

Formation of corrosion products on zinc in wet supercritical and subcritical CO₂: In-situ spectroscopic study

Kaleva, A., Tassaing, T., Saarimaa, V., Le Bourdon, G., Väisänen, P., Markkulä, A. & Levänen, E., 1 Sep 2020, In : Corrosion Science. 174, 10 p.

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Optimization of photogenerated charge carrier lifetimes in ald grown tio₂ for photonic applications

Khan, R., Ali-Löytty, H., Saari, J., Valden, M., Tukiainen, A., Lahtonen, K. & Tkachenko, N. V., 10 Aug 2020, In : Nanomaterials. 10, 8, 9 p., 1567.

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Nucleation and growth behavior of Er³⁺ doped oxyfluorophosphate glasses

Ojha, N., Szczodra, A., Boetti, N. G., Massera, J. & Petit, L., 7 Jul 2020, In : RSC Advances. 10, 43, p. 25703-25716 14 p.

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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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Utilizing Gelatinized Starchy Waste from Rice Noodle Factory as Substrate for L(+)-Lactic Acid Production by Amyolytic Lactic Acid Bacterium Enterococcus faecium K-1

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

Evaluation of scaffold microstructure and comparison of cell seeding methods using micro-computed tomography-based tools

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Utilizing Neurons for Digital Logic Circuits: A Molecular Communications Analysis

Adonias, G. L., Yastrebova, A., Barros, M. T., Koucheryavy, Y., Cleary, F. & Balasubramaniam, S., 1 Apr 2020, In : IEEE Transactions on Nanobioscience. 19, 2, p. 224-236 13 p.

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Transparent Yb³⁺ doped phosphate glass-ceramics

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

Investigation of well-defined pinholes in TiO₂ electron selective layers used in planar heterojunction perovskite solar cells

Masood, M. T., Qudsia, S., Hadadian, M., Weinberger, C., Nyman, M., Ahläng, C., Dahlström, S., Liu, M., Vivo, P., Österbacka, R. & Smått, J. H., 2020, In : Nanomaterials. 10, 1, 16 p., 181.

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The thermal contact resistance of a steel-ceramic interface with oxide intermediates

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

In-flightwind field identification and prediction of parafoil systems

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Efficient Conversion of Light to Chemical Energy: Directional, Chiral Photoswitches with Very High Quantum Yields

Moormann, W., Tellkamp, T., Stadler, E., Röhrich, F., Näther, C., Puttreddy, R., Rissanen, K., Gescheidt, G. & Herges, R., 2020, In : Angewandte Chemie - International Edition. 59, 35, p. 15081-15086 6 p.

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Modelling of a pressure swing adsorption unit by deep learning and artificial Intelligence tools

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CFD modeling the diffusional losses of nanocluster-sized particles and condensing vapors in 90° bends of circular tubes

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Kinetics and modelling of thiosulphate biotransformations by haloalkaliphilic Thioalkalivibrio versutus

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Power production and microbial community composition in thermophilic acetate-fed up-flow and flow-through microbial fuel cells

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Transcription closed and open complex formation coordinate expression of genes with a shared promoter region

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Controlled Orientations of Neighboring Tetracene Units by Mixed Self-Assembled Monolayers on Gold Nanoclusters for High-Yield and Long-Lived Triplet Excited States through Singlet Fission

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Effects of anode materials on electricity production from xylose and treatability of TMP wastewater in an up-flow microbial fuel cell

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Influence of ions to modulate hydrazone and oxime reaction kinetics to obtain dynamically cross-linked hyaluronic acid hydrogels

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Chlorine induced high-temperature corrosion mechanisms in HVOF and HVOF sprayed Cr₃C₂-based hardmetal coatings
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Characterisation and in vitro and in vivo evaluation of supercritical-CO₂-foamed β-TCP/PLCL composites for bone applications

Pitkänen, S., Paakinaho, K., Pihlman, H., Ahola, N., Hannula, M., Asikainen, S., Manninen, M., Morelius, M., Keränen, P., Hyttinen, J., Kellomäki, M., Laitinen-Vapaavuori, O. & Miettinen, S., 5 Aug 2019, In : European cells & materials. 38, p. 35-50 16 p.

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Photochemistry of dithiophosphate Ni(S₂P(i-Bu)₂)₂ complex in CCl₄. Transient species and TD-DFT calculations

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

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A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities

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Quality and Capacity Analysis of Molecular Communications in Bacterial Synthetic Logic Circuits

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High-speed production of antibacterial fabrics using liquid flame spray

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Large-scale efficient water harvesting using bioinspired micro-patterned copper oxide nanoneedle surfaces and guided droplet transport

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Synergistic Computational-Experimental Discovery of Highly Selective PtCu Nanocluster Catalysts for Acetylene Semihydrogenation

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Less Is More: Enhancement of Second-Harmonic Generation from Metasurfaces by Reduced Nanoparticle Density

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Novel osteoconductive β -tricalcium phosphate/poly(L-lactide-co- ϵ -caprolactone) scaffold for bone regeneration: a study in a rabbit calvarial defect

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The effects of laser patterning 10CeTZP-Al₂O₃ nanocomposite disc surfaces: Osseous differentiation and cellular arrangement in vitro

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Effect of Co-Adsorbate and Hole Transporting Layer on the Photoinduced Charge Separation at the TiO₂-Phthalocyanine Interface

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

A Ceramide-Regulated Element in the Late Endosomal Protein LAPTM4B Controls Amino Acid Transporter Interaction

Zhou, K., Dichlberger, A., Martinez-Seara, H., Nyholm, T. K. M., Li, S., Kim, Y. A., Vattulainen, I., Ikonen, E. & Blom, T., 23 May 2018, In : ACS Central Science. 4, 5, p. 548-558 11 p.

