



Monday 20 July 2020

13:00	Welcome and Introductions Silvia Vignolini, <i>Chair of Scientific Committee</i>
13:15	Outline of Discussion Format Paige Boxhall and Joe Gibson, <i>Royal Society of Chemistry Publishing Editors</i>
13:30	Introductory Lecture (Session Chair: Silvia Vignolini) Pete Vukusic <i>University of Exeter, UK</i>
14:30	Break
	Session 1: Optics and photonics in nature (Session Chair: Leila Deravi and Ling Li)
15:00	Biophotonics of diversely coloured peacock tail feathers Pascal Freyer* and Doekele G. Stavenga <i>University of Groningen, Netherlands</i>
15:05	Scattering of ultraviolet light by avian eggshells Mathieu Ladouce, Tarek Barakat, Bao-Lian Su, Olivier Deparis and Sébastien R. Mouchet* <i>University of Namur, Belgium</i>
15:10	The Red Admiral butterfly's living light sensors and signals Primož Pirih <i>University of Ljubljana, Slovenia</i>
15:15	Conical epidermal cells cause velvety colouration and enhanced patterning in <i>Mandevilla</i> flowers Doekele G. Stavenga,* Marten Staal and Casper J. van der Kooi <i>University of Groningen, Netherlands</i>
15:20	Discussion
16:20	Break
16:50	Flash poster presentations (by invitation of the scientific committee)
17:20	Close of sessions



Tuesday 21 July 2020

	Session 2: Bio-inspired optics (Session Chair: Leila Deravi and Mathias Kolle)
13:00	Integration of bio-responsive silver in 1D photonic crystals: towards the colorimetric detection of bacteria Giuseppe M. Paternò,* Liliana Moscardi, Stefano Donini, Aaron M. Ross, Silvia M. Pietralunga, Nicholas Dalla Vedova, Simone Normani, Ilka Kriegel, Guglielmo Lanzani and Francesco Scotognella <i>Istituto Italiano di Tecnologia, Italy</i>
13:05	Designing refractive index fluids using the Kramers–Kronig relations Tianqi Sai, Matthias Saba, Eric R. Dufresne, Ullrich Steiner* and Bodo D. Wilts <i>Adolphe Merkle Institute, Switzerland</i>
13:10	The lesser purple emperor butterfly, <i>Apatura ilia</i>: from mimesis to biomimetics Franziska Schenk* and Doekele G. Stavenga <i>Birmingham City University, UK</i>
13:15	Bio-inspired gas sensing: boosting performance with sensor optimization guided by “machine learning” R. A. Potyrailo,* J. Brewer, B. Cheng, M. A. Carpenter, N. Houlihan, and A. Kolmakov <i>GE Research, USA</i>
13:20	Discussion
14:20	Break
	Session 3: The role of structure: order vs disorder in bio-photonic systems (Session Chair: Ling Li and Bodo Wilts)
14:50	On the multifunctionality of butterfly scales: a scaling law for the ridges of cover-scales Peter Köchling, Andreas Niebel, Kordula Hurka, Frederik Vorholt, and Hendrik Hölscher* <i>Karlsruher Institut für Technologie, Germany</i>
14:55	Disordered wax platelets on <i>Tradescantia pallida</i> leaves create golden shine Gea T. van de Kerkhof, Lukas Schertel,* Rebecca Poon, Gianni Jacucci, Beverley J. Glover and Silvia Vignolini <i>University of Cambridge, UK</i>
15:00	Photonic artificial muscles: from micro robots to tissue engineering Daniele Martella, Sara Nocentini, Camilla Parmeggiani and Diederik S. Wiersma* <i>Università degli Studi di Firenze, Italy</i>
15:05	Discussion
15:50	Break
16:20	Poster session
17:20	Close of sessions



Wednesday 22 July 2020

12:00	Poster session continued
	Session 4: The role of composition: natural materials vs synthetic composites (Session Chair: Mathias Kolle and Silvia Vignolini)
13:00	Playing the blues, the greens and the reds with cellulose-based structural colours Ricardo Chagas, Pedro E. S. Silva, Susete N. Fernandes, Slobodan Žumer and Maria Helena Godinho* <i>Universidade Nova de Lisboa, Portugal</i>
13:05	Biosilica slab photonic crystals as an alternative to cleanroom nanofabrication? Johannes W. Goessling, Ana A. Santiago González, Vijaya Shanthi Paul Raj, Matt P. Ashworth, Schonna R. Manning and Martin Lopez-Garcia* <i>International Iberian Nanotechnology Laboratory, Portugal</i>
13:10	Characterization and possible function of an enigmatic reflector in the eye of the shrimp <i>Litopenaeus vannamei</i> Nathan Schiffmann, Eyal Merary Wormser, Vlad Brumfeld, Sefi Addadi, Iddo Pinkas, Venkata Jayasurya Yallapragada, Eliahu D. Aflalo, Amir Sagi, Benjamin A. Palmer,* Steve Weiner and Lia Addadi <i>Ben-Gurion University of the Negev, Israel</i>
13:15	Discussion
14:00	Break
14:30	Concluding Remarks Lecture (Session Chair: Bodo Wilts) Gerd Schröder-Turk <i>Murdoch University Perth, Australia</i>
15:10	Acknowledgements Mathias Kolle, <i>Scientific Committee</i>
15:20	Close of meeting