

Report of the British Liquid Crystal Society annual meeting online, 21st – 24th June 2021

The 36th annual meeting of the British Liquid Crystal Society took place online for the first time due to the pandemic from Monday 21st of June to Thursday 24th of June 2021. It was organised by Dr Alf Martinez-Felipe and Dr Rebecca Walker from the University of Aberdeen, who masterfully took on a challenge of the first ever online edition of the conference and welcomed more than 70 attendees from countries across the globe.

This year's conference was one of a kind as it took place online rather than meeting everyone in person. To make the experience emulate more of that of an in-person meeting, the Gather.Town platform was chosen, which allowed delegates to explore virtual presentation rooms as well as social spaces. Plenty of information and instruction was provided on how to use the online space, conduct the talks and interact with other participants. While with this new environment technical difficulties were expected, the conference went along very smoothly and without any major problems. As the meeting was postponed from 2020, the awards for both years were presented, and all the medallists gave their invited talks.

The BLCS conference started on Monday morning, with all attendees warmly welcomed by the co-chairs of the event – Dr Rebecca Walker and Dr Alf Martinez-Felipe who also talked a bit more about how to use the platform itself (see [Figure 1](#)). An additional welcome was given by the outgoing BLCS Chair – Dr Susanne Klein who wished she had the opportunity to meet other BLCS group members in person while undertaking her role but was grateful to be able to at least take part in this online event. The research topics presented at the conference were across multiple disciplines and aspects of research from simulations, theory and experiments on topics as varied as twisted LC, photonic devices, self-assembly and much more. The first talk was given by the 2020 Gray Medallist winner Dr Ewa Górecka presenting about the 'Photonic band gap in achiral liquid crystals – a twist on a twist'. The Gray Medal is awarded for outstanding contributions to research in liquid crystal science and technology and was first awarded in 1996 to George Gray's former PhD student Professor John Goodby. After the opening talk,

there were two more talks about different aromatic liquid crystal compounds presented by members of the Aberdeen research group, followed by a presentation from the conference sponsor, Taylor&Francis. Following a short coffee break, the next talk was presented by the Young Scientist 2020 award winner, Dr Rebecca Walker, who gave a very interesting talk about the 'Structure-property relationships, chirality and N_{TB} phase'. It was highly informative and explained a lot about the N_{TB} phases. More talks were presented and that concluded the first day of the conference.

The Tuesday session was full of many events, divided into three sessions, and it was started by the Hilsum Medallist 2020, Professor Apala Majumdar, who gave a talk about the modelling and applications of nematic confinement. The Hilsum medal is awarded for overall independent contributions to liquid crystal science and technology. Following the invited opening talk, more talks focusing on different simulation aspects of liquid crystal systems were presented. The second session of the second day of the conference started with the Poster Flash presentations, which gave everyone a teaser of the 18 posters that would be displayed later that day. Following that, we had more presentations focused on modelling dyes, theory of banana liquid crystals and fringing field effects one after another which concluded the second session. The final session of the day started with the Gray medallist 2021 – Dr Ingo Dierking who gave a very informative talk about the 'Voronoi patterns with liquid crystals'. After the talk, the BLCS 2021 AGM took place. It was very informative to learn more about the working of the society, and the responsibility of the Chair was passed from Dr Susanne Klein to Prof Nigel Mottram (see [Figure 2](#)), with some further committee position changes. After the break, the first part of the poster presentation session began.

Wednesday started off with a beautifully presented talk about 'Optimised Dissipation in 3D-Printed Liquid Crystal Elastomers' given by Dr Devesh Mistry, the Young Scientist 2021 award recipient. The day was then full of many great talks, including topics such as nanoparticle doping of liquid crystals, dynamics of solitons in nematics or stress-induced biaxiality and discontinuous



Figure 1. Welcome message from the organisers.



Figure 2. Former and current BLCS chair talk on Gather.Town.

