

**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

**The 5th international workshop on numerical modelling of high temperature superconductors**

Morandi, A., Ainslie, M. D., Grilli, F. & Stenvall, A., 2017, In : *Superconductor Science and Technology*. 30, 8, 080201.

Research output: Contribution to journal > Editorial > Scientific

**Local Mechanical Properties at the Dendrite Scale of Ni-Based Superalloys Studied by Advanced High Temperature Indentation Creep and Micropillar Compression Tests**

Haußmann, L., Neumeier, S., Kolb, M., Ast, J., Mohanty, G., Michler, J. & Göken, M., 2020, *Superalloys 2020: Proceedings of the 14th International Symposium on Superalloys*. Tin, S., Hardy, M., Clews, J., Cormier, J., Feng, Q., Marcin, J., O'Brien, C. & Suzuki, A. (eds.). Springer, p. 273-281 9 p. (The Minerals, Metals and Materials Series).

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

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

Vuoristo, P., Varis, T., Meschini, D., Bolelli, G. & Lusvarghi, L., May 2019, *International Thermal Spray Conference and Exposition, ITSC 2019: New Waves of Thermal Spray Technology for Sustainable Growth*. Azarmi, F., Lau, Y., Veilleux, J., Widener, C., Toma, F., Koivuluoto, H., Balani, K., Li, H. & Shinoda, K. (eds.). ASM International, p. 923-930 8 p. (Proceedings of the International Thermal Spray Conference).

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

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

Suokas, E. & Kuusipalo, J., 1 Jan 2018, *15th TAPPI Advanced Coating Fundamentals Symposium 2018: Charlotte, United States; 14 April 2018 through 15 April 2018*. TAPPI Press, p. 151-159 9 p.

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

**Active packaging by paper coating**

Jarnstrom, L., Johansson, K., Kuusipalo, J. & Jonsson, L., 1 Jan 2016, *14th TAPPI Advanced Coating Symposium 2016*. TAPPI Press, p. 88-92 5 p.

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

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

Lahti, J., Lavonen, J., Lahtinen, K., Johansson, P., Seppänen, T. & Cameron, D. C., 2016, *TAPPI International Conference on Nanotechnology for Renewable Materials 2016*. TAPPI Press, Vol. 2. p. 684-706 23 p.

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

**Abrasion and compression resistance of liquid-flame-spray-deposited functional nanoparticle coatings on paper**

Stepien, M., Chinga-Carrasco, G., Saarinen, J. J., Teisala, H., Tuominen, M., Haapanen, J., Kuusipalo, J., Mäkelä, J. M. & Toivakka, M., 2014, *13th TAPPI Advanced Coating Fundamentals Symposium 2014*. TAPPI Press, p. 68-82 15 p.

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

**HVOF process control enabling strategies**

Ghabchi, A., Varis, T., Holmberg, K. & Sampath, S., 2012, *International Thermal Spray Conference and Exposition, ITSC 2012 - Air, Land, Water and the Human Body: Thermal Spray Science and Applications*. ASM International, p. 465-471 7 p.

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

**Gas atomized thermal spray powders of various metals and alloys**

Lagerbom, J., Ritvonen, T., Suhonen, T. & Varis, T., 2011, *Proceedings of the Euro International Powder Metallurgy Congress and Exhibition, Euro PM 2011*. European Powder Metallurgy Association (EPMA), Vol. 2.

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

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

Palola, S., Vuorinen, J., Noordermeer, J. W. M. & Sarlin, E., 1 Jun 2020, In : *Coatings*. 10, 6, 31 p., 556.

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

#### **Supramolecular design principles for efficient photoresponsive polymer-azobenzene complexes**

Vapaavuori, J., Bazuin, C. G. & Priimagi, A., 2018, In : Journal of Materials Chemistry C. 6, 9, p. 2168-2188 21 p.

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

#### **Stimuli-responsive photonic polymer coatings**

Stumpel, J. E., Broer, D. J. & Schenning, A. P. H. J., 28 Dec 2014, In : Chemical Communications. 50, 100, p. 15839-15848 10 p.

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

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

Varis, T., Suhonen, T., Ghabchi, A., Valarezo, A., Sampath, S., Liu, X. & Hannula, S. P., 2014, In : Journal of Thermal Spray Technology. 23, 6, p. 1009-1018 10 p.

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

#### **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

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

Oksa, M., Tuurna, S. & Varis, T., Jun 2013, In : Journal of Thermal Spray Technology. 22, 5, p. 783-796 14 p.

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

#### **Lubricated icephobic coatings prepared by flame spraying with hybrid feedstock injection**

Donadei, V., Koivuluoto, H., Sarlin, E. & Vuoristo, P., 15 Dec 2020, In : Surface and Coatings Technology. 403, 13 p., 126396.

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

#### **Avoiding the initial adhesive friction peak in fretting**

Juoksukangas, J., Hintikka, J., Lehtovaara, A., Mäntylä, A., Vaara, J. & Frondelius, T., 15 Nov 2020, In : Wear. 460-461, 12 p., 203353.

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

#### **Effect of heat-treatment on the upconversion of NaYF<sub>4</sub>:Yb<sup>3+</sup>, Er<sup>3+</sup> nanocrystals containing silver phosphate glass**

Ojha, N., Bogdan, M., Galatus, R. & Petit, L., 15 Sep 2020, In : Journal of Non-Crystalline Solids. 544, 120243.

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

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

Haiko, O., Kaikkonen, P., Somani, M., Valtonen, K. & Kömi, J., 15 Sep 2020, In : Wear. 456-457, 12 p., 203386.

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**

Haiko, O., Javaheri, V., Valtonen, K., Kaijalainen, A., Hannula, J. & Kömi, J., 15 Aug 2020, In : Wear. 454-455, 203336.

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

#### **Additive manufacturing of monolithic supercapacitors with biopolymer separator**

Arvani, M., Keskinen, J., Railanmaa, A., Siljander, S., Björkqvist, T., Tuukkanen, S. & Lupo, D., 1 Jun 2020, In : Journal of Applied Electrochemistry. 50, 6, p. 689-697 9 p.

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### **Rotational Diffusion of Membrane Proteins in Crowded Membranes**

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.

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: Abrasion, dry particle erosion and cavitation erosion resistance**

Matikainen, V., Koivuluoto, H. & Vuoristo, P., 15 Apr 2020, In : Wear. 446-447, 11 p., 203188.

