

Arc-sprayed Fe-based coatings from coredwires for wear and corrosion protection in power engineering

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

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

Corrosion properties of thermally sprayed bond coatings under plasma sprayed chromia coating in sulfuric acid solutions

Erosive-abrasive wear behavior of carbide-free bainitic and boron steels compared in simulated field conditions

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

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

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

Cysteine-tagged chimeric avidin forms high binding capacity layers directly on gold

Detection of 3,4-methylenedioxymethamphetamine (MDMA, ecstasy) by displacement of antibodies

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

Behavior of 4-hydroxynonenal in phospholipid membranes

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

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

Formation mechanisms, structure, and properties of HVOF-sprayed WC-CoCr coatings  
An approach toward process maps

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

Evaluation of Residual Stresses and Their Influence on Cavitation Erosion Resistance of High Kinetic HVOF and HVOF-Sprayed WC-CoCr Coatings

Impact wear and mechanical behavior of steels at subzero temperatures

Comparison of various high-stress wear conditions and wear performance of martensitic steels

Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models

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

Optimised selection of new protective coatings for biofuel boiler applications

Microstructural and abrasion wear characteristics of laser-clad tool steel coatings

Superamphiphobic overhang structured coating on a biobased material

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

Wear of cemented tungsten carbide percussive drill-bit inserts  
Laboratory and field study

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

Development and application of HVOF sprayed spinel protective coating for SOFC interconnects

ESD qualification data used as the basis for building electrostatic discharge protected areas

Energetic origin of proton affinity to the air/water interface

Switchable light reflectance in dilute magneto-optical colloids based on nickel ferrite nanowires

Process time importance in the product properties evolution during extrusion coating of different LDPE grades

Erosion wear of vinyl ester matrix composites in aqueous and acidic environments at elevated temperatures

Stimuli-responsive photonic polymer coatings

Adjustable wetting properties of paperboard by liquid flame spray process

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

Thermally evaporated single-crystal Germanium on Silicon

Micro-Raman characterization of Germanium thin films evaporated on various substrates

Thermal evaporation of Ge on Si for near infrared detectors  
Material and device characterization

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

Fabrication and Characterization of Amorphous Alumina-Yttria-Stabilized Zirconia Coatings by Air Plasma Spraying

Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing

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

Piezoresistive natural rubber-multiwall carbon nanotube nanocomposite for sensor applications

Properties of HVOF-sprayed Stellite-6 coatings

Erosive wear of filled vinyl ester composites in water and acidic media at elevated temperature

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

Abrasive-Erosive Wear of Thermally Sprayed Coatings from Experimental and Commercial  $\text{Cr}_3\text{C}_2$ -Based Powders

Infrared Thermography as a Non-destructive Testing Solution for Thermal Spray Metal Coatings

Passive resonance sensor based method for monitoring particle suspensions

Non-destructive and wireless monitoring of biodegradable polymers

Roll-to-roll application of photocatalytic  $\text{TiO}_2$  nanoparticles for printed functionality

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

Convenient extraction method for quantification of thin zinc patina layers

Assessment of pitting corrosion in bare and passivated (wet  $\text{scCO}_2$ -induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS)

Atomikerroskasvatusmenetelmällä kasvatetun titaanidioksidikalvon ominaisuudet valosähkökemiallisessa veden hajottamisessa

Translated title of the contribution: : Properties of Atomic Layer Deposited Titanium Dioxide Film in Photoelectrochemical Water Splitting

Role of Oxide Defects in ALD grown  $\text{TiO}_2$  Coatings on Performance as Photoanode Protection Layer

CLC a Colored Liquid Crystal  
Prototype Description and Design Opportunities

Envolvente de Vidrio Electrocrómico  
Translated title of the contribution: : Electrochromic Glass Envelope

Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers

Magnetic non-contact friction from domain wall dynamics actuated by oscillatory mechanical motion

Effect of Multiple Impacts on the Deformation of Wear-Resistant Steels

The role of edge-concentrated wear in impact-abrasion testing

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

Block copolymer lithography  
Feature size control and extension by an over-etch technique

