

**Prof Cees Bastiaansen**  
BSc, PhD

School of Engineering and Materials Science  
Queen Mary University of London  
Mile End Road  
London E1 4NS

tel: +44 (0)20 7882 8865

email: c.w.m.bastiaansen@qmul.ac.uk web: www.sems.qmul.ac.uk/c.w.m.bastiaansen

---

## 2019

**Transparent, High-Thermal-Conductivity Ultradrawn Polyethylene/Graphene Nanocomposite Films.**

Pan X, Shen L, Schenning APHJ and Bastiaansen CWM. *Advanced Materials* vol. 31, (40). Wiley.

**Transparent, Lightweight, and High Strength Polyethylene Films by a Scalable Continuous Extrusion and Solid-State Drawing Process.**

Lin Y, Tu W, Verpaalen RCP, Zhang H, Bastiaansen CWM and Peijs T. *Macromolecular Materials and Engineering*.

**Glass-like transparent high strength polyethylene films by tuning drawing temperature.**

LIN Y, Patel R, CAO J, TU W, ZHANG H, BILOTTI E, BASTIAANSEN C and PEIJS AA. *Polymer* vol. 171, 180-191. Elsevier.

**Rewritable Optical Patterns in Light-Responsive Ultrahigh Molecular Weight Polyethylene.**

Lafleur SSD, Severn JR, Verpaalen RCP, Schenning APHJ and Bastiaansen CWM. *Acs Applied Polymer Materials* vol. 1, (3) 392-396. American Chemical Society.

**Optical patterns on drawn polyethylene by direct laser writing.**

BASTIAANSEN CWM. *Journal of Communication. Oxford University Press (Oup)*.

**Rheological properties of bimodal polyethylenes produced with silica nanoparticle supported catalysts.**

Liu H, Troisi EM, Goossens JGP, Severn JR and Bastiaansen CWM. *Journal of Applied Polymer Science* vol. 136, (21). Wiley.

## 2018

**Programmable helical twisting in oriented humidity-responsive bilayer films generated by spray-coating of a chiral nematic liquid crystal.**

Verpaalen RCP, Debije MG, Bastiaansen CWM, Halilović H, Engels TAP and Schenning APHJ. *Journal of Materials Chemistry A* vol. 6, (36) 17724-17729. Royal Society of Chemistry.

**Tailored bimodal ultra-high molecular weight polyethylene particles.**

Lafleur S, Berthoud R, Ensink R, Cordier A, De Cremer G, Philippaerts A, Bastiaansen K, Margossian T and Severn JR. *Journal of Polymer Science Part a: Polymer Chemistry* vol. 56, (15) 1645-1656. Wiley.

**PA6 nanofibre production: A comparison between rotary jet spinning and electrospinning.**

Rogalski JJ, Bastiaansen CWM and Peijs T. *Fibers* vol. 6, (2). Mdpi Ag.

**Drawing behavior and mechanical properties of ultra-high molecular weight polyethylene blends with a linear polyethylene wax.**

Shen L, Severn J and Bastiaansen CWM. *Polymer* vol. 153, 354-361. Elsevier.

## 2017

**Degradation and biocompatibility of photoembossed PLGA-acrylate blend for improved cell adhesion.**

Hughes-Brittain NF, Qiu L, Wang W, Peijs T and Bastiaansen CWM. *J Biomed Mater Res B Appl Biomater* vol. 106, (1) 163-171.

**Surface micropatterning of uniaxially oriented polyethylene films using interference holography for strain sensors.**

Shen L, Lafleur SSD, Houben SJA, Murphy JN, Severn JR and Bastiaansen CWM. *Langmuir: The Acs Journal of Surfaces and Colloids* vol. 33, (51) 14592-14598. American Chemical Society.

**Rotary jet spinning review-a potential high yield future for polymer nanofibers.**

Rogalski JJ, Bastiaansen CWM and Peijs T. *Nanocomposites* vol. 3, (4) 97-121.

**Photonic Shape Memory Polymer with Stable Multiple Colors.**

Moirangthem M, Engels TAP, Murphy J, Bastiaansen CWM and Schenning APHJ. *Acs Applied Materials and Interfaces* vol. 9, (37) 32161-32167. American Chemical Society.

**Surface texturing of electrospun fibres by photoembossing using pulsed laser interference holography and its effects on endothelial cell adhesion.**

Hughes-Brittain NF, Qiu L, Picot OT, Wang W, Peijs T and Bastiaansen CWM. *Polymer (United Kingdom)* vol. 125, 40-49.

**Improving Visible-Light Transparency of Drawn Melt-Crystallized Linear Polyethylenes: Influence of Molecular Weight Distribution.**

Shen L, Severn J and Bastiaansen CWM. *Macromolecular Materials and Engineering* vol. 302, (6).

**New Insights into the regulation of cell-surface signaling activity acquired from a mutagenesis screen of the *Pseudomonas putida* IutY sigma/anti-sigma factor.**

Bastiaansen KC, Civantos C, Bitter W and Llamas MA. *Frontiers in Microbiology* vol. 8, (MAY).

