



Conference report on the 45th German liquid crystal conference

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Conference report on the 45th German liquid crystal conference

After 2 years of joint meetings with the British Liquid Crystal Society, the German Liquid Crystal Society (Deutsche Flüssigkristallegesellschaft, DFKG) decided to conduct their 2018 meeting separately; this year, however, the meeting did not take place in Germany, but in the neighbouring Grand Duchy of Luxembourg at the University of Luxembourg, hosted by the lab groups of Jan Lagerwall and Giusy Scalia at Campus Limpertsberg in Luxembourg City. While the focus of the meeting was on liquid crystal research and research groups in Germany, in keeping with the international character of Luxembourg, invitations were sent out to lab groups in the neighbouring Benelux countries as well as to France, resulting in approximately 100 participants (see [Figure 1](#)) from 17 different countries attending, including some from as far away as the west coast of the United States and from the Republic of Korea.

The 2.5-day meeting was kicked off with a separate half-day mini-conference, $e@(\text{LC})^2$, a focused session on recent advances in liquid crystal elastomer research in Europe. This session featured four invited talks (Rudolf Zentel from the University of Mainz; Natalie Katsonis from the University of Twente; Verena Görtz from the University of Lancaster; and Arri Priimägi from Tampere University of Technology) and three contributed oral presentations, all covering aspects of elastomers from the chemistry and its optimisation, to fabrication strategies and methods, and all the way to novel applications.

Following the elastomer mini-conference was the main event. After some opening remarks by Jan Lagerwall on behalf of the organising committee, the main sessions began, featuring five invited speakers ([Figure 2](#)); 26 contributed oral presentations, of which over half were given by Ph.D. students and postdoctoral researchers; and 42 posters, including 5 posters related to topics from the $e@(\text{LC})^2$ session. Apart from the focus on liquid crystal elastomers, a wide range of topics was discussed from both experimental and theoretical standpoints (or a combination of the two). The oral presentations of the main conference were sorted into six sessions: 'Living Liquid Crystals and Collective Behavior', with talks about biological and active nematics and liquid crystals in microfluidic set-ups;

'Liquid Crystal and Nanoparticle Composites', featuring talks on nanoparticle-doped liquid crystals and their applications; 'Liquid Crystal Optics'; 'Novel Phenomena and Applications', which looked into previously unexplored applications of liquid crystals; 'Novel Liquid Crystal Phases and Structures', which looked into lyotropic smectics and the rheological properties of reduced-dimension liquid crystals; and 'Liquid Crystal Chemistry', which focused on the synthesis and characterisation of new liquid crystals and optimisation of synthesis pathways to achieve the desired outcomes.

The oral presentations overall were of a very high quality, covering a diverse array of topics in a manner that was engaging to the audience and that stimulated questions after the presentations and discussion during the coffee and lunch breaks.

The social programme of the conference featured the poster presentations held in parallel with the welcome reception, allowing for lively poster discussions to be held in a relaxed atmosphere, and the conference banquet held in the Rives de Clausen district ([Figure 3](#)). Walking lunches and coffee breaks held in the poster area also encouraged further discussions and networking throughout the duration of the conference, and, despite the unusually cold temperatures for March, additional opportunities for exploring the capital of the world's only Grand Duchy were available throughout and after the conference.

This year, the Saupe Medal was awarded by the DFKG to Dr Wim H. de Jeu of RWTH Aachen for his consistent contributions to the field of X-ray and other characterisation techniques of liquid crystals. In addition, several prizes were awarded for presentations during the conference ([Figure 4](#)). Two poster prizes were awarded by the DFKG jury: one to Moritz T. Dechant of the University of Würzburg for his work 'Donor-Acceptor Phthalocyanine Dyads: The Right Complex LC Nanostructures For Organic Photovoltaics?'; the other to Christian Häge from the University of Stuttgart for 'Switching dynamics and nanosegregation in carbosilane "de Vries"-type smectics'. The organising committee additionally conducted a popular vote of the conference attendees for an additional best poster prize, the winner of which being Lukas Pschyklenk of the Technische Hochschule Bonn-Rhein-Sieg for his



Figure 1. Official GLCC conference photo.



Figure 2. GLCC Invited Speakers. (l to r) Linda S. Hirst, University of California–Merced; Paul van der Schoot, Eindhoven Technical University; Kristiaan Neyts, University of Ghent; Soo-Young Park, Kyungpook National University; Tanya Ostapenko, Max Planck Institute for Dynamics and Self-Organization.



Figure 3. Very happy banquet attendees.



Figure 4. Winners of the GLCC awards. (top row, l to r) The Saupe Medal winner Wim H. de Jeu (second from left) and representatives of the DFG prize committee; poster prize winner Moritz T. Dechant (left), University of Würzburg; poster prize winner Christian Häge (left), University of Stuttgart; (bottom row, l to r): Lukas B. Braun (left) of the Johannes Gutenberg University of Mainz, the winner of the Video Abstract Prize; Lukas Pschyklenk (left) of Technische Hochschule Bonn-Rhein-Sieg, the winner of the popular vote poster prize; and Lawrence W. Honaker (left) of the University of Luxembourg, the recipient of the DFG's Young Researcher Award.

poster 'Optical detection of harmful substances with encapsulated chiral-nematic liquid crystals'. Video abstracts were solicited prior to the conference for presenters to advertise their presentations, and Lukas B. Braun of Johannes Gutenberg University of Mainz received a prize for his abstract to advertise his poster 'Microfluidic Synthesis of Liquid Crystalline Elastomer Actuators'. Finally, the DFG's Young Scientist Award was given to Lawrence W. Honaker of the University of Luxembourg for his oral presentation 'Microfluidics for Measuring the Equilibrium and Dynamic Interfacial Tensions of Liquid Crystals'.

After a very successful sojourn to the west of Germany, the 46th German Liquid Crystal Conference will again return to its home country in 2019, this time to be hosted at the University of Paderborn by the group of Heinz Kitzerow.

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