

Direct measurement of the kinetic energy shift between the molecular and atomic M4.5N4.5N4.5 Auger spectra of iodine

Anomalous Auger-electron spectra of metallic calcium

A finite cluster approach to the electron-hole pair damping of the adsorbate vibration  
CO adsorbed on Cu(100)

A Finite Cluster Approach to the Electron-Hole Pair Damping of the Adsorbate Vibration  
CO Adsorbed on Cu(100)

Potential energy curves for diatomic molecules calculated with numerical basis functions

Numerical simulation of temperature distributions in layered structures during laser processing

Sorption and retention of ethylene glycol monoethyl ether (EGME) on silicas

Morphological and structural changes in laser CVD of silicon  
comparison of theoretical temperature calculations with experimental results

Electronic and structural properties of Si<sub>10</sub> cluster

Rate equation simulation of the height of Schottky barriers at the surface of oxidic semiconductors

Melting of copper clusters

A cluster approach for the SnO<sub>2</sub> (110) face

Si<sub>10</sub> and photoabsorption spectra of mid-sized silicon clusters

Synthesis of chlorinated 5-hydroxy 4-methyl-2(5H)-furanones and mucochloric acid

Effects of two double bonds on the hydrocarbon interior of a phospholipid bilayer

Mutational spectra of *Salmonella typhimurium* revertants induced by chlorohydroxyfuranones, byproducts of chlorine disinfection of drinking water

Surface relaxation of the (1010) face of wurtzite CdS

Melting and evaporation of argon clusters

Start-up and Operation of Laboratory-Scale Thermophilic Upflow Anaerobic Sludge Blanket Reactors Treating Vegetable Processing Wastewaters

Inequivalence of single CH<sub>a</sub> and CH<sub>b</sub> methylene bonds in the interior of a diunsaturated lipid bilayer from a molecular dynamics simulation

Calculation of the molecular ordering parameters of (±)-3-butyn-2-ol dissolved in an organic solution of poly(γ-benzyl-L-glutamate)

Investigation of the adducts formed by reaction of butenedioic acids with adenosine

Computational approaches to the chemical sensitivity of semiconducting tin dioxide

Effect of nitro groups and alkyl chain length on the negative ion tandem mass spectra of alkyl 3-hydroxy-5-(4'-nitrophenoxy) and alkyl 3-hydroxy-5-(2', 4'-dinitrophenoxy) benzoates

Surface relaxation of the (110) face of rutile SnO<sub>2</sub>

Experimental and theoretical study of the spin-spin coupling tensors in methylsilane

The Suzuki, the Heck, and the Stille reaction - Three versatile methods, for the introduction of new C-C bonds on solid support

Utilization of Grignard reagents in solid-phase synthesis  
A review of the literature

Preparation of 5-substituted 2-carboxyindoles on solid support

Recent advances in the preparation of heterocycles on solid support  
A review of the literature

Computational studies for the interpretation of gas response of SnO<sub>2</sub>(110) surface

Solid-phase bromination and Suzuki coupling of 2-carboxyindoles

Vilsmeier formylation of 2-carboxyindoles and preparation of O-benzylhydroxyureas on solid phase

Control of matrix interferences by the multiple linear regression model in the determination of arsenic, antimony and tin in lead pellets by inductively coupled plasma atomic emission spectrometry

Ultrasound-assisted extraction in the determination of arsenic, cadmium, copper, lead, and silver in contaminated soil samples by inductively coupled plasma atomic emission spectrometry

Statistical modeling of water vapor transmission rates for extrusion-coated papers

Batch dark fermentative hydrogen production from grass silage  
The effect of inoculum, pH, temperature and VS ratio

The structural information content of chemical networks

Structural information content of networks  
Graph entropy based on local vertex functionals

The effects of corona and flame treatment  
Part 2. PE-HD and PP coated papers

On entropy-based molecular descriptors  
Statistical analysis of real and synthetic chemical structures

Efficient production of NV colour centres in nanodiamonds using high-energy electron irradiation

An electro-optically tunable Bragg reflector based on liquid crystals

Effect of pre-treatments on barrier properties of layers applied by atomic layer deposition onto polymer-coated substrates

Enrichment polymer layers for detection of volatile vapors by ATR FT-IR

Interactions of molecular ions with model phospholipid membranes

Nanoparticle deposition on packaging materials by the liquid flame spray

Quantifying structural complexity of graphs  
Information measures in mathematical chemistry

Site-specific polarizabilities as predictors of favorable adsorption sites on Nan clusters

Ionization of purine tautomers in nucleobases, nucleosides, and nucleotides  
From the gas phase to the aqueous environment

Molecular dynamics simulations of the interactions of kinin peptides with an anionic POPG bilayer

Energetic origin of proton affinity to the air/water interface

Detection of DNA hybridisation in a diluted serum matrix by surface plasmon resonance and film bulk acoustic resonators

Preparation of zinc oxide free, transparent rubber nanocomposites using a layered double hydroxide filler

Behavior of the eigen form of hydronium at the air/water interface

Behavior of  $\beta$ -amyloid 1-16 at the air-water interface at varying pH by nonlinear spectroscopy and molecular dynamics simulations

Steric and electronic effects in the host-guest hydrogen bonding in clathrate hydrates

Internal structure, hygroscopic and reactive properties of mixed sodium methanesulfonate-sodium chloride particles

Defined-size DNA triple crossover construct for molecular electronics  
Modification, positioning and conductance properties

Urea and guanidinium induced denaturation of a Trp-cage miniprotein

Machine learning  
How it can help nanocomputing

From a localized H<sub>3</sub>O radical to a delocalized H<sub>3</sub>O<sup>+</sup>·e<sup>-</sup> solvent-separated pair by sequential hydration

Towards universal enrichment nanocoating for IR-ATR waveguides

Tube-like natural halloysite/fluoroelastomer nanocomposites with simultaneous enhanced mechanical, dynamic mechanical and thermal properties

Quantitative glycoproteomic analysis of optimal cutting temperature-embedded frozen tissues identifying glycoproteins associated with aggressive prostate cancer