Morphology evolution of PS-b-PDMS block copolymer and its hierarchical directed self-assembly on block copolymer templates

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

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

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

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

Influence of As/group-III flux ratio on defects formation and photovoltaic performance of GaInNAs solar cells

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

Vegetable fillers for electric stimuli responsive elastomers

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

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

Ab initio study of the surface properties of austenitic stainless steel alloys

Reversal of the Hofmeister series  
Specific ion effects on peptides

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

Microwave induced hierarchical nanostructures on aramid fibers and their influence on adhesion properties in a rubber matrix

Development in additive methods in aramid fiber surface modification to increase fiber-matrix adhesion  
A review

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

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

PIP2 and Talin Join Forces to Activate Integrin

Comparison of laboratory rolling-sliding wear tests with in-service wear of nodular cast iron rollers against wire ropes

Load capacity of lubricated bismuth bronze bimetal bearing under elliptical sliding motion

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

Increased lifetime for biomass and waste to energy power plant boilers with HVOF coatings  
High temperature corrosion testing under chlorine-containing molten salt

Influence of the phosphate glass melt on the corrosion of functional particles occurring during the preparation of glass-ceramics

Effects of composition and microstructure on the abrasive wear performance of quenched wear resistant steels

The formation and characterization of fretting-induced degradation layers using quenched and tempered steel

Dielectric Breakdown Strength of Thermally Sprayed Ceramic Coatings  
Effects of Different Test Arrangements

RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides

Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles

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

Detergent impurity effect on recycled HDPE  
Properties after repetitive processing

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

Influence of the Spray Gun Type on Microstructure and Properties of HVOF Sprayed Fe-Based Corrosion Resistant Coatings

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

Microstructure and Sliding Wear Behavior of Fe-Based Coatings Manufactured with HVOF and HVOF Thermal Spray Processes

Evaluation of screen printed silver trace performance and long-term reliability against environmental stress on a low surface energy substrate

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

Advanced coatings by novel high-kinetic thermal spray processes

Sliding wear behaviour of HVOF and HVOF sprayed  $\text{Cr}_3\text{C}_2$ -based coatings

A Study of  $\text{Cr}_3\text{C}_2$ -Based HVOF- and HVOF-Sprayed Coatings  
Microstructure and Carbide Retention

Effect of nozzle geometry on the microstructure and properties of hvaf-sprayed wc-10co4cr and cr3c2-25nicr coatings

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

A study of  $\text{Cr}_3\text{C}_2$ -based HVOF- and HVOF-sprayed coatings  
Abrasion, dry particle erosion and cavitation erosion resistance

Slurry and dry particle erosion wear properties of WC-10Co4Cr and  $\text{Cr}_3\text{C}_2$ -25NiCr hardmetal coatings deposited by HVOF and HVOF spray processes

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

Tribocorrosion behaviour of two low-alloy steel grades in simulated waste solution

Prediction of contact condition and surface damage by simulating variable friction coefficient and wear

Vacancy-type defect distributions near argon sputtered Al(100) surface studied by variable-energy positrons and molecular dynamics simulations

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

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

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

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

Running-in effects on friction of journal bearings under slow sliding speeds

The deformation, strain hardening, and wear behavior of chromium-alloyed hadfield steel in abrasive and impact conditions

The effect of impact conditions on the wear and deformation behavior of wear resistant steels

Erosive wear of various stainless steel grades used as impeller blade materials in high temperature aqueous slurry

Erosion–corrosion resistance of various stainless steel grades in high-temperature sulfuric acid solution

Numerical simulation of temperature distributions in layered structures during laser processing

Electrospun Black Titania Nanofibers

Influence of Hydrogen Plasma-Induced Disorder on the Electronic Structure and Photoelectrochemical Performance

Cold gas spraying of a high-entropy CrFeNiMn equiatomic alloy

Detection of gaseous species during KCl-induced high-temperature corrosion by the means of CPFAAS and CI-API-TOF

