

### **Role of Oxide Defects in ALD grown TiO<sub>2</sub> Coatings on Performance as Photoanode Protection Layer**

Saari, J., Ali-Löytty, H. & Valden, M., 29 May 2018.

Research output: Other conference contribution › Paper, poster or abstract › Scientific

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

Hannula, M. K., Lahtonen, K. T., Isotalo, T. J., Saari, J. S. & Valden, M. O., 15 Dec 2016.

Research output: Other conference contribution › Paper, poster or abstract › Scientific

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

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Book/Report › Master's Thesis › Scientific

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Research output: Contribution to journal › Article › Professional

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### **Slurry and dry particle erosion wear properties of WC-10Co4Cr and Cr<sub>3</sub>C<sub>2</sub>-25NiCr hardmetal coatings deposited by HVOF and HVAF spray processes**

Matikainen, V., Rubio Peregrina, S., Ojala, N., Koivuluoto, H., Schubert, J., Houdková & Vuoristo, P., 2019, In : *Tribologia*. 36, 1-2, p. 58-61 4 p.

Research output: Contribution to journal › Article › Scientific

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#### **Erosion wear performance of WC-10Co4Cr and Cr<sub>3</sub>C<sub>2</sub>-25NiCr coatings sprayed with high-velocity thermal spray processes**

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

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

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

Kiilakoski, J., Puranen, J., Heinonen, E., Koivuluoto, H. & Vuoristo, P., Jan 2019, In : Journal of Thermal Spray Technology. 28, 1-2, p. 98-107

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**Behaviour of leaded tin bronze in simulated seawater in the absence and presence of tribological contact with alumina counterbody: Corrosion, wear and tribocorrosion**

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

Haapanen, J., Aromaa, M., Teisala, H., Juuti, P., Tuominen, M., Sillanpää, M., Stepien, M., Saarinen, J. J., Toivakka, M., Kuusipalo, J. & Mäkelä, J. M., 2019, In : Materials Research Express. 6, 3, 035004.

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

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

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

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Research output: Contribution to journal › Article › Scientific › peer-review

#### **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**

Hiltunen, A., Ruoko, T-P., Iivonen, T., Lahtonen, K., Ali-Löytty, H., Sarlin, E., Valden, M., Leskelä, M. & Tkachenko, N., 31 Jul 2018, In : Sustainable Energy & Fuels. 2, 9, p. 2124-2130

Research output: Contribution to journal › Article › Scientific › peer-review

#### **Fluid flow simulations meet high-speed video: Computer vision comparison of droplet dynamics**

Kulju, S., Riegger, L., Koltay, P., Mattila, K. & Hyväluoma, J., 15 Jul 2018, In : Journal of Colloid and Interface Science. 522, p. 48-56 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Mikkonen, R. & Mäntysalo, M., 1 Jul 2018, In : Microelectronics Reliability. 86, p. 54-65 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Kaunisto, K., Kotilainen, M., Karhu, M., Lagerbom, J., Vuorinen, T., Honkanen, M., Vippola, M. & Turunen, E., 1 Jun 2018, In : Ceramics International. 44, 8, p. 9338-9346

Research output: Contribution to journal › Article › Scientific › peer-review

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

Goyos-Ball, L., Prado, C., Díaz, R., Fernández, E., Ismailov, A., Kumpulainen, T., Levänen, E., Torrecillas, R. & Fernández, A., Jun 2018, In : Ceramics International. 44, 8, p. 9472-9478

Research output: Contribution to journal › Article › Scientific › peer-review

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

Ojha, N., Laihininen, T., Salminen, T., Lastusaari, M. & Petit, L., Jun 2018, In : *Ceramics International*. 44, 10, p. 11807-11811

