### 68th Irish Universities Chemistry Research Colloquium

June 23rd & 24th, 2016.



## THURSDAY 23rd

| THURSDAY 23rd         |  |  |  |  |
|-----------------------|--|--|--|--|
| 8.45 am               | Registration   |  |  |  |
|                       | Boole 3  |  |  |  |
| 9.30 am               | Welcome and Opening Remarks                                |  |  |  |
|                       | Prof. Justin D. Holmes                                     |  |  |  |
|                       | Head of Chemistry  |  |  |  |
|                       | Diamana ha starra  |  |  |  |
|                       | Plenary Lecture  |  |  |  |
| 9.45am                | 45am Prof. John Sodeau                                     |  |  |  |
| Every Breath You Take |  |  |  |  |
|                       |  |  |  |  |
|                       | Boole 3  | Boole 4  |  |  |
|                       | CHAIR: Dr Paul Evans                                       | CHAIR: Dr Orla Ni Dhubhghaill                      |  |  |
|                       |  |  |  |  |
|                       | Aramballi Jayanth, S. (TCD)                                | Gibson, Gregory (QUB)                              |  |  |
| 10.35am               | Self assembly studies of tripodal                          | The Electrochemical Generation of $O_3$            |  |  |
|                       | molecules towards new materials                            | on a Ni/Sb-SnO <sub>2</sub> Electrode: A DFT Study |  |  |
|                       | O'Shea, Kevin (UCC)  |  |  |  |
|                       | Synthesis & Evaluation of Novel                            | Wilson, Eoin (UCC)                                 |  |  |
| 11.00am               | Functionalized Indoles as Potential                        | Investigation of the near-UV optical               |  |  |
|                       | Inhibitors of Kinase                                       | properties of secondary organic                    |  |  |
|                       |  | aerosols in an atmospheric chamber                 |  |  |
| 11.25am               | Coffee Break   |  |  |  |
|                       |  |  |  |  |
|                       | CHAIR: Dr Ger McGlacken                                    | CHAIR: Prof. Martyn Pemble                         |  |  |
|                       | Reddy, Andrew (Maynooth)                                   | Liu, Pai (UL)                                      |  |  |
| 11.55am               | Synthesis, Characterization and In Vitro                   | Device Scale Assembly of                           |  |  |
|                       | Anti-parasitic Activity of a Novel Family                  | Semiconductor Nanorods by                          |  |  |
|                       | of Glycosylated Metallodrugs                               | Electrophoretic deposition                         |  |  |
|                       |  |  |  |  |
|                       | Smith, Raymond (UCD)                                       | Sarangapani, Chaitanya (DIT)                       |  |  |
| 12.20pm               | Configuration-Based Orthogonal                             | Non-thermal plasma: a novel chemical               |  |  |
|                       | Activation of Thioglycosides                               | decontamination tool                               |  |  |
|                       | Flash Talks 1  |  |  |  |
|                       |  |  |  |  |
|                       | CHAIR: Dr Dara Fitzpatrick                                 | CHAIR: Dr Tony Keene                               |  |  |
|                       | Holon Lisa (Typdall/UCC)                                   | Browne, Michelle (TCD)                             |  |  |
|                       | Helen, Lisa (Tyndall/UCC)<br>The 'Smart' Needle – A Needle | Water Splitting at Transition Metal                |  |  |
| 12.45pm               | Integrated with an Impedance Sensor                        | Oxide (TMO) Films in Alkaline Media -              |  |  |
|                       | for Objective Nerve Localisation during                    | Cost vs. Activity                                  |  |  |
|                       | Ultrasound Guided Peripheral Nerve                         | /  |  |  |
|                       | Block  |  |  |  |
|                       |  |  |  |  |

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# Department of **Chemistry**