**Bimodal Ultrahigh Molecular Weight Polyethylenes Produced from Supported Catalysts: The Challenge of Using a Combined Catalyst System.**

Liu H, Bastiaansen CWM, Goossens JGP, Schenning APHJ and Severn JR. *Macromolecular Chemistry and Physics* vol. 218, (5).

**Switchable surface structured hydrogel coatings.**

Kommeren S, Dongmo J and Bastiaansen CWM. *Soft Matter* vol. 13, (11) 2239-2245. Royal Society of Chemistry.

**Chiral nematic liquid crystalline sensors containing responsive dopants.**

Cachelin P and Bastiaansen CWM. *Liquid Crystal Sensors*.

## 2016

**Fabrication and properties of poly(tetrafluoroethylene) nanofibres via sea-island spinning.**

Zhang Z, Tu W, Peijs T and Bastiaansen CWM. *Polymer (United Kingdom)* vol. 109, 321-331.

**Responses of Vascular Endothelial Cells to Photoembossed Topographies on Poly(Methyl Methacrylate) Films.**

Qiu L, Hughes-Brittain NF, Bastiaansen CWM, Peijs T and Wang W. *J Funct Biomater* vol. 7, (4).

**Electrospinning of reactive mesogens.**

Yao J, Picot OT, Hughes-Brittain NF, Bastiaansen CWM and Peijs T. *European Polymer Journal* vol. 84, 642-651.

**Diffraction flat panel solar concentrators of a novel design.**

De Jong TM, De Boer DKG and Bastiaansen CWM. *Optics Express* vol. 24, (14) A1138-A1147.

**Improving the Transparency of Ultra-Drawn Melt-Crystallized Polyethylenes: Toward High-Modulus/High-Strength Window Application.**

Shen L, Nickmans K, Severn J and Bastiaansen CWM. *Acs Appl Mater Interfaces* vol. 8, (27) 17549-17554.

**Polarization-Selective Patterning in an Anisotropic Smectic B Film.**

Van MP, Bastiaansen CWM and Broer DJ. *Advanced Optical Materials* vol. 4, (5) 677-681.

**Optical Acetone Vapor Sensors Based on Chiral Nematic Liquid Crystals and Reactive Chiral Dopants.**

Cachelin P, Green JP, Peijs T, Heeney M and Bastiaansen CWM. *Advanced Optical Materials* vol. 4, (4) 592-596.

**Tunable surface topography in fluoropolymers using photo-embossing.**

Kommeren S, Sullivan T and Bastiaansen CWM. *Rsc Advances* vol. 6, (73) 69117-69123.

**Ligand exchange as a tool to improve quantum dot miscibility in polymer composite layers used as luminescent down-shifting layers for photovoltaic applications.**

Draaisma GJJ, Reardon D, Schenning APHJ, Meskers SCJ and Bastiaansen CWM. *Journal of Materials Chemistry C* vol. 4, (24) 5747-5754.

## 2015

**Electrospinning of p-Aramid Fibers.**

Yao J, Jin J, Lepore E, Pugno NM, Bastiaansen CWM and Peijs T. *Macromolecular Materials and Engineering* vol. 300, (12) 1238-1245.

**High-performance electrospun co-polyimide nanofibers.**

Yao J, Pantano MF, Pugno NM, Bastiaansen CWM and Peijs T. *Polymer* vol. 76, 105-112.

**High performance co-polyimide nanofiber reinforced composites.**

Yao J, Li G, Bastiaansen CWM and Peijs T. *Polymer* vol. 76, 46-51.

**Enhanced lithographic resolution using longitudinal polarization state of light.**

Van MP, Ushakova K, Bastiaansen CWM, Pereira SF, Urbach HP and Broer DJ. *Journal of Micro/Nanolithography, Mems, and Moems* vol. 14, (4).

**Stimuli-responsive materials based on interpenetrating polymer liquid crystal hydrogels.**

Stumpel JE, Gil ER, Spoelstra AB, Bastiaansen CWM, Broer DJ and Schenning APHJ. *Advanced Functional Materials* vol. 25, (22) 3314-3320.

**Electrospinning of p-Aramid Fibers.**

Yao J, Jin J, Lepore E, Pugno NM, Bastiaansen CWM and Peijs T. *Macromolecular Materials and Engineering*.

## 2014

**Chiral-nematic liquid crystals as one dimensional photonic materials in optical sensors.**

Mulder DJ, Schenning APHJ and Bastiaansen CWM. *Journal of Materials Chemistry C* vol. 2, (33) 6695-6705.

**Humidity-responsive liquid crystalline polymer actuators with an asymmetry in the molecular trigger that bend, fold, and curl.**

De Haan LT, Verjans JMN, Broer DJ, Bastiaansen CWM and Schenning APHJ. *Journal of The American Chemical Society* vol. 136, (30) 10585-10588.

**High strength and high modulus electrospun nanofibers.**

Yao J, Bastiaansen CWM and Peijs T. *Fibers* vol. 2, (2) 158-187.