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

Wet etching of dilute nitride GaInNAs, GaInNAsSb, and GaNAsSb alloys lattice-matched to GaAs

Raappana, M., Polojärvi, V., Aho, A., Mäkelä, J., Aho, T., Tukiainen, A., Laukkanen, P. & Guina, M., 15 May 2018, In : Corrosion Science. 136, p. 268-274 7 p.

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

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

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

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

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

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

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

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

Uncertainty in multispectral lidar signals caused by incidence angle effects

Kaasalainen, S., Åkerblom, M., Nevalainen, O., Hakala, T. & Kaasalainen, M., 6 Apr 2018, In : Interface Focus. 8, 2, 20170033.

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

Non-intersecting leaf insertion algorithm for tree structure models

Åkerblom, M., Raunonen, P., Casella, E., Disney, M. I., Danson, F. M., Gaulton, R., Schofield, L. A. & Kaasalainen, M., 6 Apr 2018, In : Interface Focus. 8, 2, 20170045.

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

Weighing trees with lasers: Advances, challenges and opportunities

Disney, M. I., Boni Vicari, M., Burt, A., Calders, K., Lewis, S. L., Raunonen, P. & Wilkes, P., 6 Apr 2018, In : Interface Focus. 8, 2, 20170048.

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

Aqueous synthesis of Z-scheme photocatalyst powders and thin-film photoanodes from earth abundant elements

Šutka, A., Vanags, M., Joost, U., Šmits, K., Ruža, J., Ločs, J., Kleperis, J. & Juhna, T., 1 Apr 2018, In : Journal of Environmental Chemical Engineering. 6, 2, p. 2606-2615 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

Improved Stability of Atomic Layer Deposited Amorphous TiO₂ Photoelectrode Coatings by Thermally Induced Oxygen Defects

Hannula, M., Ali-Löytty, 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

Improved fatty aldehyde and wax ester production by overexpression of fatty acyl-CoA reductases

Lehtinen, T., Efimova, E., Santala, S. & Santala, V., 8 Feb 2018, In : Microbial Cell Factories. 17, 1, 19.

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

Design, synthesis, and structure-property relationships of Er³⁺-doped TiO₂ luminescent particles synthesized by sol-gel

Lopez-Iscoa, P., Pugliese, D., Boetti, N. G., Janner, D., Baldi, G., Petit, L. & Milanese, D., 2 Jan 2018, In : Nanomaterials. 8, 1, 20.

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

Upconversion from fluorophosphate glasses prepared with NaYF₄:Er³⁺,Yb³⁺ nanocrystals

Ojha, N., Tuomisto, M., Lastusaari, M. & Petit, L., 1 Jan 2018, In : RSC Advances. 8, 34, p. 19226-19236 11 p.

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

Conjugated Heat Transfer Simulation of a Fin-and-Tube Heat Exchanger

Väläkangas, T. & Karvinen, R., 2018, In : Heat Transfer Engineering. 39, 13-14, p. 1192-1200 9 p.

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

Adsorption of furfural from torrefaction condensate using torrefied biomass

Doddapaneni, T. R. K. C., Jain, R., Praveenkumar, R., Rintala, J., Romar, H. & Konttinen, J., 2018, In : Chemical Engineering Journal. 334, p. 558-568 11 p.

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

Fin-and-tube heat exchanger enhancement with a combined herringbone and vortex generator design

Väläkangas, T., Singh, S., Sørensen, K. & Condra, T., 2018, In : International Journal of Heat and Mass Transfer. 118, p. 602-616 15 p.

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Regeneration of sulfur-poisoned Pd-based catalyst for natural gas oxidation

Honkanen, M., Wang, J., Kärkkäinen, M., Huuhtanen, M., Jiang, H., Kallinen, K., Keiski, R. L., Akola, J. & Vippola, M., 2018, In : Journal of Catalysis. 358, p. 253-265 13 p.

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

Composition and role of the attached and planktonic microbial communities in mesophilic and thermophilic xylose-fed microbial fuel cells

Dessi, P., Porca, E., Haavisto, J., Lakaniemi, A-M., Collins, G. & Lens, P. N. L., 2018, In : RSC Advances. 8, 6, p. 3069-3080 12 p.

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

Decomposition of persistent luminescent microparticles in corrosive phosphate glass melt

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

Effect of N/S ratio on anoxic thiosulfate oxidation in a fluidized bed reactor: Experimental and artificial neural network model analysis

Khanongnuch, R., Di Capua, F., Lakaniemi, A-M., Rene, E. R. & Lens, P. N. L., 2018, In : Process Biochemistry. 68, p. 171-181

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

Bioactive glass induced osteogenic differentiation of human adipose stem cells is dependent on cell attachment mechanism and mitogen-activated protein kinases

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

Deactivation of Pt/SiO₂-ZrO₂ diesel oxidation catalysts by sulphur, phosphorus and their combinations

Väliheikki, A., Kärkkäinen, M., Honkanen, M., Heikkinen, O., Kolli, T., Kallinen, K., Huuhtanen, M., Vippola, M., Lahtinen, J. & Keiski, R. L., 5 Dec 2017, In : Applied Catalysis B-Environmental. 218, p. 409-419 11 p.

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Photodynamic self-disinfecting surface using pyridinium phthalocyanine

George, L., Müller, A., Röder, B., Santala, V. & Efimov, A., 1 Dec 2017, In : Dyes and Pigments. 147, p. 334-342 9 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

Production of long chain alkyl esters from carbon dioxide and electricity by a two-stage bacterial process

Lehtinen, T., Efimova, E., Tremblay, P. L., Santala, S., Zhang, T. & Santala, V., 1 Nov 2017, In : Bioresource Technology. 243, p. 30-36 7 p.