Versatile bio-ink for covalent immobilization of chimeric avidin on sol-gel substrates

Like-charge guanidinium pairing from molecular dynamics and ab initio calculations

Efficient surface structuring and photoalignment of supramolecular polymer-azobenzene complexes through rational chromophore design

The effect of lipid oxidation on the water permeability of phospholipids bilayers

Oriental dependence of the affinity of guanidinium ions to the water surface

Detection and verification of glycosylation patterns of glycoproteins from clinical specimens using lectin microarrays and lectin-based immunosorbent assays

Arrhenius analysis of anisotropic surface self-diffusion on the prismatic facet of ice

Effect of ionic liquid on dielectric, mechanical and dynamic mechanical properties of multi-walled carbon nanotubes/polychloroprene rubber composites

Cholesterol driven alteration of the conformation and dynamics of phospholamban in model membranes

The Discovery of Compounds That Stimulate the Activity of Kallikrein-Related Peptidase3 (KLK3)

Chasing charge localization and chemical reactivity following photoionization in liquid water

Modification of olivomycin A at the side chain of the aglycon yields the derivative with perspective antitumor characteristics

Conductive layers on surface modified natural fibre based substrates for printed functionality

Layered Double Hydroxides (LDH)  
A multifunctional versatile system for nanocomposites

Location of the Azobenzene moieties within the cross-linked liquid-crystalline polymers can dictate the direction of photoinduced bending

Structure, dynamics, and reactivity of hydrated electrons by Ab initio molecular dynamics

Surface-relief gratings and stable birefringence inscribed using light of broad spectral range in supramolecular polymer-bisazobenzene complexes

Glycerol mediated synthesis of 5-substituted 1H-tetrazole under catalyst free conditions

A novel thermotropic elastomer based on highly-filled LDH-SSB composites

Excited-state polarizability in crystalline sexithiophene  
Charge-transfer and vibronic effects

Highly exfoliated natural rubber/Clay composites by "propping-open procedure"  
The influence of fatty-acid chain length on exfoliation

Structural characteristics and flammability of fire retarding EPDM/layered double hydroxide (LDH) nanocomposites

Elemental and mixed actinide dioxides  
An ab initio study

Behavior of 4-hydroxynonenal in phospholipid membranes

Halogen bonding versus hydrogen bonding in driving self-assembly and performance of light-responsive supramolecular polymers

Molecular mechanisms of ion-specific effects on proteins

Accurate description of aqueous carbonate ions  
An effective polarization model verified by neutron scattering

Nematicons in azobenzene liquid crystals

Impact of biodiesel application at various blending ratios on passenger cars of different fueling technologies

Solvation and ion-pairing properties of the aqueous sulfate anion  
Explicit versus effective electronic polarization

Effect of sol-gel derived in situ silica on the morphology and mechanical behavior of natural rubber and acrylonitrile butadiene rubber blends

Affine-response model of molecular solvation of ions  
Accurate predictions of asymmetric charging free energies

Biomimetic surface modification of polycarbonateurethane film via phosphorylcholine-graft for resisting platelet adhesion

Kinetics of filler wetting and dispersion in carbon nanotube/rubber composites

Fabrication of ssDNA/oligo(ethylene glycol) monolayers and complex nanostructures by an irradiation-promoted exchange reaction

Azobenzene photomechanics  
Prospects and potential applications

Influence of ionic liquids on the dielectric relaxation behavior of CNT based elastomer nanocomposites

Superquenching of SYBRGreen dye fluorescence in complex with DNA by gold nanoparticles

Transforming anion instability into stability  
Contrasting photoionization of three protonation forms of the phosphate ion upon moving into water

Search for global minimum geometries of medium sized Cd<sub>n</sub>Te<sub>n</sub> clusters (n = 15, 16, 20, 24 and 28)

Peptide salt bridge stability  
From gas phase via microhydration to bulk water simulations

Semiclassical hybrid approach to condensed phase molecular dynamics  
Application to the I<sub>2</sub>Kr<sub>17</sub> cluster

New reports on anti-bacterial and anti-candidal activities of fatty acid methyl esters (FAME) obtained from *Scenedesmus bijugatus* var. *bicellularis* biomass

Improving the effect of a nanoscale barrier coating on BOPP film properties by surface pretreatments

Molecular mechanism of T-cell protein tyrosine phosphatase (TCPTP) activation by mitoxantrone

A 'clusters-in-liquid' method for calculating infrared spectra identifies the proton-transfer mode in acidic aqueous solutions

A potential nonthrombogenic small-diameter vascular scaffold with polyurethane/poly(ethylene glycol) hybrid materials by electrospinning technique

Density functional theory study of FePd<sub>n</sub> (n = 2-14) clusters and interactions with small molecules

Growth behavior and magnetic properties of spherical uranium oxide nanoclusters

Networking of ionic liquid modified CNTs in SSBR

Chemically tailored dielectric-to-metal transition for the design of metamaterials from nanoimprinted colloidal nanocrystals

Aqueous guanidinium-carbonate interactions by molecular dynamics and neutron scattering  
Relevance to ion-protein interactions

Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography

Optical vortex generation in nematic liquid crystal light valves

Molecularly functionalized silicon substrates for orientation control of the microphase separation of PS-b-PMMA and PS-b-PDMS block copolymer systems

Site-specific analysis of dipole polarizabilities of heterogeneous systems  
Iron-doped Si<sub>n</sub> (n = 1-14) clusters

Biomimetic zinc chlorin-poly(4-vinylpyridine) assemblies  
Doping level dependent emission-absorption regimes

Understanding the reinforcing behavior of expanded clay particles in natural rubber compounds

Nanoindentation study of light-induced softening of supramolecular and covalently functionalized azo polymers

Immobilized bioactive agents onto polyurethane surface with heparin and phosphorylcholine group

Screening pretreatment methods to enhance thermophilic anaerobic digestion of pulp and paper mill wastewater treatment secondary sludge

Depth profiling of PLGA copolymer in a novel biomedical bilayer using confocal raman spectroscopy