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

### **Structure and in vitro dissolution of Mg and Sr containing borosilicate bioactive glasses for bone tissue engineering**

Tainio, J. M., Salazar, D. A. A., Nommeots-Nomm, A., Roiland, C., Bureau, B., Neuville, D. R., Brauer, D. S. & Massera, J., 1 Apr 2020, In : Journal of Non-Crystalline Solids. 533, 10 p., 119893.

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

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

Young, D. C., Tasiar, M., Laurent, A. D., Dobrzycki, Ł., Cyrański, M. K., Tkachenko, N., Jacquemin, D. & Gryko, D. T., Apr 2020, In : Journal of Materials Chemistry C. 8, 23, p. 7708-7717 10 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

### **Cold gas spraying of a high-entropy CrFeNiMn equiatomic alloy**

Lehtonen, J., Koivuluoto, H., Ge, Y., Juselius, A. & Hannula, S. P., 2020, In : Coatings. 10, 1, 12 p., 53.

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

### **Compounding and characterization of recycled multilayer plastic films**

Jönkkäri, I., Poliakova, V., Mylläri, V., Anderson, R., Andersson, M. & Vuorinen, J., 2020, In : Journal of Applied Polymer Science. 8 p., e49101.

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

### **Electronic transport in n-type modulation-doped AlGaAs/GaAsBi quantum well structures: Influence of Bi and thermal annealing on electron effective mass and electron mobility**

Donmez, O., Aydin, M., Ardali, Yildirim, S., Tiraş, E., Nutku, F., Cetinkaya, C., okduygular, E., Puustinen, J., Hilska, J., Guina, M. & Erol, A., 2020, In : Semiconductor Science and Technology. 35, 2, 025009.

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

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

Varis, T., Suhonen, T., Jokipii, M. & Vuoristo, P., 2020, In : Surface and Coatings Technology. 388, 9 p., 125604.

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., Laptchenkova, 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

### **Cold-Sprayed Al6061 coatings: Online spray monitoring and influence of process parameters on coating properties**

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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

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

Varis, T., Suhonen, T., Laakso, J., Jokipii, M. & Vuoristo, P., 2020, In : Journal of Thermal Spray Technology. 17 p.

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**Phase-change material: Natural rubber composites for heat storage applications**

Poikelispää, M., Ruokangas, S., Honkanen, M., Vippola, M. & Sarlin, E., 2020, In : Rubber Chemistry and Technology. 93, 1, p. 208-221 14 p.

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

**Effect of carbon nanotubes and nanodiamonds on the heat storage ability of natural rubber composites**

Poikelispää, M., Honkanen, M., Vippola, M. & Sarlin, E., 2020, In : Journal of Elastomers and Plastics. 12 p.

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

**Assessment of pitting corrosion in bare and passivated (wet scCO<sub>2</sub>-induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS)**

Saarimaa, V., Fuertes, N., Persson, D., Zavalis, T., Kaleva, A., Nikkanen, J-P., Levänen, E. & Heydari, G., 2020, In : Materials and Corrosion. 10 p.

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

**Mining tailings as a raw material for glass-bonded thermally sprayed ceramic coatings: Microstructure and properties**

Karhu, M., Lagerbom, J., Honkanen, M., Huttunen-Saarivirta, E., Kiilakoski, J., Vuoristo, P., Solismaa, S. & Kivikytö-Reponen, P., 2020, In : Journal of the European Ceramic Society. 40, 12, p. 4111-4121 11 p.

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

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

Wani, O. M., Schenning, A. P. H. J. & Priimagi, A., 2020, In : Journal of Materials Chemistry C. 8, 30, p. 10191-10196 6 p.

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

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

Shakun, A., Sarlin, E. & Vuorinen, J., 2020, In : Journal of Applied Polymer Science. 15 p.

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

**Power loss mechanisms in n-type modulation-doped AlGaAs/GaAsBi quantum well heterostructures**

Donmez, O., Aydin, M., Ardali, Yildirim, S., Tiraş, E., Erol, A., Puustinen, J., Hilska, J. & Guina, M., 2020, In : Semiconductor Science and Technology. 35, 9, 095038.

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**

Haiko, O., Valtonen, K., Kaijalainen, A., Uusikallio, S., Hannula, J., Liimatainen, T. & Kömi, J., 15 Dec 2019, In : Wear. 440-441

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**First principles prediction of the solar cell efficiency of chalcopyrite materials AgMX<sub>2</sub> (M=In, Al; X=S, Se, Te)**

Dongho-Nguimdo, G. M., Igumbor, E., Zambou, S. & Joubert, D. P., 1 Dec 2019, In : Computational Condensed Matter. 21, e00391.

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

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

Calejo, M. T., Haapala, A., Skottman, H. & Kellomäki, M., 1 Sep 2019, In : European Polymer Journal. 118, p. 78-87 10 p.

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

#### **Antibacterial polymer fibres by rosin compounding and melt-spinning**

Kanerva, M., Puolakka, A., Takala, T. M., Elert, A. M., Mylläri, V., Jönkkäri, I., Sarlin, E., Seitsonen, J., Ruokolainen, J., Saris, P. & Vuorinen, J., Sep 2019, In : *Materials Today Communications*. 20, 100527.

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

Lehmusto, J., Olin, M., Viljanen, J., Kalliokoski, J., Mylläri, F., Toivonen, J., Dal Maso, M. & Hupa, L., 30 Aug 2019, In : *Materials and Corrosion*. 10 p.

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

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

Kiilakoski, J., Langlade, C., Koivuluoto, H. & Vuoristo, P., 15 Aug 2019, In : *Surface and Coatings Technology*. 371, p. 245-254

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

#### **Fluorine losses in Er<sup>3+</sup> oxyfluoride phosphate glasses and glass-ceramics**

Szczodra, A., Mardoukhi, A., Hokka, M., Boetti, N. G. & Petit, L., 15 Aug 2019, In : *Journal of Alloys and Compounds*. 797, p. 797-803 7 p.

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

#### **Modelling thermodynamics in a high erature superconducting dipole magnet: An inverse problem based approach**

Ruuskanen, J., Stenvall, A., Lahtinen, V., Nugteren, J. V., Kirby, G. & Murtomäki, J., 2 Aug 2019, In : *Superconductor Science and Technology*. 32, 9, 094007.

