

Lubricated icephobic coatings prepared by flame spraying with hybrid feedstock injection

The effect of substrate pre-treatment on durability of rubber-stainless steel adhesion

On the alignment of ZnO nanowires by Langmuir – Blodgett technique for sensing application

Fusionsense

Emotion classification using feature fusion of multimodal data and deep learning in a brain-inspired spiking neural network

Tail-Oxidized Cholesterol Enhances Membrane Permeability for Small Solutes

Formation of corrosion products on zinc in wet supercritical and subcritical CO<sub>2</sub>  
In-situ spectroscopic study

The role of symmetry in the aesthetics of residential building façades using cognitive science methods

ClothFace

A Batteryless RFID-Based Textile Platform for Handwriting Recognition

The C-I<sup>-</sup>⋯O-N<sup>+</sup> Halogen Bonds with Tetraiodoethylene and Aromatic N-Oxides

Design principles for non-reciprocal photomechanical actuation

Nucleation and growth behavior of Er<sup>3+</sup> doped oxyfluorophosphate glasses

Selective hydrogen production at Pt(111) investigated by Quantum Monte Carlo methods for metal catalysis

Additive manufacturing of monolithic supercapacitors with biopolymer separator

Molecular Docking Studies of Royleanone Diterpenoids from *Plectranthus* spp. as P-Glycoprotein Inhibitors

Physical Characteristics of Particle Emissions from a Medium Speed Ship Engine Fueled with Natural Gas and Low-Sulfur Liquid Fuels

Rotational Diffusion of Membrane Proteins in Crowded Membranes

The effect of start-up on energy recovery and compositional changes in brewery wastewater in bioelectrochemical systems

Host-Guest Interactions of Sodiumsulfonatomethylenesorcinarene and Quaternary Ammonium Halides  
An Experimental-Computational Analysis of the Guest Inclusion Properties

Photostable orange-red fluorescent unsymmetrical diketopyrrolopyrrole-BF<sub>2</sub> hybrids

Linking volatile and non-volatile compounds to sensory profiles and consumer liking of wild edible Nordic mushrooms

Sequential Collinear Photofragmentation and Atomic Absorption Spectroscopy for Online Laser Monitoring of Triatomic Metal Species

Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway

Monitoring Charge Carrier Diffusion across a Perovskite Film with Transient Absorption Spectroscopy

Effect of tungsten and selenium on C<sub>1</sub> gas bioconversion by an enriched anaerobic sludge and microbial community analysis

Compounding and characterization of recycled multilayer plastic films

Taste compound – Nanocellulose interaction assessment by fluorescence indicator displacement assay

Hematite Surface Modification toward Efficient Sunlight-Driven Water Splitting Activity  
The Role of Gold Nanoparticle Addition

Influence of powder properties on residual stresses formed in high-pressure liquid fuel HVOF sprayed WC-CoCr coatings

Non-radiative decay and fragmentation in water molecules after 1 a 1-1 4 a 1 excitation and core ionization studied by electron-energy-resolved electron-ion coincidence spectroscopy

Comparison and impact of different fiber debond techniques on fiber reinforced flexible composites

Experimental study on axially loaded square hollow section T-joints under fire conditions

High-resolution analysis of the  $\nu_3$  band of radiocarbon methane <sup>14</sup>CH<sub>4</sub>

Ultrafast Photochemistry of the [Cr(NCS)<sub>6</sub>]<sup>3-</sup> Complex in Dimethyl Sulfoxide and Dimethylformamide upon Excitation into Ligand-Field Electronic State

Efficient Conversion of Light to Chemical Energy  
Directional, Chiral Photoswitches with Very High Quantum Yields

Modelling of a pressure swing adsorption unit by deep learning and artificial Intelligence tools

Fast Switching of Bright Whiteness in Channeled Hydrogel Networks

A concise synthesis of carbasugars isolated from Streptomyces lincolnensis

Bringing a Molecular Plus One  
Synergistic Binding Creates Guest-Mediated Three-Component Complexes

A bifacial colour-tunable system via combination of a cholesteric liquid crystal network and hydrogel

Modification of Surface States of Hematite-Based Photoanodes by Submonolayer of TiO<sub>2</sub> for Enhanced Solar Water Splitting