Surface properties and interaction forces of biopolymer-doped conductive polypyrrole surfaces by atomic force microscopy

Cation-specific effects on enzymatic catalysis driven by interactions at the tunnel mouth

Cell toxicity and oxidative potential of engine exhaust particles  
Impact of using particulate filter or biodiesel fuel blend

Shape-dependent plasmonic response and directed self-assembly in a new semiconductor building block, indium-doped cadmium oxide (ICO)

Development and characterization of poly( $\epsilon$ -caprolactone) hollow fiber membranes for vascular tissue engineering

Photoswitchable hydrogel surface topographies by polymerisation-induced diffusion

Reversal of the Hofmeister series  
Specific ion effects on peptides

Tuning PDMS brush chemistry by UV-O<sub>3</sub> exposure for PS-b-PDMS microphase separation and directed self-assembly

Irradiation promoted exchange reaction with disulfide substituents

Mechanisms of acceleration and retardation of water dynamics by ions

Spectroscopic study of a DNA brush synthesized in situ by surface initiated enzymatic polymerization

Zinc coordination spheres in protein structures

Importance of the ion-pair interactions in the OPEP coarse-grained force field  
Parametrization and validation

Reversible biofunctionalization of surfaces with a switchable mutant of avidin

Porphyrin adsorbed on the (1010) surface of the wurtzite structure of ZnO-conformation induced effects on the electron transfer characteristics

Embedded cluster models for reactivity of the hydrated electron

Soft-graphoepitaxy using nanoimprinted polyhedral oligomeric silsesquioxane substrates for the directed self-Assembly of PS-b-PDMS

How conformational flexibility stabilizes the hyperthermophilic elongation factor G-domain

The Halogen Bond in the Design of Functional Supramolecular Materials  
Recent Advances

Ion pairing in aqueous lithium salt solutions with monovalent and divalent counter-anions

Release of halide ions from the buried active site of the haloalkane dehalogenase LinB revealed by stopped-flow fluorescence analysis and free energy calculations

Fabrication of ssDNA/Oligo(ethylene glycol) monolayers and patterns by exchange reaction promoted by ultraviolet light irradiation

Effect of surface morphology of poly( $\mu$ -caprolactone) scaffolds on adipose stem cell adhesion and proliferation

Human adipose stem cells in chondrogenic differentiation medium without growth factors differentiate towards annulus fibrosus phenotype in vitro

Proliferation and differentiation of adipose stem cells towards smooth muscle cells on poly(trimethylene carbonate) membranes

Location of dispersing agent in rubber nanocomposites during mixing process

Analysis of free, mono- and diacetylated polyamines from human urine by LC-MS/MS

Self-assembly of polystyrene-block-poly(4-vinylpyridine) block copolymer on molecularly functionalized silicon substrates  
Fabrication of inorganic nanostructured etchmask for lithographic use

A full-potential linearized augmented plane wave study of the interaction of CO<sub>2</sub> with  $\alpha$ -Pu (020) surface nanolayers

A microscopic view of the mechanisms of active transport across the cellular membrane

Direct observation of the collapse of the delocalized excess electron in water

Effect of non-rubber components of NR on the carbon nanotube (CNT) localization in SBR/NR blends



Fabrication of 3-D nanodimensioned electric double layer capacitor structures using block copolymer templates

Improving the effect of nanoscale barrier coating on BOPP film properties  
Influence of substrate contamination, web handling and pretreatments

Kinetics of bioconjugate nanoparticle label binding in a sandwich-type immunoassay

Magnetic origin of the chemical balance in alloyed Fe-Cr stainless steels  
First-principles and Ising model study

Molekuly a ionty v pohybu  
Počítačové simulace biochemických a biofyzikálních procesů  
Translated title of the contribution: : Molecules and ions in motion: Computer simulations of biochemical and biophysical processes

Novel derivatives of bacteriochlorophyll a  
Complex formation with albumin and the mechanism of tumor cell photodamage

pH-dependent deformations of the energy landscape of avidin-like proteins investigated by single molecule force spectroscopy

Study of the kinetics and mechanism of rapid self-assembly in block copolymer thin films during solvo-microwave annealing

Natural thermal adaptation increases heat shock protein levels and decreases oxidative stress

Both zundel and eigen isomers contribute to the IR spectrum of the gas-phase H<sub>9</sub>O<sub>4</sub> + cluster

Azopolymer-based micro- and nanopatterning for photonic applications

Fabrication of ssDNA/oligo(ethylene glycol) monolayers by promoted exchange reaction with thiol and disulfide substituents

Deciphering the infrared spectrum of the protonated water pentamer and the hybrid Eigen-Zundel cation

Protein conformation as a regulator of cell-matrix adhesion

Microphase mechanism of "superquenching" of luminescent probes in aqueous solutions of DNA and some other polyelectrolytes

Light-fuelled transport of large dendrimers and proteins

Bioprocessing of enhanced cellulase production from a mutant of *Trichoderma asperellum* RCK2011 and its application in hydrolysis of cellulose

Hydration of the chloride ion in concentrated aqueous solutions using neutron scattering and molecular dynamics

Carbon nanotubes-filled thermoplastic polyurethane-urea and carboxylated acrylonitrile butadiene rubber blend nanocomposites

Surface behavior of hydrated guanidinium and ammonium ions  
A comparative study by photoelectron spectroscopy and molecular dynamics

Accurate description of calcium solvation in concentrated aqueous solutions

Performance testing of iron based thermally sprayed HVOF coatings in a biomass-fired fluidised bed boiler

Molecular engineering of avidin and hydrophobin for functional self-assembling interfaces

Effect of silane integrated sol-gel derived in situ silica on the properties of nitrile rubber

The role of linked phospholipids in the rubber-filler interaction in carbon nanotube (CNT) filled natural rubber (NR) composites

Optical spectroscopy of the bulk and interfacial hydrated electron from ab initio calculations

Recent twists in photoactuation and photoalignment control

Density functional theory study of transition metals doped B<sub>80</sub> fullerene

