ISHA 2013
January 13-17
AT&T Executive Education & Conference Center
Austin, TX, USA

Session/Day/Time	Speaker Last Name	Speaker First Name	Affiliation	Abstract Title
Monday, January 14th				
Plenary				
8:00-8:15 am	ISHA 2013 Introduction from Brian Korgel and Byron Byrappa			
8:15-9:00 am	Komarneni	Sridhar	Penn State University	Multi-energy Solvothermal Processing: Retrospect and Prospect
9:00-9:30 am	BREAK			
Materials Session	Lithium ion battery synthesis sub-session			
9:30-10:00 am	Manthiram	Arumugam	University of Texas at Austin	Microwave-assisted Solvothermal Synthesis of Nanostructured Materials for Lithium-ion Batteries
10:00-10:30 am	Stevenson	Keith	University of Texas at Austin	Architectural Control of Nanostructured TiO2(B) and Morphological Dependent Lithiation Behavior
10:30-11:00 am	Aymonier	Cyril	University of Bordeaux	Supercritical solvothermal synthesis of oxide nanostructures in water/alcohol mixtures
11:00-11:15 am	Bogart	Timothy	University of Texas at Austin	Solution-Grown Si and Ge Nanowires as High Capacity Anodes for Lithium-Ion Batteries
11:15-11:30 am	Richards	Benjamin	Cornell University	Direct growth of silicon and germanium nanowires on metal foils: opportunities and challenges for high-throughput processing
11:30-noon	Ohara	Satoshi	Osaka University	Tailor-Made Ceramic Nanocrystals by Organic-Ligand-Assisted Hydrothermal Synthesis
Materials Session	Nanomaterials			
9:30-10:00 am	Tang	Zhiyong	National Center for Nanoscience and Technology	
10:00-10:30 am	Wang	Xun	Tsinghua University	Solvothermal Synthesis of Monodisperse Nanocrystals and their Surface
10:30-11:00 am	Xiang	Lan	Tsinghua University	Hydrothermal Formation and Application of advanced Ca/Mg-bearing Whiskers
11:00-11:30 am	Yoshimura	Masahiro	National Cheng Kung University, Taiwan	Feature and Future of Hydrothermal-Electrochemical Processing for Inorganic Materials
11:30-noon	Yu	Shu-Hong	Hefei National Laboratory (HFNL)	Multiplex Templating Hydrothermal Synthesis of Functional Nanowires, Macroscopic Assemblies and Their Applications
Sustainability Session				
9:30-10:00 am	Savage	Phillip	University of Michigan	Hydrothermal Conversion of Algal Biomass to Fuels and Chemicals
10:00-10:30 am	Al-Duri	Bushra	University of Birmingham	Supercritical Water Oxidation: The Next Generation of Processes for Hazardous Waste Treatment
10:30-10:45 am	Abdelmoez	Wael	Minia University	Sub-critical Water Technology as a Green and Sustainable Tool for Oil Extraction
10:45-11:15am	Long	Jeffrey	University of California, Berkeley	Carbon Dioxide Capture in Metal-Organic Frameworks
11:15-11:30 am	Bayliss	Peter	University of Nottingham	Greener Synthesis of Metal Organic Frameworks in High Temperature Water
11:30-noon	Li	Jing	Rutgers University	Microporous Metal Organic Frameworks: Solvothermal-Hydrothermal Synthesis, Structure-Pore Functionalization, and Potential Applications
noon-1:30 pm	LUNCH			
Materials Session	Catalysis and Nanomaterials			
1:30-2:00 pm	Walton	Richard	University of Warwick	New Oxide Materials for Catalysis from Hydrothermal Chemistry
2:00-2:30 pm	Lu	Fu-Hsing	National Chung-Hsing University	Hydrothermal-galvanic couple synthesis of perovskite oxide thin films
2:30-3:00 pm	Lu	Xianmao	National University of Singapore	Shape-selective Growth of Noble Metal Nanocrystals
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Tilley	Richard	Victoria University of Wellington	Synthesis and Applications of Nanoparticles
4:00-4:30 pm	Tuan	Hsing-Yu	National Tsing Hua University	Generalized Syntheses of Nanocrystal–Graphene Hybrids in Hot Solvents
4:30-5:00 pm	Watkins	Jim	University of Massachusetts	Nanoparticle Assembly Using Polymer Templates and Printing Technologies for Hybrid Materials and Devices