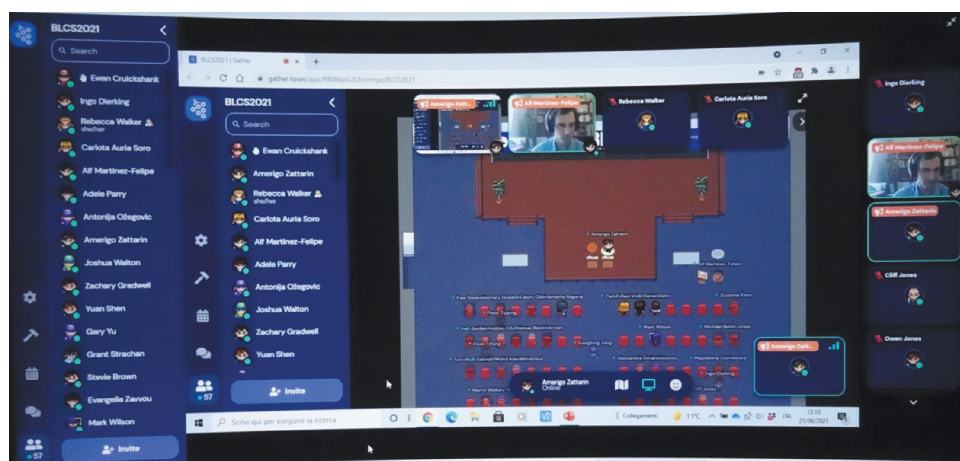


Figure 3. Lively discussion on Gather.Town after a talk.

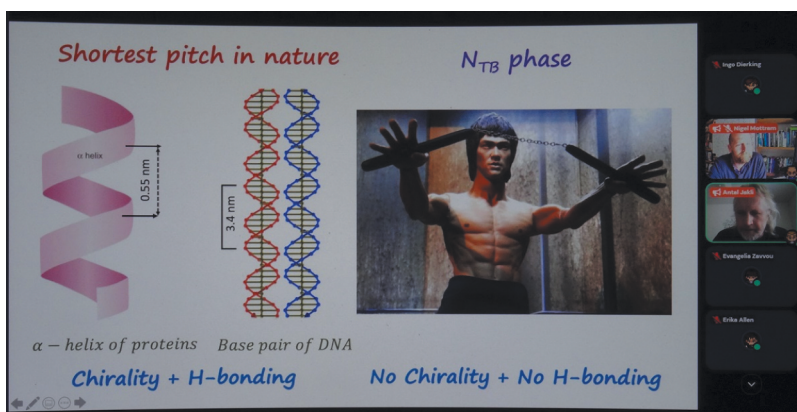


Figure 4. A slide from the plenary lecture by Prof Antal Jáklí.

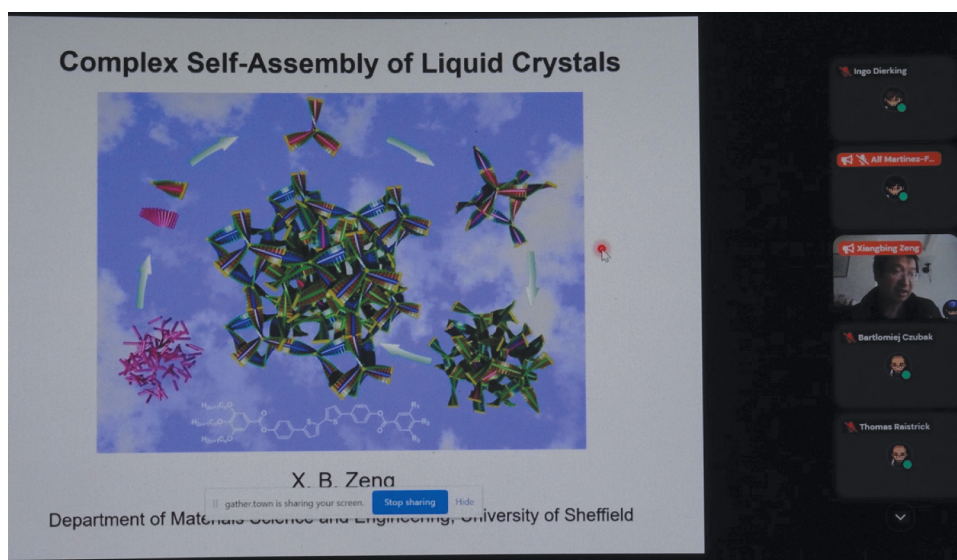


Figure 5. A slide from the presentation from Dr Xiangbing Zeng.