Recovery characteristics of different tube materials in relation to combustion products

Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds

Kinetics and modelling of thiosulphate biotransformations by haloalkaliphilic Thioalkalivibrio versutus

Energy dissipation in natural rubber latex films  
The effect of stabilizers, leaching and acetone-treatment

Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide

A modular brain-on-a-chip for modelling epileptic seizures with functionally connected human neuronal networks

ILC1 drive intestinal epithelial and matrix remodelling

Environmental monitoring with distributed mesh networks  
An overview and practical implementation perspective for urban scenario

Programmable responsive hydrogels inspired by classical conditioning algorithm

Key drivers of cloud response to surface-active organics

The role of highly oxygenated organic molecules in the Boreal aerosol-cloud-climate system

Spectral object recognition in hyperspectral holography with complex-domain denoising

Nanocluster Aerosol Emissions of a 3D Printer

Molecular Composition and Volatility of Nucleated Particles from  $\alpha$ -Pinene Oxidation between -50 °c and +25 °c

Statistical evaluation of barkhausen noise testing (BNT) for ground samples

Controlled Orientations of Neighboring Tetracene Units by Mixed Self-Assembled Monolayers on Gold Nanoclusters for High-Yield and Long-Lived Triplet Excited States through Singlet Fission

Effects of anode materials on electricity production from xylose and treatability of TMP wastewater in an up-flow microbial fuel cell

Multiresonant High-Q Plasmonic Metasurfaces

Strategies To Diminish the Emissions of Particles and Secondary Aerosol Formation from Diesel Engines

Porous polybutylene succinate films enabling adhesion of human embryonic stem cell-derived retinal pigment epithelial cells (hESC-RPE)

Behavior of the DPH fluorescence probe in membranes perturbed by drugs

Influence of ions to modulate hydrazone and oxime reaction kinetics to obtain dynamically cross-linked hyaluronic acid hydrogels

Characterizing the micro-impact fatigue behavior of APS and HVOF-sprayed ceramic coatings

Chlorine induced high-temperature corrosion mechanisms in HVOF and HVOF sprayed  $\text{Cr}_3\text{C}_2$ -based hardmetal coatings

Bayesian inversion of a forest reflectance model using Sentinel-2 and Landsat 8 satellite images

Photochemistry of dithiophosphate  $\text{Ni}(\text{S}_2\text{P}(\text{i-Bu})_2)_2$  complex in  $\text{CCl}_4$ . Transient species and TD-DFT calculations

Erosion wear performance of WC-10Co4Cr and  $\text{Cr}_3\text{C}_2$ -25NiCr coatings sprayed with high-velocity thermal spray processes

Observation of Coexistence of Yu-Shiba-Rusinov States and Spin-Flip Excitations

FCC-hh

The Hadron Collider: Future Circular Collider Conceptual Design Report Volume 3

Pyrolytic behavior of lignocellulosic-based polysaccharides

Crystalline Wax Esters Regulate the Evaporation Resistance of Tear Film Lipid Layers Associated with Dry Eye Syndrome

Water-Responsive and Mechanically Adaptive Natural Rubber Composites by in Situ Modification of Mineral Filler Structures

Epitaxial phases of high Bi content GaSbBi alloys

Tailoring Second-Harmonic Emission from (111)-GaAs Nanoantennas

The Role of Temperature and Lipid Charge on Intake/Uptake of Cationic Gold Nanoparticles into Lipid Bilayers

Analytical Expressions for Spring Constants of Capillary Bridges and Snap-in Forces of Hydrophobic Surfaces

Correlation of Surface Morphology and Interfacial Adhesive Behavior between Cellulose Surfaces  
Quantitative Measurements in Peak-Force Mode with the Colloidal Probe Technique

Methods for simultaneous robot-world-hand-eye calibration  
A comparative study

Bioimpedance Sensor Array for Long-Term Monitoring of Wound Healing from Beneath the Primary Dressings and  
Controlled Formation of  $\text{H}_2\text{O}_2$  Using Low-Intensity Direct Current

