Geopolymers as Encapsulants for Cs and Sr Nuclear Waste
Designing molecular beacons for improved nucleic acid bioanalysis
Polynuclear N-Heterocyclic Carbene Complexes of Gold
Vibrational Spectroscopy of Exosomes
Glycodendrimersomes, a Novel Cellular Mimic with Displayed Surface Carbohydrates for Binding to Lectins
Low-Coordinate Phosphorus Compounds: Adding Tools to the Synthetic Chemists’ Toolbox
Red to near-IR BODIPY fluorophores and their role in dendritic single-molecule fluorescent probes
Saxitoxin in Action: Development of novel biological tools for the investigation of voltage gated sodium channels
X-750 alloy oxide formation in boiling water reactor conditions: exploring the effects of iron content and surface preparation
Reusable Evanescent wave DNA biosensor for rapid detection of Mercury ions in aqueous solution with high sensitivity and selectivity
Hydrogen Bonding in Photoswitchable Molecules
Plasmonic Nanoparticles as Optical Biosensors
The design and synthesis of a 18F-labeled saxitoxin derivative for in vivo PET imaging of voltage-gated sodium channels
Analytical Issues involved in the Legalization of Cannabinoids
Improving the Detection Sensitivity in Paper-based Microfluidics for Point-of-Care Diagnostics
Keep ’em Separated: Methods of deconvoluting NMR spectra of complex mixtures
Polymers in Water Treatment: Applications and Function
Recent Advances in Materials Science: What Does It Mean to Be “Biomimetic”? The Use of DNA Nano-Architecture Platforms for Stabilization and Delivery of Biologically Active Therapeutics
The Importance of Late Stage Functionalization
Liquid Crystal Elastomers and their Modern Applications
Universal molecular scissor, CRISPR-CAS9, and its chemical modification
Mass Spectrometry - A Weapon in the War on Drugs
Single-Molecule Reactions Simultaneously Initiated and Filmed by Transmission Electron Microscopy
Drug Delivery for Selective Targeting: A Couple Creative Approaches
Electroorganic Synthesis: C‒H Functionalization by Electrochemical Methods
Iron Oxide Nanoparticles as an Adsorbent in Water and Wastewater Treatments
Protein Conformations in the Gas Phase Probed by Mass Spectrometry and Molecular Dynamics Simulations
Sustained drug release formulations for joint conditions
Fabrication of Silicon Films Using Electrodeposition Methods
The effect of formyl group on the spectral properties of chlorophylls

The X Files: The Application of Nuclear Forensics to Characterize Nuclear Materials of Unknown Origin
Small Flasks for Big Chemistry: Application of Self-Assembled Hosts in Synthesis
A lithium–oxygen battery based on lithium superoxide
Model exchange-correlation potentials
Stimuli Responsive Poly(phthalaldehyde)s and Their Applications in Tunable Core-Shell Microcapsules for Controlled Release
Inverse vulcnization: a new polymeric technique and its uses in Li-S batteries
Cancer Diagnosis and Treatment by Means of Magnetic Nanoparticles
Corrosion and Oxide Formation of Nickel-based Alloys
Solvent-Free Synthesis of MOFs and Zeolites
The viability of current solid materials for direct air capture of CO2
Artificially expanded genetic information system (AEGIS)
Molecular Assembly of the Nanoporous Metal-Organic Framework ZIF-8 Studied by Atomic Force Microscopy
Solution to the PEG Dilemma: Efficient Bioconjugation of Large Gold Nanoparticles for Biodiagnostic Applications using Mixed Layers
Ancient DNA – Preserving and Analyzing the Remnants of DNA from Fossilized Organisms
Recent Developments of Atom Probe Tomography and Applications
Stapled Peptides: Applications and new Advances
Exploring the Oxygen Reactivity of a NiCl(π-allyl)N-Heterocyclic Carbene System
Innovative4paper: Applications of paper functionalized with hydrochromic dyes
Recent progress on the conversion of syngas to lower olefins
Reversible4CycloadDITIONS4o4Unsaturated4Tin4Compounds4
Incorporation of BODIPY dyes into block copolymers, and their use in visualizing self-assembly
Use of dissolution dynamic nuclear polarization to increase sensitivity in metabolic magnetic resonance imaging
Applications of Hydrogen/Deuterium Exchange-Mass Spectrometry for Studying Intrinsically Disordered Proteins
Radiation-induced Oxidation of Iron Oxides
The Effect of Long-range Interaction Forces on Surface-Surface Reactions
Deadly secrets of 17th and 18th century paintings: Arsenic sulfide pigment degradation and migration
Thermochromic VO$_2$-Based Coatings for Smart Windows
Blast Off! Progress of Rocket Propellant and its Impact on Space Exploration