Optimization of convectively cooled heat sinks

Improved properties for packaging materials by nanoscale surface modification and ALD barrier coating

Effect of Phosphatidic Acid on Biomembrane

Experimental and Molecular Dynamics Simulations Study

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

Fluid flow simulations meet high-speed video

Computer vision comparison of droplet dynamics

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

Influence of temperature-induced copper diffusion on degradation of selective chromium oxy-nitride solar absorber coatings

Hafnium oxide thin films as a barrier against copper diffusion in solar absorbers

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

Calculated electronic density of states and structural properties of tetrahedral amorphous carbon

Novel Online Diagnostic Analysis for In-Flight Particle Properties in Cold Spraying

Cold-Sprayed Al6061 coatings

Online spray monitoring and influence of process parameters on coating properties

Accurate description of calcium solvation in concentrated aqueous solutions

Characterization Of High-Velocity Single Particle Impacts On Thermally Sprayed Ceramic Coatings

Wear Properties of Thermally Sprayed Tungsten-Carbide Coatings in Paper Machine Environments

Fracture Characteristics of High-Velocity Suspension Flame-Sprayed Aluminum Oxide Coatings

Characterization of High-Velocity Single Particle Impacts on Plasma-Sprayed Ceramic Coatings

Cavitation wear characteristics of Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>-ceramic coatings deposited by APS and HVOF -processes

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

Characterization of Powder-Precursor HVOF-Sprayed Al<sub>2</sub>O<sub>3</sub>-YSZ/ZrO<sub>2</sub> Coatings

Process Parameter Impact on Suspension-HVOF-Sprayed Cr<sub>2</sub>O<sub>3</sub> Coatings

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

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

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

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

Irradiation promoted exchange reaction with disulfide substituents

The effect of carbon and nickel additions on the precursor synthesis of Cr<sub>3</sub>C<sub>2</sub>-Ni nanopowder

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

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

Mining tailings as raw materials for reaction-sintered aluminosilicate ceramics  
Effect of mineralogical composition on microstructure and properties

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

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

Evaluation of crushing strength of spray-dried MgAl<sub>2</sub>O<sub>4</sub> granule beds

How conformational flexibility stabilizes the hyperthermophilic elongation factor G-domain

A comparison of relative displacement fields between numerical predictions and experimental results in fretting contact



Experimental and numerical investigation of fretting fatigue behavior in bolted joints

Characterization of cracks formed in large flat-on-flat fretting contact

Avoiding the initial adhesive friction peak in fretting

Compounding and characterization of recycled multilayer plastic films

Two cations, two mechanisms

Interactions of sodium and calcium with zwitterionic lipid membranes

Rotational Diffusion of Membrane Proteins in Crowded Membranes

Active packaging by paper coating

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

HVOF- and HVAF-Sprayed  $\text{Cr}_3\text{C}_2\text{-NiCr}$  Coatings Deposited from Feedstock Powders of Spherical Morphology  
Microstructure Formation and High-Stress Abrasive Wear Resistance Up to 800 °C

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

Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched  $\text{GaInNAsSb}$  solar junctions grown by molecular beam epitaxy on GaAs

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

Behaviour of leaded tin bronze in simulated seawater in the absence and presence of tribological contact with alumina counterbody

Corrosion, wear and tribocorrosion

Tribocorrosion behaviour of tin bronze CuSn12 under a sliding motion in NaCl containing environment

Contact to inert vs. reactive counterbody

Transparent  $\text{Yb}^{3+}$  doped phosphate glass-ceramics

Global energy consumption due to friction and wear in the mining industry

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

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

Fretting-induced friction and wear in large flat-on-flat contact with quenched and tempered steel

Normal displacements in non-Coulomb friction conditions during fretting

Third Particle Ejection Effects on Wear with Quenched and Tempered Steel Fretting Contact

Stable and unstable friction in fretting contacts

Running-in in fretting, transition from near-stable friction regime to gross sliding