**Photoembossing of surface relief structures in polymer films for biomedical applications.**

Hughes-Brittain NF, Qiu L, Wang W, Peijs T and Bastiaansen CWM. *J Biomed Mater Res B Appl Biomater* vol. 102, (2) 214-220.

**An Optical Sensor for Volatile Amines Based on an Inkjet-Printed, Hydrogen-Bonded, Cholesteric Liquid Crystalline Film.**

Stumpel JE, Wouters C, Herzer N, Ziegler J, Broer DJ, Bastiaansen CWM and Schenning APHJ. *Advanced Optical Materials* vol. 2, (5) 459-464.

**The role of supramolecular chemistry in stimuli responsive and hierarchically structured functional organic materials.**

Schenning APHJ, Bastiaansen CMW, Broer DJ and Debije MG. *Chimica Oggi/Chemistry Today* vol. 32, (3) 78-80.

**Thermoresponsive scattering coating for smart white LEDs.**

Bauer J, Verbunt PPC, Lin WY, Han Y, Van MP, Cornelissen HJ, Yu JJH, Bastiaansen CWM and Broer DJ. *Optics Express* vol. 22, (25) A1868-A1879.

**Polarization-selective polymerization in a photo-crosslinking monomer film.**

Van MP, Schuurmans CCL, Bastiaansen CWM and Broer DJ. *Rsc Advances* vol. 4, (107) 62499-62504.

## 2013

### **A real time optical strain sensor based on a cholesteric liquid crystal network.**

Picot OT, Dai M, Billoti E, Broer DJ, Peijs T and Bastiaansen CWM. *Rsc Advances* vol. 3, (41) 18794-18798.

### **Dual waveguide patterned luminescent solar concentrators.**

Albers PTM, Bastiaansen CWM and Debije MG. *Solar Energy* vol. 95, 216-223.

### **New approach toward reflective films and fibers using cholesteric liquid-crystal coatings.**

Picot OT, Dai M, Broer DJ, Peijs T and Bastiaansen CWM. *Acs Appl Mater Interfaces* vol. 5, (15) 7117-7121.

### **Patterned silver nanoparticles embedded in a nanoporous smectic liquid crystalline polymer network.**

Dasgupta D, Shishmanova IK, Ruiz-Carretero A, Lu K, Verhoeven M, van Kuringen HPC, Portale G, Leclère P, Bastiaansen CWM, Broer DJ and Schenning APHJ. *J Am Chem Soc* vol. 135, (30) 10922-10925.

### **Phosphate starvation relayed by PhoB activates the expression of the *Pseudomonas aeruginosa* $\sigma^{vfrE}$ ECF factor and its target genes.**

Faure LM, Llamas MA, Bastiaansen KC, Bentzmann SD and Bigot S. *Microbiology (United Kingdom)* vol. 159, (PART7) 1315-1327.

### **Humidity-responsive bilayer actuators based on a liquid-crystalline polymer network.**

Dai M, Picot OT, Verjans JMN, De Haan LT, Schenning APHJ, Peijs T and Bastiaansen CWM. *Acs Applied Materials and Interfaces* vol. 5, (11) 4945-4950.

### **Engineered complex molecular order in liquid crystals towards unusual optics and responsive mechanics.**

Sánchez-Somolinos C, De Haan LT, Schenning APHJ, Bastiaansen CWM and Broer DJ. *Proceedings of Spie - The International Society For Optical Engineering* vol. 8642,.

### **A printable optical time-temperature integrator based on shape memory in a chiral nematic polymer network.**

Davies DJD, Vaccaro AR, Morris SM, Herzer N, Schenning APHJ and Bastiaansen CWM. *Advanced Functional Materials* vol. 23, (21) 2723-2727.

### **Polarization selective photoresist based on reactive liquid crystals doped with a dichroic photoinitiator.**

Van MP, Bastiaansen CWM and Broer DJ. *Proceedings of Spie - The International Society For Optical Engineering* vol. 8682,.

### **Influence of solid-state microstructure on the electronic performance of 5,11-Bis(triethylsilylethynyl) anthradithiophene.**

Yu L, Li X, Pavlica E, Koch FPV, Portale G, Da Silva I, Loth MA, Anthony JE, Smith P, Bratina G, Kjellander BKC, Bastiaansen CWM, Broer DJ, Gelinck GH and Stingelin N. *Chemistry of Materials* vol. 25, (9) 1823-1828.

### **(Photo-)thermally induced formation of dynamic surface topographies in polymer hydrogel networks.**

Liu D, Bastiaansen CWM, Den Toonder MJM and Broer DJ. *Langmuir* vol. 29, (18) 5622-5629.

### **Using lenses to improve the output of a patterned luminescent solar concentrator.**

Tsoi S, Broer DJ, Bastiaansen CWM and Debije MG. *Advanced Energy Materials* vol. 3, (3) 337-341.

### **Anisotropic wetting and de-wetting of drops on substrates patterned with polygonal posts.**

Vrancken RJ, Blow ML, Kusumaatmaja H, Hermans K, Prenen AM, Bastiaansen CWM, Broer DJ and Yeomans JM. *Soft Matter* vol. 9, (3) 674-683.