|        | Ahmed, Muhib (Maynooth)<br>New Life for an Old Tuberculosis Drug  | Buk, Vuslat (Tyndall)<br>Novel miniaturized gold<br>microelectrodes for electrochemical<br>detection of hydrogen peroxide   |
|--------|---|---|
|        | Kitteringham, Eolann (RCSI)<br>Development of Bespoke Metal<br>Complexes for Cellular Targeting   | Heffernan, Maria (UL)<br>Electroactive Bioresorbable Materials<br>for Tissue Engineering Scaffolds  |
|        | Gaynor, Brian (UCD)<br>In Silico Determination of Dioxygen<br>Addition to a (Cp*)Ru(II) β-diketiminate<br>Complex                             | Newman, Gemma (ITT)<br>Design and Evaluation of New<br>Biomaterials to Treat Fungal Infection   |
| 1.05pm | Lunch   |   |
|        | CHAIR: Dr Stuart Collins  | CHAIR: Prof. John Cassidy   |
| 2.15pm | Ramos, Jessica (Maynooth)<br>Selective aliphatic/aromatic<br>organogelation controlled by the side-<br>chain protection of serine amphiphiles | Ryan, Catherine (UCC/Tyndall)<br>An organic-inorganic composite<br>designed for pH-driven optical<br>detection by combination of chitosan<br>and colloidal silica |
| 2.40pm | Antonik, Pawel (NUIG)<br>Lectin–Glycopolymer Interactions as a<br>Route to Noncovalent PEGylation   | Ford, Rochelle (UCD)<br>Design and characterization of<br>amperometric glutamate biosensors   |
| 3.05pm | McKeon, Aoife (RCSI)<br>Pt Anticancer Compounds; Targeting<br>HSP70-1   | Kyne, Michelle (NUIG)<br>Fluorescence Emission Properties of<br>Triazine Fluorophores in Micelle and<br>Protein Solutions: A Comparison                           |
| 3.30pm | Coffee Break  |   |
|        | CHAIR: Dr Simon Lawrence  | CHAIR: Dr Eric Moore  |
| 4.00pm | Conway-Kenny, Robert (TCD)<br>Synthetic Potential; Large Poly-Phenyl<br>Ligands Derived from 1,10-<br>Phenanthroline                          | McCrellis, Corina (QUB)<br>Effect of the Presence of MEA on CO2<br>Capture Ability of Superbasic Ionic<br>Liquids   |
| 4.25pm | Zhang, Shi Yuan (UL)<br>A Chiral Crystalline Sponge   | Cheung, Shane (RCSI)<br>Real-time Imaging of Lysosomal<br>Disruption with a pH Responsive NIR<br>Fluorophore  |
|        |   |   |

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| Flash Talks 2  |   |  |  |  |
|----------------|---|--|--|--|
|                | CHAIR: Dr Micheal Scanlon   | CHAIR: Dr Colm O'Dwyer   |  |  |
| 4.50pm         | Mulahmetovic, Ensar (DIT)<br>Synthesis of Novel Magnetic Catalysts  | Pettenuzo, Andrea (NUIG)<br>Recent Developments of Gold(III)<br>Dithiocarbamato Glycoconjugates for<br>the Targeted Metal-Based Anticancer<br>Chemotherapy |  |  |
|                | Molphy, Zara (DCU)<br>DNA Oxidation Profiles of Copper<br>Phenanthrene Chemical Nucleases                 | O'Connell, John (UCC)<br>Monolayer doping of Si and<br>InGa <sub>0.53</sub> As <sub>0.47</sub> substrates and devices for<br>future CMOS applications      |  |  |
|                | Jinju, James (UCD)<br>Catalytic asymmetric synthesis of<br>sterically hindered a-allyl-a-aryl<br>lactones | Creedon, Niamh (Tyndall)<br>Nanowire-based, Label-free<br>Electrochemical Detection of Bovine<br>Respiratory Disease Pathogens in Serum                    |  |  |
| Kampus Kitchen |   |  |  |  |
| 5.10pm         | Poster Session  |  |  |  |
| 6.10pm         | Finish Day 1  |  |  |  |
|                | River Lee Hotel (Weir Bar)  |  |  |  |
| 8.00pm         | BBQ   |  |  |  |

| FRIDAY 24th |   |   |  |  |
|-------------|---|---|--|--|
|             | Boole 3   | Boole 4   |  |  |
|             | CHAIR: Dr Colm O'Dwyer  | CHAIR: Dr Nikolay Petkov  |  |  |
| 9.55am      | Slator, Creina (DCU)<br>[Cu(o-phthalate)(phenanthroline)]<br>Exhibits Unique Superoxide-Mediated<br>NCI-60 Chemotherapeutic Action<br>through Genomic DNA Damage and<br>Mitochondrial Dysfunction | Bruen, Danielle (DCU) -<br>Applications of Fluorescent Biosensors<br>for Non-Invasive Glucose Monitoring  |  |  |
| 10.20am     | Belhout, Samir (UCD)<br>Preparation and Characterisation of<br>Supported Gold Nanoparticles with<br>Tunable Loading and Various<br>Applications   | McCarney, Eoin (TCD)<br>Synthesis of functional supramolecular<br>architectures the development of<br>healable luminescent metallogels from<br>triazole- based heterocyclic ligands |  |  |
| 10.45am     | Coffee Break  |   |  |  |

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# Boole 3 Keynote Speaker 11.15am Dr Dara Fitzpatrick A Sound Approach to Analytical Chemistry 12.00pm Award Presentations Closing Remarks Prof. Anita Maguire Vice President for Research & Innovation