Pyrene based conjugated materials  
Synthesis, characterization and electroluminescent properties

Effect of head group size on the photoswitching applications of azobenzene Disperse Red 1 analogues

Rapid, Brushless Self-assembly of a PS-b-PDMS Block Copolymer for Nanolithography

Global analysis of human nonreceptor tyrosine kinase specificity using high-density peptide microarrays

Impact of selective catalytic reduction on exhaust particle formation over excess ammonia events

A supramolecular approach to photoresponsive thermo/solvoplastic block copolymer elastomers

Electromagnetic interference shielding effectiveness of MWCNT filled poly(ether sulfone) and poly(ether imide) nanocomposites

Processable aromatic polyesters based on bisphenol derived from cashew nut shell liquid  
synthesis and characterization

Time-resolved fluorescence methods (IUPAC technical report)

DNA lesion can facilitate base ionization  
Vertical ionization energies of aqueous 8-oxoguanine and its nucleoside and nucleotide

Switchavidin  
Reversible biotin-avidin-biotin bridges with high affinity and specificity

Stimuli-responsive photonic polymer coatings

Ballistic and numerical simulation of impacting goods on conveyor belt rubber

Block co-polymers for nanolithography  
Rapid microwave annealing for pattern formation on substrates

Characterisation of novel regenerated cellulosic, viscose, and cotton fibres and the dyeing properties of fabrics

Chemolithotrophic denitrification in biofilm reactors

Coulomb explosion during the early stages of the reaction of alkali metals with water

Geometry controlled anomalous diffusion in random fractal geometries  
Looking beyond the infinite cluster

Halogen-bonded photoresponsive materials

Role of the bridge in photoinduced electron transfer in porphyrin-fullerene dyads

Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels

Synthesis, crystal structure, spectral, dielectric characteristics and conduction mechanism of two novel carboxylates of 1-benzhydrylpiperazine

Synthesis of fluorescent naphthoquinolizines via intramolecular houben-hoesch reaction

Van der Waals interactions are critical in Car-Parrinello molecular dynamics simulations of porphyrin-fullerene dyads

Water-responsive dual-coloured photonic polymer coatings based on cholesteric liquid crystals

$\pi$ -Expanded  $\alpha,\beta$ -unsaturated ketones  
Synthesis, optical properties, and two-photon-induced polymerization

A comparison of five optical surface topography measurement methods

Appropriate pricing policy needed worldwide for improving water services infrastructure

Perfluoro-1,1'-biphenyl and perfluoronaphthalene and their derivatives as  $\pi$ -acceptors for anions

Photophysical properties of Sn (IV)tetraphenylporphyrin-pyrene dyad with a  $\beta$ -vinyl linker

Manipulation of polycarbonate urethane bulk properties via incorporated zwitterionic polynorborene for tissue engineering application

Oxidation half-reaction of aqueous nucleosides and nucleotides via photoelectron spectroscopy augmented by ab initio calculations

Second-Harmonic Generation from Metal Nanoparticles  
Resonance Enhancement versus Particle Geometry

Kinetics of polymer looping with macromolecular crowding  
Effects of volume fraction and crowder size

Non-universal tracer diffusion in crowded media of non-inert obstacles

Rational design of a printable, highly conductive silicone-based electrically conductive adhesive for stretchable radio-frequency antennas

Silver sulfide nanoclusters and the superatom model

Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning

Sulfonated polyetheretherketone/polypropylene polymer blends for the production of photoactive materials

Second-harmonic generation imaging of semiconductor nanowires with focused vector beams

Encapsulation of secondary and tertiary ammonium salts by resorcinarenes and pyrogallarenes  
The effect of size and charge concentration

Neutralized chimeric avidin binding at a reference biosensor surface

Polymer looping is controlled by macromolecular crowding, spatial confinement, and chain stiffness

Crystal structure of 2-methylpiperazine-1,4-dium bis(hydrogen maleate)

Exploring the role of stearic acid in modified zinc aluminum layered double hydroxides and their acrylonitrile butadiene rubber nanocomposites

Resveratrol interferes with the aggregation of membrane-bound human-IAPP  
A molecular dynamics study

Synthesis, characterization and solid-state photoluminescence studies of six alkoxy phenylene ethynylene dinuclear palladium(II) rods

New perspectives on proton pumping in cellular respiration

CO oxidation catalyzed by neutral and anionic Cu<sub>20</sub> clusters  
Relationship between charge and activity

Oxidation of the GaAs semiconductor at the Al<sub>2</sub>O<sub>3</sub>/GaAs junction

High temperature corrosion of thermally sprayed NiCr and FeCr coatings covered with a KCl-K<sub>2</sub>SO<sub>4</sub> salt mixture

Tribology of HVOF- and HVOF-sprayed WC-10Co4Cr hardmetal coatings  
A comparative assessment

Effects of fresh lubricant oils on particle emissions emitted by a modern gasoline direct injection passenger car

Effect of rheological properties of dissolved cellulose/microfibrillated cellulose blend suspensions on film forming

Oxidation of cholesterol does not alter significantly its uptake into high-density lipoprotein particles

Rate constant and thermochemistry for  $K + O_2 + N_2 = KO_2 + N_2$

Workplace performance of a loose-fitting powered air purifying respirator during nanoparticle synthesis

Ergodicity breaking and particle spreading in noisy heterogeneous diffusion processes

Energy degradation in photoexcited complexes of indocarbocyanine with albumin

Multistep reactions of water with small  $Pd_n$  clusters  
A first principles study

Modeling photoionization of aqueous DNA and its components

Effect of melting state on the thermal shock resistance and thermal conductivity of APS  $ZrO_2$ -7.5wt.%  $Y_2O_3$  coatings

Hydration of hydroxyl and amino groups examined by molecular dynamics and neutron scattering

Spectral and kinetic characteristics of indotricarbocyanine complexation with albumin

A facile route to synthesis of S-doped  $TiO_2$  nanoparticles for photocatalytic activity

Equipment for obtaining polymeric nanofibres by electrospinning technology  
II. The obtaining of polymeric nanofibers

