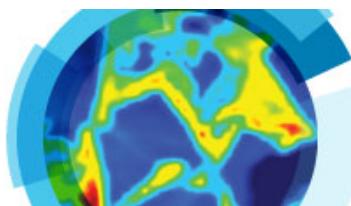


Carbon in Electrochemistry

Faraday Discussion 172



28-30 July 2014
Sheffield, UK

Monday 28 July

11:00	Registration, Tea and Coffee	
12:00	Lunch	
12.45	Welcome and Introductions	
12.55	Outline of Discussion Format <i>Faraday Discussions</i> , Publishing Editors	
13.00	Introductory Lecture Richard McCreery* <i>University of Alberta, Canada</i>	Paper 1
	Session 1: The many faces of carbon in electrochemistry Session Chair: Katherine Holt / Ian Kinloch	
14:00	Single Layer Graphene as an Electrochemical Platform Héctor Abruña* <i>Cornell University, USA</i>	Paper 2
14:05	Boron doped Diamond Biotechnology: From Sensors to Neurointerfaces Philippe Bergonzo* <i>CEA-LIST, France</i>	Paper 3
14:10	Creating and Testing Carbon Interfaces – Integrating Oligomeric Phthalocyanines onto single walled carbon nanotubes Dirk Guldi* <i>Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany</i>	Paper 4
14:15	Discussion	
15:30	Afternoon Tea	
16:00	Multifunctional Structural Energy Storage Composite Supercapacitors Milo Shaffer* <i>Imperial College London, UK</i>	Paper 5
16:05	Electro-deposition and re-oxidation of carbon in carbonate containing molten salts George Chen* <i>University of Nottingham, UK</i>	Paper 6
16.10	Discussion	
17:00	Lightning Poster Presentations	
17:30	Poster Session and Wine Reception	
18:30	Dinner	

Tuesday 29 July

	Session 2: Carbon electrodes for energy storage Session Chair: Peter Hall / Ian Kinloch	
09:00	Effects of Structural Disorder and Surface Chemistry on Electric Conductivity and Capacitance of Porous Carbon Electrodes Yury Gogotsi* <i>Drexel University, Philadelphia, USA</i>	Paper 7
09:05	The effect of carbon porosity on the performance of Ionic Liquid based EDLCs Asa Noofeli* <i>University of Sheffield, UK</i>	Paper 8
09:10	Redox-active Electrolyte for Supercapacitor Application Elzbieta Frackowiak* <i>Poznan University of Technology, Poland</i>	Paper 9
09:15	Sodium molybdate – an Additive of Choice for Enhancing the Performance of AC/AC Electrochemical Capacitors in a Salt Aqueous Electrolyte François Béguin* <i>Poznan University of Technology, Poland</i>	Paper 10
9:20	Discussion	
11:00	Morning Tea	
11:30	Reduced Graphene Oxide Anchoring CoFe₂O₄ Nanoparticles as an Effective Catalyst for Non-aqueous Lithium–Oxygen Batteries Yong Cao*, Quan-Feng Dong <i>Xiamen University, China</i>	Paper 11
11:35	<i>In Situ</i> Raman Study of Lithium-ion Intercalation into Microcrystalline Graphite Laurence Hardwick* <i>University of Liverpool, UK</i>	Paper 12
11:40	Discussion	
13:30	Lunch	
	Session 3: Role of surface contaminants, functionalities, defects and electronic structure Session Chair: Julie MacPherson / John Foord	
14:30	Electrochemistry of Well-defined Graphene Samples: Role of Contaminants Robert Dryfe* <i>University of Manchester, UK</i>	Paper 13
14:35	Controlled Covalent Modification of Epitaxial Single Layer Graphene on 6H-SiC (0001) with Aryliodonium Salts Using Electrochemical Methods Keith Stevenson* <i>The University of Texas at Austin, USA</i>	Paper 14
14:40	Electrochemical Characterisation of Graphene Nanoflakes with Functionalised Edges Daren Caruana* <i>University College London, UK</i>	Paper 15

14:45	Discussion	
16:00	Afternoon Tea	
16:30	Probing the Charging Mechanisms of Carbon Nanomaterial Polyelectrolytes Stephen Hodge* <i>Imperial College London, UK</i>	Paper 16
16:35	Spontaneous Formation of Metallic Nanostructures on Highly Oriented Pyrolytic Graphite (HOPG): An Ab-initio and Experimental Study Fernanda Juarez* <i>Institute of Theoretical Chemistry, Ulm University, Germany</i>	Paper 17
16:40	Nanodiamond Surface Redox Chemistry: Influence of Physicochemical Properties on Catalytic Processes Thomas Varley* <i>University College London, UK</i>	Paper 18
16:45	Discussion	
18:00	Close of sessions	
19:00	Pre-Dinner Drinks	
19:30	Conference Dinner	

Wednesday 30 July

	Session 4: Carbon electrode interfaces for synthesis, sensing and electrocatalysis Session Chair: John Foord / Julie MacPherson	
09:00	Photoemission from Diamond Films and Substrates into Water: Dynamics of Solvated Electrons and Implications for Diamond Photoelectrochemistry Robert Hamers <i>University of Wisconsin-Madison, USA</i>	Paper 19
09:05	Synthesis of Iodobiphenyls and Dibenzofurans by Direct Coupling at BDD Anodes Siegfried Waldvogel* <i>Johannes Gutenberg-Universität Mainz, Germany</i>	Paper 20
09:10	Laser Heated Boron Doped Diamond Electrodes: Effect of Temperature on Outer Sphere Electron Transfer Processes Mark Newton* <i>University of Warwick, UK</i>	Paper 21
09:15	Discussion	
10:30	Morning Tea	
11:00	Selection, Characterisation and Mapping of Complex Electrochemical Processes at Individual Single-walled Carbon Nanotubes: the Case of Serotonin Oxidation Aleix Guell* <i>University of Warwick, UK</i>	Paper 22
11:05	Glutamate Biosensors Based on Diamond and Graphene Platforms Jingping Hu* <i>University of Oxford, UK</i>	Paper 23
11:10	Comparison of Carbon Materials as Electrodes for Enzyme Electrocatalysis: Hydrogenase as a Case Study Jonathan Quinson* <i>University of Oxford, UK</i>	Paper 24
11:15	Discussion	
12:30	Concluding remarks Patrick Unwin* <i>University of Warwick, UK</i>	Paper 25
13:15	Acknowledgements	
13:20	Close of meeting	
13:20	Lunch	