Research output: Contribution to journal › Article › Scientific › peer-review

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

Rasappa, S., Schulte, L., Borah, D., Hulkkonen, H., Ndoni, S., Salminen, T., Senthamarakanan, R., Morris, M. A. & Niemi, T., 15 May 2018, In : *Microelectronic Engineering*. 192, p. 1-7 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Sutka, A., Timusk, M., Joost, U., Ignatans, R. & Maiorov, M., 2 May 2018, In : *e-Journal of Surface Science and Nanotechnology*. 16, p. 119-121 3 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Harra, J., Tuominen, M., Juuti, P., Rissler, J., Koivuluoto, H., Haapanen, J., Niemelä-Anttonen, H., Stenroos, C., Teisala, H., Lahti, J., Kuusipalo, J., Vuoristo, P. & Mäkelä, J. M., May 2018, In : *Journal of Coatings Technology Research*. 15, 3, p. 623-632 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Melcr, J., Martinez-Seara, H., Nencini, R., Kolafa, J., Jungwirth, P. & Ollila, O. H. S., 26 Apr 2018, In : *Journal of Physical Chemistry B*. 122, 16, p. 4546-4557 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Magarkar, A., Parkkila, P., Viitala, T., Lajunen, T., Mobarak, E., Licari, G., Cramariuc, O., Vauthey, E., Róg, T. & Bunker, A., 11 Apr 2018, In : *Chemical Communications*. 54, 28, p. 3440-3443 4 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Matikainen, V., Koivuluoto, H., Vuoristo, P., Schubert, J. & Houdková, 1 Apr 2018, In : *Journal of Thermal Spray Technology*. 27, 4, p. 680-694 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Properties of HVOF-sprayed Stellite-6 coatings**

Sassatelli, P., Bolelli, G., Lassinantti Gualtieri, M., Heinonen, E., Honkanen, M., Lusvarghi, L., Manfredini, T., Rigon, R. & Vippola, M., 25 Mar 2018, In : *Surface and Coatings Technology*. 338, p. 45-62 18 p.

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**Improving the high temperature abrasion resistance of thermally sprayed Cr<sub>3</sub>C<sub>2</sub>-NiCr coatings by WC addition**

Janka, L., Berger, L. M., Norpoth, J., Trache, R., Thiele, S., Tomastik, C., Matikainen, V. & Vuoristo, P., 15 Mar 2018, In : *Surface and Coatings Technology*. 337, p. 296-305 10 p.

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

Vaikuntam, S. R., Stöckelhuber, K. W., Subramani Bhagavatheswaran, E., Wießner, S., Scheler, U., Saalwächter, K., Formanek, P., Heinrich, G. & Das, A., 15 Feb 2018, In : *Journal of Physical Chemistry B*. 122, 6, p. 2010-2022 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review



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

Yury, K., Filippov, M., Makarov, A., Malygina, I., Soboleva, N., Fantozzi, D., Andrea, M., Koivuluoto, H. & Vuoristo, P., 1 Feb 2018, In : *Coatings*. 8, 2, 71.

Research output: Contribution to journal > Article > Scientific > peer-review

### **Tribology of FeVCrC coatings deposited by HVOF and HVAF thermal spray processes**

Bolelli, G., Bursi, M., Lusvarghi, L., Manfredini, T., Matikainen, V., Rigon, R., Sassatelli, P. & Vuoristo, P., 2018, In : *Wear*. 394-395, p. 113-133 21 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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

Alekseev, A., Ihalainen, P., Ivanov, A., Domnin, I., Rosqvist, E., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Peltonen, J. & Vyaz'min, S., 2018, In : *Thin Solid Films*. 645, p. 108-118 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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

Cappelluti, F., Kim, D., van Eerden, M., Cédola, A. P., Aho, T., Bissels, G., Elsehrawy, F., Wu, J., Liu, H., Mulder, P., Bauhuis, G., Schermer, J., Niemi, T. & Guina, M., 2018, In : *Solar Energy Materials and Solar Cells*. 181, p. 83-92

Research output: Contribution to journal > Article > Scientific > peer-review

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

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

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Research output: Contribution to journal > Article > Scientific > peer-review

### **Convenient extraction method for quantification of thin zinc patina layers**

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

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

Saarimaa, V., Kaleva, A., Nikkanen, J-P., Heinonen, S., Levänen, E., Väisänen, P., Markkula, A. & Juhanoja, J., 15 Dec 2017, In : *Surface and Coatings Technology*. 331, p. 137-142 6 p.

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

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Research output: Contribution to journal > Article > Scientific > peer-review

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

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Research output: Contribution to journal > Article > Scientific > peer-review

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

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

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

Brobbe, K. J., Haapanen, J., Gunell, M., Mäkelä, J. M., Eerola, E., Toivakka, M. & Saarinen, J. J., 31 Oct 2017, In : Applied Surface Science. 420, p. 558-565 8 p.

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Välimäki, H., Verho, J., Kreutzer, J., Kattippambil Rajan, D., Ryyänen, T., Pekkanen-Mattila, M., Ahola, A., Tappura, K., Kallio, P. & Lekkala, J., 1 Oct 2017, In : Sensors and Actuators B: Chemical. 249, p. 738-746 9 p.

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

Christophliemk, H., Ullsten, H., Johansson, C. & Järnström, L., 1 Oct 2017, In : Progress in Organic Coatings. 111, p. 13-22 10 p.

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

Heinonen, S., Nikkanen, J-P., Huttunen-Saarivirta, E. & Levänen, E., 30 Sep 2017, In : Thin Solid Films. 638, p. 410-419 10 p.

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

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Research output: Contribution to journal › Article › Scientific › peer-review

### **A Study of Cr<sub>3</sub>C<sub>2</sub>-Based HVOF- and HVOF-Sprayed Coatings: Microstructure and Carbide Retention**

Matikainen, V., Bolelli, G., Koivuluoto, H., Honkanen, M., Vippola, M., Lusvarghi, L. & Vuoristo, P., Aug 2017, In : Journal of Thermal Spray Technology. 26, 6, p. 1-18 18 p.

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

Rahaman, O., Kalimeri, M., Katava, M., Paciaroni, A. & Sterpone, F., 20 Jul 2017, In : Journal of Physical Chemistry Part B. 121, 28, p. 6792-6798 7 p.

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Research output: Contribution to journal > Article > Scientific > peer-review

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

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

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#### **Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods: Aggregation Effects**

Virkki, K., Hakola, H., Urbani, M., Tejerina, L., Ince, M., Martínez-Díaz, M. V., Torres, T., Golovanova, V., Golovanov, V. & Tkachenko, N. V., 4 May 2017, In : Journal of Physical Chemistry C. 121, 17, p. 9594-9605 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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#### **Sliding wear behaviour of HVOF and HVOF sprayed Cr<sub>3</sub>C<sub>2</sub>-based coatings**

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#### **Non-destructive and wireless monitoring of biodegradable polymers**

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

Javanainen, M., Melcrová, A., Magarkar, A., Jurkiewicz, P., Hof, M., Jungwirth, P. & Martinez-Seara, H., 2017, In : *Chemical Communications*. 53, 39, p. 5380-5383 4 p.

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#### **HVOF- and HVOF-Sprayed Cr<sub>3</sub>C<sub>2</sub>-NiCr Coatings Deposited from Feedstock Powders of Spherical Morphology: Microstructure Formation and High-Stress Abrasive Wear Resistance Up to 800 °C**

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

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

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#### **Superamphiphobic overhang structured coating on a biobased material**

Tuominen, M., Teisala, H., Haapanen, J., Mäkelä, J. M., Honkanen, M., Vippola, M., Bardage, S., Wälinder, M. E. P. & Swerin, A., 15 Dec 2016, In : *Applied Surface Science*. 389, p. 135-143 9 p.

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**RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides**  
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**Photocatalytic and antibacterial properties of ZnO films with different surface topographies on stainless steel substrate**  
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**Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers**  
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**Detergent impurity effect on recycled HDPE: Properties after repetitive processing**  
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**Reinforced chloroprene rubber by in situ generated silica particles: Evidence of bound rubber on the silica surface**  
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**The red, purple and blue modifications of polymeric unsymmetrical hydroxyalkadiynyl-N-arylcarbamate derivatives in Langmuir-Schaefer films**  
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**Sliding and abrasive wear behaviour of HVOF- and HVAF-sprayed Cr<sub>3</sub>C<sub>2</sub>-NiCr hardmetal coatings**  
Bolelli, G., Berger, L. M., Börner, T., Koivuluoto, H., Matikainen, V., Lusvarghi, L., Lyphout, C., Markocsan, N., Nylén, P., Sassatelli, P., Trache, R. & Vuoristo, P., 15 Jul 2016, In : Wear. 358-359, p. 32-50 19 p.  
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**Characterization of High-Velocity Single Particle Impacts on Plasma-Sprayed Ceramic Coatings**  
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**Microstructure and Sliding Wear Behavior of Fe-Based Coatings Manufactured with HVOF and HVAF Thermal Spray Processes**  
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Research output: Contribution to journal > Article > Scientific > peer-review

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

Polojärvi, V., Aho, A., Tukiainen, A., Raappana, M., Aho, T., Schramm, A. & Guina, M., 1 May 2016, In : Solar Energy Materials and Solar Cells. 149, p. 213-220 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Hakola, H., Sariola-Leikas, E., Efimov, A. & Tkachenko, N. V., 21 Apr 2016, In : Journal of Physical Chemistry C. 120, 13, p. 7044-7051 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Influence of heat treatment on the abrasive wear resistance of a Cr<sub>3</sub>C<sub>2</sub>NiCr coating deposited by an ethene-fuelled HVOF spray process**

Janka, L., Norpoth, J., Trache, R. & Berger, L. M., 15 Apr 2016, In : Surface and Coatings Technology. 291, p. 444-451 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Wetting hysteresis induced by temperature changes: Supercooled water on hydrophobic surfaces**

Heydari, G., Sedighi Moghaddam, M., Tuominen, M., Fielden, M., Haapanen, J., Mäkelä, J. M. & Claesson, P. M., 15 Apr 2016, In : Journal of Colloid and Interface Science. 468, p. 21-33 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Katava, M., Kalimeri, M., Stirnemann, G. & Sterpone, F., 17 Mar 2016, In : Journal of Physical Chemistry Part B. 120, 10, p. 2721-2730 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Piezoresistive natural rubber-multiwall carbon nanotube nanocomposite for sensor applications**

Selvan, N. T., Eshwaran, S. B., Das, A., Stöckelhuber, K. W., Wießner, S., Pötschke, P., Nando, G. B., Chervanyov, A. I. & Heinrich, G., 1 Mar 2016, In : Sensors and Actuators, A: Physical. 239, p. 102-113 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Ali-Löytty, H., Louie, M. W., Singh, M. R., Li, L., Sanchez Casalongue, H. G., Ogasawara, H., Crumlin, E. J., Liu, Z., Bell, A. T., Nilsson, A. & Friebel, D., 4 Feb 2016, In : Journal of Physical Chemistry C. 120, 4, p. 2247-2253 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Guanidinium Pairing Facilitates Membrane Translocation**

Allolio, C., Baxova, K., Vazdar, M. & Jungwirth, P., 14 Jan 2016, In : Journal of Physical Chemistry Part B. 120, 1, p. 143-153 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Static friction measurements on steel against uncoated and coated cast iron**

Andersson, P., Kilpi, L., Holmberg, K., Vaajoki, A. & Oksanen, V., 1 Jan 2016, In : Tribologia. 34, 1-2, p. 5-40 36 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Normal displacements in non-Coulomb friction conditions during fretting**

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2016, In : Tribology International. 94, p. 633-639

Research output: Contribution to journal › Article › Scientific › peer-review

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

Kotilainen, M., Honkanen, M., Mizohata, K. & Vuoristo, P., 2016, In : Solar Energy Materials and Solar Cells. 145, p. 323-332 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Bolelli, G., Milanti, A., Lusvarghi, L., Trombi, L., Koivuluoto, H. & Vuoristo, P., 2016, In : Tribology International. 95, p. 372-390

Research output: Contribution to journal › Article › Scientific › peer-review

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

Ratia, V., Valtonen, K., Kemppainen, A. & Kuokkala, V. T., 2016, In : Tribology Online. 11, 2, p. 410-416 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Tuominen, J., Näkki, J., Pajukoski, H., Hyvärinen, L. & Vuoristo, P., 2016, In : Surface Engineering. 32, 12, p. 923-933 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Auer, S., Koho, T., Uusi-Kerttula, H., Vesikari, T., Blazevic, V. & Hytönen, V. P., 31 Dec 2015, In : Sensors and Actuators B: Chemical. 221, p. 507-514 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Oksanen, V., Valtonen, K., Andersson, P., Vaajoki, A., Laukkanen, A., Holmberg, K. & Kuokkala, V. T., 15 Oct 2015, In : Wear. 340-341, p. 73-81 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles**

Mylläri, V., Fatarella, E., Ruzzante, M., Pogni, R., Baratto, M. C., Skrifvars, M., Syrjäälä, S. & Järvelä, P., 1 Oct 2015, In : Journal of Applied Polymer Science. 132, 39, 42595.

Research output: Contribution to journal › Article › Scientific › peer-review

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

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Research output: Contribution to journal › Article › Scientific › peer-review

### **PIP2 and Talin Join Forces to Activate Integrin**

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Research output: Contribution to journal › Article › Scientific › peer-review

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

Kiilakoski, J., Eronen, V. & Vuoristo, P., 21 Sep 2015, In : Tribologia - Finnish Journal of Tribology. 33, 2, p. 29 35 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Bhagavatheswaran, E. S., Parsekar, M., Das, A., Le, H. H., Wiessner, S., Stöckelhuber, K. W., Schmaucks, G. & Heinrich, G., 17 Sep 2015, In : Journal of Physical Chemistry C. 119, 37, p. 21723-21731 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

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### **Superatom Model for Ag-S Nanocluster with Delocalized Electrons**

Goh, J. Q. & Akola, J., 10 Sep 2015, In : Journal of Physical Chemistry C. 119, 36, p. 21165-21172 8 p.

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

Lepcha, A., Maccato, C., Mettenböcker, A., Andreu, T., Mayrhofer, L., Walter, M., Olthof, S., Ruoko, T. P., Klein, A., Moseler, M., Meerholz, K., Morante, J. R., Barreca, D. & Mathur, S., 20 Aug 2015, In : Journal of Physical Chemistry C. 119, 33, p. 18835-18842 8 p.

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

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

Kanerva, U., Suhonen, T., Lagerbom, J. & Levänen, E., 1 Aug 2015, In : Ceramics International. 41, 7, p. 8494-8500 7 p.

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

Timr, Š., Brabec, J., Bondar, A., Ryba, T., Železný, M., Lazar, J. & Jungwirth, P., 30 Jul 2015, In : Journal of Physical Chemistry Part B. 119, 30, p. 9706-9716 11 p.

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

Virkki, K., Demir, S., Lemmetyinen, H. & Tkachenko, N. V., 23 Jul 2015, In : Journal of Physical Chemistry C. 119, 31, p. 17561-17572 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Rahaman, O., Kalimeri, M., Melchionna, S., Hénin, J. & Sterpone, F., 23 Jul 2015, In : Journal of Physical Chemistry Part B. 119, 29, p. 8939-8949 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

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

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2 Jul 2015, In : Tribology International. 92, p. 191-202 12 p.

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

Mylläri, V., Ruoko, T-P. & Syrjälä, S., 1 Jul 2015, In : Journal of Applied Polymer Science. 132, 28, 6 p., 42246.

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

Abou-Chahine, F., Fujii, D., Imahori, H., Nakano, H., Tkachenko, N. V., Matano, Y. & Lemmetyinen, H., 18 Jun 2015, In : Journal of Physical Chemistry Part B. 119, 24, p. 7328-7337 10 p.

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**Passive resonance sensor based method for monitoring particle suspensions**

Salpavaara, T., Järveläinen, M., Seppälä, S., Yli-Hallila, T., Verho, J., Vilkkö, M., Lekkala, J. & Levänen, E., 8 Jun 2015, In : Sensors and Actuators B: Chemical. 219, p. 324-330 7 p.

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**PEGylated liposomes as carriers of hydrophobic porphyrins**

Dzieciuch, M., Rissanen, S., Szydłowska, N., Bunker, A., Kumorek, M., Jamróz, D., Vattulainen, I., Nowakowska, M., Róg, T. & Kepczynski, M., 4 Jun 2015, In : Journal of Physical Chemistry Part B. 119, 22, p. 6646-6657 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review



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

Hladílková, J., Fischer, H. E., Jungwirth, P. & Mason, P. E., 28 May 2015, In : Journal of Physical Chemistry Part B. 119, 21, p. 6357-6365 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**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**

Song, X., Liu, Z., Suhonen, T., Varis, T., Huang, L., Zheng, X. & Zeng, Y., 25 May 2015, In : Surface and Coatings Technology. 270, p. 132-138 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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

Lindroos, M., Ratia, V., Apostol, M., Valtonen, K., Laukkanen, A., Molnar, W., Holmberg, K. & Kuokkala, V. T., 5 Apr 2015, In : Wear. 328-329, p. 197-205 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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

Lindgren, M., Suihkonen, R. & Vuorinen, J., 5 Apr 2015, In : Wear. 328-329, p. 391-400 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

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

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Research output: Contribution to journal > Article > Scientific > peer-review

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

Bolelli, G., Berger, L. M., Börner, T., Koivuluoto, H., Lusvardi, L., Lyphout, C., Markocsan, N., Matikainen, V., Nylén, P., Sassatelli, P., Trache, R. & Vuoristo, P., 15 Mar 2015, In : Surface and Coatings Technology. 265, p. 125-144 20 p.

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

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Research output: Contribution to journal > Article > Scientific > peer-review

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

Eshwaran, S. B., Basu, D., Vaikuntam, S. R., Kutlu, B., Wiessner, S., Das, A., Naskar, K. & Heinrich, G., 1 Mar 2015, In : Journal of Applied Polymer Science. 132, 9, 41539.

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

Fatarella, E., Mylläri, V., Ruzzante, M., Pogni, R., Baratto, M. C., Skrifvars, M., Syrjälä, S. & Järvelä, P., 1 Feb 2015, In : Journal of Applied Polymer Science. 132, 8, 41509.

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**Silver sulfide nanoclusters and the superatom model**

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

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

Heiskanen, J. P., Manninen, V. M., Pankov, D., Omar, W. A. E., Kastinen, T., Hukka, T. I., Lemmetyinen, H. J. & Hormi, O. E. O., 1 Jan 2015, In : *Thin Solid Films*. 574, p. 196-206 11 p.

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

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

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

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Research output: Contribution to journal > Article > Scientific > peer-review

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

Lindroos, M., Apostol, M., Heino, V., Valtonen, K., Laukkanen, A., Holmberg, K. & Kuokkala, V. T., 2015, In : *Tribology Letters*. 57, 3, 24.

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

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

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

Rasappa, S., Schulte, L., Borah, D., Morris, M. A. & Ndoni, S., 1 Oct 2014, In : *Colloids and Interface Science Communications*. 2, p. 1-5 5 p.

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

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

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Kohagen, M., Mason, P. E. & Jungwirth, P., 17 Jul 2014, In : Journal of Physical Chemistry Part B. 118, 28, p. 7902-7909 8 p.

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

Werner, J., Wernersson, E., Ekholm, V., Ottosson, N., Öhrwall, G., Heyda, J., Persson, I., Söderström, J., Jungwirth, P. & Björneholm, O., 26 Jun 2014, In : Journal of Physical Chemistry Part B. 118, 25, p. 7119-7127 9 p.

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

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

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

Aho, A., Polojärvi, V., Korpjärvi, V. M., Salmi, J., Tukiainen, A., Laukkanen, P. & Guina, M., May 2014, In : Solar Energy Materials and Solar Cells. 124, p. 150-158 9 p.

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

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

Khan, M. N. & Zharnikov, M., 13 Feb 2014, In : Journal of Physical Chemistry C. 118, 6, p. 3093-3101 9 p.

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

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

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**How conformational flexibility stabilizes the hyperthermophilic elongation factor G-domain**

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Khan, M. N., Tjong, V., Chilkoti, A. & Zharnikov, M., 29 Aug 2013, In : Journal of Physical Chemistry Part B. 117, 34, p. 9929-9938 10 p.

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**Reversal of the Hofmeister series: Specific ion effects on peptides**

Paterová, J., Rembert, K. B., Heyda, J., Kurra, Y., Okur, H. I., Liu, W. R., Hilty, C., Cremer, P. S. & Jungwirth, P., 11 Jul 2013, In : Journal of Physical Chemistry Part B. 117, 27, p. 8150-8158 9 p.

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

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Research output: Contribution to journal › Article › Scientific › peer-review

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

Borah, D., Rasappa, S., Sentharamakannan, R., Shaw, M. T., Holmes, J. D. & Morris, M. A., 1 Mar 2013, In : Journal of Colloid and Interface Science. 393, 1, p. 192-202 11 p.

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

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

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

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Research output: Contribution to journal › Article › Scientific › peer-review

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

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

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

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

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**Printable and flexible macroporous organosilica film with high protein adsorption capacity**

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

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**Thermally evaporated single-crystal Germanium on Silicon**

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**Towards universal enrichment nanocoating for IR-ATR waveguides**

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

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