X-Rays, Microreactors and In situ studies				
1:30-2:00 pm	O'Hare	Dermot	Oxford	Studying Sub- and Supercritical Hydrothermal Syntheses using Time-Resolved In-Situ Powder X-Ray and Neutron Diffraction
2:00-2:30 pm	Takami	Seiichi	Tohoku University	Neutron Radiography on Mixing Behavior of Supercritical Water and Room-Temperature Water in Tubular Flow Reactor for Hydrothermal Synthesis
2:30-3:00 pm	Marre	Samuel	University of Bordeaux	Hydrothermal Media on Chip: Supercritical Microreactors for Studying Water / CO2 Systems
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Aoki	Nobuaki	Tohoku University	Design Methodology of Microreactor and its Application for Supercritical Nanoparticle Synthesis
4:00-4:30 pm	Schaef	Todd	Pacific Northwest National Laboratory	The In Situ Supercritical Suite at Pacific Northwest National Laboratory
4:30-4:45 pm	Jensen	Kirsten M. Ø.	Aarhus University	Watching chemistry happen: In situ studies of nanoparticle formation and growth in sub- and supercritical fluids
4:45-5:00 pm	Shuai	Min	Texas A&M University	Liquid Crystals of Zirconium Phosphate disks with Various Aspect Ratios Controlled through Hydrothermal Method

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Materials Session				
1:30-1:45 pm	Dharmaprakash	Sampyady	Mangalore University	Low temperature sol gel processing of pure and Al doped ZnO films
1:45-2:00 pm	Onoki	Takamasa	Osaka University	Preparation of transparent zeolite film on glass substrate without using structure directing agents
2:00-2:30 pm	Halasyamani	P. Shiv	University of Houston	Hydrothermal Synthesis of New Functional Polar Inorganic Materials
2:30-2:45 pm	Playford	Helen	University of Warwick	Direct Synthesis of Oxides from Solvothermal Oxidation of Metallic Gallium
2:45-3:00 pm	Harunsani	Hilni	University of Warwick	Characterisation of Doped Perovskites Prepared by Hydrothermal Synthesis
3:00-3:30 pm	BREAK			
3:30-3:45 pm	Hiley	Craig	University of Warwick	New Metastable Ternary Metal Ruthenium Oxides from Low Temperature Hydrothermal Synthesis
3:45-4:00 pm	Ananda	Sannaiah	University Of Mysore	Synthesis of Nanocomposites of ZnO/ZrO2, Ag-RuO2 and Ru-ZnS by Electrochemical method in aqueous medium for photocatalytic degradation kinetics reaction for dyes and for antibacterial study
4:00-4:15 pm	Wu	Yuen	Jilin University	A strategy for Design of Concave Pt-Ni Alloy with Controllable Chemical Etching
4:15-4:30 pm	Yoshida	Hiroyuki	Osaka University	Synthesis of a Novel Implant for Bone Grafting Using Sub-critical Water Technology
4:30-4:45 pm	Elbasuney	Sherif	University of Nottingham	The use of continuous hydrothermal synthesis in the formulation and functionalization of flame retardant polymers
Reception	Poster Session & ISHA Graduate Student Poster Competition			
	Cabañas	Albertina	The Complutense University	Silanization of Silica SBA-15 using Supercritical Carbon Dioxide
	Escalona-González	José Ricardo	CINVESTAV	Synthesis of Carbonated Doped Hydroxyapatite Powders by Urea Decomposition Under by Hydrothermal Method
	Gimeno-Fabra	Miquel	University of Nottingham	
	Goto	Yuki	Chuo University	Hydrothermal Conversion of 1-Bromododecane to 1-Dodecanol in Aqueous 2-Butanone Solution without Catalysts
	Liu	Chengxiang	Tsinghua University	Synthesis of ZnO nano-whiskers in the presence of SDNS
5:30-7:00 pm	Matamoros Veloza	Zully	Technological Institute of Saltillo	Influence Of Hydrothermal Alkaline Activation on the Co-Cr-Mo Biodur CCmplus 799 Alloy Compacts
	Montoya	Karla	Research Institute for Advanced Studies of the NPI	Effect of Phosphate Precursor on the Crystallization of Ca10-xMgx(PO4)6(OH)2 Solid Solutions Under Hydrothermal Conditions
	Ozawa	Shingo	Chuo University	Hydrothermal Conversion of Celluloses to Glucose and Cellooligosaccharides in Dilute Aqueous Formic Acid Solution
