



11-15 August 2025
Tampere, Finland

International Liquid Crystal Elastomer Conference

Chairs:
Arri Priimägi
Hao Zeng

Conference coordinator:
Ekaterina Lisitsyna



Updates:



MONDAY August 11



08:00-08:45

Registration

SESSION 1: **Mustamakkara** (chair: **Morgan Barnes**)

08:45-09:00

OPENING WORDS (**Arri Priimägi** and **Hao Zeng**)

09:00-09:30

KEYNOTE LECTURE - Tim White: "The Contribution of "Liquid Crystallinity" to the Thermomechanical Response of Liquid Crystalline Elastomers"

09:30-09:55

Invited talk - Albert Schenning: "Cholesteric Liquid Crystal Elastomers"

09:55-10:15

Shuai Huang: "Force-Trainable Liquid Crystal Elastomer Enabled by Mechanophore-Induced Radical Polymerization"

10:15-10:35

Jesus Guillen Campos: "From Substituents to Actuation: A Chemical-Quantitative Predictor of Contraction Forces"

10:35-11:10

Coffee Break

SESSION 2: **Koskenkorva** (chair: **Morgan Barnes**)

11:10-11:35

Invited talk - Yue Zhao: "Actuation and Auxetic Behaviors of Stretching-Induced Monodomain Side-Chain Liquid Crystal Elastomers"

11:35-11:55

Thomas Raistrick: "Cross-over for Semi-Soft or Auxetic Behavior in a Series of LCEs"

11:55-12:15

Valentina Domenici: "Self-Assembling and Structural Behaviour of Multifunctional Selectively Deuterated Reactive Mesogens Targeted for Photo-Active Liquid Crystalline Elastomers"

12:15-12:35

Ying Hu: "Nanomaterial/Polymer-Based Soft Actuators with Light-Driven Self-Oscillation for Bionic Applications"

12:35-14:00

Lunch Break

SESSION 3: Äkäslompolo (chair: Zhongqiang Yang)

14:00-14:25

Invited talk, Antal Jakli: "Shape Changes of Liquid Crystal Elastomers Swollen by Low Molecular Weight Liquid Crystal Drops"

14:25-14:45

Yuxing Yao: "Programming Liquid Crystal Elastomers for Multistep Ambidirectional Deformability"

14:45-15:05

Min-Hui Li: "Polymer Conformation Changes Observed with the Naked Eye in a Liquid Crystal Elastomer and Their Use to Produce Adjustable and Multidirectional Deformations"

15:05-15:30

Invited talk - Camilla Parmeggiani: "How to Build Cell Instructive Scaffolds by Liquid Crystalline Networks"

15:30-17:30

Coffee Break & **POSTER SESSION**

18:45

Bus leaving to city reception

TUESDAY August 12



08:15-08:45

Registration

SESSION 4: Aamukahvi (chair: Zhongqiang Yang)

08:45-09:10

Invited talk - Jerry Qi: "Additive Manufacturing of Liquid Crystal Elastomers and Multimaterial 3D Printing for Functional Applications"

09:10-09:35

Invited talk - Sara Nocentini: "Advanced Photonics with 4D Microstructured Liquid Crystalline Networks"

09:35-10:00

Invited talk - Qi-Huo Wei: "Photopatterning Liquid Crystal Polymers with Predesigned Director and Shape"

10:00-10:20

Suk-kyun Ahn: "Unlocking New Opportunities in Liquid Crystal Elastomers through Smectic Phase"

10:20-11:00

Coffee Break

SESSION 5: Eukonkanto (chair: Mingchao Zhang)

11:00-11:25

Invited talk - Zachariah Page: "Sidechain and Mainchain Photoalignment of Azobenzene-Containing Liquid Crystalline Polymers"

11:25-11:45

Toru Ube: "Enhancement of Photomobile Properties of Liquid-Crystalline Polymers through the Design of Azobenzene Derivatives"

11:45-12:05

Li Han: "Dynamic Azobenzene Liquid Crystal Elastomers Based on SBS and Their Applications"

12:05-12:30

Invited talk - Atsushi Shishido: "Crosslinked Liquid-Crystalline Polymer Films Patterned by Scanning Light"

12:30-14:00

Lunch Break

SESSION 6: Sauvakävely (chair: Mingchao Zhang)

14:00-14:25

Invited talk - Zhongqiang Yang: "Smart Liquid Crystal Elastomer Fibers"

14:25-14:45

Pedro Santos Silva: "Enabling Active Textiles Using Liquid Crystalline Elastomer Yarn"

14:45-15:05

Lansong Yue: "Reconfigurable Exotic Liquid Crystal Elastomer "Smart" Surfaces via Hot Embossing"

15:05-15:25

Jianfeng Yang: "Optically Controlled Wind-Assisted Flight in Miniature Soft Robots"

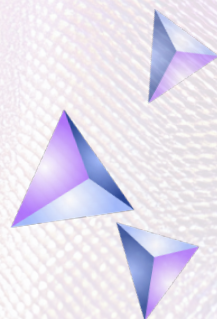
15:25-15:50

Invited talk - Kevin Chen: "Insect-Scale Micro-Aerial-Robots Powered by Soft Artificial Muscles"

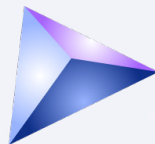
15:50-17:30

Coffee Break & POSTER SESSION

FREE EVENING



WEDNESDAY August 13



SESSION 7: Salmiakki (chair: Hamed Shahsavan)

08:45-09:15

KEYNOTE LECTURE - Hong Yang: “Enhanced Mechanical Performances of Liquid Crystal Elastomers Enabled by Mechanophores and Interpenetrating Network”

09:15-09:40

Invited talk - John Biggins: “Soft Elasticity and Microstructure: Explaining Mechanical Programming and Powering Director Design”

09:40-10:00

Michał Zmysłony: “What is Difficult about Printing of Complex Director Patterns?”

