, H. Liu, "Nematic-isotropic phase transition of binary liquid crystal mixtures," *Liquid Crystal* **34**, 605 (2007).

D.-K. Yang, K.-U. Jeong, S.Z.D. Cheng, "Structure of liquid crystal droplets with chiral propeller texture," *J. Phys. Chem. B*, **112**; 1358-1366 (2008).

D.-K. Yang, "Review of operating principle and performance of polarizer free reflective liquid-crystal displays," *J. Soc. Information. Display* **16**, 117 (2008).

#### Conference Proceedings

S. Hurley, D.-K. Yang, J. Shi, C. Mullin, "A systematic optimization of normal-white STN-LCDs," *SID Intl Symp. Digest Tech. Papers*, **XXXVIII**, 475-478 (2007).

Y.-C. Yang, D.-K. Yang, "Achromatic reduction of off axis light leakage in LCDs by self-compensated phase retardation (SPR) film," *SID Intl Symp. Digest Tech. Papers*, **XXXIX**, 1955-1958 (2008).



Distinguished Visiting Chair. Email: This email address is being protected from spambots. You need JavaScript enabled to view it.  
Telephone: +886-2-2787-1254. [ CV ]. EDUCATION AND POSITIONS HELD: 2009-present Distinguished Research Fellow, Genomics Research Center, Academia Sinica, Taiwan. 2009-2015 Chief Executive Officer, Biotechnology Incubation Center, Genomics Research Center, Academia Sinica, Taiwan. 2009-2013 Director, Office of Public Affairs, Academia Sinica, Taiwan. Huang Liang-chi (Chinese: 黃亮奇; born 8 March 1992) is a Taiwanese tennis player playing on the ATP Challenger Tour. On 11 August 2014, he reached his highest ATP singles ranking of 172 and his highest doubles ranking of 223 achieved on 22 October 2012. Huang Liang-chi at the Association of Tennis Professionals. Huang Liang-chi at the International Tennis Federation. Liang Chi is a leading cooling tower manufacturer in the world, with 50 years experiences in the cooling tower industry, our cooling tower products are widely used in the industries and received high reputation. Liang Chi devotes to produce quality, service and innovation. Currently we have five factories in China, one in Taiwan, Thailand, Vietnam, Philippines, and Indonesia.