

AMN9 Programme

Subject to change

Sunday 10 February

12 - 7.30pm	Registration opens - Soundings Theatre Level 2
6 - 7.30pm	Welcome reception - Level 4

Monday 11 February

7.30am	Registration opens - Soundings Theatre Level 2
8.30 - 9am	Conference Opening - Mihi and Opening speaker Hon Dr Megan Woods - Amokura Gallery Level 4
9 - 10am	Plenary 1 - Professor Dan Nocera - A Complete Artificial Photosynthesis Food and Fuel from Sunlight, Air and Water - Amokura Galley Level 4
10-10.30am	Morning Tea - Oceania Level 3

	Amokura Gallery	Rangimarie 2	Rangimarie 1	Mahuki	Icon
10:30am - 11:11am - 11:20am - 12:20pm	Functional Materials Invited Speaker 1A Alexandre Dmitriev I.1 Magnetic, chemical and electrical steering of the nanoscale optical antennas	Materials Synthesis and Characterisation Invited Speaker 1 Roy Clarke - I.2 with Band-gap Tuning via Cation Sub-lattice Ordering	Theory and Modelling of Materials and Devices Invited Speaker 1 Oleg Tretiakov - I.3 Dynamics and Lifetimes of (Anti)Skyrmions	Materials and Technologies for Biological Applications invited Speaker 1 Alexander Zelikin - I.4 Enzyme prodrug therapy engineered into biomaterials	Future Devices and Technologies invited Speaker 1 Lan Wang - I.5 2D ferromagnetism and spintronic devices based on van der Waals heterostructures
11-11.20am	Functional Materials Invited Speaker 1B Geoffrey Waterhouse I.6 Photonic Band Gap Materials for Efficient Solar Hydrogen Production	Materials Synthesis and Characterisation Contributed 1 Geoffry Laufersky - C4 Tuning Indium Phosphide Quantum Dots: From Theory to Practice	Theory and Modelling of Materials and Devices Contributed 1 Amanda Parker - C8 Use of artificial intelligence to avoid biases in materials simulations or experiments	Materials and Technologies for Biological Applications Contributed 1 Louise Orcheston-Findlay - C12 Oxygen control and measurement to incorporate drug resistant regions into the cancer model	Future Devices and Technologies Contributed 1 Masahiro Yamashita - C16 Quantum Molecular Spintronics Based on Single-Molecule Magnets: Single-Molecule Memory and MOF-Spintronics
11.20-11.40am	Functional Materials Contributed 1 11.30 - 11.50am Pieter Geiregat - C1 Optical Gain Spectroscopy of Solution Processable 2D Materials for Integrated Micro-Lasers	Alyxandra Thiesse - C5 Insights into the Structure of Silicon Nanocrystals	Elke Pahl - C9 Melting of Nano-Clusters in Strong Magnetic Fields	Maryam Hejazi - C13 Deposition of conductive diamond on carbon fiber microelectrodes for neural stimulation	Luca Bondi - C17 15N-NMR to predict spin crossover activity in solution?
11.40-12noon	11.50 - 12.10pm Linda Chen - C2 Gold nanoclusters for solar cells applications	Nina Novikova - C6 Distorted Porphyrins: Ultrafast Excited State Dynamics of Boron Porphyrins and Porphyrinoids	Shaun Hendy - C10 Instabilities in the melting of metal nanowires	Mohammad Tajul Islam - C14 Fabrication and characterisation of 3-dimensional electrospun nanofibrous scaffolds	Guy Dubuis - C18 Skyrmions and Topological Hall Effect in Mn2CoAl
12noon-12.20pm	12.10 - 12.30pm Joanne Rogers - C3 Arc discharge synthesis of metal oxide composites for black near-infrared reflective coatings	Marcus Jones - C7 Exploiting exciton plasmon coupling to enhance optical transitions in colloidal quantum dots	Geoff Willmott - C11 Collective Dynamics of Janus Particles: Simulations	Rossana Boni - C15 A novel 3D nanofibrous scaffold for neural tissue regeneration	Richard Caulfield - C19 Miniaturised 3D printed probes for high-resolution all-optical ultrasound imaging
12.20-12.30pm					
12.30-1.30pm					
	Lunch break - Oceania Level 3				