9658Y Topics: 2015-2016

How to recycle waste solvent? Membranes can co it!
Filling the gap: Developing new composite resins for dental materials
Catalytic Hydrogenation of CO$_2$ to Methanol
Recent Advancements of Silicon Nanowires: Bio--interfaced Electronics
Continuous Liquid Interface Production: Pulling 3D Printed Polymers Forward
Bodybuilding, Powerlifting and Performance Enhancing Drugs
Tracking of LiFePO$_4$ Phase Transition Mechanism upon Lithiation and Delithiation
Single Molecule Imaging using Atomic Force Microscopy
Coating Methods for Magnesium Alloys
CO oxidation: Transforming A Hazardous Air Pollutant to Non--Toxic CO$_2$
Recent advances in the development of small molecule based organic solar cells
Application of magnetic compounds to wastewater treatment
Recent progress in molecular level studies of mechanochemical processes
CO$_2$--Switchable Materials for Green Chemical Processes
Harmful Algal blooms -- Toxicity and the need for Rapid detection of microcystins in drinking water
Recent advances in tandem catalysis
Criegee Intermediates:Elusive molecules that clean up the atmosphere
Prodrugs Targeting the Central Nervous System (CNS): A Challenge in Drug Development
Restoring the past: is chemical cleaning or laser ablation the answer to bringing ancient art back to life
The synthesis, properties and applications of Nanodiamonds
Tackling the burden of obesity and hyperglycemia in type 2 diabetes
Chemistry as a Useful Tool for Understanding the Universe
Atomically thin transition metal dicalcogenides as new semiconductor materials
The Use of anti--MicroRNAs (AMOs) and Nanotechnology for Drug Delivery Systems and Therapy
Sperical nucleic acid: A multifunctional cancer treatment kit
Applications of Quantum Dots as Forster Resonance Energy Transfer Based Biosensors
Anisotropic patchy particles as self assembling building blocks
Valorization of Lignin: Towards the production of valuable chemicals and fuels
Advances in wearable electronics using fiber energy storage systems
Can we make our windows smart using Transition Metal Oxides?
Flow Chemisty: The future of Synthesis
From Chemotherapeutics to Surgical Extraction: The Role of NPs in Treating Brain Tumors
Recent Developments in Chemical Exchange Saturation Transfer (CEST) Agents for Magnetic Resonance Imaging
(MRI) Contrast Enhancement
Carbon Monoxide Reduction: A Trade off between Efficiency and Conditions
Hypervalent Iodine Reagent in Atom Transfer Reactions
Applying Archaeochemistry to Shipwrecks: Exploring History’s Underwater Treasure Chests
The Crystalline Sponge Method: A Revolutionary Change in X-ray Crystallography
Methods of Detection for Blood Doping in Professional Athletes
Recovering Uranium from Seawater Using Iron Nanoparticles


Examining the Next Generation of Anti-Inflammatory Agents
Membrane Electrode Assembly: the Challenges and Opportunities That Lie Within
Advances in CO₂ Capture Technologies Using Amine-Based Solid Sorbents
Recent Developments in Single Particle Cryo-Electron Microscopy for Studying Biomolecular Structures
Organocatalyzed Dynamic Kinetic Resolution for Single Enantiomer Synthesis
Cellular Factories: The Next Industrial Revolution
Versatile chemistry of cyclodextrins and their multifunctionalities
Graphene-Based Anode Materials for Lithium-Ion Batteries
Spiroindolones and Imidazolopiperazines: Potential New Weapons to Defeat Malaria
Threose Nucleic Acid (TNA)
Li-S Batteries: Advanced S-Host Materials
Recent Advances in Organocatalysis
MALDI Mass Spectrometry Imaging: Enabling Spatially-Resolved Biomarker Discovery
Antibiotic Resistance: A Growing Concern with a Sweet Solution
Targeting metal ions as a potential therapeutic for Alzheimer’s disease
Challenges and opportunities for mixed-matrix membranes for gas separation
Detection of O-linked protein glycosylation—an important link in Alzheimer’s disease
Broadly Neutralizing Antibodies: Towards the Development of HIV Vaccines
Carbon Dioxide: A "Green" Stimulus for Block Copolymer Self-Assembly and Development of Biomimetic Materials
Phasing Out the Fat: Colloids in Food
Medical Applications of Solid-Phase Microextraction (SPME)
Catalytic Conversion of Biomass for the Use as Alternative Fuels
DNA Aptamers for Targeted Cancer Therapy
Development of Aptasensors and Their Use in Bisphenol A (BPA) Detection
Marijuana: A gateway drug ... to better health
Polymer solar cells- a new approach to harness energy directly from the sun
Rotaxane Based Mechanically Interlocked Machines: From Design to Work
Actuator Materials in Future Biomedical Applications