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

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

Matikainen, V., Rubio Peregrina, S., Ojala, N., Koivuluoto, H., Schubert, J., Houdková & Vuoristo, P., 25 Jul 2019, In : *Surface and Coatings Technology*. 370, p. 196-212 17 p.

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

#### **Epitaxial phases of high Bi content GaSbBi alloys**

Hilksa, J., Koivusalo, E., Puustinen, J., Suomalainen, S. & Guina, M., 15 Jun 2019, In : *Journal of Crystal Growth*. 516, p. 67-71 5 p.

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

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

Chintha, 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

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

Valtonen, K., Ojala, N., Haiko, O. & Kuokkala, V-T., 30 Apr 2019, In : *Wear*. 426-427, Part A, p. 3-13 11 p.

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

Puustinen, J., Hilksa, J. & Guina, M., 1 Apr 2019, In : *Journal of Crystal Growth*. 511, p. 33-41 9 p.

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

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

Asikainen, S., Paakinaho, K., Kyhkynen, A. K., Hannula, M., Malin, M., Ahola, N., Kellomäki, M. & Seppälä, J., 1 Apr 2019, In : *European Polymer Journal*. 113, p. 165-175 11 p.

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

#### **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

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

#### **Solvent Welding and Imprinting Cellulose Nanofiber Films Using Ionic Liquids**

Reyes, G., Borghei, M., King, A. W. T., Lahti, J. & Rojas, O. J., 14 Jan 2019, In : *Biomacromolecules*. 20, 1, p. 502-514

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

#### **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

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

#### **Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation**

Shin, M., Kim, J., Jung, Y. K., Ruoko, T-P., Priimagi, A., Walsh, A. & Shin, B., 2019, In : *Journal of Materials Chemistry C*. 7, 13, p. 3945-3951 7 p.

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#### **Design, processing, and characterization of an optical core-bioactive clad phosphate fiber for biomedical applications**

Lopez-Iscoa, P., Ojha, N., Pugliese, D., Mishra, A., Gumenyuk, R., Boetti, N. G., Janner, D., Troles, J., Bureau, B., Boussard-Plédel, C., Massera, J., Milanese, D. & Petit, L., 2019, In : *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*.

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#### **Flip-chip Wafer-fused OP-VECSELS emitting 3.65 W at the 1.55-μm waveband**

Mereuta, A., Nechay, K., Caliman, A., Suruceanu, G., Rudra, A., Gallo, P., Guina, M. & Kapon, E., 2019, In : *IEEE Journal of Selected Topics in Quantum Electronics*. 25, 6

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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., Wießner, S., Janke, A., Heinrich, G. & Das, A., 2019, In : *Journal of Applied Polymer Science*. 48344.

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#### **Structure and Dynamics of Thermosensitive pDNA Polyplexes Studied by Time-Resolved Fluorescence Spectroscopy**

Fliervoet, L. A. L., Lisitsyna, E. S., Durandin, N. A., Kotsis, I., Maas-Bakker, R. F. M., Yliperttula, M., Hennink, W. E., Vuorimaa-Laukkanen, E. & Vermonden, T., 2019, In : *Biomacromolecules*.

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.

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

Barberi, J., Nommeots-Nomm, A., Fiume, E., Verné, E., Massera, J. & Baino, F., 2019, In : *Biomedical Glasses*. 5, 1, p. 140-147 8 p.

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

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

Passananti, M., Zapadinsky, E., Zanca, T., Kangasluoma, J., Myllys, N., Rissanen, M. P., Kurtén, T., Ehn, M., Attoui, M. & Vehkamäki, H., 2019, In : Chemical Communications. 55, 42, p. 5946-5949 4 p.

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

Joost, U., Sutka, A., Oja, M., Smits, K., Doebelin, N., Loot, A., Järvekülg, M., Hirsimäki, M., Valden, M. & Nommiste, E., 26 Dec 2018, In : Chemistry of Materials. 30, 24, p. 8968-8974

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

#### **Optical properties of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum well structures grown by molecular beam epitaxy on (100) and (311)B GaAs substrates**

Gunes, M., Ukelge, M. O., Donmez, O., Erol, A., Gumus, C., Alghamdi, H., Galeti, H. V. A., Henini, M., Schmidbauer, M., Hilska, J., Puustinen, J. & Guina, M., 13 Nov 2018, In : Semiconductor Science and Technology. 33, 12, 124015.

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#### **Solvothermal synthesis derived Co-Ga codoped ZnO diluted magnetic degenerated semiconductor nanocrystals**

Šutka, A., Käämbre, T., Joost, U., Kooser, K., Kook, M., Duarte, R. F., Kisand, V., Maiorov, M., Döbelin, N. & Smits, K., 30 Sep 2018, In : Journal of Alloys and Compounds. 763, p. 164-172 9 p.

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

Rajan, R., Rainosalu, E., Ramamoorthy, S. K., Thomas, S. P., Zavašnik, J., Vuorinen, J. & Skrifvars, M., 20 Sep 2018, In : Journal of Applied Polymer Science. 135, 36, 46673.

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

#### **Recent progress in biohydrometallurgy and microbial characterisation**

Kaksonen, A. H., Boxall, N. J., Gumulya, Y., Khaleque, H. N., Morris, C., Bohu, T., Cheng, K. Y., Usher, K. M. & Lakaniemi, A-M., 1 Sep 2018, In : Hydrometallurgy. 180, p. 7-25 19 p.

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

#### **Post operation inactivation of acidophilic bioleaching microorganisms using natural chloride-rich mine water**

Bomberg, M., Miettinen, H., Wahlström, M., Kaartinen, T., Ahoranta, S., Lakaniemi, A-M. & Kinnunen, P., 1 Sep 2018, In : Hydrometallurgy. 180, p. 236-245 10 p.

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

#### **Near-threshold high spin amplification in a 1300 nm GaInNAs spin laser**

Cemlyn, B., Adams, M., Harbord, E., Li, N., Henning, I. D., Oulton, R., Korpijärvi, V. M. & Guina, M., 1 Aug 2018, In : Semiconductor Science and Technology. 33, 9, 094005.

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

#### **Exciton localization and structural disorder of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells grown by molecular beam epitaxy on (311)B GaAs substrates**

Prando, G. A., Orsi Gordo, V., Puustinen, J., Hilska, J., Alghamdi, H. M., Som, G., Gunes, M., Akyol, M., Souto, S., Rodrigues, A. D., Galeti, H. V. A., Henini, M., Gobato, Y. G. & Guina, M., 17 Jul 2018, In : Semiconductor Science and Technology. 33, 8, 084002.