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

DoGlycans-Tools for Preparing Carbohydrate Structures for Atomistic Simulations of Glycoproteins, Glycolipids, and Carbohydrate Polymers for GROMACS

Danne, R., Poojari, C., Martinez-Seara, H., Rissanen, S., Lolicato, F., Róg, T. & Vattulainen, I., 23 Oct 2017, In : Journal of Chemical Information and Modeling. 57, 10, p. 2401-2406 6 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

New Evidence for the Mechanism of Action of a Type-2 Diabetes Drug Using a Magnetic Bead-Based Automated Biosensing Platform

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

Membrane Binding of Recoverin: From Mechanistic Understanding to Biological Functionality

Timr, Š., Pleskot, R., Kadlec, J., Kohagen, M., Magarkar, A. & Jungwirth, P., 23 Aug 2017, In : ACS Central Science. 3, 8, p. 868-874 7 p.

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

Exhaust emissions of non-road mobile machine: Real-world and laboratory studies with diesel and HVO fuels

Pirjola, L., Rönkkö, T., Saukko, E., Parviainen, H., Malinen, A., Alanen, J. & Saveljeff, H., 15 Aug 2017, In : Fuel. 202, p. 154-164 11 p.

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

Effects of different nickel species on autotrophic denitrification driven by thiosulfate in batch tests and a fluidized-bed reactor

Di Capua, F., Milone, I., Lakaniemi, A-M., Hullebusch, E. D. V., Lens, P. N. L. & Esposito, G., 1 Aug 2017, In : Bioresource Technology. 238, p. 534-541 8 p.

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Dissolution-induced nanowire synthesis on hot-dip galvanized surface in supercritical carbon dioxide

Kaleva, A., Saarimaa, V., Heinonen, S., Nikkanen, J-P., Markkula, A., Väisänen, P. & Levänen, E., 11 Jul 2017, In : Nanomaterials. 7, 7, 181.

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The effects of calcium and potassium on CO₂ gasification of birch wood in a fluidized bed

Kramb, J., Gómez-Barea, A., DeMartini, N., Romar, H., Doddapaneni, T. R. K. C. & Kontinen, J., 15 May 2017, In : Fuel. 196, p. 398-407 10 p.

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

Electron microscopic studies of natural gas oxidation catalyst – Effects of thermally accelerated aging on catalyst microstructure

Honkanen, M., Hansen, T. W., Jiang, H., Kärkkäinen, M., Huuhtanen, M., Heikkinen, O., Kallinen, K., Lahtinen, J., Keiski, R. L., Wagner, J. B. & Vippola, M., 1 May 2017, In : Journal of Catalysis. 349, p. 19-29 11 p.

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Bioamine-crosslinked gellan gum hydrogel for neural tissue engineering

Koivisto, J. T., Joki, T., Parraga, J. E., Paakkönen, R., Ylä-Outinen, L., Salonen, L., Jönkkäri, I., Peltola, M., Ihalainen, T. O., Narkilahti, S. & Kellomäki, M., 24 Mar 2017, In : *Biomedical Materials*. 12, 2, 025014.

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Calcium Directly Regulates Phosphatidylinositol 4,5-Bisphosphate Headgroup Conformation and Recognition

Bilkova, E., Pleskot, R., Rissanen, S., Sun, S., Czogalla, A., Cwiklik, L., Róg, T., Vattulainen, I., Cremer, P. S., Jungwirth, P. & Coskun, Ü., 22 Mar 2017, In : *Journal of the American Chemical Society*. 139, 11, p. 4019-4024 6 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.

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Benchmarking DFT methods with small basis sets for the calculation of halogen-bond strengths

Siiskonen, A. & Priimägi, A., 1 Feb 2017, In : *Journal of Molecular Modeling*. 23, 2, 50.

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Biological removal of selenate and ammonium by activated sludge in a sequencing batch reactor

Mal, J., Nancharaiyah, Y. V., van Hullebusch, E. D. & Lens, P. N. L., 2017, In : *Bioresource Technology*. 229, p. 11-19 9 p.

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

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

Supramolecular control of liquid crystals by doping with halogen-bonding dyes

Vapaavuori, J., Siiskonen, A., Dichiarante, V., Forni, A., Saccone, M., Pilati, T., Pellerin, C., Shishido, A., Metrangolo, P. & Priimägi, A., 2017, In : *RSC Advances*. 7, 64, p. 40237-40242 6 p.

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

Cultivation of *Scenedesmus acuminatus* in different liquid digestates from anaerobic digestion of pulp and paper industry biosludge

Tao, R., Lakaniemi, A-M. & Rintala, J. A., 2017, In : *Bioresource Technology*. 245, A, p. 706-713 8 p.

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

Dynamic response to process disturbances—A comparison between TMB/SMB models in transient regime

Nogueira, I. B. R., Ribeiro, A. M., Rodrigues, A. E. & Loureiro, J. M., 2017, In : *Computers and Chemical Engineering*. 99, p. 230-244 15 p.

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

Particle emissions characterization from a medium-speed marine diesel engine with two fuels at different sampling conditions

Ntziachristos, L., Saukko, E., Lehtoranta, K., Rönkkö, T., Timonen, H., Simonen, P., Karjalainen, P. & Keskinen, J., 15 Dec 2016, In : *Fuel*. 186, p. 456-465 10 p.

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The effect of low-temperature pretreatment on the solubilization and biomethane potential of microalgae biomass grown in synthetic and wastewater media

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

Magnesium aminoclay enhances lipid production of mixotrophic *Chlorella* sp. KR-1 while reducing bacterial populations

Kim, B., Praveenkumar, R., Lee, J., Nam, B., Kim, D. M., Lee, K., Lee, Y. C. & Oh, Y. K., 1 Nov 2016, In : *Bioresource Technology*. 219, p. 608-613 6 p.

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

Mild pressure induces rapid accumulation of neutral lipid (triacylglycerol) in *Chlorella* spp.

Ramasamy, P., Kim, B., Lee, J., Vijayan, D., Lee, K., Nam, B., Jeon, S. G., Kim, D. M. & Oh, Y. K., 1 Nov 2016, In : *Bioresource Technology*. 220, p. 661-665 5 p.