9658Y Topics: 2013-2014

Sonochemistry, a versatile tool in chemical operations
Visible-Light Photoredox Catalysis in Organic Transformations
Studying "invisible" excited states of proteins by solution phase NMR
New Synthesis of Frontier Therapeutic Molecules with Applications
Chemistry of High-Temperature Superconductivity
Photochromic Diarylethenes: Potential Application as Molecular Mechanical Devices
Analyzing the Mechanism, Synthesis and Action of Anti-Obesity drugs and their affects on Adiposity
Chemistry of Cheating: Performance-Enhancing Drugs in Professional Sports
Fragment Based Drug Discovery: How is it changing the drug design process?
Chemical Fingerprinting of Historic Works of Art
Quintuple bonded complexes: Synthesis and reactivity
Chiral tert butanesulfinamides: A Versatile Auxiliary for
Synthesis Stirred not Shaken: Mixing in Droplet
Microfluidics
Nanocarries as a Method for Drug Delivery of Nitric Oxide
Bioorthogonal Reactions: Bringing Chemistry to Life
Antimicrobial Textiles
Lightweight Biodegradable Implants
The Role of Nanoparticles in Drug Delivery
What’s Love Got to Do with It? The Chemistry of Sex Pheromones
Small Melicules Which Rescue the Mutant Cystic Fibrosis Transmembrane Conductance
Regulator Archaeological Chemistry - Using Chemistry to Unveil the Secrets of Antiquity
Recent Developments in Atom Transfer Radical Polymerization (ATRP) Methods to Discover and Synthesize Macroyclic Peptides
Bind and Shine: Fluorescence Chemosensors for Fluoride Ions Detection
Chemistry of Disaster: Recent Advance in Detection and Degradation of Chemical Warfare Agents

9658Y Topics: 2012-2013

Tinplate Cans for Food Preservation: Corrosion Detection and Natural Corrosion Inhibitor Chemical Chaperones as Alternative Therapeutic Agents
Implantable Biofuel Cells
Light Struck Beer
Development of Synthetic Metalloenzymes Towards Industrial Applications Layered Double Hydroxides (LDHs) Nanosheets and their Applications Metal-organic Frameworks for Hydrogen Storage

9658Y Topics: 2011-2012

Artificial and Non-Nutritive Sweeteners (NNS): What’s in your coffee?
The Photochemical Reduction of Carbon Dioxide: Application for Energy Storage Catalytic Antibodies: At the Interface of Chemistry and Biology
The Role of Nanomaterials in Increasing Energy Efficiency of Li-air Batteries Repairing Internal Damage - The Chemistry of Self-Healing Materials Molecular Flasks: Self-Assembled Transition-Metal Supramolecular Hosts
C-H Bond Activation, Towards Unactivated Cross-Coupling
Reduction to Ammonia Core-Shell Nanoparticles: Fabrication and Application for Chemical Catalysis Synthesis, Dynamics and Applications of Catalytic Motors
Photoswitching with azobenzene compounds for application: Can you see the light? Unravelling the Chemistry behind Two Forms of Non-B DNA: Theory and Application
The Green Solvent, Supercritical Carbon Dioxide and its Application in Liposome Preparation
An old dog teaching us new tricks: microRNAs - from detection to potential drug applications
Total Syntheses: Stemona Alkaloids
Aptamers: Principles and Applications in Molecular Recognition
Using Nanobiosensors for Food and Water Safety
Organophosphate Nerve Agents: Chemical Methodologies to Decontaminate or Destroy This Chemical Warfare Agent
Mending Bones: Synthesis and Applications of Bioceramics and Nanofibers
Shedding Light on Photoprotection: Advances in Sunscreen UV-Filters
Storing Energy between Layers: Fabrication and Applications of Graphene Family Nanomaterials
There is a lot to a wee dram of whisky; a comprehensive analysis of current analytical techniques used to confirm quality and authenticity
Toward Flexible Memories: Organic Materials for High Density Data Storage
Photoluminescent Framework for the Identification of Gunshot Residue Dye
Sensitized Solar Cells: The Bright Future of Photovoltaics
Bacterial Magnetosomes and Their Applications