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

#### **Luminescence of Er<sup>3+</sup> doped oxyfluoride phosphate glasses and glass-ceramics**

Nommeots-Nomm, A., Boetti, N. G., Salminen, T., Massera, J., Hokka, M. & Petit, L., 30 Jun 2018, In : Journal of Alloys and Compounds. 751, p. 224-230 7 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

**A study of electric transport in n- and p-type modulation-doped GaInNAs/GaAs quantum well structures under a high electric field**

Sarcan, F., Mutlu, S., Cokduygular, E., Donmez, O., Erol, A., Puustinen, J. & Guina, M., 4 May 2018, In : *Semiconductor Science and Technology*. 33, 6, 064003.

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

**Powering of an HTS dipole insert-magnet operated standalone in helium gas between 5 and 85 K**

Nugteren, J. V., Kirby, G., Bajas, H., Bajko, M., Ballarino, A., Bottura, L., Chiuchiolo, A., Contat, P. A., Dhallé, M., Durante, M., Fazilleau, P., Fontalva, A., Gao, P., Goldacker, W., Kate, H. T., Kario, A., Lahtinen, V., Lorin, C., Markelov, A., Mazet, J., Molodyk, A., Murtomäki, J., Long, N., Perez, J., Petrone, C., Pincot, F., Rijk, G. D., Rossi, L., Russenschuck, S., Ruuskanen, J., Schmitz, K., Stenvall, A., Usoskin, A., Willering, G. & Yang, Y., 25 Apr 2018, In : *Superconductor Science and Technology*. 31, 6, 065002.

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.

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

**Thermal Isomerization of Hydroxyazobenzenes as a Platform for Vapor Sensing**

Poutanen, M., Ahmed, Z., Rautkari, L., Ikkala, O. & Priimägi, A., 20 Mar 2018, In : *ACS Macro Letters*. 7, 3, p. 381-386 6 p.

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

**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., Mätikäinen, V. & Vuoristo, P., 15 Mar 2018, In : *Surface and Coatings Technology*. 337, p. 296-305 10 p.

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



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

Karvinen, J., Joki, T., Ylä-Outinen, L., Koivisto, J. T., Narkilahti, S. & Kellomäki, M., 1 Mar 2018, In : *Reactive and Functional Polymers*. 124, p. 29-39 11 p.

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

**High-performance elastomeric strain sensors based on nanostructured carbon fillers for potential tire applications**

Bhagavatheswaran, E. S., Vaikuntam, S. R., Stöckelhuber, K. W., Wießner, S., Heinrich, G. & Das, A., 1 Mar 2018, In : *Materials Today Communications*. 14, p. 240-248 9 p.

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

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

Hannula, M., Ali-Löyty, H., Lahtonen, K., Sarlin, E., Saari, J. & Valden, M., 27 Feb 2018, In : *Chemistry of Materials*. 30, 4, p. 1199-1208 10 p.

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

**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

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

Saccone, M., Kuntze, K., Ahmed, Z., Siiskonen, A., Giese, M. & Priimagi, A., 1 Jan 2018, In : *Journal of Materials Chemistry C*. 6, 37, p. 9958-9963 6 p.

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

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

Shakun, A., Poikelispää, M., Das, A. & Vuorinen, J., 2018, In : *Polymer Engineering and Science*. 58, 3, p. 395-404

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

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

Rajan, R., Rainosalo, E., Thomas, S. P., Ramamoorthy, S. K., Zavašnik, J., Vuorinen, J. & Skrifvars, M., 2018, In : *Polymer Bulletin*. 75, 1, p. 167-195 29 p.

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

**Persistent luminescent particles containing bioactive glasses: Prospect toward tracking in-vivo implant mineralization using biophotonic ceramics**

Saarinen, M., Nommeots-Nomm, A., Hokka, M., Laurila, J., Norrbo, I., Lastusaari, M., Massera, J. & Petit, L., 2018, In : *Journal of the European Ceramic Society*. 38, 1, p. 287-295

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

**Evaluating the toughness of APS and HVOF-sprayed  $\text{Al}_2\text{O}_3\text{-ZrO}_2$ -coatings by in-situ- and macroscopic bending**

Kiilakoski, J., Musalek, R., Lukac, F., Koivuluoto, H. & Vuoristo, P., 2018, In : *Journal of the European Ceramic Society*. 38, 4, p. 1908-1918  
Research output: Contribution to journal › Article › Scientific › peer-review

**Better understanding of the role of  $\text{SiO}_2$ ,  $\text{P}_2\text{O}_5$  and  $\text{Al}_2\text{O}_3$  on the spectroscopic properties of  $\text{Yb}^{3+}$  doped silica sol-gel glasses**

Glorieux, B., Salminen, T., Massera, J., Lastusaari, M. & Petit, L., 2018, In : *Journal of Non-Crystalline Solids*. 482, p. 46-51  
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

**Simultaneous removal of tetrathionate and copper from simulated acidic mining water in bioelectrochemical and electrochemical systems**

Sulonen, M. L. K., Kokko, M. E., Lakaniemi, A-M. & Puhakka, J. A., 2018, (Unpublished) In : *Hydrometallurgy*. 176, p. 129-138 10 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

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

Saarimaa, V., Kaleva, A., Paunikallio, T., Nikkanen, J-P., Heinonen, S., Levänen, E., Väisänen, P. & Markkula, A., 2018, In : *Surface and Interface Analysis*. 50, 5, p. 564-570  
Research output: Contribution to journal › Article › Scientific › peer-review

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

Durandin, N. A., Isokuortti, 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

**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.  
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

**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

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

Santangelo, P. E., Allesina, G., Bolelli, G., Lusvarghi, L., Matikainen, V. & Vuoristo, P., Dec 2017, In : *Journal of Thermal Spray Technology*. 26, 8, p. 1982-1993 12 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

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

Sarlin, E., Saarimäki, M., Sironen, R., Lindgren, M., Siljander, S., Kanerva, M. & Vuorinen, J., 15 Nov 2017, In : *Wear*. 390-391, p. 84-92 9 p.

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

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

Välimäki, H., Verho, J., Kreutzer, J., Kattiparambil 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.

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

**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.

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

**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.

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.

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

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

Matikainen, V., Boilelli, 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.

