



DRAFT PROGRAMME

Monday 14th September

11:00	Registration, Tea and Coffee	
12.00	Lunch	
12.30	Welcome and Introductions	
12.40	Outline of Discussion Format Faraday Discussion, Publishing Editors	
12.45	Introductory Lecture W. E. Moerner <i>Stanford University, USA</i>	
	Session 1: Superresolution Techniques Session Chair: Haw Yang	
13.45	Polarization effects in lattice–STED microscopy B. Yang, C.-Y. Fang, H.-C. Chang, F. Treussart, J.-B. Trebbia and <u>B. Lounis</u> <i>Université of Bordeaux, France</i>	Paper 6445
13.50	Single molecule fluorescence resonance energy transfer scanning near-field optical microscopy: potentials and challenges <u>S. K. Sekatskii</u> , K. Dukenbayev, M. Mensi, A. G. Mikhaylov, E. Rostova, A. Smirnov, N. Suriyamurthy, and G. Dietler <i>Laboratoire de Physique de la Matière Vivante, EPFL, Switzerland</i>	Paper 6765
13.55	Discussion	
14.45	Lightning poster presentations (by invitation of the scientific committee)	
15.00	Afternoon Tea and Poster Session <i>Sponsored by Cogent</i>	
	Session 2: Biophysics with Nanostructures Session Chair: Maxime Dahan or Haw Yang	
16.00	Mechanical matching between a ligand and receptor <u>A. Peñaherrera</u> , L. Donlon and Daniel Frankel <i>Polytechnic Army School, Ecuador</i>	Paper 6624
16.05	An integrated system for optical and electrical detection of single molecules/particles inside a solid-state nanopore <u>X. Shi</u> , R. Gao, Y.-L. Ying, W. Si, Y. Chen, and Y.-T. Long <i>East China University of Science and Technology, China</i>	Paper 6754
16.10	Single occupancy spectroelectrochemistry of freely diffusing flavin mononucleotide in zero-dimensional nanophotonic structures L. P. Zaino, III, D. A. Grismer, D. Han, G. M. Crouch, and <u>P. W. Bohn</u> <i>University of Notre Dame, USA</i>	Paper 6773

16.15	Discussion	
	Session 3: Fluorescence Energy Transfer Session Chair: Niek van Hulst	
17.05	Quantitative structural information from single-molecule FRET M. Beckers, F. Drechsler, T. Eilert, J. Nagy and <u>J. Michaelis</u> <i>Ulm University, Germany</i>	Paper 6446
17.10	Quantitative single molecule FRET efficiencies using TIRF microscopy L. L. Hildebrandt, S. Preus, and <u>V. Birkedal</u> <i>Aarhus University, Denmark</i>	Paper 6812
17.15	Discussion	
18.05	Close of Sessions	

Tuesday 15th September

	Session 4: Quantum Optics Session Chair: Vahid Sandoghdar	
09:00	Indirect quantum sensors: improving the sensitivity in characterizing very weakly coupled spins J. N. Greiner, D. D. Bhaktavatsala Rao, P. Neumann and <u>J. Wrachtrup</u> <i>University of Stuttgart, Germany</i>	Paper 6448
09:05	Towards quantum networks of single spins: analysis of a quantum memory with an optical interface in diamond M.S. Blok, N. Kalb, A. Reiserer, T. H. Taminiau and <u>R. Hanson</u> <i>Delft University of Technology, The Netherlands</i>	Paper 6444
09:10	Towards witnessing quantum effects in complex molecules <u>T. Farrow</u> , R. A. Taylor and V. Vedral <i>University of Oxford, UK</i>	Paper 6543
09:15	Discussion	
10.30	Morning Tea	
	Session 5: Molecular Spectroscopy Session Chair: Jörg Wrachtrup or Alfred Meixner	
11.00	Near-field Raman spectroscopy of nanocarbon materials Z. J. Lapin, R. Beams, L. G. Cançado and <u>L. Novotny</u> <i>Photonics Laboratory, ETH Zürich, Switzerland</i>	Paper 6447
11.05	Multicolour single molecule emission and excitation spectroscopy reveals extensive spectral shifts <u>L. Piatkowski</u> , E. Gellings and N. F. van Hulst <i>¹CFO—Institut de Ciències Fotoniques, Spain</i>	Paper 7139
11:10	Intramolecular photostabilization via triplet-state quenching: design principles to make organic fluorophores “self-healing” J. H. M. van der Velde, J. J. Uusitalo, L.-J. Ugen, E. M. Warszawik, A. Herrmann, S. J. Marrink and <u>T. Cordes</u> <i>University of Groningen, The Netherlands</i>	Paper 6748
11:15	Discussion	