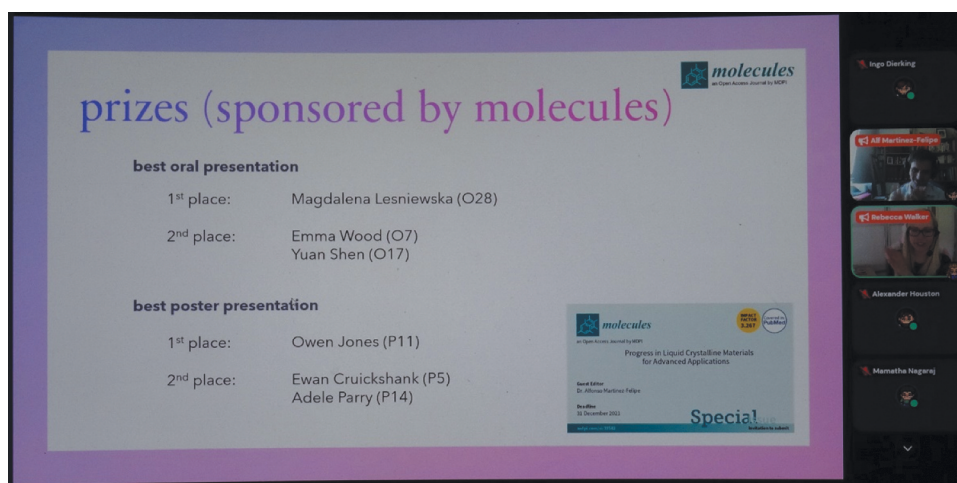


Figure 6. Announcement of prize winners of the conference for best posters and presentations.

transitions. An example of post-talk discussions is shown in [Figure 3](#). During this day, the Sturgeon Lecture was delivered by Professor Antal Jákli (see [Figure 4](#)), from Kent State University, about the 'New insights into the nanostructure of the twist-bend nematic phase'. The Sturgeon Lectureship is awarded by the BLCS in memory of Ben Sturgeon, who worked along with George Gray at BDH (now Merck) on some of the earliest LC materials to be used in displays, with the lecturer presenting a plenary paper at the conference. The second part of the poster session took part this afternoon following all the talks. While all of the posters were excellent, the top poster award was eventually given to Owen Jones for his 'Triphenoxazoles: Tuning Emission Properties for Organic-Electronic applications', with honourable mention to the 2nd place joint winners Ewan Cruickshank and Adele Parry.

The final day of the conference was started off with an invited talk from Dr Teresa Sierra who talked in-depth about Tris(triazolyl)triazine, a versatile mesogenic unit for functional supramolecular materials. This was followed by a talk of the outgoing chair of BLCS, Dr Susanne Klein, about Adventures in Lithography, which explored the combination of liquid crystals and lithography, a type of non-textile printing, to create successful RGB prints. After those two talks, there were more presentations from a range of topics, such as defect loops or micro-rheology of colloidal suspensions. The final invited talk was given by Dr Xiangbing Zeng (see [Figure 5](#)), the 2021 Hilsom Medallist who presented his research about the 'Complex

self-assembly of liquid crystals. This was then followed by the final three talks about diffusion of macromolecules in colloidal cuboids, flow of nematic liquid crystal colloids, and the electrically controlled topological micro-cargo transportation, respectively. After the talks were finished, there was a presentation from another sponsor, the journal 'Molecules', just before the end of the conference. The closing remarks were then delivered by the committee, and the poster and oral presentation awards were given (see [Figure 6](#)). The best oral presentation was awarded to yours truly for the 'Microfluidic flow of nematic liquid crystal colloids'. The joint second place was awarded to Emma Wood, for her 'Mesoscopic modelling of highly ordered Sanidic mesophases of polymers' talk and Yuan Shen for his 'Dynamics of electrically driven solitons in nematics' presentation. Overall, the conference was filled with many talks and posters and even in the online version it managed to be a great networking place for everyone involved.

I got screen captures from Prof Ingo Dierking, they were taken throughout the duration of the online conference and his infinite patience.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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