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

**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.

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

**Quench absorption coils: A quench protection concept for high-field superconducting accelerator magnets**

Mentink, M. & Salmi, T., 3 May 2017, In : *Superconductor Science and Technology*. 30, 6, 064002.

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

**Halogen bonding stabilizes a cis-azobenzene derivative in the solid state: A crystallographic study**

Saccone, M., Siiskonen, A., Fernandez-Palacio, F., Priimägi, A., Terraneo, G., Resnati, G. & Metrangolo, P., 1 Apr 2017, In : *ACTA CRYSTALLOGRAPHICA SECTION B: STRUCTURAL SCIENCE, CRYSTAL ENGINEERING AND MATERIALS*. 73, 2, p. 227-233 7 p.

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

**Effect of the addition of Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub> and ZnO on the thermal, structural and luminescence properties of Er<sup>3+</sup>-doped phosphate glasses**

Lopez-Iscoa, P., Petit, L., Massera, J., Janner, D., Boetti, N. G., Pugliese, D., Fiorilli, S., Novara, C., Giorgis, F. & Milanese, D., 15 Mar 2017, In : Journal of Non-Crystalline Solids. 460, p. 161-168 8 p.

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

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

Milani, R., Houbenov, N., Fernandez-Palacio, F., Cavallo, G., Luzio, A., Haataja, J., Giancane, G., Saccone, M., Priimägi, A., Metrangolo, P. & Ikkala, O., 9 Mar 2017, In : Chem. 2, 3, p. 417-426 10 p.

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

**Electromagnetic nonlinearities in a Roebel-cable-based accelerator magnet prototype: Variational approach**

Ruuskanen, J., Stenvall, A., Lahtinen, V. & Pardo, E., 1 Feb 2017, In : Superconductor Science and Technology. 30, 2, 024008.

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

**Characterization of the microstructure and corrosion performance of Ce-alloyed Nd-Fe-B magnets**

Isotahdon, E., Huttunen-Saarivirta, E. & Kuokkala, V., Jan 2017, In : Journal of Alloys and Compounds. 692, p. 190-197

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

**Aligned Poly(ε-caprolactone) Nanofibers Guide the Orientation and Migration of Human Pluripotent Stem Cell-Derived Neurons, Astrocytes, and Oligodendrocyte Precursor Cells In Vitro**

Hyysalo, A., Ristola, M., Joki, T., Honkanen, M., Vippola, M. & Narkilahti, S., 2017, In : MACROMOLECULAR BIOSCIENCE. 17, 7, 1600517.

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., Lúsvarghi, L. & Vuoristo, P., 2017, In : Wear. 388-389, p. 57-71

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

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

Oksanen, V. T., Lehtovaara, A. J. & Kallio, M. H., 2017, In : Wear. 388-389, p. 72-80

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

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

Salpavaara, T., Hänninen, A., Antniemi, A., Lekkala, J. & Kellomäki, M., 2017, In : Sensors and Actuators B: Chemical. 251, p. 1018-1025

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

**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**

Janka, L., Norpoth, J., Trache, R., Thiele, S. & Berger, L. M., 2017, In : Journal of Thermal Spray Technology. 26, 7, p. 1720-1731 12 p.

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

**Abrasive-Erosive Wear of Thermally Sprayed Coatings from Experimental and Commercial Cr<sub>3</sub>C<sub>2</sub>-Based Powders**

Sarjas, H., Surzhenkov, A., Juhani, K., Antonov, M., Adoberg, E., Kulu, P., Viljus, M., Traksmaa, R., Matikainen, V. & Vuoristo, P., 2017, In : Journal of Thermal Spray Technology. 26, 8, p. 2020-2029 10 p.

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., Caloniuss, 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

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

Poikelispää, M., Shakun, A., Das, A. & Vuorinen, J., 10 Nov 2016, In : Journal of Applied Polymer Science. 133, 42, 44116.

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

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

Lindgren, M., Siljander, S., Suihkonen, R., Pohjanne, P. & Vuorinen, J., 15 Oct 2016, In : Wear. 364-365, p. 10-21 12 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.

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

**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

**Barkhausen noise response of three different welded duplex stainless steels**

Lindgren, M., Santa-aho, S. & Vippola, M., 1 Sep 2016, In : Insight. 58, 9, p. 480-486 7 p.

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

**Detergent impurity effect on recycled HDPE: Properties after repetitive processing**

Mylläri, V., Hartikainen, S., Poliakova, V., Anderson, R., Jönkkäri, I., Pasanen, P., Andersson, M. & Vuorinen, J., 15 Aug 2016, In : Journal of Applied Polymer Science. 133, 31, 43766.

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

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

Kapgate, B. P., Das, C., Das, A., Basu, D., Wiessner, S., Reuter, U. & Heinrich, G., 10 Aug 2016, In : Journal of Applied Polymer Science. 133, 30, 43717.

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

**Novel oxyfluorophosphate glasses and glass-ceramics**

Cui, S., Massera, J., Lastusaari, M., Hupa, L. & Petit, L., 1 Aug 2016, In : Journal of Non-Crystalline Solids. 445-446, p. 40-44 5 p.

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

**Sliding and abrasive wear behaviour of HVOF- and HVOF-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

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

Suihkonen, R., Lindgren, M., Siljander, S., Sarlin, E. & Vuorinen, J., 15 Jul 2016, In : *Wear*. 358-359, p. 7-16 10 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Kiilakoski, J., Lindroos, M., Apostol, M., Koivuluoto, H., Kuokkala, V-T. & Vuoristo, P., 24 Jun 2016, In : *Journal of Thermal Spray Technology*. 25, p. 1127-1137 11 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Poutanen, M., Ikkala, O. & Priimägi, A., 14 Jun 2016, In : *Macromolecules*. 49, 11, p. 4095-4101 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Sharma, R., Bhalerao, S. & Gupta, D., 1 Jun 2016, In : *Organic Electronics: physics, materials, applications*. 33, p. 274-280 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**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., Lusvardi, L. & Vuoristo, P., Jun 2016, In : *Journal of Thermal Spray Technology*. 25, 5, p. 1040-1055 16 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Thermal, structural and optical properties of Er<sup>3+</sup> doped phosphate glasses containing silver nanoparticles**

Soltani, I., Hraiech, S., Horchani-Naifer, K., Massera, J., Petit, L. & Férid, M., 15 Apr 2016, In : *Journal of Non-Crystalline Solids*. 438, p. 67-73 7 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