	Amokura Galley	Soundings Theatre	Icon	Rangimarie 1	Rangimarie 2
1.30 - 2pm	Functional Materials Invited Speaker 2 James Crowley - I.7 Metallosupramolecular Cages Selfassembly Molecular Recognition and Catalysis	Materials Synthesis and Characterisation Invited Speaker 2 Benjamin Mallett - I.8 Controlling charge-order in superconductor sandwiches	Soft Matter Invited Speaker 1 Emilia Nowak - I.9 Interfacial phenomena in liquid systems caused by the presence of surfactants	Materials and Technologies for Biological Applications Invited Speaker 2 William Peveler - I.10 Detecting Liver Fibrosis from Serum with a Rapid and Robust Multichannel Polymer-based Sensor Array	Materials and Devices for Energy Sustainability Invited Speaker 1 Nonglak Meethong - I.11 Structural and Electrochemical Properties of Li and Mn-rich Oxide Cathode Materials for Next Generation High Energy Density Li-ion Batteries
2-2.20pm	Functional Materials Contributed 2 Colm Healy - C20 Photoactive Multicomponent MOFs for Photon Upconversion and Photocatalysis	Materials Synthesis and Characterisation Contributed 2 Gabriel Bioletti - C.23 Pressure Dependant Measurements of Critical Current Density in the Nickel-doped Ba122 Superconductor	Soft Matter Contributed 1 Catherine Whitby - C26 From rings to bumps in colloid patterning: the effect of short chain amphiphiles	Materials and Technologies for Biological Applications Contributed 2 Nicola Altenhuber - C29 Diabetes Management: Developing a Point-of-Care Insulin Sensor	Materials and Devices for Energy Sustainability Contributed 1 Shalini Divya - C32 New Cathodes for Aluminium Ion Batteries (AIBs)
2.20 - 2.40pm	Lita Lee - C21 Detection of volatile organic compounds (VOCs) in ppb level using heated metal oxide semiconductor (HMOS) sensor	Heedae Kim - C24 Fractional Aharonov-Bohm Oscillations in a Single Quantum Ring	Matheu Broom - C27 Symmetry Splitting of Impacting Droplets on Partly Wetting Surfaces	Jenny Malmstrom - C30 Functional surfaces as biointerfaces and beyond	Keith Gordon - C33 Using Raman Spectroscopy and Computational Chemistry to Understand Molecular Electronic Materials
2.40-3pm	Mahsa Moteshakeri - C22 Comparison of PEDOT-Sensors with HPLC for the analysis of uric and ascorbic acid antioxidants in milk	Ciaran Moore - C25 Measurement of surface plasmon resonance intensity in thin film plasmonic sensors	Azam Ali - C28 Fundamental understanding of structure, function and properties of chitosan biopolymer gels	Md. Sakinui Islam - C31 Intensification of High-Pressure Delignification Process for Nanocrystalline Cellulose Production	John Kennedy - C34 Thermoelectric Properties of Isovalent Ion Doped Bismuth Telluride Films
3 - 3.30pm	Coffee break - Oceania Level 3				
3.30 - 5pm	Keynote 1 - Professor Adam Engler Improving Cardiovascular "Diseases-in-a-dish" with Dynamic Materials	Keynote 2 - Dr Stefan Kupfer Tuning Unidirectional Energy and (Multi-) Electron Transfer Processes in Photocatalysis			
5 - 6.30pm	Poster session 1 - Oceania Level 3				