Reaction between Peroxy and Alkoxy Radicals Can Form Stable Adducts

Energy-dependent diffusion in a soft periodic Lorentz gas

Moiré superlattices and 2D electronic properties of graphite/MoS<sub>2</sub> heterostructures

Spin filtering in silicene by edges and chemically or electrically induced interfaces

Mass balance control of crushing circuits

Complex Behavior of Phosphatidylcholine-Phosphatidic Acid Bilayers and Monolayers  
Effect of Acyl Chain Unsaturation

Analysis of GaAsBi growth regimes in high resolution with respect to As/Ga ratio using stationary MBE growth

Hydrolysis and drug release from poly(ethylene glycol)-modified lactone polymers with open porosity

Positioning information privacy in intelligent transportation systems  
An overview and future perspective

Alpha radiation-induced luminescence by am-241 in aqueous nitric acid solution

The Devil Is in the Details  
What Do We Really Track in Single-Particle Tracking Experiments of Diffusion in Biological Membranes?

Kinetics and thermochemistry of the reaction of 3-methylpropargyl radical with molecular oxygen

A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities

Charge carrier dynamics in tantalum oxide overlayered and tantalum doped hematite photoanodes

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

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

Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation

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

Multiphoton Excitation of CsPbBr<sub>3</sub> Perovskite Quantum Dots (PQDs)  
How Many Electrons Can One PQD Donate to Multiple Molecular Acceptors?

Spodumene tailings for porcelain and structural materials  
Effect of temperature (1050–1200°C) on the sintering and properties

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

Possible strategy to use differential mobility spectrometry in real time applications

Synthesis of 6,12-disubstituted methanodibenzo[b,f][1,5]dioxocins  
Pyrrolidine catalyzed self-condensation of 2'-Hydroxyacetophenones

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

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

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

The Hosoya entropy of graphs revisited

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

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

Synergistic Computational-Experimental Discovery of Highly Selective PtCu Nanocluster Catalysts for Acetylene Semihydrogenation

How well can we predict cluster fragmentation inside a mass spectrometer?

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

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

Experimental moment resistance of rectangular hollow section T joints

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

Beaming random lasers with soliton control

Machine learning plastic deformation of crystals

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

Aminobenzylated 4-Nitrophenols as Antibacterial Agents Obtained from 5-Nitrosalicylaldehyde through a Petasis Borono-Mannich Reaction

Machine learning analysis of extreme events in optical fibre modulation instability

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

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

Molecular-Scale Ligand Effects in Small Gold-Thiolate Nanoclusters

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

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

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

Mechanical, thermal, and burning properties of viscose fabric composites  
Influence of epoxy resin modification

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

A compact olfactometer for IMS measurements and testing human perception

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

Photoinduced Energy Transfer in ZnCdSeS Quantum Dot-Phthalocyanines Hybrids

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

Design aspects of all atomic layer deposited TiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> scaffold-absorber photoanodes for water splitting

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

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

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

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

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

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

A Ceramide-Regulated Element in the Late Endosomal Protein LAPT4B Controls Amino Acid Transporter Interaction

Wet etching of dilute nitride  $\text{GaInNAs}$ ,  $\text{GaInNAsSb}$ , and  $\text{GaNaNsSb}$  alloys lattice-matched to  $\text{GaAs}$

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

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

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

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

Properties of HVOF-sprayed Stellite-6 coatings

Thermal Isomerization of Hydroxyazobenzenes as a Platform for Vapor Sensing

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

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

Improved Stability of Atomic Layer Deposited Amorphous  $\text{TiO}_2$  Photoelectrode Coatings by Thermally Induced Oxygen Defects

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

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

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

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

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

Controlled Growth of Supported ZnO Inverted Nanopyramids with Downward Pointing Tips



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

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

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

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

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

Adsorption of furfural from torrefaction condensate using torrefied biomass

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

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

Decomposition of persistent luminescent microparticles in corrosive phosphate glass melt

Convenient extraction method for quantification of thin zinc patina layers

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

A Bioscreening Technique for Ultraviolet Irradiation Protective Natural Substances

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

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

Optical frequency comb photoacoustic spectroscopy

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

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

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

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

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

Oxygen and water vapor transmission rates of starch-poly(vinyl alcohol) barrier coatings for flexible packaging paper