### **Single-composition three-dimensionally morphing hydrogels.**

Liu D, Bastiaansen CWM, Den Toonder MJM and Broer DJ. *Soft Matter* vol. 9, (2) 588-596.

### **Manufacturing of surface relief structures in moving substrates using photoembossing and pulsed-interference holography.**

Picot OT, Alcalá R, Sánchez C, Dai M, Hughes-Brittain NF, Broer DJ, Peijs T and Bastiaansen CWM. *Macromolecular Materials and Engineering* vol. 298, (1) 33-37.

## 2012

### **Engineering of complex order and the macroscopic deformation of liquid crystal polymer networks.**

De Haan LT, Sánchez-Somolinos C, Bastiaansen CWM, Schenning APHJ and Broer DJ. *Angewandte Chemie - International Edition* vol. 51, (50) 12469-12472.

**Surface structuring of bi-component fibres with photoembossing.**

Dai M, De Jong TM, Sánchez C, Picot OT, Broer DJ, Peijs T and Bastiaansen CWM. *Rsc Advances* vol. 2, (26) 9964-9968.

**Light-induced formation of dynamic and permanent surface topologies in chiral-nematic polymer networks.**

Liu D, Bastiaansen CWM, Den Toonder JMJ and Broer DJ. *Macromolecules* vol. 45, (19) 8005-8012.

**Increased efficiency of luminescent solar concentrators after application of organic wavelength selective mirrors.**

Verbunt PPC, Tsoi S, Debije MG, Broer DJ, Bastiaansen CWM, Lin CW and De Boer DKG. *Optics Express* vol. 20, (105) A655-A668.

**Effect of polymer binder on surface texturing by photoembossing.**

Hughes-Brittain NF, Picot OT, Dai M, Peijs T and Bastiaansen CWM. *Applied Surface Science* vol. 258, (22) 8609-8612.

**Manufacturing of fibres with new reflective properties and their application in textiles.**

Picot OT, Dai M, Peijs T and Bastiaansen CWM. *Materials Research Society Symposium Proceedings* vol. 1403, 113-118.

**Photoembossing for surface texturing of films and fibres for biomedical applications.**

Hughes-Brittain NF, Picot OT, Qiu L, Sanchez C, Peijs T and Bastiaansen K. *Materials Research Society Symposium Proceedings* vol. 1418, 127-132.

**Functional organic materials based on polymerized liquid-crystal monomers: Supramolecular hydrogen-bonded systems.**

Broer DJ, Bastiaansen CMW, Debije MG and Schenning APHJ. *Angewandte Chemie - International Edition* vol. 51, (29) 7102-7109.

**Alcohol-responsive, hydrogen-bonded, cholesteric liquid-crystal networks.**

Chang CK, Bastiaansen CMW, Broer DJ and Kuo HL. *Advanced Functional Materials* vol. 22, (13) 2855-2859.

**Discrimination of alcohol molecules using hydrogen-bridged cholesteric polymer networks.**

Chang CK, Bastiaansen CWM, Broer DJ and Kuo HL. *Macromolecules* vol. 45, (11) 4550-4555.

**Printable optical sensors based on H-bonded supramolecular cholesteric liquid crystal networks.**

Herzer N, Guneyasu H, Davies DJD, Yildirim D, Vaccaro AR, Broer DJ, Bastiaansen CWM and Schenning APHJ. *Journal of The American Chemical Society* vol. 134, (18) 7608-7611.

**Two-dimensional pH-responsive printable smectic hydrogels.**

Shishmanova IK, Bastiaansen CWM, Schenning APHJ and Broer DJ. *Chemical Communications* vol. 48, (38) 4555-4557.

**Irreversible visual sensing of humidity using a cholesteric liquid crystal.**

Saha A, Tanaka Y, Han Y, Bastiaansen CMW, Broer DJ and Sijbesma RP. *Chemical Communications* vol. 48, (38) 4579-4581.

**Photo-switchable surface topologies in chiral nematic coatings.**

Liu D, Bastiaansen CWM, Den Toonder JMJ and Broer DJ. *Angewandte Chemie - International Edition* vol. 51, (4) 892-896.

## 2011

**Formation of relief structures on fibres by photo-embossing.**

Dai M, Picot OT, Hughes-Brittain NF, Peijs T and Bastiaansen CWM. *Journal of Materials Chemistry* vol. 21, (39) 15527-15531.

**Surface-relief and polarization gratings for solar concentrators.**

De Jong TM, De Boer DKG and Bastiaansen CWM. *Optics Express* vol. 19, (16) 15127-15142.

**In-situ fabrication of polymer microsieves for ?tAS by slanted angle holography.**

Prenen AM, Knopf A, Bastiaansen CWM and Broer DJ. *Microfluidics and Nanofluidics* vol. 10, (6) 1299-1304.

## **Polymer MEMS.**

Van Oosten CL, Bastiaansen CWM and Broer DJ. *Cross-Linked Liquid Crystalline Systems: From Rigid Polymer Networks to Elastomers*.