	Wang	Jiali	USTB	Facile solvothermal synthesis of spherical Bi-based compounds and their visible-light driven photocatalytic properties
	Xu	Pengfei	USTB	Phase Transformation and Photoluminescence of CePO4 Nano-wires

Tuesday, January 15th

Plenary	Awards Session			
8:00-8:15 am	ISHA Best Ph.D. Thesis Award			
8:15-8:45 am	Roy-Somiya Award			
8:45-9:00 am	BREAK			
Materials Session	Nanowires subtopic			
9:00-9:30 am	Hanrath	Tobias	Cornell University	Metal-Assisted Silicon and Germanium Nanowire Growth: Novel Methods for High-Throughput Production
9:30-10:00 am	Holmes	Justin	University College Cork	Tailoring the Growth and Morphology of Germanium Nanowires in Supercritical fluids
10:00-10:30 am	Heitsch	Andrew	Dow Chemical	Colloidal Synthesis of Silicon Nanowires and Nanorods
10:30-11:00 am	BREAK			
11:00-11:15 am	Lu	Xiaotang	University of Texas at Austin	Monophenyl Silane Catalyzed Growth of Germanium Nanowires with Gold and Nickel Seeds
11:15-11:30 am	Lotty	Olan	University College Cork	Self-Seeded Growth of Germanium Nanowires in Supercritical Fluids
11:30-11:45 am	Pang	Guangsheng	Jilin University	The structure and properties of W18O49 ultrathin nanowire bundles
11:45-noon	Hoang	Son	University of Texas at Austin	Visible Light Driven Photoelectrochemical Water Oxidation on Nitrogen-Modified TiO2 Nanowires
Materials Session	Crystallization/processing			
9:00-9:30 am	Ehrentraut	Dirk	Soraa, Inc.	High Quality, Low Cost Ammonothermal Bulk GaN Substrates
9:30-10:00 am	Graeve	Olivia	University of California, San Diego	Densification Behavior and Interfaces of Tantalum Carbide Nanopowders Prepared by a Solvothermal Process and Consolidated by Spark Plasma Sintering
10:00-10:30 am	Morita	Takeshi	University of Tokyo	Ultrasonic-assisted hydrothermal method for the piezoelectric materials
10:30-11:00 am	Vilarinho	Paula	University of Aveiro	Hydrothermal growth of perovskites: a strategy for processing advanced ferroic structures
11:00-11:30 am	Yanagisawa	Kazumichi	Kochi University	Hydrothermal Growth of Calcite Crystals by Slow Cooling Method
11:30-noon	Suchanek	Wojciech	Sawyer Technical Materials, LLC	Hydrothermal Production and Surface Characterization of Novel Alpha Alumina – based Nanomaterials
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Materials Session	Particle production/continuous reactors			
1:30-2:00 pm	Adschiri	Tadafumi	Tohoku University	Supercritical Hydrothermal Synthesis of Organic Modified Nanoparticles for the Fabrication of Hybrid Polymers
2:00-2:15 pm	Tang	Selina	University of Nottingham	Continuous Hydrothermal Synthesis of Stabilised Zinc Sulphide Nanoparticles with Fluorescent Properties
2:15-2:30 pm	Cheng	Zhengdong	Texas A&M University	Hydrothermal Synthesis of Layered α-Zirconium Phosphate Disks: Control of Aspect Ratio and Polydispersity for Nano-architecture
2:30-3:00 pm	Lester	Edward	University of Nottingham	SHYMAN – Sustainable Hydrothermal Manufacturing of Nanomaterials
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Fehr	Karl Thomas	LMU Munich	Hydrothermal Synthesis of Li4Ti5O12 Spinel in a Continuous Flow Reactor
4:00-4:30 pm	Furusawa	Takashi	Tohoku University	Numerical Simulation of Supercritical Water Flows in Continuous Hydrothermal Synthesis Reactors
4:30-5:00 pm	Kawasaki	Shin-ichiro	AIST	Fluid mixing engineering on continuous supercritical hydrothermal synthesis
5:00-5:30 pm	Hojo	Daisuke	Tohoku University	Rearrangement of Organic-inorganic hybrid Cerium Oxide Nanocrystals during Tetrahydrofuran Annealing
Materials Session	Nanomaterials			
1:30-2:00 pm	Feng	Qi	Kagawa University	Hydrothermal Soft Chemical Synthesis of {010}-Faceted Anatase TiO2 Nanocrystals for High Performance Dye-Sensitized Solar Cells