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

Grain orientation dependent Nb-Ti microalloying mediated surface segregation on ferritic stainless steel

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Increased survival rate by local release of diclofenac in a murine model of recurrent oral carcinoma

Will, O. M., Purcz, N., Chalaris, A., Heneweer, C., Boretius, S., Purcz, L., Nikkola, L., Ashammakhi, N., Kalthoff, H., Glüer, C. C., Wiltfang, J., Açil, Y. & Tiwari, S., 12 Oct 2016, In : *International Journal of Nanomedicine*. 11, p. 5311-5321 11 p.

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

Elimination of arsenic-containing emissions from gasification of chromated copper arsenate wood

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

Long-term stability of bioelectricity generation coupled with tetrathionate disproportionation

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

3D micro-nano structured hybrid scaffolds: An investigation into the role of nanofiber coating on viability, proliferation and differentiation of seeded mesenchymal stem cells

Pilehrood, M. K., Atashi, A., Sadeghi-Aliabadi, H., Nousiainen, P. & Harlin, A., 1 Sep 2016, In : *Journal Nanoscience and Nanotechnology*. 16, 9, p. 9000-9007 8 p.

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

Modeling of the catalytic effects of potassium and calcium on spruce wood gasification in CO₂

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

Hydrothermal carbonization of pulp mill streams

Wikberg, H., Ohra-aho, T., Honkanen, M., Kanerva, H., Harlin, A., Vippola, M. & Laine, C., 1 Jul 2016, In : *Bioresource Technology*. 212, p. 236-244 9 p.

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

The influence of high-temperature sulfuric acid solution ageing on the properties of laminated vinyl-ester joints

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

Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs_{1-x}Bi_x/GaAs quantum wells
Luna, E., Wu, M., Hanke, M., Puustinen, J., Guina, M. & Trampert, A., 1 Jul 2016, In : *Nanotechnology*. 27, 32, 325603.
Research output: Contribution to journal > Article > Scientific > peer-review

The Influence of Phosphorus Exposure on a Natural-Gas-Oxidation Catalyst
Kärkkäinen, M., Kolli, T., Honkanen, M., Heikkinen, O., Väliheikki, A., Huuhtanen, M., Kallinen, K., Lahtinen, J., Vippola, M. & Keiski, R. L., 1 Jul 2016, In : *Topics in Catalysis*. 59, 10-12, p. 1044-1048 5 p.
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Development of Magnetic Losses During Accelerated Corrosion Tests for Nd-Fe-B Magnets Used in Permanent Magnet Generators
Isotahdon, E., Huttunen-Saarivirta, E. & Kuokkala, V.-T., 1 Jun 2016, In : *Corrosion*. 72, 6, p. 732-741 10 p.
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Wetting hysteresis induced by temperature changes: Supercooled water on hydrophobic surfaces
Heydari, G., Sedighi Moghaddam, M., Tuominen, M., Fielden, M., Haapanen, J., Mäkelä, J. M. & Claesson, P. M., 15 Apr 2016, In : *Journal of Colloid and Interface Science*. 468, p. 21-33 13 p.
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Effect of heavy metal co-contaminants on selenite bioreduction by anaerobic granular sludge
Mal, J., Nancharaiyah, Y. V., van Hullebusch, E. D. & Lens, P. N. L., 1 Apr 2016, In : *Bioresource Technology*. 206, p. 1-8 8 p.
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Metal chalcogenide quantum dots: Biotechnological synthesis and applications
Mal, J., Nancharaiyah, Y. V., Van Hullebusch, E. D. & Lens, P. N. L., Apr 2016, In : *RSC Advances*. 6, 47, p. 41477-41495 19 p.
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Human Adipose Stem Cells Differentiated on Braided Polylactide Scaffolds is a Potential Approach for Tendon Tissue Engineering
Vuornos, K., Björninen, M., Talvitie, E., Paakinaho, K., Kellomäki, M., Huhtala, H., Miettinen, S., Seppänen-Kajjansinkko, R. & Haimi, S., 1 Mar 2016, In : *Tissue Engineering Part A*. 22, 5-6, p. 513-523 11 p.
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Importance of maintenance data quality in extended warranty simulation
Mahlamäki, K., Niemi, A., Jokinen, J. & Borgman, J., 1 Jan 2016, In : *International Journal of COMADEM*. 19, 1, p. 3-10 8 p.
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Accelerated deactivation studies of the natural-gas oxidation catalyst-Verifying the role of sulfur and elevated temperature in catalyst aging
Honkanen, M., Kärkkäinen, M., Kolli, T., Heikkinen, O., Viitanen, V., Zeng, L., Jiang, H., Kallinen, K., Huuhtanen, M., Keiski, R. L., Lahtinen, J., Olsson, E. & Vippola, M., 2016, In : *Applied Catalysis B-Environmental*. p. 439-448 10 p.
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Cell-wall disruption and lipid/astaxanthin extraction from microalgae: Chlorella and Haematococcus
Kim, D. Y., Vijayan, D., Praveenkumar, R., Han, J. I., Lee, K., Park, J. Y., Chang, W. S., Lee, J. S. & Oh, Y. K., 2016, In : *Bioresource Technology*. 199, p. 300-310
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Remarkable Dependence of the Final Charge Separation Efficiency on the Donor-Acceptor Interaction in Photoinduced Electron Transfer
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Research output: Contribution to journal › Article › Scientific › peer-review

Preferential adsorption of Cu in a multi-metal mixture onto biogenic elemental selenium nanoparticles

Jain, R., Dominic, D., Jordan, N., Rene, E. R., Weiss, S., van Hullebusch, E. D., Hübner, R. & Lens, P. N. L., 2016, In : Chemical Engineering Journal. 284, p. 917–925

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

Composites of high-temperature thermomechanical pulps and polylactic acid

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Biological and Bioelectrochemical Recovery of Critical and Scarce Metals

Nancharaiyah, Y. V., Mohan, S. V. & Lens, P. N. L., 2016, In : Trends in Biotechnology. 34, 2, p. 137-155 19 p.