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

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

Starch-poly(vinyl alcohol) barrier coatings for flexible packaging paper and their effects of phase interactions

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

Membrane Binding of Recoverin  
From Mechanistic Understanding to Biological Functionality

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

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

Vegetable fillers for electric stimuli responsive elastomers

Electropolymerized polyazulene as active material in flexible supercapacitors

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

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

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

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

Nematicon-enhanced spontaneous symmetry breaking

Density functional study of structure and dynamics in liquid antimony and  $Sb_n$  clusters

The effects of calcium and potassium on  $CO_2$  gasification of birch wood in a fluidized bed

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

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

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

Hexaphyrin as a Potential Theranostic Dye for Photothermal Therapy and  $^{19}\text{F}$  Magnetic Resonance Imaging

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

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

Membrane cholesterol access into a G-protein-coupled receptor

Magnetic routing of light-induced waveguides

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

Polarization resolved photoluminescence in  $\text{GaAs}_{1-x}\text{Bi}_x/\text{GaAs}$  quantum wells

Architectures and codecs for real-time light field streaming

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

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

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

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

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

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

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

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

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

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

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

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

Collective excitations and viscosity in liquid Bi

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

London Hybrid Exposure Model  
Improving Human Exposure Estimates to NO<sub>2</sub> and PM<sub>2.5</sub> in an Urban Setting

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

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

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

Controlling the motion of multiple objects on a Chladni plate

Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers

3D micro-nano structured hybrid scaffolds  
An investigation into the role of nanofiber coating on viability, proliferation and differentiation of seeded mesenchymal stem cells

Detergent impurity effect on recycled HDPE  
Properties after repetitive processing

Buckling Behavior of Cold-Formed Studs with Thermal Perforations

Reinforced chloroprene rubber by in situ generated silica particles  
Evidence of bound rubber on the silica surface

Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells

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

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

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

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

Effect of incorporation of CdS NPs on performance of PTB7  
PCBM organic solar cells

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

Lipid-assisted protein transport  
A diffusion-reaction model supported by kinetic experiments and molecular dynamics simulations

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

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

Coordination networks incorporating halogen-bond donor sites and azobenzene groups

Strain rate change tests with the Split Hopkinson Bar method

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

Microwave assisted laser-induced breakdown spectroscopy at ambient conditions

Metal chalcogenide quantum dots  
Biotechnological synthesis and applications

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

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

HPLC-SEC  
a new approach to characterise complex wastewater effluents

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

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

Guanidinium Pairing Facilitates Membrane Translocation

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

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

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

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

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

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

The electrooxidation-induced structural changes of gold di-superatomic molecules  
 $Au_{23}$  vs.  $Au_{25}$

Cholesterol oxidation products and their biological importance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Graphene-intercalated  $\text{Fe}_2\text{O}_3/\text{TiO}_2$  heterojunctions for efficient photoelectrolysis of water

Tri-functionality of  $\text{Fe}_3\text{O}_4$ -embedded carbon microparticles in microalgae harvesting

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

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

Submolecular Plasticization Induced by Photons in Azobenzene Materials

Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds

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

Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles

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

PIP2 and Talin Join Forces to Activate Integrin

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

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

Superatom Model for Ag-S Nanocluster with Delocalized Electrons

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

Measuring synthesis yield in graphene oxide synthesis by modified hummers method

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

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

How large are nonadiabatic effects in atomic and diatomic systems?

$\text{Fe}_2\text{O}_3$ - $\text{TiO}_2$  nanosystems by a hybrid PE-CVD/ALD approach  
controllable synthesis, growth mechanism, and photocatalytic properties

Effects of thinning and heating for  $\text{TiO}_2/\text{AlInP}$  junctions

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

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

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

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

Responsive Polymer Photonics

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

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

Quantifying non-ergodic dynamics of force-free granular gases

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

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

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

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

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

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

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

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

On the biomaterials for nanostructured ocular therapeutics

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

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



Inverted critical adsorption of polyelectrolytes in confinement

PEGylated liposomes as carriers of hydrophobic porphyrins

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

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

Photodiagnostic et chirurgie guidés par la fluorescence

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

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

La thérapie photodynamique

État de l'art et perspectives

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

A facile route to synthesis of S-doped TiO<sub>2</sub> nanoparticles for photocatalytic activity

