

Photoinduced Processes in Nucleic Acids and Proteins

Faraday Discussion



11–13 January
2018, Kerala, India

Thursday 11 January

11:00	Registration, Tea and Coffee	
12:00	Lunch	
12:45	Welcome and Introductions Mahesh Hariharan <i>Chair of Scientific Committee</i>	
12:55	Outline of Discussion Format <i>Royal Society of Chemistry Publishing Editors</i>	
13:00	Introductory Lecture (Session Chair: Anthony Watts) Ilme Schlichting <i>MPI, Heidelberg</i>	
	Session 1: Light induced charge and energy transport in nucleic acids and proteins (Session Chair: <i>tbid</i>)	
14:00	The role of water molecules in photo transduction of retinal proteins and G protein coupled receptors Elena Lesca, Valerie Panneels and <u>Gebhard Schertler</u> <i>Paul Scherrer Institut</i>	Paper 16404
14:05	Discussion of Paper 16404	
14:20	Probing the excited state dynamics of Venus: origin of dual-emission in fluorescent proteins Arijit K. De, Shaina Dhamija, Bhisham Thakur, Purnananda Guptasarma <i>IISER Mohali</i>	Paper 17076
14:25	Discussion of Paper 17076	
14:40	Effect of point mutations on the ultrafast photo-isomerization dynamics in Anabaena sensory rhodopsin D. Agathangelou, Y. Orozco-Gonzalez, M. del Carmen Marín, P. P. Roy, J. Brazard, H. Kandori, K.-H. Jung, J. Léonard, T. Buckup, N. Ferré, M. Olivucci and <u>Stefan Haacke</u> <i>Université de Strasbourg</i>	Paper 17086
14:45	Discussion of Paper 17086	
15:00	Computational studies on ground and excited state charge transfer properties of peptidomimetics <u>Ganga Periyasamy</u> , Sherin Joy and Vommina Sureshbabu <i>Bangalore University</i>	Paper 16453
15:05	Discussion of Paper 16453	
15:20	General discussion (all session speakers)	
15:50	Afternoon tea	
	Session 1: Light induced charge and energy transport in nucleic acids and proteins (Session Chair: <i>tbid</i>)	
16:20	Protein charge transfer absorption spectra: an intrinsic probe to monitor structural and oligomeric transitions in proteins Mohd. Ziauddin Ansari, Amrendra Kumar, Dileep Ahari, Anurag Priyadarshi, Padmavathi Lolla, Rashna Bhandari and <u>Rajaram Swaminathan</u> <i>IIT Guwahati</i>	Paper 16629
16:25	Discussion of Paper 16629	

16:40	Optical backbone-sidechain charge transfer transitions in proteins sensitive to secondary structure and modifications I. Mandal, S. Paul and <u>Ravindra Venkatramani</u> <i>Tata Institute of Fundamental Research</i>	Paper 16612
16:45	Discussion of Paper 16612	
17:00	A QM/MM study of the initial excited state dynamics of green-absorbing Proteorhodopsin Veniamin A. Borin, Christian Wiebeler and <u>Igor Schapiro</u> <i>Hebrew University of Jerusalem</i>	Paper 16403
17:05	Discussion of Paper 16403	
17:20	General discussion (all session speakers)	
17:50	Lightning presentations (by invitation of the scientific committee)	
18:15	Poster Session and Wine Reception	

Friday 12 January

	Session 2: Photocrosslinking between nucleic acids and proteins (Session Chair: <i>tbd</i>)	
09:00	Adenine radicals generated in alternating AT duplexes by direct absorption of low-energy UV radiation Akos Banyasz, Tiia Ketola, Lara Martínez-Fernández, Roberto Improta and <u>Dimitra Markovitsi</u> <i>CNRS, Université Paris Saclay</i>	Paper 16408
09:05	Discussion of Paper 16408	
09:20	Photoactivated proton coupled electron transfer in DNA: insights from quantum mechanical calculations <u>Roberto Improta</u> , Lara Martinez-Fernandez <i>IBB-CNR</i>	Paper 16486
09:25	Discussion of Paper 16486	
09:40	Fluorescent excimers and exciplexes of the purine base derivative 8-phenylethynyl-guanine in DNA Hairpins <u>Frederick Lewis</u> , Kristen Brown, Arunoday Singh, Yi-Lin Wu, Lin Ma, Ashutosh Kumar Mishra, Brian Phelan, Ryan Michael Young, Michael Wasielewski <i>Northwestern University</i>	Paper 16409
09:45	Discussion of Paper 16409	
10:00	General discussion (all session speakers)	
10:30	Morning Tea	
	Session 2: Photocrosslinking between nucleic acids and proteins (Session Chair: <i>tbd</i>)	
11:00	Two-dimensional electronic spectroscopy as a tool for tracking molecular conformations in DNA/RNA aggregates <u>Javier Segarra Martí</u> , Vishal K. Jaiswal, Ana Julieta Pepino, Angelo Giussani, Artur Nenov, Shaul Mukamel, Marco Garavelli, Ivan Rivalta <i>Ecole Normale Supérieure de Lyon</i>	Paper 16770
11:05	Discussion of Paper 16770	
11:20	Direct observation of the external force mediated conformational dynamics of an IHF bound Holliday junction <u>P. Prasad Mishra</u> , Subhas C. Bera, Tapas Paul, A. N. Sekar Iyengar <i>Saha Institute of Nuclear Physics</i>	Paper 16276