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High-Yield Excited Triplet States in Pentacene Self-Assembled Monolayers on Gold Nanoparticles through Singlet Exciton Fission

Kato, D., Sakai, H., Tkachenko, N. V. & Hasobe, T., 2016, In : Angewandte Chemie (International Edition). 55, 17, p. 5230-5234

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

Superfluorinated Ionic Liquid Crystals Based on Supramolecular, Halogen-Bonded Anions

Cavallo, G., Terraneo, G., Monfredini, A., Saccone, M., Priimägi, A., Pilati, T., Resnati, G., Metrangolo, P. & Bruce, D. W., 2016, In : Angewandte Chemie (International Edition). 55, 21, p. 6300-6304

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

Fire-safe and environmentally friendly nanocomposites based on layered double hydroxides and ethylene propylene diene elastomer

Basu, D., Das, A., Wang, D. Y., George, J. J., Stöckelhuber, K. W., Boldt, R., Leuteritz, A. & Heinrich, G., 2016, In : RSC Advances. 6, 31, p. 26425-26436 12 p.

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

Metrics for polyphonic sound event detection

Mesaros, A., Heittola, T. & Virtanen, T., 2016, In : Applied Sciences. 6, 6, 162.

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

Decoding the Morphological Diversity in Two Dimensional Crystalline Porous Polymers by Core Planarity Modulation

Halder, A., Kandambeth, S., Biswal, B. P., Kaur, G., Roy, N. C., Addicoat, M., Salunke, J. K., Banerjee, S., Vanka, K., Heine, T., Verma, S. & Banerjee, R., 2016, In : Angewandte Chemie (International Edition). 55, 27, p. 7806-7810 5 p.

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

Enhanced adsorption of orthophosphate and copper onto hydrochar derived from sewage sludge by KOH activation

Spataru, A., Jain, R., Chung, J. W., Gerner, G., Krebs, R. & Lens, P. N. L., 2016, In : RSC Advances. 6, 104, p. 101827-101834 8 p.

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

Nonlinear transmittance and optical power limiting in magnesium ferrite nanoparticles: effects of laser pulsewidth and particle size

Perumbilavil, S., Sridharan, K., Abraham, A. R., Janardhanan, H. P., Kalarikkal, N. & Philip, R., 2016, In : RSC Advances. 6, 108, p. 106754-106761 8 p.

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

The formation and physical properties of the particle emissions from a natural gas engine

Alanen, J., Saukko, E., Lehtoranta, K., Murtonen, T., Timonen, H., Hillamo, R., Karjalainen, P., Kuuluvainen, H., Harra, J., Keskinen, J. & Rönkkö, T., 15 Dec 2015, In : Fuel. 162, p. 155-161 7 p.

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

Modeling carbon dioxide transport in PDMS-based microfluidic cell culture devices

Mäki, A. J., Peltokangas, M., Kreutzer, J., Auvinen, S. & Kallio, P., 1 Dec 2015, In : *Chemical Engineering Science*. 137, p. 515-524 10 p.

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

Polypyrrole coating on poly-(lactide/glycolide)- β -tricalcium phosphate screws enhances new bone formation in rabbits

Zhao, M. D., Björninen, M., Cao, L., Wang, H. R., Pelto, J., Li, X. Q., Hyttinen, J., Jiang, Y. Q., Kellomäki, M., Miettinen, S., Sándor, G. K., Seppänen, R., Haimi, S. & Dong, J., 27 Nov 2015, In : *Biomedical Materials*. 10, 6, 065016.

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

Graphene-intercalated Fe₂O₃/TiO₂ heterojunctions for efficient photoelectrolysis of water

Kaouk, A., Ruoko, T. P., Gönüllü, Y., Kaunisto, K., Mettenböcker, A., Gurevich, E., Lemmetyinen, H., Ostendorf, A. & Mathur, S., 13 Nov 2015, In : *RSC Advances*. 5, 123, p. 101401-101407 7 p.

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

Simultaneous nutrient removal and lipid production with *Chlorella vulgaris* on sterilized and non-sterilized anaerobically pretreated piggery wastewater

Marjakangas, J. M., Chen, C. Y., Lakaniemi, A. M., Puhakka, J. A., Whang, L. M. & Chang, J. S., 5 Nov 2015, In : *Biochemical Engineering Journal*. 103, p. 177-184 8 p.

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

Tri-functionality of Fe₃O₄-embedded carbon microparticles in microalgae harvesting

Seo, J. Y., Lee, K., Ramasamy, P., Kim, B., Lee, S. Y., Oh, Y. K. & Park, S. B., 5 Nov 2015, In : *Chemical Engineering Journal*. 280, p. 206-214 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., Wiefßner, S., Das, A., Do, Q. K., Heinrich, G. & Radosch, 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

Comparison of different cationized proteins as biomaterials for nanoparticle-based ocular gene delivery

Zorzi, G. K., Párraga, J. E., Seijo, B. & Sanchez, A., 1 Nov 2015, In : *Colloids and Surfaces B: Biointerfaces*. 135, p. 533-541 9 p.

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

Submolecular Plasticization Induced by Photons in Azobenzene Materials

Vapaavuori, J., Laventure, A., Bazuin, C. G., Lebel, O. & Pellerin, C., 28 Oct 2015, In : *Journal of the American Chemical Society*. 137, 42, p. 13510-13517 8 p.

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

Cultivation of *Nannochloropsis* for eicosapentaenoic acid production in wastewaters of pulp and paper industry

Polishchuk, A., Valev, D., Tarvainen, M., Mishra, S., Kinnunen, V., Antal, T., Yang, B., Rintala, J. & Tyystjärvi, E., 1 Oct 2015, In : *Bioresource Technology*. 193, p. 469-476 8 p.