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

Spectral and kinetic characteristics of indotricarbocyanine complexation with albumin

Effect of melting state on the thermal shock resistance and thermal conductivity of APS ZrO<sub>2</sub>-7.5wt.% Y<sub>2</sub>O<sub>3</sub> coatings

Modeling photoionization of aqueous DNA and its components

Multistep reactions of water with small Pd<sub>n</sub> clusters

A first principles study

Energy degradation in photoexcited complexes of indocarbocyanine with albumin

Ergodicity breaking and particle spreading in noisy heterogeneous diffusion processes

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

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

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

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

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

Tribology of HVOF- and HVOF-sprayed WC-10Co4Cr hardmetal coatings

A comparative assessment

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

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

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

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

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

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

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

Neutralized chimeric avidin binding at a reference biosensor surface

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

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

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

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

Silver sulfide nanoclusters and the superatom model

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

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

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

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

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

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

A comparison of five optical surface topography measurement methods

Appropriate pricing policy needed worldwide for improving water services infrastructure

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

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

Ballistic and numerical simulation of impacting goods on conveyor belt rubber

Synthesis of fluorescent naphthoquinolizines via intramolecular houben-hoesch reaction

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

Chemolithotrophic denitrification in biofilm reactors

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

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

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

Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels

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

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

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

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

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

Time-resolved fluorescence methods (IUPAC technical report)

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

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

A supramolecular approach to photoresponsive thermo/solvoplastic block copolymer elastomers

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

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

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

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

Pyrene based conjugated materials  
Synthesis, characterization and electroluminescent properties

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

Recent twists in photoactuation and photoalignment control

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

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

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

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

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

Accurate description of calcium solvation in concentrated aqueous solutions

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

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

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

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

Light-fuelled transport of large dendrimers and proteins

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

Protein conformation as a regulator of cell-matrix adhesion

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

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

Azopolymer-based micro- and nanopatterning for photonic applications

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

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

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

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

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

Magnetic origin of the chemical balance in alloyed Fe-Cr stainless steels

First-principles and Ising model study

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

Novel derivatives of bacteriochlorophyll a

Complex formation with albumin and the mechanism of tumor cell photodamage

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

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

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

Self-assembly of polystyrene-block-poly(4-vinylpyridine) block copolymer on molecularly functionalized silicon substrates

Fabrication of inorganic nanostructured etchmask for lithographic use

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

Location of dispersing agent in rubber nanocomposites during mixing process

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

Effect of surface morphology of poly( $\epsilon$ -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

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

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

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

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

How conformational flexibility stabilizes the hyperthermophilic elongation factor G-domain

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

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

Reversible biofunctionalization of surfaces with a switchable mutant of avidin

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

Zinc coordination spheres in protein structures

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

Mechanisms of acceleration and retardation of water dynamics by ions

Irradiation promoted exchange reaction with disulfide substituents

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

Reversal of the Hofmeister series  
Specific ion effects on peptides

Photoswitchable hydrogel surface topographies by polymerisation-induced diffusion

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

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

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

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

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

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

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

Immobilized bioactive agents onto polyurethane surface with heparin and phosphorylcholine group

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

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

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

Site-specific analysis of dipole polarizabilities of heterogeneous systems  
Iron-doped  $\text{Si}_n$  ( $n = 1-14$ ) clusters

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

Optical vortex generation in nematic liquid crystal light valves

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

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

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

Growth behavior and magnetic properties of spherical uranium oxide nanoclusters

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

Networking of ionic liquid modified CNTs in SSBR

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

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

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

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

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

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

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

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

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

Azobenzene photomechanics  
Prospects and potential applications

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

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

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

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

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

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

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



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

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

Nematicons in azobenzene liquid crystals

Molecular mechanisms of ion-specific effects on proteins

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

Behavior of 4-hydroxynonenal in phospholipid membranes

Elemental and mixed actinide dioxides  
An ab initio study

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

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

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

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

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

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

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

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

Chasing charge localization and chemical reactivity following photoionization in liquid water

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

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

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

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