11:25	Discussion of Paper 16276	
11:40	Excited state dynamics of mononucleotides and DNA strands in a deep eutectic solvent <u>Bern Kohler</u> , ^a Yuyuan Zhang, ^a Kimberly de La Harpe, ^b Mahesh Hariharan ^c <i>The Ohio State University</i>	Paper 16407
11:45	Discussion of Paper 16407	
12:00	General discussion (all session speakers)	
12:30	Lunch	
	Session 3: Light induced damage and repair in nucleic acids and proteins (Session Chair: <i>tbd</i>)	
14:00	Engineered photoproteins that give rise to photosynthetically-incompetent bacteria are effective as photovoltaic materials for biohybrid photoelectrochemical cells Juntai Liu, Vincent M. Friebe, David J. K. Swainsbury, Lucy I. Crouch, David A. Szabo, Raoul N. Frese and <u>Michael R. Jones</u> <i>University of Bristol</i>	Paper 16405
14:05	Discussion of Paper 16405	
14:20	Mechanistic insights into photoinduced damage of DNA and RNA nucleobases in the gas phase and in bulk solution <u>Tolga Karsili</u> , Pratip Chakraborty, Barbara Marchetti and Spiridoula Matsika <i>Temple University</i>	Paper 16806
14:25	Discussion of Paper 16806	
14:40	General discussion (all session speakers)	
15:10	Afternoon Tea	
	Session 3: Light induced damage and repair in nucleic acids and proteins (Session Chair: <i>tbd</i>)	
15:40	Photochemical relaxation pathways of S⁶-methylthioinosine and O⁶-methylguanosine in solution Brennan Ashwood, Luis A. Ortiz-Rodríguez and <u>Carlos E. Crespo-Hernández</u> <i>Case Western Reserve University</i>	Paper 17075
15:45	Discussion of Paper 17075	
16:00	Photoinduced Formation Mechanism of the thymine-thymine (6-4) adduct in DNA; a QM(CASPT2//CASSCF):MM(AMBER) study <u>Angelo Giussani</u> , Irene Conti, Artur Nenov, Mareo Garavelli <i>Università di Bologna</i>	Paper 17083
16:05	Discussion of Paper 17083	
16:20	General discussion (all session speakers)	
16:50	End of meeting	
<i>tbc</i>	Conference Dinner	

Saturday 13 January

	Session 4: Bionanophotonics (Session Chair: <i>tb</i>)	
09:00	Exploring Oligomeric State of the Serotonin1A Receptor utilizing Photobleaching Image Correlation Spectroscopy: Implications for Receptor Function Hirak Chakraborty, Md. Jafurulla, Andrew H. A. Clayton and <u>Amitabha Chattopadhyay</u> <i>Centre for Cellular and Molecular Biology, Hyderabad</i>	Paper 16401
09:05	Discussion of Paper 16401	
09:20	Gold nanorods decorated with a cancer drug for multimodal imaging and therapy Resmi V. Nair, Hema Santhakumar and Ramapurath S. Jayasree <i>Sree Chitra Tirunal Institute of Medical Sciences and Technology</i>	Paper 17079
09:25	Discussion of Paper 17079	
09:40	Optically sensing phospholipid induced coil–helix transitions in the phosphoinositide-binding motif of gelsolin Samsuzzoha Mondal, Amitava Chandra, Ravindra Venkatramani and <u>Ankona Datta</u> <i>Tata Institute of Fundamental research</i>	Paper 17078
09:45	Discussion of Paper 17078	
10:00	General discussion (all session speakers)	
10:30	Morning Tea	
	Session 4: Bionanophotonics (Session Chair: <i>tb</i>)	
11:00	Chiral self-assembly of fullerene nanoclusters on CT-DNA templates Sandeepa K. V. and <u>Joshya Joseph</u> <i>CSIR</i>	Paper 16576
11:05	Discussion of Paper 16576	
11:20	Adaptation of Rhodopseudomonas acidophila strain 7050 to growth at different light intensities: what are the benefits to changing the type of LH2? A. T. Gardiner, D. M. Niedzwiedzki and <u>R. J. Cogdell</u> <i>University of Glasgow</i>	Paper 16402
11:25	Discussion of Paper 16402	
11:40	General discussion (all session speakers)	
12:10	Concluding Remarks Lecture (Session Chair: Mahesh Hariharan) Rienk Van Grondelle <i>Vrije Universiteit Amsterdam</i>	
13:10	Acknowledgements	
13:15	Close of meeting	

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author. If the presenting author of your paper has changed since abstract selection please email events@rsc.org. Please note that this is a draft programme and timings may change.