## **2010**

### **Patterned dye structures limit reabsorption in luminescent solar concentrators.**

Tsoi S, Broer DJ, Bastiaansen CWM and Debije MG. *Opt Express vol. 18, A536-A543. Optical Soc Amer.*

### **Optical monitoring of gases with cholesteric liquid crystals.**

Han Y, Pacheco K, Bastiaansen CWM, Broer DJ and Sijbesma RP. *Journal of The American Chemical Society vol. 132, (9) 2961-2967.*

### **Fully reversible transition from wenzel to cassie-baxter states on corrugated superhydrophobic surfaces.**

Vrancken RJ, Kusumaatmaja H, Hermans K, Prenen AM, Pierre-Louis O, Bastiaansen CWM and Broer DJ. *Langmuir vol. 26, (5) 3335-3341.*

### **Effect on the output of a luminescent solar concentrator on application of organic wavelength-selective mirrors.**

Debije MG, Van MP, Verbunt PPC, Kastelijn MJ, Van Der Blom RHL, Broer DJ and Bastiaansen CWM. *Applied Optics vol. 49, (4) 745-751.*

### **Room temperature preparation of conductive silver features using spin-coating and inkjet printing.**

Valeton JJP, Hermans K, Bastiaansen CWM, Broer DJ, Perelaer J, Schubert US, Crawford GP and Smith PJ. *Journal of Materials Chemistry vol. 20, (3) 543-546.*

## **2009**

### **Azeotropic binary solvent mixtures for preparation of organic single crystals.**

Li X, Kjellander BKC, Anthony JE, Bastiaansen CWM, Broer DJ and Gelinck GH. *Advanced Functional Materials vol. 19, (22) 3610-3617.*

### **Controlling light emission in luminescent solar concentrators through use of dye molecules aligned in a planar manner by liquid crystals.**

Verbunt PPC, Kaiser A, Hermans K, Bastiaansen CWM, Broer DJ and Debije MG. *Advanced Functional Materials vol. 19, (17) 2714-2719.*

### **Photo-embossed surface relief structures with an increased aspect ratio by addition of kinetic interfering compounds.**

Perelaer J, Hermans K, Bastiaansen CWM, Broer DJ and Schubert US. *Journal of Photopolymer Science and Technology vol. 22, (5) 667-670.*

### **The effect of a scattering layer on the edge output of a luminescent solar concentrator.**

Debije MG, Teunissen JP, Kastelijn MJ, Verbunt PPC and Bastiaansen CWM. *Solar Energy Materials and Solar Cells vol. 93, (8) 1345-1350.*

### **Monodisperse, polymeric nano- and microsieves produced with interference holography.**

Prenen AM, Van der Werf JCAH, Bastiaansen CWM and Broer DJ. *Advanced Materials vol. 21, (17) 1751-1755.*

### **Nanostructured smectic networks toward integrated nanomembranes.**

Broer DJ, Luengo C, Bastiaansen CWM and Lub J. *Abstr Pap Am Chem S vol. 237,.*

### **Printed artificial cilia from liquid-crystal network actuators modularly driven by light.**

Van Oosten CL, Bastiaansen CWM and Broer DJ. *Nature Materials vol. 8, (8) 677-682.*

### **Influence of waveguide material on light emission in luminescent solar concentrators.**

Kastelijn MJ, Bastiaansen CWM and Debije MG. *Optical Materials vol. 31, (11) 1720-1722.*

## **2008**

### **Rapid, direct fabrication of antireflection-coated microlens arrays by photoembossing.**

Hermans K, Hamidi SZ, Spelstra AB, Bastiaansen CWM and Broer DJ. *Applied Optics vol. 47, (35) 6512-6517.*



**Bending dynamics and directionality reversal in liquid crystal network photoactuators.**

Van Oosten CL, Corbett D, Davies D, Warner M, Bastiaansen CWM and Broer DJ. *Macromolecules* vol. 41, (22) 8592-8596.

**Highly efficient surface relief formation via photoembossing of a supramolecular polymer.**

Hermans K, Tomatsu I, Matecki M, Sijbesma RP, Bastiaansen CWM and Broer DJ. *Macromolecular Chemistry and Physics* vol. 209, (20) 2094-2099.

**An in situ sealing method for liquid-filled micro-cavities based on photoembossing.**

Hermans K, Van Delden M, Bastiaansen CWM and Broer DJ. *Journal of Micromechanics and Microengineering* vol. 18, (9).

**Photo-embossed surface relief structures with an increased aspect ratios by addition of a reversible addition-fragmentation chain transfer agent.**

Perelaer J, Hermans K, Bastiaansen CWM, Broer DJ and Schubert US. *Adv Mater* vol. 20, (16) 3117-3121.

**Anisotropic drop morphologies on corrugated surfaces.**

Kusumaatmaja H, Vrancken RJ, Bastiaansen CWM and Yeomans JM. *Langmuir* vol. 24, (14) 7299-7308.