Tuesday 12 February

8.30am	Registration opens - Soundings Theatre Level 2
9 - 10am	Plenary 2 - Professor Rose Amal - Harnessing Solar Energy Through Catalysis - Closing the Carbon Loop - Amokura Gallery Level 4
10-10.30am	Morning tea - Oceania Level 4

	Amokura Gallery	Soundings Theatre	Icon	Rangimarie 1	Rangimarie 2
10.30 - 11am	Functional Materials Invited Speaker 3 James Analytis - I.12 Transport signatures of surface states in a Weyl semimetal: evidence of field driven Fermi arc interferometry	Materials Synthesis and Characterisation Invited Speaker 3 Annie K Powell - I.13 Approaching a quantum critical point using chemical means - a science fiction wormhole in a science fact scenario	Future Devices and Technologies Invited Speaker 2 Ethan Minot I.14 Electron-electron interaction driven phenomena in carbon nanotube devices	Materials and Technologies for Biological Applications Invited Speaker 3 Silvia Giordani - I.15 Carbon Nano-Onions for Biomedical Applications	Materials and Devices for Energy Sustainability invited Speaker 2 Antoni Llobet - I.16 Hybrid molecular materials for water splitting applications
11-11.20am	Functional Materials Contributed 3 Nerea Bilbao - C35 The impact of grafted surface defects on the on-surface Schiff-base chemistry at the solid-liquid interface.	Materials Synthesis and Characterisation Contributed 3 Selvan Demir - C39 Radical-Bridged Lanthanide Single-Molecule Magnets	Future Devices and Technologies Contributed 2 Jeff Tallon - C43 The long road to room temperature superconductivity - basically there, but...	Materials and Technologies for Biological Applications Contributed 3 Sharali Malik - C47 Few-layer graphene based nanocomposites for potential use in dental/biomedical applications	Materials and Devices for Energy Sustainability Contributed 2 Shane Telfer - C51 Gas Separations using Metal-Organic Frameworks
11.20 - 11.40am	Avadh Saxena - C36 Nonreciprocity, Chirality and PT-Symmetry in Photonics and Functional Materials	Valerie Cornuault - C40 Investigating the impact of complex pectin structures on gelling	Frederick Wells - C44 Nanoparticle Colloids for Improved Superconducting Films	Azadeh Hashemi - C48 Characteristics of bioimprinted casein microdevices as biodegradable cell-culture substrates	Charlie Ruffman - C52 Hydrogen production using MoS2 electrocatalysts: The effect of applied potential and catalyst support
11.40-12noon	Charlotte Boott - C37 Functional Materials from Cellulose Nanocrystals	Chris Fitchett - C41 Turning the Switch: Redox Active Bridging Ligands	Jakub Jagielski - C45 Aggregation-induced emission in lamellar solids of colloidal perovskite quantum wells	Renee Goreham - C49 InP quantum dots conjugated with targeting ligands to fluorescently label and track extracellular vesicles	Jay Chan - C53 Breaking molecular nitrogen with an atomically clean lanthanide surface
12 - 12.20pm	Johannes Seibel - C38 An in-situ nanoshaving protocol to achieve control over 2D crystallization at the liquid/solid interface	Courtney Ennis - C42 The DFT Prediction of Molecular Crystal Far-Infrared Spectra: From Planetary Ices to Forensics	Jakub Jagielski - C46 Colloidal quantum confined perovskites - achieving ultrapure green and blue electroluminescence	Zeineb Ayed - C50 Aptamer conjugated InP/ZnS QDs to target and label acinetobacter baumannii	Frantisek Fendrych - C54 Nanocrystalline Diamond Films for Anticorrosion Protection of Zirconium Nuclear Fuel Rod Cladding
12.20 - 12.30pm					
12.30 - 1.30pm					
	Lunch break - Oceania Level 3				

	Amokura Gallery	Soundings Theatre	Rangimarie 1	Rangimarie 2	Icon
	Functional Materials Invited Speaker 4	Materials and Devices for Quantum Technologies Invited Speaker 1	Theory and Modelling of Materials and Devices Invited Speaker 2	Soft Matter Invited Speaker 2	Future Devices and Technologies Invited Speaker 3