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.

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

Effects of anode potentials on bioelectrogenic conversion of xylose and microbial community compositions

Kokko, M. E., Mäkinen, A. E., Sulonen, M. L. K. & Puhakka, J. A., 5 Sep 2015, In : *Biochemical Engineering Journal*. 101, p. 248-252 5 p.

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

Enhanced photoactive and photoelectrochemical properties of TiO₂ sol-gel coated steel by the application of SiO₂ intermediate layer

Nikkanen, J. P., Huttunen-Saarivirta, E., Salminen, T., Hyvärinen, L., Honkanen, M., Isotahdon, E., Heinonen, S. & Levänen, E., 1 Sep 2015, In : Applied Catalysis B-Environmental. 174-175, p. 533-543 11 p.

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

Searching for a robust strategy for minimizing alkali chlorides in fluidized bed boilers during burning of high SRF-energy-share fuel

Bajamundi, C. J. E., Vainikka, P., Hedman, M., Silvennoinen, J., Heinanen, T., Taipale, R. & Kontinen, J., 1 Sep 2015, In : Fuel. 155, p. 25-36 12 p.

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

Surface Modified Biodegradable Electrospun Membranes as a Carrier for Human Embryonic Stem Cell-Derived Retinal Pigment Epithelial Cells

Sorkio, A., Porter, P. J., Juuti-Uusitalo, K., Meenan, B. J., Skottman, H. & Burke, G. A., 1 Sep 2015, In : Tissue Engineering Part A. 21, 17-18, p. 2301-2314 14 p.

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

Influence of relative humidity and physical load during storage on dustiness of inorganic nanomaterials: implications for testing and risk assessment

Levin, M., Rojas, E., Vanhala, E., Vippola, M., Liguori, B., Kling, K. I., Koponen, I. K., Mølhav, K., Tuomi, T., Gregurec, D., Moya, S. & Jensen, K. A., 14 Aug 2015, In : Journal of Nanoparticle Research. 17, 8, 337.

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

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

Sol-gel synthesis of quaternary (P₂O₅)₅₅-(CaO)₂₅-(Na₂O)_(20-x)-(TiO₂)_x bioresorbable glasses for bone tissue engineering applications (x = 0, 5, 10, or 15)

Foroutan, F., Walters, N. J., Owens, G. J., Mordan, N. J., Kim, H. W., de Leeuw, N. H. & Knowles, J. C., 1 Aug 2015, In : Biomedical materials (Bristol, England). 10, 4, p. 45025 1 p.

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

High quality sub-10 nm graphene nanoribbons by on-chip PS-b-PDMS block copolymer lithography

Rasappa, S., Caridad, J. M., Schulte, L., Cagliani, A., Borah, D., Morris, M. A., Bøggild, P. & Ndoni, S., 29 Jul 2015, In : RSC Advances. 5, 82, p. 66711-66717 7 p.

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

Electricity production by a microbial fuel cell fueled by brewery wastewater and the factors in its membrane deterioration

Çetinkaya, A. Y., Köroğlu, E. O., Demir, N. M., Baysoy, D. Y., Özkaya, B. & Çakmakçı, M., 20 Jul 2015, In : Chinese Journal of Catalysis. 36, 7, p. 1068-1076 9 p.

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

Lithography-free oxide patterns as templates for self-catalyzed growth of highly uniform GaAs nanowires on Si(111)

Hakkarainen, T. V., Schramm, A., Mäkelä, J., Laukkanen, P. & Guina, M., 18 Jul 2015, In : Nanotechnology. 26, 27, 275301.

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

Lipid production by eukaryotic microorganisms isolated from palm oil mill effluent

Marjakangas, J. M., Lakaniemi, A. M., Koskinen, P. E. P., Chang, J. S. & Puhakka, J. A., 5 Jul 2015, In : Biochemical Engineering Journal. 99, p. 48-54 7 p.

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

The influence of SrO and CaO in silicate and phosphate bioactive glasses on human gingival fibroblasts

Massera, J., Kokkari, A., Närhi, T. & Hupa, L., 25 Jun 2015, In : Journal of Materials Science: Materials in Medicine. 26, 6, 196.

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

Catalytic effect of Ca and K on CO₂ gasification of spruce wood char

Perander, M., DeMartini, N., Brink, A., Kramb, J., Karlström, O., Hemming, J., Moilanen, A., Konttinen, J. & Hupa, M., 15 Jun 2015, In : Fuel. 150, p. 464-472 9 p.

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

A facile route to synthesis of S-doped TiO₂ nanoparticles for photocatalytic activity

McManamon, C., O'Connell, J., Delaney, P., Rasappa, S., Holmes, J. D. & Morris, M. A., 30 May 2015, In : Journal of Molecular Catalysis A: Chemical. 406, p. 51-57!

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

Biomimetic collagen I and IV double layer Langmuir-Schaefer films as microenvironment for human pluripotent stem cell derived retinal pigment epithelial cells

Sorkio, A. E., Vuorimaa-Laukkanen, E. P., Hakola, H. M., Liang, H., Ujula, T. A., Valle-Delgado, J. J., Österberg, M., Yliperttula, M. L. & Skottman, H., 1 May 2015, In : Biomaterials. 51, p. 257-269 13 p.

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

Workplace performance of a loose-fitting powered air purifying respirator during nanoparticle synthesis

Koivisto, A. J., Aromaa, M., Koponen, I. K., Fransman, W., Jensen, K. A., Mäkelä, J. M. & Hämeri, K. J., 9 Apr 2015, In : Journal of Nanoparticle Research. 17, 4

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

Multi-stable dynamics of the non-adiabatic repressilator

Potapov, I., Zhurov, B. & Volkov, E., 6 Mar 2015, In : Journal of the Royal Society. Interface. 12, 104, 20141315.