10:00-10:25

Invited talk - Antonio De Simone: “ Self-Oscillations of Submerged Liquid Crystal Elastomer Beams Driven by Light and Self-Shadowing”

10:25-10:45

Thao Nguyen: “A Nonlinear Viscoelastic Model for Nematic Elastomers: Coupling Mesogen Order, Director Rotation, and Network Viscoelasticity”

10:45-11:20

Coffee Break

SESSION 8: Poronkärstys (chair: Hamed Shahsavan)

11:20-11:40

Tayler Hebner: “(Re)programming Functionality in Liquid Crystalline Elastomers Using Dynamic Covalent Chemistry”

11:40-12:00

Mingchao Zhang: “3D Deformation of Liquid Crystals Elastomer for Small-Scale Structural Manipulation”

12:00-12:20

Devin Roach: “Tailorable Energy Damping Using 3D Printed Liquid Crystalline Elastomers”

12:20-12:40

Morgan Barnes: “Mechanics and Microstructures of Mechanically Programmed LCEs”

12:40-14:00

Lunch Break



SESSION 9: Hölökynkölökyn (chair: Tayler Hebner)

14:00-14:20

Jiuan Lv: "Phototunable Self-Oscillating Systems"

14:20-14:40

Hamed Shahsavan: "Polymerized Liquid Crystals as Aquatic Robots and Actuators"

14:40 →

PANEL DISCUSSION on the Future of LCEs

Panellists: Helen Gleeson,
Jan Lagerwall, Ivan Smalyukh, Eugene Terentjev
(chairs: Tayler & Morgan)

15:40-17:00

Coffee Break & POSTER SESSION

18:30

Boat leaving for cruise and conference dinner

THURSDAY August 14



SESSION 10: Avantouinti (chair: Tayler Hebner)

08:45-09:10

Invited talk - Javier Read de Alaniz: "Light-Driven Soft Materials that Move, Change Color and "Survive""

09:10-09:35

Invited talk - Danqing Liu: "Interactive Liquid Crystal Polymers for Soft Robotics and Haptics"

09:35-09:55

Elif Kurt: "Regulating Airflow Using Hybrid LCN for Soft Pneumatic Robots"

09:55-10:15

Jingxia Wang: "Functional Blue Phase Liquid Crystal"

10:15-10:35

Wei Hu: "Hierarchical Liquid Crystal Microstructures for Multi-Degree Optical Field Manipulation"

10:35-11:10

Coffee Break

SESSION 11: **Muumipeikko** (chair: **Jiu-an Lv**)

11:10-11:35

Invited talk - Mohand Saed: "Switchable Pressure-Sensitive Adhesion in Liquid Crystal Elastomers"

11:35-11:55

Kailing Lin: "Nematic LCE and Composites for Enhanced Vibration Damping"

11:55-12:15

Subi Choi: "Harnessing Extreme Internal Damping in Polyrotaxane-Incorporated Liquid Crystal Elastomers for Pressure-Sensitive Adhesives"

12:15-12:35

Yu-Chieh Cheng: "From LC Molecular Alignment to Optical Coupling: Multifunctional LC Materials for Soft Robotics and AR Waveguide Displays"

12:35-14:00

Lunch Break

SESSION 12: **Savusauna** (chair: **Jiu-an Lv**)

14:00-14:25

Invited talk - Jeong Jae Wie: "Stiffness Patterning of Light-Triggered Jumper for Efficient Snap-Through"

14:25-14:45

Neri Fuochi: "Control of Magnetic Properties by Photoresponsive Liquid Crystalline Networks"

14:45-15:05

Alexandra Gruzdenko: "Magnetically Induced Motion of LCP Microparticles"

15:05-15:25

Hongshuang Guo: "Emergent Locomotion in Dissipative, Closely Connected Soft Matter Rings"

15:25-15:50

Invited talk - Jie Yin: "Self-Resetting Soft Robot Enables Light-Powered Continuous Leaping"

15:50-16:30

Coffee Break

17:30

Bus leaving to sauna evening

FRIDAY August 15



09:15-09:45

Morning Coffee

SESSION 13: **Dagenefter** (chair: **Devin Roach**)

09:45-10:15

KEYNOTE LECTURE - Carlos Sánchez Somolinos: "Additive Manufacturing of LCEs: Programming Actuation, Enabling Motility, and Advancing Autonomy in Soft Robotics"

10:15-10:35

Yakui Deng: "Electroactive Liquid Crystal Elastomers with Low Phase Transition Temperature"

10:35-10:55

Yasaman Maddah: "Flexible Electroactive Ionic Liquid Crystal Elastomers Based on Thiol-Michael Chemistry"

10:55-11:15

Xiaoyu Zhang: "All-Optical Microfluidic Technology Enabled by Photodeformable Linear Liquid Crystal Polymers"

11:15-11:40

Invited talk - Taylor Ware: "Mesomorphic Siloxanes without Mesogens"

11:40-12:00

CLOSING CEREMONY

12:00-13:00

Lunch



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a Park Systems company

