



Conference Programme

**RSC: BIOMATERIALS CHEMISTRY SPECIAL INTEREST
GROUP
ANNUAL CONFERENCE**

11th and 12th January 2017.

VENUE: ULSTER UNIVERSITY (JORDANSTOWN CAMPUS).

Conference Sponsors:



RSC BIOMATERIALS SPECIAL INTEREST GROUP CONFERENCE PROGRAMME 2017

Day 1 – Wednesday 11th January

9.00 am – 9.40 am Registration (Tea/Coffee on arrival)
(Poster Setting Up Time)

9.40 – 9.45 am Welcome note and opening remarks

9.45 am – 11.20 am **Session 1**

Time	Presentation
9.45 – 10.05	Invited Talk – Prof. BJ Meenan (Ulster University)
10.05 – 10.20	Phosphate based glasses with antimicrobial resistance for medical application A Lapa (University of Erlangen-Nuremberg / Lucideon Ltd (UK))
10.20 – 10.35	<i>In vivo</i> safety and Efficacy Testing of a Thermally Triggered Injectable Hydrogel, loaded with Hydroxyapatite Nanoparticles, to Promote Repair and Regeneration of Bone Defects A Thorpe (Sheffield Hallam University)
10.35 – 10.50	Synchrotron Techniques and Exciting Possibilities for Biomaterials Characterisation Dr JE Parker (Diamond Light source, Harwell Science and Innovation Campus (UK))
10.50 – 11.05	Controlling drug release from silicone oil tamponades: strategies to combat proliferative vitreoretinopathy after retinal detachment. Dr. H Cauldbeck (University of Liverpool)
11.05 – 11.20	Novel Human Pluripotent Stem Cell Expansion Polymers: A High-Throughput Micro Array Discovery Campaign L Burroughs (University of Nottingham)

11.20 am – 11.40 am Coffee/Tea and Poster Viewing

11.40 am – 1.00 pm **Session 2**

Time	Presentation
11.40 – 12.10	Modular biomaterials and cell-assemblies in regenerative medicine Keynote Presentation – Dr. D Zeugolis (NUI Galway)
12.10 – 12.25	Tunable injectable pNIPAM-Laponite® based hydrogels for musculoskeletal regeneration A Essa (Sheffield Hallam University)
12.25 – 12.40	Efficient <i>in situ</i> nucleophilic thiol-yne click chemistry for the synthesis of strong hydrogel materials with tuneable properties LJ MacDougall (University of Warwick)
12.40 – 1.00	Nanoscale Definition of Material Properties for Enhanced Control of Biological Responses Invited Talk – Dr. J Curran (University of Liverpool)

1.00 pm – 1.50 pm Lunch and Poster Viewing (Judging)

1.50 pm – 3.15 pm

Session 3

Time	Presentation
1.50 – 2.10	Mineralization of hydrogels with carbonate for bone tissue engineering Invited Talk – Dr. T Douglas (University of Ghent)
2.10 – 2.25	BMP-2 Loaded, Collagen I and Hydroxyapatite Modified Biodegradable Membranes Prof B Garipcan (Bogazici University, Turkey)
2.25 – 2.40	Covalent immobilization of nisin using atmospheric pressure plasma induced grafting Dr J Aveyard (University of Liverpool)
2.40 – 2.55	Improved Adhesive Strength of a Novel Aneurysm Filler S Brady (Dublin City University)
2.55 – 3.15	Process-Performance Relationships for Bioresorbable Polymers used in Bone Fixation and Tissue Scaffolds Invited Talk – Prof. F Buchanan – (Queen's University Belfast)

3.15 pm – 3.45 pm

Coffee/Tea and Poster Viewing (Judging)

3.45 pm – 5.00 pm

Session 4

Time	Presentation
3.45 – 4.05	Tailoring (Meth)acrylate based Polymer-Glass Hybrids for Bone Regeneration Invited Talk – Dr T K. Georgiou (Imperial College)
4.05 – 4.25	The Chemistry of Materials for Directing Biological Responses Invited Talk – Dr. I Roach (Loughborough University)
4.25 – 4.40	Conducting polymer composites for triggered drug delivery applications Dr G Srinivasan (Queens University Belfast)
4.40 – 5.00	Poly-ϵ-lysine Gels for Corneal Wound Therapy Dr. R Lace (University of Liverpool)

7.30 pm

Conference Dinner (Europa Hotel Belfast)

Day 2 – Thursday 12th January

9.10 am – 11.00 am **Session 5**

Time	Presentation
9.10 – 9.30	Protein adsorption on nano-patterned hydrogenated amorphous carbon model surfaces Invited Talk – Dr. P Lemoine (Ulster University)
9.30 – 9.50	Innovative strategies for the synthesis of self-assembly amphiphilic nanobiomaterials with advanced features Invited Talk – Prof. A Sosnik (Technion-Israel institute of Technology)
9.50 – 10.10	Electrospinning of yarns for tissue engineering: system design issues and performance characteristics Invited Talk – Dr. G McGuiness (Dublin City University)
10.10 – 10.25	Development of a novel chemical cross-linker for the treatment of keratoconus Dr H Atikah (University of Liverpool)
10.25 – 10.40	Designing the Ideal Biocompatible Amphiphilic Block Copolymer for a Specific Biomedical Application Dr E Themistou (Queen’s University Belfast)
10.40 – 11.00	Fluoride exchange in glass-ionomer dental cements Invited Talk – Prof. J Nicholson (Bluefield Centre for Biomaterials, London and Dental Institute, Queen Mary University of London)

11.00 am – 11.30 am Coffee/Tea and Poster Viewing (Judging)

11.30 am – 1.00 pm **Session 6**

Time	Presentation
11.30 -12.10	Keynote Presentation - Prof M Dalby and Prof M Salmeron Sanchez (University of Glasgow)
12.10 – 12.25	Delivering the immunomodulatory properties of mesenchymal stem cells: Comparing different designs and biomaterials S Moise (University of Nottingham)
12.25 – 12.40	Thermally Triggered Hydrogel Induces Nucleus Pulposus Differentiation of Mesenchymal Stem Cells and Restores Mechanical Function Following Injection into Bovine Intervertebral Disc. A Thorpe (Sheffield Hallam University)
12.40 – 1.00	Peptide Functionalised Gold Nanoparticles in Nanomedicine Invited Talk – Dr. D Dixon (Ulster University)

1.00 pm – 1.50 pm Lunch

1.50 pm – 3.15 pm

Session 7

Time	Presentation
1.50 – 2.10	Chemical Mapping of Biomaterials and Mineralised Tissues Invited Talk – Dr. R Williams (University of Birmingham)
2.10 – 2.25	Crystalline Polymeric Nanocomposite Hydrogels M Inam (University of Warwick)
2.25 – 2.40	The use of pNIPAM-Iaponite® hydrogel in 3D-cell culture of the intestine R Dosh (Sheffield Hallam University)
2.40 – 2.55	Studies on Double-crosslinked Nanogel with Graphene Oxide and their potential application in removing toxic Pb ions from water SM Zaki (University of Manchester)
2.55 – 3.15	Enzymatic mineralization of hydrogels with alkaline phosphatase Invited Talk – Dr. T Douglas (University of Ghent)

3.15 pm Prize Giving and Closing Remarks