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

Fluidized-bed denitrification of mining water tolerates high nickel concentrations

Zou, G., Papirio, S., van Hullebusch, E. D. & Puhakka, J. A., 1 Mar 2015, In : Bioresource Technology. 179, p. 284-290 7 p.

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

Second-harmonic generation imaging of semiconductor nanowires with focused vector beams

Bautista, G., Mäkitalo, J., Chen, Y., Dhaka, V., Grasso, M., Karvonen, L., Jiang, H., Huttunen, M. J., Huhtio, T., Lipsanen, H. & Kauranen, M., 6 Feb 2015, In : Nano Letters. 15, 3, p. 1564-1569 6 p.

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

Second-Harmonic Generation from Metal Nanoparticles: Resonance Enhancement versus Particle Geometry

Czaplicki, R., Mäkitalo, J., Siikanen, R., Husu, H., Lehtolahti, J., Kuittinen, M. & Kauranen, M., 14 Jan 2015, In : Nano Letters. 15, 1, p. 530-534 5 p.

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

Oxidation half-reaction of aqueous nucleosides and nucleotides via photoelectron spectroscopy augmented by ab initio calculations

Schroeder, C. A., Pluharová, E., Seidel, R., Schroeder, W. P., Faubel, M., Slavíček, P., Winter, B., Jungwirth, P. & Bradforth, S. E., 14 Jan 2015, In : Journal of the American Chemical Society. 137, 1, p. 201-209 9 p.

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

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.

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

A comparison of five optical surface topography measurement methods

Mettänen, M. & Hirn, U., 1 Jan 2015, In : TAPPI Journal. 14, 1, p. 27-38 12 p.

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

Chemolithotrophic denitrification in biofilm reactors

Di Capua, F., Papirio, S., Lens, P. N. L. & Esposito, G., 2015, In : Chemical Engineering Journal. 280, p. 643-657 15 p.

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

Characterisation of novel regenerated cellulosic, viscose, and cotton fibres and the dyeing properties of fabrics

Kampuri, T., Vehviläinen, M., Puolakka, A., Honkanen, M., Vippola, M. & Rissanen, M., 2015, In : Coloration Technology. 131, 5, p. 396-402 7 p.

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

Water-responsive dual-coloured photonic polymer coatings based on cholesteric liquid crystals

Stumpel, J. E., Broer, D. J. & Schenning, A. P. H. J., 2015, In : RSC Advances. 5, 115, p. 94650-94653 4 p.

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

Coulomb explosion during the early stages of the reaction of alkali metals with water

Mason, P. E., Uhlig, F., Vaněk, V., Buttersack, T., Bauerecker, S. & Jungwirth, P., 2015, In : Nature Chemistry. 7, 3, p. 250-254 5 p.

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

Multifunctional ultras-small nanoplat-forms for vascular-targeted interstitial photodynamic therapy of brain tumors guided by real-time MRI

Bechet, D., Auger, F., Couleaud, P., Marty, E., Ravasi, L., Durieux, N., Bonnet, C., Plénat, F., Frochot, C., Mordon, S., Tillement, O., Vanderesse, R., Lux, F., Perriat, P., Guillemin, F. & Barberi-Heyob, M., 2015, In : NANOMEDICINE: NANOTECHNOLOGY BIOLOGY AND MEDICINE. 11, 3, p. 657-670 14 p.

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

Efficient preparation of shuffled DNA libraries through recombination (Gateway) cloning

Lehtonen, S. I., Taskinen, B., Ojala, E., Kukkurainen, S., Rahikainen, R., Riihimäki, T. A., Laitinen, O. H., Kulomaa, M. S. & Hytönen, V. P., 2015, In : Protein Engineering Design and Selection. 28, 1, p. 23-28 6 p.

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

Enquête de la variabilité cycle-cycle du NO dans la combustion homogène

Translated title of the contribution: : Investigation of cycle-to-cycle variability of NO in homogeneous combustion

Karvountzis-Kontakiotis, A. & Ntziachristos, L., 2015, In : OIL AND GAS SCIENCE AND TECHNOLOGY : REVUE DE L'INSTITUT FRANCAIS DU PETROLE. 70, 1, p. 111-123 13 p.

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

Switchavidin: Reversible biotin-avidin-biotin bridges with high affinity and specificity

Taskinen, B., Zauner, D., Lehtonen, S. I., Koskinen, M., Thomson, C., Kähkönen, N., Kukkurainen, S., Määttä, J. A. E., Ihalainen, T. O., Kulomaa, M. S., Gruber, H. J. & Hytönen, V. P., 17 Dec 2014, In : Bioconjugate Chemistry. 25, 12, p. 2233-2243 11 p.

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

Time-resolved fluorescence methods (IUPAC technical report)

Lemmetyinen, H., Tkachenko, N. V., Valeur, B., Hotta, J. I., Ameloot, M., Ernstring, N. P., Gustavsson, T. & Boens, N., 1 Dec 2014, In : Pure and Applied Chemistry. 86, 12, p. 1969-1998 30 p.

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

Improved biomass and lipid production in a mixotrophic culture of Chlorella sp. KR-1 with addition of coal-fired flue-gas

Praveenkumar, R., Kim, B., Choi, E., Lee, K., Park, J. Y., Lee, J. S., Lee, Y. C. & Oh, Y. K., 1 Nov 2014, In : Bioresource Technology. 171, p. 500-505 6 p.

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

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

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

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

Mixotrophic cultivation of oleaginous *Chlorella* sp. KR-1 mediated by actual coal-fired flue gas for biodiesel production

Praveenkumar, R., Kim, B., Choi, E., Lee, K., Cho, S., Hyun, J. S., Park, J. Y., Lee, Y. C., Lee, H. U., Lee, J. S. & Oh, Y. K., 12 Sep 2014, In : Bioprocess and Biosystems Engineering. 37, 10, p. 2083-2094 12 p.