**Nanoporous membranes of hydrogen-bridged smectic networks with nanometer transverse pore dimensions.**

Gonzalez CL, Bastiaansen CWM, Lub J, Loos J, Lu K, Wondergem HJ and Broer DJ. *Advanced Materials* vol. 20, (7) 1246-1252.

**Nano-and Microstructuring of Polymers.**

De Witz C, Sánchez C, Bastiaansen C and Broer DJ. *Handbook of Polymer Reaction Engineering*.

**Printing of monolithic polymeric microstructures using reactive mesogens.**

Sanchez C, Verbakel F, Escuti MJ, Bastiaansen CWM and Broer DJ. *Adv Mater* vol. 20, (1) 74-+.

## 2007

**Improved microcontact printing of proteins using hydrophilic thermoplastic elastomers as stamp materials.**

Trimbach DC, Stapert H, Van Orselen J, Jandt KD, Bastiaansen CWM and Broer DJ. *Advanced Engineering Materials* vol. 9, (12) 1123-1128.

**A design-based structural test method for a switched-resistor DAC.**

Ma L, Seuren G, Rijsing RV, Bastiaansen C and Dussen LVD. *Journal of Electronic Testing: Theory and Applications (Jetta)* vol. 23, (6) 559-567.

**High aspect ratio surface relief structures by photoembossing.**

Hermans K, Wolf FK, Perelaer J, Janssen RAJ, Schubert US, Bastiaansen CWM and Broer DJ. *Applied Physics Letters* vol. 91, (17).

**POLY 544-Functionalized liquid crystal networks: Toward soft actuators and organic zeolites.**

Broer DJ, Gonzalez CL, Oosten CL, Harris KD, Bastiaansen CWM and Lub J. *Abstr Pap Am Chem S* vol. 234,.

**Glassy photomechanical liquid-crystal network actuators for microscale devices.**

Van Oosten CL, Harris KD, Bastiaansen CWM and Broer DJ. *European Physical Journal E* vol. 23, (3) 329-336.

**Physical properties of anisotropically swelling hydrogen-bonded liquid crystal polymer actuators.**

Harris KD, Bastiaansen CWM and Broer DJ. *J Microelectromech S* vol. 16, (2) 480-488.

## 2006

**Simplified spectropolarimetry using reactive mesogen polarization gratings.**

Escuti MJ, Oh C, Sánchez C, Bastiaansen C and Broer DJ. *Proceedings of Spie - The International Society For Optical Engineering* vol. 6302,.

**Two-dimensional photonic crystals from semiconductor material with polymer filled holes.**

Van Heijden RD, Kjellander C, Carlström CF, Snijders J, Van Der Heijden RW, Bastiaansen K, Broer D, Karouta F, Nötzel R, Van Drift ED and Salemink HWM. *Proceedings of Spie - The International Society For Optical Engineering* vol. 6182,.

**A glassy bending-mode polymeric actuator which deforms in response to solvent polarity.**

Harris KD, Bastiaansen CWM and Broer DJ. *Macromolecular Rapid Communications* vol. 27, (16) 1323-1329.

**Isotropic Islands in a cholesteric Sea: Patterned thermal expansion for responsive surface topologies.**

Sousa ME, Broer DJ, Bastiaansen CWM, Freund LB and Crawford GP. *Advanced Materials* vol. 18, (14) 1842-1845.

**Template induced chiral ordering in nematic liquid crystalline materials: A deuterium nuclear magnetic resonance study.**

Elias AL, Brett MJ, Sousa ME, Woltman SJ, Crawford GP, Bastiaansen CWM and Broer DJ. *J Appl Phys* vol. 99, (11).

**InP-based two-dimensional photonic crystals filled with polymers.**

Van Der Heijden R, Carlström CF, Snijders JAP, Van Der Heijden RW, Karouta F, Nötzel R, Salemink HWM, Kjellander BKC, Bastiaansen CWM, Broer DJ and Van Der Drift E. *Applied Physics Letters* vol. 88, (16).

**Nanomotor rotates microscale objects.**

Eelkema R, Pollard MM, Vicario J, Katsonis N, Ramon BS, Bastiaansen CWM, Broer DJ and Feringa BL. *Nature* vol. 440, (7081).

**High-throughput screening and optimization of photoembossed relief structures.**

Adams N, De Gans BJ, Kozodaev D, Sánchez C, Bastiaansen CWM, Broer DJ and Schubert US. *Journal of Combinatorial Chemistry* vol. 8, (2) 184-191.

**Optimizing photo-embossed gratings: A gradient library approach.**

De Gans BJ, Sánchez C, Kozodaev D, Wouters D, Alexeev A, Escuti MJ, Bastiaansen CWM, Broer DJ and Schubert US. *Journal of Combinatorial Chemistry* vol. 8, (2) 228-236.

**Large area liquid crystal monodomain field-effect transistors.**

Van Breemen AJJM, Herwig PT, Chlon CHT, Sweelssen J, Schoo HFM, Setayesh S, Hardeman WM, Martin CA, De Leeuw DM, Valetton JJP, Bastiaansen CWM, Broer DJ, Popa-Merticaru AR and Meskers SCJ. *Journal of The American Chemical Society* vol. 128, (7) 2336-2345.