**Chemical synthesis of WC-Co from water-soluble precursors: The effect of carbon and cobalt additions to WC synthesis**

Kanerva, U., Karhu, M., Lagerbom, J., Kronlöf, A., Honkanen, M., Turunen, E. & Laitinen, T., 1 Apr 2016, In : *International Journal of Refractory Metals and Hard Materials*. 56, p. 69-75 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**DFT simulations and microkinetic modelling of 1-pentyne hydrogenation on Cu<sub>20</sub> model catalysts**

Ma, L., Melander, M., Weckman, T., Lipasti, S., Laasonen, K. & Akola, J., 1 Apr 2016, In : *Journal of Molecular Graphics and Modelling*. 65, p. 61-70 10 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

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

Salunke, J. K., Wong, F. L., Feron, K., Manzhos, S., Lo, M. F., Shinde, D., Patil, A., Lee, C. S., Roy, V. A. L., Sonar, P. & Wadgaonkar, P. P., 7 Feb 2016, In : *Journal of Materials Chemistry C*. 4, 5, p. 1009-1018 10 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

#### **Chemical and bacterial leaching of metals from a smelter slag in acid solutions**

Kaksonen, A. H., Särkijärvi, S., Puhakka, J. A., Peuraniemi, E., Junnikkala, S. & Tuovinen, O. H., 2016, In : Hydrometallurgy. 159, p. 46-53

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#### **Dissolution behavior of the bioactive glass S53P4 when sodium is replaced by potassium, and calcium with magnesium or strontium**

Hupa, L., Fagerlund, S., Massera, J. & Björkvik, L., 2016, In : Journal of Non-Crystalline Solids. p. 41-46 6 p.

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

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

Bansod, N. D., Kapgade, B. P., Das, C., Das, A., Basu, D. & Debnath, S. C., 2016, In : JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY. 80, 2, p. 548-559 12 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

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

Akamatsu, N., Aizawa, M., Tatsumi, R., Hisano, K., Priimägi, A. & Shishido, A., 2016, In : JOURNAL OF PHOTOPOLYMER SCIENCE AND TECHNOLOGY. 29, 1, p. 145-148 4 p.

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#### **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.

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#### **Processing and characterization of phosphate glasses containing CaAl<sub>2</sub>O<sub>4</sub>:Eu<sup>2+</sup>,Nd<sup>3+</sup> and SrAl<sub>2</sub>O<sub>4</sub>:Eu<sup>2+</sup>,Dy<sup>3+</sup> microparticles**

Massera, J., Gaussiran, M., Gluchowski, P., Lastusaari, M., Hupa, L. & Petit, L., 1 Nov 2015, In : Journal of the European Ceramic Society. 35, 14, p. 3863-3871 9 p.

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

Le, H. H., Parsaker, M., Sriharish, M. N., Henning, S., Menzel, M., Wießner, S., Das, A., Do, Q. K., Heinrich, G. & Radsch, H. J., 1 Nov 2015, In : Express Polymer Letters. 9, 11, p. 960-971 12 p.

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#### **Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds**

Vapaavuori, J., Heikkinen, I. T. S., Dichiarante, V., Resnati, G., Metrangolo, P., Sabat, R. G., Bazuin, C. G., Priimägi, A. & Pellerin, C., 27 Oct 2015, In : Macromolecules. 48, 20, p. 7535-7542 8 p.

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

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

Vapaavuori, J., Grosrenaud, J., Pellerin, C. & Bazuin, C. G., 20 Oct 2015, In : ACS Macro Letters. 4, 10, p. 1158-1162 5 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 :  
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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 :  
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**Characterization of thermally aged polyetheretherketone fibres: Mechanical, thermal, rheological and chemical property changes**

Mylläri, V., Ruoko, T-P., Vuorinen, J. & Lemmetyinen, H., 1 Oct 2015, In : Polymer Degradation and Stability. 120, p. 419-426 8 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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**Effect of spraying parameters on the microstructural and corrosion properties of HVAF-sprayed Fe-Cr-Ni-B-C coatings**

Milanti, A., Matikainen, V., Koivuluoto, H., Bolelli, G., Lusvardi, L. & Vuoristo, P., 15 Sep 2015, In : Surface and Coatings  
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Research output: Contribution to journal > Article > Scientific > peer-review

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

Ter Schiphorst, J., Coleman, S., Stumpel, J. E., Ben Azouz, A., Diamond, D. & Schenning, A. P. H. J., 8 Sep 2015, In :  
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**Unintentional boron contamination of MBE-grown GaInP/AlGaInP quantum wells**

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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**

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**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  
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**Measuring optical anisotropy in poly(3,4-ethylene dioxythiophene): poly(styrene sulfonate) films with added graphene**  
Isoniemi, T., Tuukkanen, S., Cameron, D. C., Simonen, J. & Toppari, J. J., 9 Jul 2015, In : Organic Electronics. 25, p. 317-323 7 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.

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

**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

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

Salpavaara, T., Järveläinen, M., Seppälä, S., Yli-Hallila, T., Verho, J., Vilkkio, 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**

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

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

Manea, L. R., Cramariuc, B., Popescu, V., Cramariuc, R., Sandu, I. & Cramariuc, O., 1 Jun 2015, In : Materiale Plastice. 52, 2, p. 180-185 6 p.

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

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**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.

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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.

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**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.

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**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

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

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

**Corrosion mechanisms of sintered Nd-Fe-B magnets in the presence of water as vapour, pressurised vapour and liquid**  
Isotahdon, E., Huttunen-Saarivirta, E., Heinonen, S., Kuokkala, V. T. & Paju, M., 25 Mar 2015, In : Journal of Alloys and Compounds. 626, p. 349-359 11 p.

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**

Varis, T., Bankiewicz, D., Yrjas, P., Oksa, M., Suhonen, T., Tuurna, S., Ruusuvaori, K. & Holmström, S., 15 Mar 2015, In : Surface and Coatings Technology. 265, p. 235-243 9 p.

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

Shin, J., Cherstvy, A. G. & Metzler, R., 17 Feb 2015, In : ACS Macro Letters. 4, 2, p. 202-206 5 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., Syrjälä, S. & Järvelä, P., 1 Feb 2015, In : Journal of Applied Polymer Science. 132, 8, 41509.