La thérapie photodynamique  
État de l'art et perspectives

Translated title of the contribution: : The photodynamic therapy: State of the art and perspectives

Photodiagnostic et chirurgie guidés par la fluorescence

Translated title of the contribution: : Fluorescence diagnosis and fluorescence-guided surgery

Polymorph crystal packing effects on charge transfer emission in the solid state

Soft graphoepitaxy for large area directed self-assembly of polystyrene-block-poly(dimethylsiloxane) block copolymer on nanopatterned poss substrates fabricated by nanoimprint lithography

PEGylated liposomes as carriers of hydrophobic porphyrins

Inverted critical adsorption of polyelectrolytes in confinement

Catalytic effect of Ca and K on CO<sub>2</sub> gasification of spruce wood char

Synthesis and Photophysical Properties of Two Diazaporphyrin-Porphyrin Hetero Dimers in Polar and Nonpolar Solutions

A comparison of rheology and FTIR in the study of polypropylene and polystyrene photodegradation

On the biomaterials for nanostructured ocular therapeutics

Optimal emission enhancement in orthogonal double-pulse laser-induced breakdown spectroscopy

Synthesis and study of electrochemical and optical properties of substituted perylenemonoimides in solutions and on solid surfaces

Measuring optical anisotropy in poly(3,4-ethylene dioxythiophene) poly(styrene sulfonate) films with added graphene

Lithography-free oxide patterns as templates for self-catalyzed growth of highly uniform GaAs nanowires on Si(111)

Electricity production by a microbial fuel cell fueled by brewery wastewater and the factors in its membrane deterioration

Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids

Role of Internal Water on Protein Thermal Stability  
The Case of Homologous G Domains

Quantifying non-ergodic dynamics of force-free granular gases

High quality sub-10 nm graphene nanoribbons by on-chip PS-b-PDMS block copolymer lithography

Nonlinear Optical Properties of Fluorescent Dyes Allow for Accurate Determination of Their Molecular Orientations in Phospholipid Membranes

Responsive Polymer Photonics

Formation and stability of carbon nanotube network in natural rubber  
Effect of non-rubber components

Effect of Phosphatidic Acid on Biomembrane  
Experimental and Molecular Dynamics Simulations Study

Influence of relative humidity and physical load during storage on dustiness of inorganic nanomaterials  
implications for testing and risk assessment

Electrospun Black Titania Nanofibers  
Influence of Hydrogen Plasma-Induced Disorder on the Electronic Structure and Photoelectrochemical Performance

Effects of thinning and heating for TiO<sub>2</sub>/AlInP junctions

Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> nanosystems by a hybrid PE-CVD/ALD approach  
controllable synthesis, growth mechanism, and photocatalytic properties

How large are nonadiabatic effects in atomic and diatomic systems?

Searching for a robust strategy for minimizing alkali chlorides in fluidized bed boilers during burning of high SRF-energy-share fuel

Unintentional boron contamination of MBE-grown GaInP/AlGaInP quantum wells

Measuring synthesis yield in graphene oxide synthesis by modified hummers method

Molecular Design of Light-Responsive Hydrogels, for in Situ Generation of Fast and Reversible Valves for Microfluidic Applications

Superatom Model for Ag-S Nanocluster with Delocalized Electrons

Effect of spraying parameters on the microstructural and corrosion properties of HVOF-sprayed Fe-Cr-Ni-B-C coatings

Construction of an Interconnected Nanostructured Carbon Black Network  
Development of Highly Stretchable and Robust Elastomeric Conductors

PIP2 and Talin Join Forces to Activate Integrin

Atomic-level characterization of transport cycle thermodynamics in the glycerol-3-phosphate  
Phosphate antiporter

Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles

In Situ Photocontrol of Block Copolymer Morphology during Dip-Coating of Thin Films

Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds

Submolecular Plasticization Induced by Photons in Azobenzene Materials

Comparison of different cationized proteins as biomaterials for nanoparticle-based ocular gene delivery

Effect of rubber polarity on selective wetting of carbon nanotubes in ternary blends

Tri-functionality of Fe<sub>3</sub>O<sub>4</sub>-embedded carbon microparticles in microalgae harvesting

Graphene-intercalated Fe<sub>2</sub>O<sub>3</sub>/TiO<sub>2</sub> heterojunctions for efficient photoelectrolysis of water

Differential basal-to-apical accessibility of laminin A/C epitopes in the nuclear lamina regulated by changes in cytoskeletal tension

Modeling carbon dioxide transport in PDMS-based microfluidic cell culture devices

Synthesis, crystal structure, physico-chemical characterization and dielectric properties of a new hybrid material, 1-Ethylpiperazine-1,4-dium tetrachlorocadmate

The formation and physical properties of the particle emissions from a natural gas engine

Evaluating transparent liquid screen overlay as a haptic conductor  
Method of enhancing touchscreen based user interaction by a transparent deformable liquid screen overlay

Inkjet-printed dual microfluidic-based sensor integrated system

Alginate microgels created by selective coalescence between core drops paired with an ultrathin shell

A Three-Component Assembly Promoted by Boronic Acids Delivers a Modular Fluorophore Platform (BASHY Dyes)

Cholesterol oxidation products and their biological importance

Compatibilization of natural rubber/nitrile rubber blends by sol-gel nano-silica generated by in situ method

Controllable Electronic Structures and Photoinduced Processes of Bay-Linked Perylenediimide Dimers and a Ferrocene-Linked Triad

Decoding the Morphological Diversity in Two Dimensional Crystalline Porous Polymers by Core Planarity Modulation

Enhanced adsorption of orthophosphate and copper onto hydrochar derived from sewage sludge by KOH activation

Fire-safe and environmentally friendly nanocomposites based on layered double hydroxides and ethylene propylene diene elastomer

Heat capacities of crystalline and glassy lithium metaphosphate up to the transition region

High-Yield Excited Triplet States in Pentacene Self-Assembled Monolayers on Gold Nanoparticles through Singlet Exciton Fission