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

Wetting hysteresis induced by temperature changes  
Supercooled water on hydrophobic surfaces

Urea and guanidinium induced denaturation of a Trp-cage miniprotein

Aryl end-capped quaterthiophenes applied as anode interfacial layers in inverted organic solar cells

Photocatalytic and antibacterial properties of ZnO films with different surface topographies on stainless steel substrate

Investigation of long-term chemical stability of structured ZnO films in aqueous solutions of varying conditions

Printable and flexible macroporous organosilica film with high protein adsorption capacity

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

Thermal Modification of ALD Grown Titanium Oxide Ultra Thin Film for Photoanode Applications

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

Effect of finish rolling and quench stop temperatures on impact-abrasive wear resistance of 0.35 % carbon direct-quenched steel

Effect of tempering on the impact-abrasive and abrasive wear resistance of ultra-high strength steels

Effect of prior austenite grain size on the abrasive wear resistance of ultra-high strength martensitic steels

Effect of microstructure on the abrasive wear resistance of steels with hardness 450 HV

Characteristics of carbide-free medium-carbon bainitic steels in high-stress abrasive wear conditions

On the limit of superhydrophobicity  
Defining the minimum amount of TiO<sub>2</sub> nanoparticle coating

Interfacial design and structure of protein/polymer films on oxidized AlGaN surfaces

The effects of laser patterning 10CeTZP-Al<sub>2</sub>O<sub>3</sub> nanocomposite disc surfaces  
Osseous differentiation and cellular arrangement in vitro

Silver sulfide nanoclusters and the superatom model

Superatom Model for Ag-S Nanocluster with Delocalized Electrons

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

Towards universal enrichment nanocoating for IR-ATR waveguides

Luminescent (Er,Ho)<sub>2</sub>O<sub>3</sub> thin films by ALD to enhance the performance of silicon solar cells

Damage mechanisms and cracking behavior of thermal sprayed WC-CoCr coating under scratch testing

HVOF process control enabling strategies

Surface reactivity and silanization ability of borosilicate and Mg-Sr-based bioactive glasses

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

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

PEGylated liposomes as carriers of hydrophobic porphyrins

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

Lubricated icephobic coatings prepared by flame spraying with hybrid feedstock injection

Novel borosilicate bioactive scaffolds with persistent luminescence

Optical power monitors in Ge monolithically integrated on SOI chips

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

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

Role of fracture toughness in impact-abrasion wear

Light-trapping enhanced thin-film III-V quantum dot solar cells fabricated by epitaxial lift-off

Observation of off-axis directional beaming via subwavelength asymmetric metallic gratings

One-step flame synthesis of silver nanoparticles for roll-to-roll production of antibacterial paper

The sensitivity of random polymer brush-lamellar polystyrene-b-polymethylmethacrylate block copolymer systems to process conditions

Plasma etch technologies for the development of ultra-small feature size transistor devices

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

Wear and impact behaviour of High Velocity Air-Fuel sprayed Fe-Cr-Ni-B-C alloy coatings

Sliding and abrasive wear behaviour of HVOF- and HVOF-sprayed  $\text{Cr}_3\text{C}_2$ -NiCr hardmetal coatings

Tribology of FeVCoC coatings deposited by HVOF and HVOF thermal spray processes

The correlation between gear contact friction and ball on disc friction measurements

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

Mechanical characterization of pore-graded bioactive glass scaffolds produced by robocasting

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

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

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

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

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

Rapid and sensitive detection of norovirus antibodies in human serum with a bilayer interferometry biosensor

Static friction measurements on steel against uncoated and coated cast iron

Guanidinium Pairing Facilitates Membrane Translocation

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

The red, purple and blue modifications of polymeric unsymmetrical hydroxyalkadiynyl-N-arylcarbamate derivatives in Langmuir-Schaefer films

Stable blue phase polymeric Langmuir-Schaefer films based on unsymmetrical hydroxyalkadiynyl N-arylcarbamate derivatives

Composition dependent growth dynamics in molecular beam epitaxy of GaInNAs solar cells

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