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

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

Saccone, M., Dichiarante, V., Forni, A., Goulet-Hanssens, A., Cavallo, G., Vapaavuori, J., Terraneo, G., Barrett, C. J., Resnati, G., Metrangola, P. & Priimägi, A., 28 Jan 2015, In : Journal of Materials Chemistry C. 3, p. 759-768 10 p.

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**Perfluoro-1,1'-biphenyl and perfluoronaphthalene and their derivatives as π-acceptors for anions**

Yi, H., Albrecht, M., Valkonen, A. & Rissanen, K., 1 Jan 2015, In : New Journal of Chemistry. 39, 1, p. 746-749 4 p.

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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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**Are coarse-grained models apt to detect protein thermal stability? the case of OPEP force field**

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

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

### **Mechanical performance and CO<sub>2</sub> uptake of ion-exchanged zeolite A structured by freeze-casting**

Ojuva, A., Järveläinen, M., Bauer, M., Keskinen, L., Valkonen, M., Akhtar, F., Levänen, E. & Bergström, L., 2015, In : *Journal of the European Ceramic Society*. 35, 9, p. 2607-2618 12 p.

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

Milanti, A., Koivuluoto, H. & Vuoristo, P., 2015, In : *Journal of Thermal Spray Technology*. 24, 7, p. 1312-1322 11 p.

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

Palivec, V., Pluharová, E., Unger, I., Winter, B. & Jungwirth, P., 4 Dec 2014, In : *Journal of Physical Chemistry Part B*. 118, 48, p. 13833-13837 5 p.

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### **Unmodified LDH as reinforcing filler for XNBR and the development of flame-retardant elastomer composites**

Basu, D., Das, A., Jacobgeorge, J., Wang, D. Y., Stöckelhuber, K., Wagenknecht, U., Leuteritz, A., Kutlu, B., Reuter, U. & Heinrich, G., 1 Dec 2014, In : *Rubber Chemistry and Technology*. 87, 4, p. 606-616 11 p.

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

Song, X., Suhonen, T., Varis, T., Huang, L., Zheng, X. & Zeng, Y., 25 Nov 2014, In : *Journal of Thermal Spray Technology*. 23, 8, p. 1302-1311 10 p.

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

Tawade, B. V., Salunke, J. K., Sane, P. S. & Wadgaonkar, P. P., 18 Nov 2014, In : *JOURNAL OF POLYMER RESEARCH*. 21, 12

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

Mohanty, A. K., Ghosh, A., Sawai, P., Pareek, K., Banerjee, S., Das, A., Pötschke, P., Heinrich, G. & Voit, B., 1 Nov 2014, In : *Polymer Engineering and Science*. 54, 11, p. 2560-2570 11 p.

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### **A supramolecular approach to photoresponsive thermo/solvoplastic block copolymer elastomers**

Wang, X., Vapaavuori, J., Zhao, Y. & Bazuin, C. G., 28 Oct 2014, In : *Macromolecules*. 47, 20, p. 7099-7108 10 p.

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

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### **Recent twists in photoactuation and photoalignment control**

Priimagi, A., Barrett, C. J. & Shishido, A., 21 Sep 2014, In : *Journal of Materials Chemistry C*. 2, 35, p. 7155-7162 8 p.

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

Ojala, N., Valtonen, K., Heino, V., Kallio, M., Aaltonen, J., Siitonen, P. & Kuokkala, V. T., 15 Sep 2014, In : *Wear*. 317, 1-2, p. 225-232 8 p.

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

Kapgate, B. P., Das, C., Basu, D., Das, A., Heinrich, G. & Reuter, U., 5 Aug 2014, In : *Journal of Applied Polymer Science*. 131, 15, 40531.

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

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

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**Accurate description of calcium solvation in concentrated aqueous solutions**

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

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

**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

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

Mahmood, N., Khan, A. U., Stöckelhuber, K. W., Das, A., Jehnichen, D. & Heinrich, G., 5 Jun 2014, In : *Journal of Applied Polymer Science*. 131, 11

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

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

Ghabchi, A., Sampath, S., Holmberg, K. & Varis, T., 15 May 2014, In : *Wear*. 313, 1-2, p. 97-105 9 p.

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

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

Kuzmin, M. G., Soboleva, I. V., Durandin, N. A., Lisitsyna, E. S. & Kuzmin, V. A., 17 Apr 2014, In : *Journal of Physical Chemistry Part B*. 118, 15, p. 4245-4252 8 p.

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

**Azopolymer-based micro- and nanopatterning for photonic applications**

Priimagi, A. & Shevchenko, A., 1 Feb 2014, In : *Journal of Polymer Science. Part B, Polymer Physics*. 52, 3, p. 163-182 20 p.

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

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

Kulig, W. & Agmon, N., 9 Jan 2014, In : *Journal of Physical Chemistry Part B*. 118, 1, p. 278-286 9 p.

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

**Stearate Modified Zinc-Aluminum Layered Double Hydroxides and Acrylonitrile Butadiene Rubber Nanocomposites**

Eshwaran, S. B., Basu, D., Kutlu, B., Leuteritz, A., Wagenknecht, U., Stöckelhuber, K. W., Naskar, K., Das, A. & Heinrich, G., Jan 2014, In : *Polymer-Plastics Technology and Engineering*. 53, 1, p. 65-73 9 p.

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

**The effects of UV irradiation to polyetheretherketone fibres: Characterization by different techniques**

Mylläri, V., Ruoko, T. P. & Järvelä, P., 2014, In : Polymer Degradation and Stability. 109, p. 278-284 7 p.

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

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

Le, H. H., Parsekar, M., Ilisch, S., Henning, S., Das, A., Stöckelhuber, K. W., Beiner, M., Ho, C. A., Adhikari, R., Wießner, S., Heinrich, G. & Radosch, H. J., 2014, In : Macromolecular Materials and Engineering. 299, 5, p. 569-582 14 p.

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

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

Cummins, C., Borah, D., Rasappa, S., Chaudhari, A., Ghoshal, T., O'Driscoll, B. M. D., Carolan, P., Petkov, N., Holmes, J. D. & Morris, M. A., 21 Dec 2013, In : Journal of Materials Chemistry C. 1, 47, p. 7941-7951 11 p.

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

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

German, S. J., Behbahani, M., Miettinen, S., Grijpma, D. W. & Haimi, S. P., Dec 2013, In : Macromolecular symposia. 334, 1, p. 133-142 10 p.