Nanoscale barrier coating on BOPP packaging film by ALD

Nonlinear transmittance and optical power limiting in magnesium ferrite nanoparticles  
effects of laser pulsewidth and particle size

On describing the optoelectronic characteristics of poly(benzodithiophene-Co -quinoxaline)-fullerene complexes: The influence of optimally tuned density functionals

Optical non-contact pH measurement in cell culture with sterilizable, modular parts



Photoresponsive liquid-crystalline polymer films bilayered with an inverse opal structure

Preferential adsorption of Cu in a multi-metal mixture onto biogenic elemental selenium nanoparticles

Remarkable Dependence of the Final Charge Separation Efficiency on the Donor-Acceptor Interaction in Photoinduced Electron Transfer

Superfluorinated Ionic Liquid Crystals Based on Supramolecular, Halogen-Bonded Anions

The electrooxidation-induced structural changes of gold di-superatomic molecules  
 $\text{Au}_{23}$  vs.  $\text{Au}_{25}$

Thermal desorption of molecular oxygen from  $\text{SnO}_2$  (110) surface  
Insights from first-principles calculations

Physical and Chemical Characterization of Real-World Particle Number and Mass Emissions from City Buses in Finland

Guanidinium Pairing Facilitates Membrane Translocation

Ambient-Pressure XPS Study of a Ni-Fe Electrocatalyst for the Oxygen Evolution Reaction

Phenothiazine and carbazole substituted pyrene based electroluminescent organic semiconductors for OLED devices

HPLC-SEC  
a new approach to characterise complex wastewater effluents

Stability and Function at High Temperature. What Makes a Thermophilic GTPase Different from Its Mesophilic Homologue

Long-Lived Triplet Excited States of Bent-Shaped Pentacene Dimers by Intramolecular Singlet Fission

Metal chalcogenide quantum dots  
Biotechnological synthesis and applications

DFT simulations and microkinetic modelling of 1-pentyne hydrogenation on  $\text{Cu}_{20}$  model catalysts

Microwave assisted laser-induced breakdown spectroscopy at ambient conditions

Strain rate change tests with the Split Hopkinson Bar method

Organic and Printed Electronics  
Fundamentals and Applications

Coordination networks incorporating halogen-bond donor sites and azobenzene groups

Influence of heat treatment on the abrasive wear resistance of a  $\text{Cr}_3\text{C}_2\text{NiCr}$  coating deposited by an ethene-fuelled HVOF spray process

Effect of Hole Transporting Material on Charge Transfer Processes in Zinc Phthalocyanine Sensitized ZnO Nanorods

Lipid-assisted protein transport

A diffusion-reaction model supported by kinetic experiments and molecular dynamics simulations

Optical Projection Tomography Technique for Image Texture and Mass Transport Studies in Hydrogels Based on Gellan Gum

Development of Magnetic Losses During Accelerated Corrosion Tests for Nd-Fe-B Magnets Used in Permanent Magnet Generators

Effect of incorporation of CdS NPs on performance of PTB7

PCBM organic solar cells

Robust statistical approaches for RSS-based floor detection in indoor localization

Structurally Controlled Dynamics in Azobenzene-Based Supramolecular Self-Assemblies in Solid State

Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within  $\text{GaAs}_{1-x}\text{Bi}_x/\text{GaAs}$  quantum wells

The Influence of Phosphorus Exposure on a Natural-Gas-Oxidation Catalyst

Reinforced chloroprene rubber by in situ generated silica particles

Evidence of bound rubber on the silica surface

Buckling Behavior of Cold-Formed Studs with Thermal Perforations

Detergent impurity effect on recycled HDPE

Properties after repetitive processing

Designing of Elastomer Nanocomposites

From Theory to Application

Nanostructured Ionomeric Elastomers

3D micro-nano structured hybrid scaffolds

An investigation into the role of nanofiber coating on viability, proliferation and differentiation of seeded mesenchymal stem cells

Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers

Controlling the motion of multiple objects on a Chladni plate

Elimination of arsenic-containing emissions from gasification of chromated copper arsenate wood

Increased survival rate by local release of diclofenac in a murine model of recurrent oral carcinoma

Grain orientation dependent Nb-Ti microalloying mediated surface segregation on ferritic stainless steel

UPS and DFT investigation of the electronic structure of gas-phase trimesic acid

Improvement of actuation performance of dielectric elastomers by barium titanate and carbon black fillers

Collective excitations and viscosity in liquid Bi

Optimization of HVOF Cr<sub>3</sub>C<sub>2</sub>-NiCr coating for increased fatigue performance

Particle emissions characterization from a medium-speed marine diesel engine with two fuels at different sampling conditions

Crystallization and sintering of borosilicate bioactive glasses for application in tissue engineering

Design of a 25 MWe Solar Thermal Power Plant in Iran with Using Parabolic Trough Collectors and a Two-Tank Molten Salt Storage System

Effects of orientation at the phthalocyanine-CdSe interface on the electron transfer characteristics

Fluorescence spectroscopy "knife" for polyplex "cakes": taste the filling

High-resolution coded-aperture design for compressive X-ray tomography using low resolution detectors

Improved corrosion properties of Hot Dip Galvanized Steel by nanomolecular silane layers as hybrid interface between zinc and top coatings

Liquid flame spray—a hydrogen-oxygen flame based method for nanoparticle synthesis and functional nanocoatings

Photophysical properties of porphyrin dimer-single-walled carbon nanotube linked systems

Photoresponsive ionic liquid crystals assembled  
Via halogen bond: En route towards light-controllable ion transporters

Supramolecular control of liquid crystals by doping with halogen-bonding dyes

Synthesis, Structural Characterization, Hirshfeld Surface and Antioxidant Activity Analysis of a Novel Organic Cation Antimonate Complex

Two cations, two mechanisms  
Interactions of sodium and calcium with zwitterionic lipid membranes

Architectures and codecs for real-time light field streaming

Effect of air gap on the adhesion of PET layer on cardboard substrate in extrusion coating