12.30	Lunch	
	Session 6: Low-Temperature Spectroscopy Session Chair: Alfred Meixner or Michel Orrit	
13.30	Fluorescence microscopy and spectroscopy of subsurface layer dynamics of polymers with nanometer resolution in the axial direction <u>Y. G. Vainer</u> , Y. I. Sobolev, A. V. Naumov, I. S. Osad'ko and L. Kador <i>Russian Academy of Sciences, Russia</i>	Paper 6742
13.35	Design and synthesis of aromatic molecules for probing electric fields at the nanoscale <u>S. Faez</u> , N. R. Verhart, M. Markoulides, F. Buda, A. Gourdon and M. Orrit <i>Leiden University, The Netherlands.</i>	Paper 6716
13.40	Single-molecule spectromicroscopy: a route towards sub-wavelength refractometry T. A. Anikushina, <u>M. G. Gladush</u> , A. A. Gorshelev, and A. V. Naumov <i>Institute for Spectroscopy of the Russian Academy of Sciences, Russia</i>	Paper 6818
13.45	Discussion	
15.00	Afternoon Tea	
	Session 7: Plasmonics Session Chair: Lukas Novotny	
15.30	Optical micro-spectroscopy of single metallic nanoparticles: quantitative extinction and transient resonant four-wave mixing L. Payne, G. Zorinians, F. Masia, K. P. Arkill, P. Verkade, D. Rowles, W. Langbein and <u>P. Borri</u> <i>Cardiff University School of Biosciences, UK</i>	Paper 6772
15.35	Coupling single quantum dots to plasmonic nanocones: optical properties <u>A. J. Meixner</u> , R. Jäger, S. Jäger, A. Bräuer, K. Scherzinger, J. Fulmes, S. zur Oven Krockhaus, D. A. Gollmer, D. P. Kern and M. Fleischer <i>University of Tübingen, Germany.</i>	Paper 6795
15.40	Enhanced Raman scattering from aromatic dithiols electrosprayed into plasmonic nanojunctions <u>P. Z. El-Khoury</u> , G. E. Johnson, I. V. Novikova, Y. Gong, A. G. Joly, J. E. Evans, M. Zamkov, J. Laskin and W. P. Hess <i>Pacific Northwest National Laboratory, USA.</i>	Paper 6701
15.45	Discussion	
17.00	Presentation of Honorary Royal Society of Chemistry Fellowships	
17.15	Poster Session and Drinks Reception <i>Sponsored by Cogent</i>	
18.30	Close of Sessions	
19:00	Conference Dinner at Royal Society, 6-9 Carlton House Terrace, London	

Wednesday 16th September

	Session 8: Tracking and Manipulating Session Chair: Brahim Lounis	
09.00	Imaging the behaviour of molecules in biological systems: breaking the 3D speed barrier with 3D multi-resolution microscopy K. Welsher and <u>H. Yang</u> , <i>Princeton University, USA.</i>	Paper 6449
09:05	Size dependent efficiency of photophoretic swimmers A. P. Bregulla and <u>F. Cichos</u> <i>University of Leipzig, Germany</i>	Paper 6655
09:10	Discussion	
10.00	Morning Tea	
	Session 9: Living Cells Session Chair: TBC	
10.30	Single molecule study of non-specific binding kinetics of LacI in mammalian cells L. Caccianini, D. Normanno, I. Izeddin and <u>M. Dahan</u> <i>Université Pierre et Marie Curie-Paris 6, France</i>	Paper 6443
10:35	Millisecond single-molecule localization microscopy combined with convolution analysis and automated image segmentation to determine protein concentrations in complexly structured, functional cells, one cell at a time A. J. M. Wollman and <u>M. C. Leake</u> <i>University of York, UK</i>	Paper 6713
10:40	A study of SeqA subcellular localization in <i>Escherichia coli</i> using photo-activated localization microscopy <u>J. T. Mika</u> , A. Vanhecke, P. Dedecker, T. Swings, J. Vangindertael, B. van den Bergh, J. Michiels and J. Hofkens □ <i>KU Leuven, Belgium</i>	Paper 6706
10.45	Discussion	
12.00	Challenges and tradeoffs in live cell super-resolution imaging (perspective lecture) Eric Betzig <i>Howard Hughes Medical Institute, USA</i>	
13.00	Concluding Remarks Niek van Hulst <i>The Institute of Photonic Sciences, Spain</i>	
13.45	Acknowledgements	
14.00	Close of meeting and lunch	

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.