2:00-2:30 pm	Gelabert	Maria	Winthrop University	Solubility and Supersaturation in Hydrothermal Crystal Growth of ZnO
2:30-3:00 pm	Gao	Yanfeng	SIC	Hydrothermal synthesis of VO2 nanocrystals and applications
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Jacobsohn	Luiz	Clemson University	Novel Optical Properties from Solution-Derived Nanoparticles
4:00-4:30 pm	Kang	Young Soo	Sogang University	Fabrication of Artificial Photosynthesis Devices Using Hydrothermal Synthesis of Photocatalysts
4:30-5:00 pm	Wang	Dan	Chinese Academy of Sciences	Hydrothermal Preparation of High Efficient TiO2-Graphdiyne Photocatalyst
5:00-5:30 pm	Ting	Jyh-Ming	National Cheng Kung University, Taiwan	Synthesis of TiO2 mesoporous beads and its use in all-plastic dye-sensitized solar cell
Materials Session				
1:30-2:00 pm	Sankar	Gopinathan	University College London	Understanding the mechanism of formation of nanoporous materials under hydrothermal conditions by in situ X-ray techniques
2:00-2:30 pm	Stride	John	University of New South Wales	Solvothermal Reactions For Novel Chemical Syntheses: From Graphene To MOFs
2:30-3:00 pm	Imai	Hiroaki	Keio University	Microbial-Mineralization-Inspired Syntheses of Nanostructured Iron Oxides and Manganese Oxides with Controlled Crystal Phases
3:00-3:30 pm	BREAK			
3:30-3:45 pm	Senthilnathan	Jaganathan	National Cheng Kung University, Taiwan	Spark Plasma Solvothermal Technique for the Formation of Graphitic Pattern - A Soft Solution Process (SSP)
3:45-4:00 pm	Whalen	Terence	Rutgers University	Solvothermal Synthesis of Acmite Conversion Coatings on Steel
4:00-4:15 pm	Gimeno-Fabra	Miquel	University of Nottingham	Continuous hydrothermal synthesis of functional nanomaterials for high-performance textiles
4:15-4:30 pm	Gimeno-Fabra	Miquel	University of Nottingham	Continuous Hydrothermal Synthesis of Stabilised Zinc Sulphide Nanoparticles with Fluorescent Properties
4:30-5:00 pm	Zhao	Huijun	Griffith University	Vapor Phase Hydrothermal Synthesis: A New Approach for Fabrication of Nanomaterials
5:00-5:30 pm	Bao	Ningzhong	Nanjing University of Technology	Synthesis of Semiconducting Chalcogenide Nanocrystals for Solar Cell Application
Reception				
5:30-7:00 pm	Networking and ISHA Gold/Silver Winners announcements			

Wednesday, January 16th

Plenary	Awards Session			
8:00-8:45 am	ISHA Lifetime Achievement Award			
8:45-9:00 am	BREAK			
Materials Session				
9:00-9:30 am	Poeppelmeier	Kenneth R.	Northwestern University	Hydrothermal Synthesis of Noncentrosymmetric Mixed Metal Oxide-Fluorides
9:30-10:00 am	Patzke	Greta	University of Zurich	Hydrothermal access to oxide catalysts and sensors: From MARS methods to environmental applications
10:00-10:30 am	BREAK			
10:30-11:00 am	Liu	Yunling	Jilin University	Construction of a Series of Coordination Polymers Based on Tetracarboxylate Ligand: Synthesis, Structure, Gas Adsorption and Magnetic Properties
11:00-11:30 am	Byrappa	Byron	University Of Mysore	Novel Solution Processing and In situ Surface Modification of Metal Oxide Nanomaterials
11:30-noon	Kolis	Joseph	Clemson University	Hydrothermal Growth of Multifunctional YAG Single Crystals for Laser Applications: Teaching an Old Dog New Tricks

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Materials Session				
9:00-9:30 am	Einarsrud	Mari-Ann	Norwegian University of Science and Technology	Hierarchical PbTiO3 Nanostructures Grown by Self-Assembly of Nanocrystals during Hydrothermal Synthesis
9:30-10:00 am	Feng	Shouhua	Jilin University	Atomic-Scale p-n Junctions of Manganese Perovskite Oxides from Hydrothermal Systems
10:00-10:30 am	BREAK			
10:30-10:45 am	Du	Jiang	University of Texas at Austin	Facile Synthesis of Au@TiO2 Core-shell Hollow Spheres for Dye-sensitized Solar Cells