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

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

Diban, N., Haimi, S. P., Bolhuis-Versteeg, L., Teixeira, S., Miettinen, S., Poot, A. A., Grijpma, D. W. & Stamatialis, D., Dec 2013, In : Macromolecular symposia. 334, 1, p. 126-132 7 p.

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

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

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

**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.

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

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

Kalimeri, M., Rahaman, O., Melchionna, S. & Sterpone, F., 7 Nov 2013, In : Journal of Physical Chemistry Part B. 117, 44, p. 13775-13785 11 p.

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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.

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

**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

**Immobilized bioactive agents onto polyurethane surface with heparin and phosphorylcholine group**

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

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

Vapaavuori, J., Mahimwalla, Z., Chromik, R. R., Kaivola, M., Priimagi, A. & Barrett, C. J., 28 Apr 2013, In : *Journal of Materials Chemistry C*. 1, 16, p. 2806-2810 5 p.

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

Pale, V., Nikkonen, T., Vapaavuori, J., Kostianen, M., Kavakka, J., Selin, J., Tittonen, I. & Helaja, J., 21 Mar 2013, In : *Journal of Materials Chemistry C*. 1, 11, p. 2166-2173 8 p.

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

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

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

Vazdar, M., Jungwirth, P. & Mason, P. E., 14 Feb 2013, In : *Journal of Physical Chemistry Part B*. 117, 6, p. 1844-1848 5 p.

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

**Naturally occurring amino acids: A suitable substitute of N-N'-di-phenyl guanidine (DPG) in silica tyre formulation?**

Debnath, S. C., Das, A., Basu, D. & Heinrich, G., Jan 2013, In : *KGK: KAUTSCHUK GUMMI KUNSTSTOFFE*. 66, 1-2, p. 25-31 7 p.

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

**Elastomer composites based on carbon nanotubes and ionic liquid**

Subramaniam, K., Das, A., Stöckelhuber, K. W. & Heinrich, G., 2013, In : *Rubber Chemistry and Technology*. 86, 3, p. 367-400 34 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

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

Rasappa, S., Borah, D., Senthamaraiannan, R., Faulkner, C. C., Shaw, M. T., Gleeson, P., Holmes, J. D. & Morris, M. A., 1 Nov 2012, In : *Thin Solid Films*. 522, p. 318-323 6 p.

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

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

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**Azobenzene photomechanics: Prospects and potential applications**

Mahimwalla, Z., Yager, K. G., Mamiya, J. I., Shishido, A., Priimagi, A. & Barrett, C. J., Nov 2012, In : *Polymer Bulletin*. 69, 8, p. 967-1006 40 p.

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

**Biomimetic surface modification of polycarbonateurethane film via phosphorylcholine-graft for resisting platelet adhesion**  
Gao, W., Feng, Y., Lu, J., Khan, M. & Guo, J., Oct 2012, In : Macromolecular Research. 20, 10, p. 1063-1069 7 p.  
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**Effect of sol-gel derived in situ silica on the morphology and mechanical behavior of natural rubber and acrylonitrile butadiene rubber blends**  
Kapgate, B. P., Das, C., Das, A., Basu, D., Reuter, U. & Heinrich, G., Sep 2012, In : JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY. 63, 3, p. 501-509 9 p.  
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**Cysteine-tagged chimeric avidin forms high binding capacity layers directly on gold**  
Vikholm-Lundin, I., Auer, S., Paakkunainen, M., Määttä, J. A. E., Munter, T., Leppiniemi, J., Hytönen, V. P. & Tappura, K., Aug 2012, In : Sensors and Actuators B: Chemical. 171-172, p. 440-448 9 p.  
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**Accurate description of aqueous carbonate ions: An effective polarization model verified by neutron scattering**  
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**Highly conducting polychloroprene composites based on multi-walled carbon nanotubes and 1-butyl 3-methyl imidazolium bis(trifluoromethylsulphonyl)imide**  
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**Behavior of 4-hydroxynonenal in phospholipid membranes**  
Vazdar, M., Jurkiewicz, P., Hof, M., Jungwirth, P. & Cwiklik, L., 7 Jun 2012, In : Journal of Physical Chemistry Part B. 116, 22, p. 6411-6415 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Enhanced thermal stability of polychloroprene rubber composites with ionic liquid modified MWCNTs**  
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Research output: Contribution to journal > Article > Scientific > peer-review

**Highly exfoliated natural rubber/Clay composites by "propping-open procedure": The influence of fatty-acid chain length on exfoliation**  
Rooj, S., Das, A., Stöckelhuber, K. W., Reuter, U. & Heinrich, G., Apr 2012, In : Macromolecular Materials and Engineering. 297, 4, p. 369-383 15 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**A novel thermotropic elastomer based on highly-filled LDH-SSB composites**  
Das, A., George, J. J., Kutlu, B., Leuteritz, A., Wang, D. Y., Rooj, S., Jurk, R., Rajeshbabu, R., Stöckelhuber, K. W., Galiatsatos, V. & Heinrich, G., 27 Feb 2012, In : Macromolecular Rapid Communications. 33, 4, p. 337-342 6 p.  
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**Crystallization mechanism of the bioactive glasses, 45S5 and S53P4**  
Massera, J., Fagerlund, S., Hupa, L. & Hupa, M., Feb 2012, In : JOURNAL OF THE AMERICAN CERAMIC SOCIETY. 95, 2, p. 607-613 7 p.  
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**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

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

Priimagi, A., Shimamura, A., Kondo, M., Hiraoka, T., Kubo, S., Mamiya, J. I., Kinoshita, M., Ikeda, T. & Shishido, A., 2012, In : ACS Macro Letters. 1, 1, p. 96-99 4 p.

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

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

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

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

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**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.

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

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

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

**Hybrid nanoparticle design based on cationized gelatin and the polyanions dextran sulfate and chondroitin sulfate for ocular gene therapy**

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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., Ruusuvoori, 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

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

Das, A., Wang, D. Y., Leuteritz, A., Subramaniam, K., Greenwell, H. C., Wagenknecht, U. & Heinrich, G., 28 May 2011, In : Journal of Materials Chemistry. 21, 20, p. 7194-7200 7 p.

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**Energetic origin of proton affinity to the air/water interface**

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

**Preintercalation of an organic accelerator into nanogalleries and preparation of ethylene propylene diene terpolymer rubber-clay nanocomposites**

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

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

Rantala, T. T., Rosén, A. & Helsing, B., 1986, In : Studies in Surface Science and Catalysis. 26, C, p. 173-181 9 p.

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