1.30 - 2pm	Agustin Schriffin - I.17 Organic Nanostructures on Surfaces Towards Nanoscale Control of Interfacial Electronic Properties	Jevon Longdell - I.18 Microwave-optical quantum signal conversion using rare earths in solids	Gianluca Rastelli - I.19 Electron-vibration and electron-photon interaction in nanoscale hybrid systems	Erik Reimhult - I.20 Tailoring colloidal and protein interactions of superparamagnetic nanoparticles for biomedical applications	Adam Micolich - I.21 Opportunities in Mixing Materials – Roles for Soft Materials in III-V Semiconductor Nanowire Devices
Functional Materials Contributed 4		Materials and Devices for Quantum Technologies Contributed 1		Theory and Modelling of Materials and Devices Contributed 2	
2 - 2.20pm	Penelope Brothers - C55 POMs (polyoxometallates) as building blocks for magnonics devices	Rakesh Arul - C58 Lighting up chemical bonds - Can quantum optics be used to control chemical reactions?	Walter Somerville - C61 Understanding pathlength distributions in a photon random walk	Susav Pradhan - C64 Using microrheology and biophysical techniques to probe biological microparticles	Natalie Olivia Victoria Plank - C67 Carbon nanotube network field effect transistors as a sensing platform
2.20 - 2.40pm	Sesha Manuguri - C56 Spatial organization and characterization of magnetic nanocrystals in di-block copolymer micellar thin films.	Hannah Stern - C59 Imaging single visible emitters in hBN monolayers.	Geoffrey Weal - C62 Using structural recognition methods to improve the efficiency of global optimisation algorithms for nanoparticle structure determination	Joe Berry - C65 Measuring mechanical properties of hydrogel particles using AFM	Abu Rifat Ullah - C68 Switching Highly Doped p-type GaAs Nanowire FETs
2.40 - 3pm	Viji Sarojini - C57 Designing Antimicrobial Surfaces	Robin Guehne - C60 Exploring electronic properties of topological insulator Bi2Se3 using nuclear magnetic resonance	Chhayly Tang - C63 Modeling molecular orientation effects in dye-coated nanostructures using a thin-shell approximation of Mie theory for radially anisotropic media	Sevgi Onal - C66 Design and Fabrication of a Microfluidic System for Force Application on Cancer Cells	Carlos Torres-Torres - C69 Magnetoplasmonic influence on multiphotonic effects exhibited by carbon/metal nanostructures
3 - 3.30pm	Coffee break - Oceania Level 3		Soundings Theatre Level 2		Amokura Gallery Level 4
3.30 - 5pm	Keynote 3 - Professor Norman Birge Ferromagnetic Josephson Junctions for Cryogenic Memory	Keynote 4 - Associate Professor Brigitte Stadler Micro- and Nanoreactors in Cell Mimicry	Keynote 5 - Professor Richard Palmer Nanoparticle Beam Deposition: A Novel Route to the Solvent-Free Creation of Heterogeneous Catalysts		
5 - 6.30pm	Poster session 1 - Oceania Level 3				