**Use of lyotropic liquid crystals for patterned polarizer and retarder applications.**

Sousa ME, Crawford GP, Bastiaansen CWM and Broer DJ. *Digest of Technical Papers - Sid International Symposium* vol. 37, (2) 836-839.

**Photopatterned liquid crystalline polymers for microactuators.**

Elias AL, Harris KD, Bastiaansen CWM, Broer DJ and Brett MJ. *J Mater Chem* vol. 16, (28) 2903-2912.

**Engineering education on the 'fuzzy' front end: A high-technology entrepreneurship model.**

Crawford GP, Broer DJ and Bastiaansen CWM. *European Journal of Engineering Education* vol. 31, (2) 145-153.

## 2005

**Large amplitude light-induced motion in high elastic modulus polymer actuators.**

Harris KD, Cuypers R, Scheibe P, Van Oosten CL, Bastiaansen CWM, Lub J and Broer DJ. *Journal of Materials Chemistry* vol. 15, (47) 5043-5048.

**Photoembossing of periodic relief structures using polymerization-induced diffusion: A combinatorial study.**

Sanchez C, de Gans BJ, Kozodaev D, Alexeev A, Escuti MJ, van Heesch C, Bel T, Schubert US, Bastiaansen CWM and Broer DJ. *Adv Mater* vol. 17, (21) 2567-+.

**TiO<sub>2</sub> nanoparticle-photopolymer holographic recording.**

Sanchez C, Escuti MJ, van Heesch C, Bastiaansen CWM, Broer DJ, Loos J and Nussbaumer R. *Adv Funct Mater* vol. 15, (10) 1623-1629.

**Self-assembled polymer films for controlled agent-driven motion.**

Harris KD, Bastiaansen CWM, Lub J and Broer DJ. *Nano Lett* vol. 5, (9) 1857-1860.

**An efficient illumination system for liquid crystal displays incorporating an anisotropic hologram.**

Sánchez C, Escuti MJ, Van Heesch C, Bastiaansen CWM and Broer DJ. *Applied Physics Letters* vol. 87, (9).



**Thermo-mechanical responses of liquid-crystal networks with a splayed molecular organization.**

Mol GN, Harris KD, Bastiaansen CWM and Broer DJ. *Adv Funct Mater* vol. 15, (7) 1155-1159.

**High pretilt four-domain twisted nematic liquid crystal display by microrubbing: Process, characterization, and optical simulation.**

Varghese S, Crawford GP, Bastiaansen CWM, De Boer DKG and Broer DJ. *Journal of Applied Physics* vol. 97, (5).

**Four-domain twisted vertically aligned liquid crystal pixels using microrubbing.**

Varghese S, Crawford GP, Bastiaansen CWM, De Boer DKG and Broer DJ. *Applied Physics Letters* vol. 86, (18) 1-3.

**Multidomain twisted vertically aligned display by microrubbing and its simulations.**

Varghese S, Bastiaansen CWM, Crawford GP, De Boer DKG and Broer DJ. *Digest of Technical Papers - Sid International Symposium* vol. 36, (1) 788-791.

**Improving the brightness and daylight contrast of organic light-emitting diodes.**

Ren VV, Wegh T, Teunissen JP, Lub J, Bastiaansen CWM and Broer DJ. *Advanced Functional Materials* vol. 15, (1) 138-142.

**Polarized light out-coupling from lightguides for LCDs.**

Van Heesch CM, Jagt H, Sanchez C, Cornelissen HJ, Broer DJ and Bastiaansen CWM. *Chem Rec* vol. 5, (2) 59-69.

**Large-area microfabrication of three-dimensional, helical polymer structures.**

Elias AL, Harris KD, Bastiaansen CWM, Broer DJ and Brett MJ. *Journal of Micromechanics and Microengineering* vol. 15, (1) 49-54.

## 2004

**Transparent slanted phase gratings in emissive waveguides.**

Jagt HJB, Cornelissen HJ, Bastiaansen CWM and Broer DJ. *Adv Mater* vol. 16, (23-24) 2108-+.

**Patterned alignment of liquid crystals by mu-rubbing.**

Varghese S, Narayanankutty S, Bastiaansen CWM, Crawford GP and Broer DJ. *Adv Mater* vol. 16, (18) 1600-+.

**Orientational properties and dynamics of nematic liquid crystals mixed with dendrimers for electro-optical switches.**

Van Boxtel MCW, Wubbenhorst M, Van Turnhout J, Bastiaansen CWM and Broer DJ. *Liq Cryst* vol. 31, (9) 1207-1218.

**Microrubbing technique to produce high pretilt multidomain liquid crystal alignment.**

Varghese S, Crawford GP, Bastiaansen CWM, De Boer DKG and Broer DJ. *Applied Physics Letters* vol. 85, (2) 230-232.