Novel bio-based materials for active and intelligent packaging

Novel equipment to simulate hot air heat sealability of packaging materials

Tampere University of Technology, laboratory of materials science, paper converting and packaging technology Tampere, Finland

Polarization resolved photoluminescence in GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells

Benchmarking DFT methods with small basis sets for the calculation of halogen-bond strengths

Magnetic routing of light-induced waveguides

Membrane cholesterol access into a G-protein-coupled receptor

Hierarchical Self-Assembly of Halogen-Bonded Block Copolymer Complexes into Upright Cylindrical Domains

Calcium Directly Regulates Phosphatidylinositol 4,5-Bisphosphate Headgroup Conformation and Recognition

Hexaphyrin as a Potential Theranostic Dye for Photothermal Therapy and <sup>19</sup>F Magnetic Resonance Imaging

Elucidation of Compression-Induced Surface Crystallization in Amorphous Tablets Using Sum Frequency Generation (SFG) Microscopy

Electron microscopic studies of natural gas oxidation catalyst – Effects of thermally accelerated aging on catalyst microstructure

Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods  
Aggregation Effects

The effects of calcium and potassium on CO<sub>2</sub> gasification of birch wood in a fluidized bed

Density functional study of structure and dynamics in liquid antimony and Sb<sub>n</sub> clusters

Nematicon-enhanced spontaneous symmetry breaking

Catalytic Activity of AuCu Clusters on MgO(100)  
Effect of Alloy Composition for CO Oxidation

Geometric Structure and Chemical Ordering of Large AuCu Clusters  
A Computational Study

Comparison of starch and gelatin hydrogels for non-toxic supercapacitor electrolytes

Long-Range Observation of Exciplex Formation and Decay Mediated by One-Dimensional Bridges

Dynamics of a True Moving Bed separation process  
Linear model identification and advanced process control

Electropolymerized polyazulene as active material in flexible supercapacitors

Configurational Disorder of Water Hydrogen-Bond Network at the Protein Dynamical Transition

Vegetable fillers for electric stimuli responsive elastomers

Exhaust emissions of non-road mobile machine  
Real-world and laboratory studies with diesel and HVO fuels

Feed-hopper level estimation and control in cone crushers

Membrane Binding of Recoverin  
From Mechanistic Understanding to Biological Functionality

Understanding selenium biogeochemistry in engineered ecosystems  
Transformation and analytical methods

Systematic analysis of coating-substrate interactions in the presence of flow localization

Waves in hyperbolic and double negative metamaterials including rogues and solitons

DoGlycans-Tools for Preparing Carbohydrate Structures for Atomistic Simulations of Glycoproteins, Glycolipids, and Carbohydrate Polymers for GROMACS

Carbazole-based small molecule electron donors  
Syntheses, characterization, and material properties

Mapping microscale wetting variations on biological and synthetic water-repellent surfaces

Time-Resolved Fluorescence Spectroscopy Reveals Fine Structure and Dynamics of Poly(L-lysine) and Polyethylenimine Based DNA Polyplexes

Supercritical carbon dioxide treatment of hot dip galvanized steel as a surface treatment before coating

A Bioscreening Technique for Ultraviolet Irradiation Protective Natural Substances

Adsorption of furfural from torrefaction condensate using torrefied biomass

Composition and role of the attached and planktonic microbial communities in mesophilic and thermophilic xylose-fed microbial fuel cells

Convenient extraction method for quantification of thin zinc patina layers

Decomposition of persistent luminescent microparticles in corrosive phosphate glass melt

Detection and characterization at nM concentration of oligomers formed by hIAPP, A $\beta$ (1-40) and their equimolar mixture using SERS and MD simulations

Efficient photon upconversion at remarkably low annihilator concentrations in a liquid polymer matrix: when less is more

Gloriosa superba Mediated Synthesis of Platinum and Palladium Nanoparticles for Induction of Apoptosis in Breast Cancer

Improved electromechanical response in acrylic rubber by different carbon-based fillers

Modification of epoxy resin by silane-coupling agent to improve tensile properties of viscose fabric composites

On the molecular optical nonlinearity of halogen-bond-forming azobenzenes

Optical frequency comb photoacoustic spectroscopy

Regeneration of sulfur-poisoned Pd-based catalyst for natural gas oxidation

Stable carbon isotopic composition of peat columns, subsoil and vegetation on natural and forestry-drained boreal peatlands

Supramolecular design principles for efficient photoresponsive polymer-azobenzene complexes

Concentration-dependent photophysical switching in mixed self-assembled monolayers of pentacene and perylene diimide on gold nanoclusters

Ortho-Fluorination of azophenols increases the mesophase stability of photoresponsive hydrogen-bonded liquid crystals

Upconversion from fluorophosphate glasses prepared with NaYF<sub>4</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup> nanocrystals

Temperature scanning stress relaxation of an autonomous self-healing elastomer containing non-covalent reversible network junctions

Controlled Growth of Supported ZnO Inverted Nanopyramids with Downward Pointing Tips

MetriIntSimil-an accurate and robust metric for comparison of similarity in intelligence of any number of cooperative multiagent systems

Entrapped Styrene Butadiene Polymer Chains by Sol-Gel-Derived Silica Nanoparticles with Hierarchical Raspberry Structures

Pot-economy autooxidative condensation of 2-Aryl-2-lithio-1,3-dithianes

UV-Blocking Synthetic Biopolymer from Biomass-Based Bifuran Diester and Ethylene Glycol

An activity recognition framework deploying the random forest classifier and a single optical heart rate monitoring and triaxial accelerometer wrist-band

Improved Stability of Atomic Layer Deposited Amorphous TiO<sub>2</sub> Photoelectrode Coatings by Thermally Induced Oxygen Defects

Soft hydrazone crosslinked hyaluronan- and alginate-based hydrogels as 3D supportive matrices for human pluripotent stem cell-derived neuronal cells

Improving the high temperature abrasion resistance of thermally sprayed  $\text{Cr}_3\text{C}_2$ -NiCr coatings by WC addition