Wednesday 13 February

8.30am	Registration opens - Soundings Theatre Level 2				
9 - 10am	Plenary 3 - Professor Michael Fuhrer - Topological materials for low-energy electronics				
10 - 10.30am	Morning tea - Oceania Level 3				
	Amokura Gallery		Soundings Theatre		Icon
10.30 - 11am	Functional Materials Invited Speaker 5 Karina Hudson - I.22 Towards topological quantum computing: demystifying the first 1D subband	Materials Synthesis and Characterisation Invited Speaker 4 Grzegorz Lisak I.23 Waste-to-Materials Circular Economy Concept: Carbon Nanotubes Derived from Plastic Waste	Future Devices and Technologies Invited Speaker 4 Sumeet Walia - I.24 Electronics of the future	Materials and Technologies for Biological Applications Invited Speaker 4 Laura Domigan - I.25 Lens protein biomaterials for use in ocular surgery	Materials and Devices for Energy Sustainability Invited Speaker 3 Julio Lloret-Fillol - I.26 From Well-defined Coordination Complexes towards Materials for Artificial Photosynthesis
11 - 11.20am	Functional Materials Contributed 5 Paul Baek - C70 UV-curable Highly Elastomeric Conducting Polymers for Stretchable Electronics	Materials Synthesis and Characterisation Contributed 4 Mark Waterland - C74 Characterising 2D nanoribbon edges with IR and Raman spectroscopy	Future Devices and Technologies Contributed 4 Simon Brown - C78 Self-assembled percolating networks for brain-inspired computing	Materials and Technologies for Biological Applications Contributed 4 Rebecca Soffe - C82 Building an Artificial-Leaf-on-a-Chip	Materials and Devices for Energy Sustainability Contributed 3 Sreelakshmi Chandrabose - C86 High exciton diffusion in Fused Ring Electron Acceptor films
11.20 - 11.40am	Yen Truong - C71 Functional Cross-Linked Electrospun Polyvinyl Alcohol Membranes and Their Potential Applications	Colleen Marlow - C75 Experimental investigation of the transport asymmetry in sparse networks of randomly aligned carbon nanotubes	Felicia Ullstad - C79 Making magnetic tunnel junctions using contrasting intrinsic ferromagnetic semiconductors	Michel Nieuwoudt - C83 Probing benign skin lesions with Raman spectroscopy	Sean Collins - C87 Interfacial charge transfer between gold nanorods and electropolymerized metallophthalocyanine nano-coatings
11.40 - 12noon	Jadranka Travas-Sejdic - C72 Functionalisation of Conducting Polymers: Towards Advanced Electronic Biomaterials for Biomedical Applications	Yung-Sen Lin - C76 Synthesis of flexible organosilicon oxynitride films using an atmospheric pressure plasma jet for enhancing scratch resistance of flexible carbon fiber-reinforced polymer composites	Alex Risos - C80 High Intense Femtosecond Flat Supercontinuum Pulses Through Sapphire Using Diffractive Optical Elements	Yiling Sun - C84 Trapping and Maintenance of Individual Zoospores On-Chip for Single Cell Protrusive Force Measurements	Shinuk Cho - C88 High efficiency polymer homo-tandem solar cells with carbon quantum dot doped tunnel junction intermediate layer
12 - 12.20pm	Michael Price - C73 Long range exciton transport in conjugated polymer nanofibers prepared by seeded growth	Carla Meledandri - C77 Nano-MOF Engineering Using Microemulsions	Pawel Wagner - 81 Developing Photosensitive Droplets for Chemopropulsion	Ankita Gangotra - C85 Nanoaspiration: Towards Mechanical Sensing on the Nanoscale	Jin Young Kim - C89 Nanoparticle-Enhanced Silver Nanowire Plasmonic Electrodes for High-Performance Organic Optoelectronic Devices
12.20 - 1.30pm	Lunch break - Oceania Level 3				
	Soundings Theatre Level 2		Amokura Gallery Level 4		
1.30 - 3pm	Keynote 6 - Dr Anna Phan The Possible Applications of Near Term Quantum Computers	Keynote 7 - Distinguished Professor Margaret Brimble Development of Peptide and Peptidomimetic Therapeutic Agents from a New Zealand Perspective			
3 - 3.30pm	Coffee break - Oceania Level 3				
	Soundings Theatre Level 2		Amokura Gallery Level 4		
3.30 - 5pm	Keynote 8 - Dr Thomas Watson Quantum Computing with Spins in Silicon	Keynote 9 - Dr Cathy Foley One HTS Josephson Junction - An Array of Applications: Has anything come from research on HTS devices in the last 30+ years?			
6.30pm - late	Conference Dinner - Amokura Gallery Level 4				