10:45-11:00 am	Wu	Wan-Yu	MingDao University	Characteristics of mesoporous TiO2 beads synthesized using microwave-assisted hydrothermal method and its applications
11:00-11:15 am	Diaz Algara	Joaquin	Autonomous University of Baja California	Single-step Transformation of SrMoO4 Particles from SrSO4 Ore Under Alkaline Hydrothermal Conditions
11:15-11:30 am	Daniels	Luke	University of Warwick	Hydrothermal Synthesis and Characterisation of New Rare-Earth Orthochromite Perovskites La1-xSmxCrO3
11:30-11:45 am	Li	Guangshe	Fujian Institute, CAS	New Applications of Hydrothermal Reactions in Creating Abnormal Materials Properties
11:45-noon	Ravinder	Dachepalli	Osmania University	Synthesis and Development of Li-Cd nano Ferrites by Citrate Precursor Gel Method for Multilayers Chip Inductors Applications
Materials Session				
9:00-9:30 am	Yu	Ranbo	University of Science and Technology Beijing	Hydrothermal Synthesis of CeO2 with Hollow Architecture
9:30-10:00 am	Yu	Jihong	Jilin University	Synthesis and Application of AIE Luminogen Functionalized Mesoporous Materials
10:00-10:30 am	BREAK			
10:30-11:00 am	Soga	Kohei	Tokyo University of Science	Application of Hydro- and Solvo-Thermally Processed Ceramic Nanoparticles for OTN-NIR Biomedical Imaging
11:00-11:30 am	Mao	Jiang-Gao	Chinese Academy of Sciences	Exploration of New Inorganic SHG Materials based on Metal Iodates
11:30-11:45 am	KeerthiRaj	Namratha	University Of Mysore	Organics Assisted Selectively Doped and Codoped ZnO Nanoparticles by Hydrothermal and Solvothermal Processes for Enhancing Biological Activities
11:45-noon	Liu	Chengxiang	Tsinghua University	Controllable Synthesis and Zn2+ Adsorption of γ-MnO2 Nanostructures
noon-1:30 pm	LUNCH			
Supercritical CO_2 session				
1:30-2:00 pm	Vega	Lourdes	MATGAS	Understanding supercritical CO2: from fundamental to industrial applications
2:00-2:30 pm	Ventosa	Nora	ICMAB-CSIC	CO2-expanded solvents: unique media for the synthesis of micro- and nano-particulate molecular materials with high structural homogeneity
2:30-3:00 pm	Goto	Motonobu	Nagoya University	Fabrication of PVP Micro-Hollow Fiber by Electrospinning Process in Near-Critical CO2
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Cabañas	Albertina	The Complutense University	Metal Deposition on Porous Supports Using Supercritical CO2
4:00-4:15 pm	Liang	Ming-Tsai	I-Shou University	Extraction Kinetics for Dioxins-Contaminated Soil by Supercritical Carbon Dioxide with Methanol
4:15-4:30 pm	Nerome	Hazuki	Nagoya University	Lycopene/Cyclodextrin Nanoparticle Formation Using Solution Enhanced Dispersion by Supercritical Fluid Process
4:30-5:00 pm	Türk	Michael	Karlsruhe Institute of Technology	Supercritical fluids for effective particle design processes
Sustainability Session				
1:30-2:00 pm	Gupta	Surojit	Rutgers University	Novel Structural Materials developed by CO2 Sequestration of Mineral Silicates
2:00-2:30 pm	Riman	Richard (Rik)	Rutgers University	Carbonate Concrete: A Hydrothermal Technology for CO2 Utilization and Construction
2:30-3:00 pm	Habashi	Fathi	Université Laval	Hydrothermal Technology for Ore Treatment and Metal Recovery
3:00-3:30 pm	BREAK			
3:30-4:00 pm	Günther	Amanda	LMU Munich	Hydrothermal Recovery of Zn and Pb from MSWI Bottom Ashes and APC Residues
4:00-4:30 pm	Rendón-Angeles	Juan Carlos	Cinvestav	Single Step Transformation of Raw Minerals for Inorganic Compound Synthesis Under Hydrothermal Conditions
4:30-5:00 pm	Funazukuri	Toshitaka	Chuo University	Hydrothermal Conversion of Brominated Compounds to Alcohols in Aqueous Amphipathic Solution without Catalysts
5:00-5:15 pm	Aymonier	Cyril	University of Bordeaux	Recycling of carbon fibre composites in supercritical hydrothermal conditions