**Hydrophilic elastomers for microcontact printing of polar inks.**

Trimbach DC, Al-Hussein M, De Jeu WH, Decr M, Broer DJ and Bastiaansen CWM. *Langmuir* vol. 20, (11) 4738-4742.

## 2003

**Block copolymer thermoplastic elastomers for microcontact printing.**

Trimbach D, Feldman K, Spencer ND, Broer DJ and Bastiaansen CWM. *Langmuir* vol. 19, (26) 10957-10961.

**A 128f, multi-bit ?? CMOS audio DAC with real-time DEM and 115dB SFDR.**

Van Tuijl E, Van Den Homberg J, Reefman D, Bastiaansen C and Van Der Dussen L. *Digest of Technical Papers - Ieee International Solid-State Circuits Conference* vol. 47, 298-299+584.

**Patterned alignment of liquid crystals on selectively thiol-functionalized photo-orientation layers.**

Wilderbeek HTA, Teunissen JP, Bastiaansen CWM and Broer DJ. *Adv Mater* vol. 15, (12) 985-+.

**A dielectric study on the relaxation and switching behaviour of liquid crystals confined within a colloidal network.**

Van Boxtel MCW, Wubbenhorst M, Van Turnhout J, Bastiaansen CWM and Broer DJ. *Liquid Crystals* vol. 30, (2) 235-249.

**Synthesis and properties of phenyl benzoate-based and biphenyl-based liquid crystalline thiol-ene monomers.**  
Wilderbeek HTA, van der Meer MGM, Jansen MAG, Nelissen L, Fischer HR, van Es JJGS, Bastiaansen CWM, Lub J and Broer DJ. *Liq Cryst* vol. 30, (1) 93-108.

## 2002

**Photo-initiated polymerization of liquid crystalline thiol-ene monomers in isotropic and anisotropic solvents.**  
Wilderbeek HTA, van der Meer MGM, Bastiaansen CWM and Broer DJ. *J Phys Chem B* vol. 106, (50) 12874-12883.

**Photoinitiated bulk polymerization of liquid crystalline thiolene monomers.**  
Wilderbeek HTA, Goossenst JGP, Bastiaansen CWM and Broer DJ. *Macromolecules* vol. 35, (24) 8962-8968.

**Alignment of liquid crystals on self-assembled monolayers using ultra-thin gold films.**  
Wilderbeek HTA, Van Der Meer FJA, Feldman K, Broer DJ and Bastiaansen CWM. *Advanced Materials* vol. 14, (9) 655-658.

**Photo-polymerization of liquid crystalline monomers in anisotropic solvents under dynamic conditions.**  
Wilderbeek H, De Koning H, Vorstenbosch J, Chlon C, Bastiaansen K and Broer DJ. *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers* vol. 41, (4) 2128-2138.

**Influence of laser writing of polyimides on the alignment of liquid crystals.**  
Versteeg DJ, Bastiaansen CWM and Broer DJ. *Journal of Applied Physics* vol. 91, (7) 4191-4195.

**Linearly polarized light-emitting backlight.**  
Jagt HJB, Cornelissen HJ, Broer DJ and Bastiaansen CWM. *Journal of The Society For Information Display* vol. 10, (1) 107-112.

## 2001

**The influence of laser writing of polyimides on the alignment of liquid crystals.**  
Versteeg DJ, Bastiaansen CWM and Broer DJ. *Sid Conference Record of The International Display Research Conference* 65-68.

**Novel polarized light emitting illumination systems for LCDs.**  
Stutzmann N, Sele CW, Jagt H, Bastiaansen C, Tervoort TA and Smith P. *Sid Conference Record of The International Display Research Conference* 529-532.

**Novel polarized-light emitting polymer systems.**  
Stutzmann N, Jagt H, Tervoort TA, Bastiaansen CWM and Smith P. *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers* vol. 40, (10) 5966-5971.

**Cholesteric thermo-reversible liquid-crystal gels: Phase behaviour and electro-optical response.**  
Janssen RHC, Teunissen JP, Picken SJ, Bastiaansen CWM, Broer DJ, Tervoort TA and Smith P. *Jpn J Appl Phys 1* vol. 40, (4A) 2372-2377.

**Embossed Polymeric Relief Structures as a Template for the Growth of Periodic Inorganic Microstructures.**  
Dick B, Sit JC, Brett MJ, Votte IMN and Bastiaansen CWM. *Nano Letters* vol. 1, (2) 71-73.

**Viscoelastic liquid crystal colloids for the continuous processing of twisted nematic electro-optical cells.**  
van Bortel MCW, Janssen RHC, Bastiaansen CWM and Broer DJ. *J Appl Phys* vol. 89, (2) 838-842.

**Novel polarized-light emitting polymer systems: II. Use of form birefringent polarization-selective mirrors.**  
Stutzmann N, Sele CW, Tervoort TA, Bastiaansen CWM and Smith P. *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers* vol. 40, (10) 5972-5975.

**Progress in liquid crystal displays by new developments in functional polymers.**  
Broer DJ, Van Haaren JAMM and Bastiaansen CWM. *E-Polymers* vol. 1, (1).