Thursday 14 February

8.30am	Registration opens - Soundings Theatre Level 2				
9 - 10am	Plenary 4 - Professor Joachim Spatz - Matter to Life: Assembly of Synthetic Cells - Amokura Gallery Level 4				
10 - 10.30am	Morning tea - Oceania Level 3				
	Amokura Gallery		Soundings Theatre	Rangimarie 1	Icon
10.30 - 11am	Functional Materials Invited Speaker Axel Hoffmann - I.27 Topological Quasiparticles Magnetic Skyrmions	Materials Synthesis and Characterisation Invited Speaker 5 Paula Angelome - I.28 Nanomaterials obtained by chemical synthesis: design, characterization and applications	Theory and Modelling of Materials and Devices Invited Speaker 3 Marco Polini - I.29 Viscous electron transport	Soft Matter Invited Speaker 3 Harm-Anton Klok - I.30 Polymers at synthetic and living surfaces	Material and Devices for Energy Sustainability Invited Speaker 4 Tae-Hyuk Kwon - I.31 Carbon Modifications for Energy Storage System
11 - 11.20am	Functional Materials Contributed Konrad Suschke - C90 Near-Surface Cobalt Implantation Into Amorphous Carbon Films: Observation Of Complex Magnetic Nanostructures And Multiple Magnetic Phases	Materials Synthesis and Characterisation Contributed 5 Anna Garden - C94 Contrasting the motif preference of platinum and gold nanoclusters between 55-309 atoms	Theory and Modelling of Materials and Devices Contributed 3 Bushra Anam - C98 Exploring group 13 structures: Elemental 2-dimensional Gallium, Aluminium, and Indium	Soft Matter Contributed 3 Kyle Webster - C102 Engineering, Functionalisation, and Peptide Templated Self-assembly of Human Peroxiredoxin Three.	Materials and Devices for Energy Sustainability Contributed 4 Han Y Woo - C106 Single Component OPVs Based on Oligothiophene-Fullerene Conjugate
11.20 - 11.40am	Nadine J. van der Heijden - C91 Magnonic crystal bottom-up synthesis through self-assembly	Erin Leitao - C95 Towards the next generation of polymeric materials	Michael Kammermeier - C99 Spin relaxation in wurtzite nanowires	Rona Chandrawati - C103 Liposome-based nanosensors for chemical and biological sensing	Nathaniel Davis - C107 Singlet Fission and Triplet Transfer to PbS Quantum Dots in TIPS-Tetracene Carboxylic Acid Ligands
11.40 - 12noon	Andris Sutka - C92 Triboelectric Nanogenerator from Inversely Polarised Ferroelectric Contacting Layers	Marion Dubernet - C96 Luminescent nanocomposite thin films of molybdenum metal clusters for energy applications	Nicola Gaston - C100 The electronic and thermodynamic properties of two-dimensional gallium	Shinji Kihara - C104 Small angle neutron scattering study of soft and hard component of protein corona	Justin Hodgkiss - C108 Ultrafast photoinduced refractive index changes in metal halide perovskites
12 - 12.20pm	Michael Slota - C93 Electron coherence transfer in magnetic graphene nanoribbons	Chloé Minnai - C97 Optical and electrical properties of metal-polymer nanocomposites	Krista Steenbergen - C101 Gallium Nanotubes	Isabela Monteiro - C105 Self-assembling block copolymer for signalling molecules delivery by collagen layer degradation	Sajal Biring - C109 Influence of Inhomogeneous Schottky Barrier on V_{oc} in Small Molecular Organic Photovoltaics
12.20 - 1.30pm	Lunch break - Oceania Level 3				
1.30pm - 2:30pm	Plenary 5 - Oceania Level 3				
2.30 - 3pm	Closing Ceremony - Oceania Level 3				