Thermal Isomerization of Hydroxyazobenzenes as a Platform for Vapor Sensing

Properties of HVOF-sprayed Stellite-6 coatings

Composite Hydrogels Using Bioinspired Approach with in Situ Fast Gelation and Self-Healing Ability as Future Injectable Biomaterial

Membrane bound COMT isoform is an interfacial enzyme  
General mechanism and new drug design paradigm

Accurate Binding of Sodium and Calcium to a POPC Bilayer by Effective Inclusion of Electronic Polarization

Characteristics of nFOG, an aerosol-based wet thin film coating technique

Free amino acids and 5'-nucleotides in Finnish forest mushrooms

Wet etching of dilute nitride GaInNAs, GaInNAsSb, and GaNAsSb alloys lattice-matched to GaAs

A Ceramide-Regulated Element in the Late Endosomal Protein LAPTM4B Controls Amino Acid Transporter Interaction

Effect of Co-Adsorbate and Hole Transporting Layer on the Photoinduced Charge Separation at the  $\text{TiO}_2$ -Phthalocyanine Interface

Acquiring respiration rate from photoplethysmographic signal by recursive bayesian tracking of intrinsic modes in time-frequency spectra

Evaluation of dry electrodes in canine heart rate monitoring

Multifunctional nitrogen sulfur co-doped reduced graphene oxide – Ag nano hybrids (sphere, cube and wire) for nonlinear optical and SERS applications

Photo-antimicrobial efficacy of zinc complexes of porphyrin and phthalocyanine activated by inexpensive consumer LED lamp

Effect of surfactant type and sonication energy on the electrical conductivity properties of nanocellulose-CNT nanocomposite films

Pectin and Mucin Enhance the Bioadhesion of Drug Loaded Nanofibrillated Cellulose Films

High Bending-Mode Sensitivity of Printed Piezoelectric Poly(vinylidene fluoride- co-trifluoroethylene) Sensors

Design aspects of all atomic layer deposited  $\text{TiO}_2$ - $\text{Fe}_2\text{O}_3$  scaffold-absorber photoanodes for water splitting

Selenate removal in biofilm systems

Effect of nitrate and sulfate on selenium removal efficiency, biofilm structure and microbial community

Photoinduced Energy Transfer in ZnCdSeS Quantum Dot-Phthalocyanines Hybrids

A compact olfactometer for IMS measurements and testing human perception

Effects of pyrolysis temperature on the hydrologically relevant porosity of willow biochar

Electro-concentration for chemical-free nitrogen capture as solid ammonium bicarbonate

Mechanical, thermal, and burning properties of viscose fabric composites

Influence of epoxy resin modification

Quantification of bio-anode capacitance in bioelectrochemical systems using Electrochemical Impedance Spectroscopy

Computation of Dynamic Polarizabilities and van der Waals Coefficients from Path-Integral Monte Carlo

Biological treatment of selenium-laden wastewater containing nitrate and sulfate in an upflow anaerobic sludge bed reactor at pH 5.0

Tribocorrosion behaviour of aluminium bronze in 3.5 wt.% NaCl solution

Molecular-Scale Ligand Effects in Small Gold-Thiolate Nanoclusters

High-Yield Generation of Triplet Excited States by an Efficient Sequential Photoinduced Process from Energy Transfer to Singlet Fission in Pentacene-Modified CdSe/ZnS Quantum Dots

M2M Communication Assessment in Energy-Harvesting and Wake-Up Radio Assisted Scenarios Using Practical Components

High Nitrogen Removal in a Constructed Wetland Receiving Treated Wastewater in a Cold Climate

Machine learning analysis of extreme events in optical fibre modulation instability

Aminobenzylated 4-Nitrophenols as Antibacterial Agents Obtained from 5-Nitrosalicylaldehyde through a Pictet-Spengler Mannich Reaction

Bi-directional cell-pericellular matrix interactions direct stem cell fate

Beaming random lasers with soliton control

Machine learning plastic deformation of crystals

Structural basis of actin monomer re-charging by cyclase-Associated protein

Experimental moment resistance of rectangular hollow section T joints



Less Is More

Enhancement of Second-Harmonic Generation from Metasurfaces by Reduced Nanoparticle Density

Reversible photodoping of TiO<sub>2</sub> nanoparticles

An automated algorithm for reliable equation of state fitting of magnetic systems

Effect of polyolefin molecular structure on product properties in extrusion coating

Exclusive occurrence of photoinduced energy transfer and switching of its direction by rectangular  $\pi$ -extension of nanographenes

Large-scale efficient water harvesting using bioinspired micro-patterned copper oxide nanoneedle surfaces and guided droplet transport

Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation

Market implementation of active and intelligent packaging-opportunities from a socio-economic perspective

Metabolic profiling of water-soluble compounds from the extracts of dark septate endophytic fungi (DSE) isolated from scots pine (*Pinus sylvestris* L.) seedlings using UPLC-orbitrap-MS

Multiphoton Excitation of CsPbBr<sub>3</sub> Perovskite Quantum Dots (PQDs)

How Many Electrons Can One PQD Donate to Multiple Molecular Acceptors?

Nanocellulose and Polylactic Acid Based Multilayer Coatings for Barrier Applications

O<sub>2</sub>-requiring molecular reporters of gene expression for anaerobic microorganisms

Possible strategy to use differential mobility spectrometry in real time applications

Spodumene tailings for porcelain and structural materials

Effect of temperature (1050–1200°C) on the sintering and properties

Synthesis of 6,12-disubstituted methanodibenzo[b,f][1,5]dioxocins

Pyrrolidine catalyzed self-condensation of 2'-Hydroxyacetophenones

Temperature scanning stress relaxation behavior of water responsive and mechanically adaptive elastomer nanocomposites

The Hosoya entropy of graphs revisited

The maximum Hosoya index of unicyclic graphs with diameter at most four

Tuning of nonlinear absorption in highly luminescent CdSe based quantum dots with core-shell and core/multi-shell architectures

Volatile fatty acid adsorption on anion exchange resins  
kinetics and selective recovery of acetic acid

A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities