

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

Thomann, O., Pihlatie, M., Rautanen, M., Himanen, O., Lagerbom, J., Mäkinen, M., Varis, T., Suhonen, T. & Kiviaho, J., Jun 2013, In : *Journal of Thermal Spray Technology*. 22, 5, p. 631-639 9 p.

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

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

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

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

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#### **Atomikerroskasvatusmenetelmällä kasvatetun titaanidioksidikalvon ominaisuudet valosähkökemiallisessa veden hajottamisessa**

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

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

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

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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

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

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

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

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

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

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

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

Kwolek, U., Kulig, W., Wydro, P., Nowakowska, M., Róg, T. & Kepczynski, M., 6 Aug 2015, In : Journal of Physical Chemistry Part B. 119, 31, p. 10042-10051 10 p.

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

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

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

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

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

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

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

Durandin, N. A., Isokuorppi, J., Efimov, A., Vuorimaa-Laukkanen, E., Tkachenko, N. V. & Laaksonen, T., 2018, In : *Chemical Communications*. 54, 99, p. 14029-14032 4 p.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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**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.

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

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

Milanti, A., Matikainen, V., Bolelli, G., Koivuluoto, H., Lusvarghi, L. & Vuoristo, P., Jun 2016, In : Journal of Thermal Spray Technology. 25, 5, p. 1040-1055 16 p.

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

Palola, S., Sarlin, E., Kolahgar Azari, S., Koutsos, V. & Vuorinen, J., 15 Jul 2017, In : Applied Surface Science. 410, p. 145-153 9 p.

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

Karhu, M., Lagerbom, J., Solismaa, S., Honkanen, M., Ismailov, A., Räisänen, M. L., Huttunen-Saarivirta, E., Levänen, E. & Kivikytö-Reponen, P., Mar 2019, In : Ceramics International. 45, 4, p. 4840-4848

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

Palmolahti, L., Ali-Löyty, H., Khan, R., Saari, J., Tkachenko, N. V. & Valden, M., 2020, In : Journal of Physical Chemistry C. 124, 24, p. 13094-13101 8 p.

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

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

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

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

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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

**Novel borosilicate bioactive scaffolds with persistent luminescence**

Del Cerro, P. R., Teittinen, H., Norrbo, I., Lastusaari, M., Massera, J. & Petit, L., 2020, In : *Biomedical Glasses*. 6, 1, p. 1-9 9 p.

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

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

Koivuluoto, H., Matikainen, V., Larjo, J. & Vuoristo, P., 2018, In : *Journal of Thermal Spray Technology*. 27, 3, p. 423-432 10 p.

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

**Numerical simulation of temperature distributions in layered structures during laser processing**

Levoska, J., Rantala, T. T. & Lenkkeri, J., 1989, In : *Applied Surface Science*. 36, 1-4, p. 12-22 11 p.

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

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

Caglayan, H., Bulu, I. & Ozbay, E., 2009, In : *Journal of Physics D: Applied Physics*. 42, 4, 045105.

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

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

Brobbey, 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.

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

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

Baratto, C., Golovanova, V., Faglia, G., Hakola, H., Niemi, T., Tkachenko, N., Nazarchuk, B. & Golovanov, V., 30 Oct 2020, In : *Applied Surface Science*. 528, 146959.

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

**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.

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

#### **Optical power monitors in Ge monolithically integrated on SOI chips**

Colace, L., Soriano, V., Romagnoli, M., Socci, L. & Assanto, G., Apr 2011, In : Microelectronic Engineering. 88, 4, p. 514-517 4 p.

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

#### **Optimised selection of new protective coatings for biofuel boiler applications**

Tuurna, S., Varis, T., Penttilä, K., Ruusuvaori, K., Holmström, S. & Yli-Olli, S., Jul 2011, In : Materials and Corrosion-Werkstoffe und Korrosion. 62, 7, p. 642-649 8 p.

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

#### **Optimization of convectively cooled heat sinks**

Lampio, K. & Karvinen, R., 2017, In : Microelectronics Reliability. 79, p. 473-479

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

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

Varis, T., Suhonen, T., Calonius, O., Čuban, J. & Pietola, M., 15 Nov 2016, In : Surface and Coatings Technology. 305, p. 123-131 9 p.

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

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Wernersson, E., Heyda, J., Vazdar, M., Lund, M., Mason, P. E. & Jungwirth, P., 3 Nov 2011, In : Journal of Physical Chemistry Part B. 115, 43, p. 12521-12526 6 p.

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

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

Karilainen, T., Timr, Š., Vattulainen, I. & Jungwirth, P., 2 Apr 2015, In : Journal of Physical Chemistry Part B. 119, 13, p. 4594-4600 7 p.

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**

Christophliemk, H., Johansson, C., Ullsten, H. & Järnström, L., 1 Dec 2017, In : Progress in Organic Coatings. 113, p. 218-224 7 p.

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

#### **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.

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

#### **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

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

Oksa, M., Varis, T. & Ruusuvaori, K., 25 Jul 2014, In : Surface and Coatings Technology. 251, p. 191-200 10 p.

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

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

Heinonen, S., Kannisto, M., Nikkanen, J-P., Huttunen-Saarivirta, E., Karp, M. & Levänen, E., 1 Oct 2016, In : Thin Solid Films. 616, p. 842-849 8 p.

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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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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

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

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#### **Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched GaInNAsSb solar junctions grown by molecular beam epitaxy on GaAs**

Isoaho, R., Aho, A., Tukiainen, A., Aho, T., Raappana, M., Salminen, T., Reuna, J. & Guina, M., 15 Jun 2019, In : Solar Energy Materials and Solar Cells. 195, p. 198-203 6 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

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

Orlowski, A., Kukkurainen, S., Pöyry, A., Rissanen, S., Vattulainen, I., Hytönen, V. P. & Róg, T., 24 Sep 2015, In : Journal of Physical Chemistry Part B. 119, 38, p. 12381-12389 9 p.

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

Borah, D., Shaw, M. T., Rasappa, S., Farrell, R. A., O'Mahony, C., Faulkner, C. M., Bosea, M., Gleeson, P., Holmes, J. D. & Morris, M. A., 4 May 2011, In : Journal of Physics D: Applied Physics. 44, 17, 174012.

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#### **Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers**

Robison, A. D., Sun, S., Poyton, M. F., Johnson, G. A., Pellois, J. P., Jungwirth, P., Vazdar, M. & Cremer, P. S., 8 Sep 2016, In : Journal of Physical Chemistry Part B. 120, 35, p. 9287-9296 10 p.

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

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

Mäntylä, A., Hintikka, J., Frondelius, T., Vaara, J., Lehtovaara, A. & Juoksukangas, J., 5 Nov 2019, In : Tribology International. 11 p., 106054.

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

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

Heikkinen, J. J., Kivimäki, L., Hytönen, V. P., Kulomaa, M. S. & Hormi, O. E. O., 1 Jan 2012, In : Thin Solid Films. 520, 6, p. 1934-1937 4 p.

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

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

Kiilakoski, J., Trache, R., Björklund, S., Joshi, S. & Vuoristo, P., 2019, In : Journal of Thermal Spray Technology. 12 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., Syrjälä, S. & Järvelä, P., 1 Oct 2015, In : Journal of Applied Polymer Science. 132, 39, 42595.



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

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

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

Hladilkova, J., Prokop, Z., Chaloupkova, R., Damborsky, J. & Jungwirth, P., 21 Nov 2013, In : Journal of Physical Chemistry Part B. 117, 46, p. 14329-14335 7 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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#### **RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides**

Myllymäki, S., Putaala, J., Hannu, J., Kunnari, E. & Mäntysalo, M., 1 Oct 2016, In : Microelectronics Reliability. 65, p. 142-150 9 p.

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

#### **Role of fracture toughness in impact-abrasion wear**

Chinthia, A. R., Valtonen, K., Kuokkala, V. T., Kundu, S., Peet, M. J. & Bhadeshia, H. K. D. H., 15 Jun 2019, In : Wear. 428-429, p. 430-437 8 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.

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Javanainen, M., Ollila, O. H. S. & Martinez-Seara, H., 16 Apr 2020, In : Journal of Physical Chemistry B. 124, 15, p. 2994-3001 8 p.

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

Linjamaa, A., Lehtovaara, A., Kallio, M. & Léger, A., 2019, In : Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology.

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

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#### **Silver sulfide nanoclusters and the superatom model**

Goh, J-Q., Malola, S., Häkkinen, H. & Akola, J., 22 Jan 2015, In : Journal of Physical Chemistry C. 119, 3, p. 1583-1590 8 p.

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

#### **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.

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

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

Matikainen, V., Bolelli, G., Koivuluoto, H., Sassatelli, P., Lusvarghi, L. & Vuoristo, P., 2017, In : Wear. 388-389, p. 57-71

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

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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#### **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.

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#### **Stable and unstable friction in fretting contacts**

Hintikka, J., Mäntylä, A., Vaara, J., Frondelius, T. & Lehtovaara, A., 1 Mar 2019, In : Tribology International. 131, p. 73-82 10 p.

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#### **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.

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

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#### **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.

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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., Syrjäjä, S. & Järvelä, P., 1 Feb 2015, In : Journal of Applied Polymer Science. 132, 8, 41509.

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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., Wålinder, M. E. P. & Swerin, A., 15 Dec 2016, In : Applied Surface Science. 389, p. 135-143 9 p.

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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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### **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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### **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.

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

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

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

Koskela, J. E., Vapaavuori, J., Hautala, J., Priimagi, A., Faul, C. F. J., Kaivola, M. & Ras, R. H. A., 26 Jan 2012, In : Journal of Physical Chemistry C. 116, 3, p. 2363-2370 8 p.

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

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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.

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

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

Isakov, M., Matikainen, V., Koivuluoto, H. & May, M., 15 Sep 2017, In : Surface and Coatings Technology. 324, p. 264-280 17 p.

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

Banerjee, S. S., Natarajan, T. S., Subramani B., E., Wiefßner, S., Janke, A., Heinrich, G. & Das, A., 2019, In : Journal of Applied Polymer Science. 48344.

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

Björling, M., Miettinen, J., Marklund, P., Lehtovaara, A. & Larsson, R., 2015, In : Tribology International. 83, p. 114-119 6 p.

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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**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

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**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

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

Sarlin, E., Honkanen, M., Lindgren, M., Laihonon, P., Juutilainen, M., Vippola, M. & Vuorinen, J., 1 Dec 2020, In : Surfaces and Interfaces. 21, 9 p., 100646.

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**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

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

Nurmi, V., Hintikka, J., Juoksukangas, J., Honkanen, M., Vippola, M., Lehtovaara, A., Mäntylä, A., Vaara, J. & Frondelius, T., 1 Mar 2019, In : Tribology International. 131, p. 258-267 10 p.

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

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

Alekseev, A., Ihalainen, P., Ivanov, A., Domnin, I., Klechkovskaya, V., Orekhov, A., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Peltonen, J. & Vyaz'min, S., 1 Aug 2016, In : Thin Solid Films. 612, p. 463-471 9 p.

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

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

Sorianello, V., Colace, L., Assanto, G., Notargiacomo, A., Armani, N., Rossi, F. & Ferrari, C., Apr 2011, In : Microelectronic Engineering. 88, 4, p. 526-529 4 p.

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

Sorianello, V., Colace, L., Nardone, M. & Assanto, G., 1 Sep 2011, In : Thin Solid Films. 519, 22, p. 8037-8040 4 p.

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

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

Borah, D., Rasappa, S., Senthamaraiannan, 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.

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

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2017, In : TRIBOLOGY TRANSACTIONS. 60, 1, p. 70-78 9 p.

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

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

Lisitsyna, E. S., Ketola, T.-M., Morin-Picardat, E., Liang, H., Hanzlíková, M., Urtti, A., Yliperttula, M. & Vuorimaa-Laukkanen, E., 7 Dec 2017, In : Journal of Physical Chemistry B. 121, 48, p. 10782-10792 11 p.

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

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

Giammarco, J., Zdyrko, B., Petit, L., Musgraves, J. D., Hu, J., Agarwal, A., Kimerling, L., Richardson, K. & Luzinov, I., 28 Aug 2011, In : Chemical Communications. 47, 32, p. 9104-9106 3 p.

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

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

Pluhařová, E., Ončák, M., Seidel, R., Schroeder, C., Schroeder, W., Winter, B., Bradforth, S. E., Jungwirth, P. & Slaviček, P., 8 Nov 2012, In : Journal of Physical Chemistry Part B. 116, 44, p. 13254-13264 11 p.

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

### **Transparent Yb<sup>3+</sup> doped phosphate glass-ceramics**

Hongisto, M., Veber, A., Boetti, N. G., Danto, S., Jubera, V. & Petit, L., 1 Jan 2020, In : Ceramics International.

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

### **Tribocorrosion behaviour of tin bronze CuSn12 under a sliding motion in NaCl containing environment: Contact to inert vs. reactive counterbody**

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

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

Mäntyranta, A., Heino, V., Isotahdon, E., Salminen, T. & Huttunen-Saarivirta, E., 1 Oct 2019, In : Tribology International. 138, p. 250-262 13 p.

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

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

Bolelli, G., Berger, L. M., Börner, T., Koivuluoto, H., Lusvarghi, 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.

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

### **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.

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

### **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**

Khvorost, T. A., Beliaev, L. Y., Potalueva, E., Laptenkova, A. V., Selyutin, A. A., Bogachev, N. A., Skripkin, M. Y., Ryazantsev, M. N., Tkachenko, N. & Mereshchenko, A. S., 2020, In : Journal of Physical Chemistry B. 124, 18, p. 3724-

3733 10 p.

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

#### **Urea and guanidinium induced denaturation of a Trp-cage miniprotein**

Heyda, J., Kožíšek, M., Bednárova, L., Thompson, G., Konvalinka, J., Vondrášek, J. & Jungwirth, P., 21 Jul 2011, In : Journal of Physical Chemistry Part B. 115, 28, p. 8910-8924 15 p.

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

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

Mäkinen, J., Vehanen, A., Hautojärvi, P., Huomo, H., Lahtinen, J., Nieminen, R. M. & Valkealahti, S., 2 Sep 1986, In : Surface Science. 175, 2, p. 385-414 30 p.

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

#### **Vegetable fillers for electric stimuli responsive elastomers**

Poikelispää, M., Shakun, A., Sarlin, E., Das, A. & Vuorinen, J., 20 Jul 2017, In : Journal of Applied Polymer Science. 134, 28, 45081.

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

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

Banerjee, S. S., Hait, S., Natarajan, T. S., Wießner, S., Stöckelhuber, K. W., Jehnichen, D., Janke, A., Fischer, D., Heinrich, G., Busfield, J. J. C. & Das, A., 20 Jun 2019, In : Journal of Physical Chemistry B. 123, 24, p. 5168-5175 8 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**

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

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

Tkalich, D., Li, C. C., Kane, A., Saai, A., Tkalich, D., Yastrebov, V. A., Hokka, M., Kuokkala, V-T., Bengtsson, M. & From, A., 15 Sep 2017, In : Wear. 386-387, p. 106-117 12 p.

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

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

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#### **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

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

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Research output: Contribution to journal › Article › Scientific

#### **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.

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