

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

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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

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

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

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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.

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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.

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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

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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

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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

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Lubricated icephobic coatings prepared by flame spraying with hybrid feedstock injection

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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.

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Effect of heat-treatment on the upconversion of NaYF₄:Yb³⁺, Er³⁺ nanocrystals containing silver phosphate glass

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

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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.

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A study of Cr₃C₂-based HVOF- and HVOF-sprayed coatings: Abrasion, dry particle erosion and cavitation erosion resistance

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

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

Photostable orange-red fluorescent unsymmetrical diketopyrrolopyrrole-BF₂ hybrids

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Transparent Yb³⁺ doped phosphate glass-ceramics

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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

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

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

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

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

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Novel borosilicate bioactive scaffolds with persistent luminescence

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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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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.

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Assessment of pitting corrosion in bare and passivated (wet scCO₂-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.

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

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

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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.

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

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

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First principles prediction of the solar cell efficiency of chalcopyrite materials AgMX₂ (M=In, Al; X=S, Se, Te)

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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

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

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

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

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Erosion wear performance of WC-10Co4Cr and Cr₃C₂-25NiCr coatings sprayed with high-velocity thermal spray processes

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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

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Epitaxial phases of high Bi content GaSbBi alloys

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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

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Solvent Welding and Imprinting Cellulose Nanofiber Films Using Ionic Liquids

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Characterization of Powder-Precursor HVOF-Sprayed Al₂O₃-YSZ/ZrO₂ Coatings

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Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation

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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

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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

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Process Parameter Impact on Suspension-HVOF-Sprayed Cr₂O₃ Coatings

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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. & Bairo, F., 2019, In : *Biomedical Glasses*. 5, 1, p. 140-147 8 p.

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

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Reversible photodoping of TiO₂ 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_{1-x}Bi_x/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

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

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.

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Recent progress in biohydrometallurgy and microbial characterisation

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

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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_{1-x}Bi_x/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 Er³⁺ 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 Cr₃C₂-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-Al₂O₃ 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 Cr₃C₂-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 TiO₂ 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 SiO_2 , P_2O_5 and Al_2O_3 on the spectroscopic properties of 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.
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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 Cr₃C₂-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.

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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 Al₂O₃, TiO₂ and ZnO on the thermal, structural and luminescence properties of Er³⁺-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

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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 Cr₃C₂-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 Cr₃C₂-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 Cr₃C₂-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 Cr₃C₂-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

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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 Cr₃C₂-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 Er³⁺ 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 Cr₃C₂NiCr 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 Cu₂₀ 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

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

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.

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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.

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

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

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

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

Processing and characterization of phosphate glasses containing CaAl₂O₄:Eu²⁺,Nd³⁺ and SrAl₂O₄:Eu²⁺,Dy³⁺ 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.

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

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.

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

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

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Comparison of laboratory rolling-sliding wear tests with in-service wear of nodular cast iron rollers against wire ropes
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Wear. 340-341, p. 73-81 9 p.

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

Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles

Mylläri, V., Fatarella, E., Ruzzante, M., Pogni, R., Baratto, M. C., Skrifvars, M., 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

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

PIP2 and Talin Join Forces to Activate Integrin

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

Effect of spraying parameters on the microstructural and corrosion properties of HVOF-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 :
Chemistry of Materials. 27, 17, p. 5925-5931 7 p.

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

Tukiainen, A., Likonen, J., Toikkanen, L. & Leinonen, T., 1 Sep 2015, In : Journal of Crystal Growth. 425, p. 60-63

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
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Evaluation of crushing strength of spray-dried MgAl₂O₄ granule beds

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

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

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
B. 119, 29, p. 8939-8949 11 p.

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

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.

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

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., Vilkkö, M., Leikkala, 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

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

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

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

Effect of melting state on the thermal shock resistance and thermal conductivity of APS ZrO₂-7.5wt.% Y₂O₃ coatings

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

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

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

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

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

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

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

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

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

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

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

Saarikoski, E., Rissanen, M. & Seppälä, J., 30 Mar 2015, In : Carbohydrate Polymers. 119, p. 62-70 9 p.

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.

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

High temperature corrosion of thermally sprayed NiCr and FeCr coatings covered with a KCl-K₂SO₄ salt mixture

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

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

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

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

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.

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

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.

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

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

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

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.

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

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

Kalimeri, M., Derreumaux, P. & Sterpone, F., 1 Jan 2015, In : Journal of Non-Crystalline Solids. 407, p. 494-501 8 p.

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

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 CO₂ 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.

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

Influence of the Spray Gun Type on Microstructure and Properties of HVAF 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.

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

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.

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

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.

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

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

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

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

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.

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

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

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

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

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

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.

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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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.

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

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

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

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

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

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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.

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Both zundel and eigen isomers contribute to the IR spectrum of the gas-phase H₉O⁺ 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

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

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

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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

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

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

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

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

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

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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

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

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

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

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

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

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

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