

DISCUSSION MEETING

Organic semiconductor spintronics

- Utilising triplet excitons in organic electronics

Monday 15 – Tuesday 16 September 2014

Organised by Professor Andrew Monkman and Professor Sir Richard Friend FEng FRS

DAY 1			
SESSION 1 Triplet fusion and triplet harvesting Chair: Marc Baldo		SESSION 2 Thermally activated delay fluorescence Chair: Stephen Forrest	
09.00	Welcome by Royal Society, Professor Andrew Monkman and Professor Sir Richard Friend FEng FRS		
09.05	Stephen Forrest Excitons for OLEDs: you can't live with them and you can't operate without them	13.30	Chihaya Adachi High-efficiency organic light-emitting diodes with fluorescent emitters via TADF process
09.30	Discussion	14.00	Discussion
09.45	James Durrant Triplet excitons in organic solar cells: charge recombination, oxygen quenching and photodegradation	14.15	Fernando Dias Photophysics of TADF materials
10.15	Discussion	14.45	Discussion
10.30	Coffee	15.00	Tea
11.00	Denis Kondakov Triplet-triplet annihilation: another route to 100% efficient fluorescent OLEDs?	15.30	Yuguang Ma Utilising triplet excitons in OLEDs - a hot exciton path
11.30	Discussion	16.00	Discussion
11.45	Felix Castellano Photochemical up-conversion	16.15	Reinder Coehoorn Kinetic Monte Carlo simulations of triplet-triplet annihilation and triplet-polaron quenching in organic semiconductor host-guest systems used in OLEDs
12.15	Discussion	16.45	Discussion
12.30	LUNCH	17.00	CLOSE

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DAY 2			
SESSION 3 The role of triplets in OPV Chair: Neil Greenham		SESSION 4 Organic spintronics Chair: Jenny Nelson FRS	
09.00	Marc Baldo Singlet exciton fission	13.30	Z. Valy Vardeny Optical and magnetic properties of triplet excitons in Pt-rich pi-conjugated polymers
09.30	Discussion	14.00	Discussion
09.45	Arthur Nozik Multiple exciton generation in quantum dots, QD arrays, and via molecular singlet fission: applications to solar photon conversion	14.15	Markus Wohlgenannt Singlet-to-triplet conversion utilizing hyperfine as well as ferromagnetic fringe fields
10.15	Discussion	14.45	Discussion
10.30	Coffee	15.00	Tea
11.00	Akshay Rao Dexter's dream: singlet exciton fission and triplet transfer to inorganic semiconductors	15.30	Henning Sirringhaus FRS Spin pumping into organic semiconductors
11.30	Discussion	16.00	Discussion
11.45	Anna Köhler Understanding triplet dynamics in molecular OLED host materials and in conjugated polymers	16.15	Summary of discussions and closing remarks
12.15	Discussion		
12.30	LUNCH	17.00	CLOSE