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

Molecular engineering of avidin and hydrophobin for functional self-assembling interfaces

Kurppa, K., Hytönen, V. P., Nakari-Setälä, T., Kulomaa, M. S. & Linder, M. B., 1 Aug 2014, In : Colloids and Surfaces B: Biointerfaces. 120, p. 102-109 8 p.

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

Bioprocessing of enhanced cellulase production from a mutant of *Trichoderma asperellum* RCK2011 and its application in hydrolysis of cellulose

Raghuwanshi, S., Deswal, D., Karp, M. & Kuhad, R. C., 15 May 2014, In : Fuel. 124, p. 183-189 7 p.

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

Light-fuelled transport of large dendrimers and proteins

Koskela, J. E., Liljeström, V., Lim, J., Simanek, E. E., Ras, R. H. A., Priimagi, A. & Kostianen, M. A., 14 May 2014, In : Journal of the American Chemical Society. 136, 19, p. 6850-6853 4 p.

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

Assessment of metabolic flux distribution in the thermophilic hydrogen producer *Caloramator celer* as affected by external pH and hydrogen partial pressure

Ciranna, A., Pawar, S. S., Santala, V., Karp, M. & van Niel, E. W. J., 28 Mar 2014, In : Microbial Cell Factories. 13, 1, 48.

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

Structure and barrier properties of human embryonic stem cell-derived retinal pigment epithelial cells are affected by extracellular matrix protein coating

Sorkio, A., Hongisto, H., Kaarniranta, K., Uusitalo, H., Juuti-Uusitalo, K. & Skottman, H., 1 Feb 2014, In : Tissue Engineering Part A. 20, 3-4, p. 622-634 13 p.

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

A 3D Alzheimer's disease culture model and the induction of P21-activated kinase mediated sensing in iPSC derived neurons

Zhang, D., Pekkanen-Mattila, M., Shahsavani, M., Falk, A., Teixeira, A. I. & Herland, A., Feb 2014, In : Biomaterials. 35, 5, p. 1420-1428 9 p.

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

Large-area arrays of three-dimensional plasmonic subwavelength-sized structures from azopolymer surface-relief gratings

Moerland, R. J., Koskela, J. E., Kravchenko, A., Simberg, M., Van Der Vegte, S., Kaivola, M., Priimagi, A. & Ras, R. H. A., 1 Jan 2014, In : Materials Horizons. 1, 1, p. 74-80 7 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

Repeated use of stable magnetic flocculant for efficient harvest of oleaginous *Chlorella* sp.

Lee, K., Lee, S. Y., Praveenkumar, R., Kim, B., Seo, J. Y., Jeon, S. G., Na, J. G., Park, J. Y., Kim, D. M. & Oh, Y. K., 2014, In : Bioresource Technology. 167, p. 284-290 7 p.

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

Direct observation of the collapse of the delocalized excess electron in water

Savolainen, J., Uhlig, F., Ahmed, S., Hamm, P. & Jungwirth, P., 2014, In : Nature Chemistry. 6, 8, p. 697-701 5 p.

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

Nickel-based HVOF coatings promoting high temperature corrosion resistance of biomass-fired power plant boilers

Oksa, M., Auerkari, P., Salonen, J. & Varis, T., 2014, In : Fuel Processing Technology. 125, p. 236-245 10 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., Ilich, 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

Fabrication of 3-D nanodimensioned electric double layer capacitor structures using block copolymer templates

Rasappa, S., Borah, D., Sentharamaikannan, R., Faulkner, C. C., Holmes, J. D. & Morris, M. A., 2014, In : Journal Nanoscience and Nanotechnology. 14, 7, p. 5221-5227 7 p.

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

Magnetophoretic harvesting of oleaginous *Chlorella* sp. by using biocompatible chitosan/magnetic nanoparticle composites

Lee, K., Lee, S. Y., Na, J. G., Jeon, S. G., Praveenkumar, R., Kim, D. M., Chang, W. S. & Oh, Y. K., Dec 2013, In : Bioresource Technology. 149, p. 575-578 4 p.

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

Reversible biofunctionalization of surfaces with a switchable mutant of avidin

Pollheimer, P., Taskinen, B., Scherfler, A., Gusenkov, S., Creus, M., Wiesauer, P., Zauner, D., Schöfberger, W., Schwarzinger, C., Ebner, A., Tampé, R., Stutz, H., Hytönen, V. P. & Gruber, H. J., 16 Oct 2013, In : Bioconjugate Chemistry. 24, 10, p. 1656-1668 13 p.

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

Mechanisms of acceleration and retardation of water dynamics by ions

Stirnemann, G., Wernersson, E., Jungwirth, P. & Laage, D., 14 Aug 2013, In : Journal of the American Chemical Society. 135, 32, p. 11824-11831 8 p.

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

Development and characterization of poly(ϵ -caprolactone) hollow fiber membranes for vascular tissue engineering

Diban, N., Haimi, S., Bolhuis-Versteeg, L., Teixeira, S., Miettinen, S., Poot, A., Grijpma, D. & Stamatialis, D., 1 Jul 2013, In : Journal of Membrane Science. 438, p. 29-37 9 p.

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

Shape-dependent plasmonic response and directed self-assembly in a new semiconductor building block, indium-doped cadmium oxide (ICO)

Gordon, T. R., Paik, T., Klein, D. R., Naik, G. V., Caglayan, H., Boltasseva, A. & Murray, C. B., 12 Jun 2013, In : Nano Letters. 13, 6, p. 2857-2863 7 p.

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

Screening pretreatment methods to enhance thermophilic anaerobic digestion of pulp and paper mill wastewater treatment secondary sludge

Bayr, S., Kaparaju, P. & Rintala, J., 1 May 2013, In : Chemical Engineering Journal. 223, p. 479-486 8 p.

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

Immobilized bioactive agents onto polyurethane surface with heparin and phosphorylcholine group

Tan, M., Feng, Y., Wang, H., Zhang, L., Khan, M., Guo, J., Chen, Q. & Liu, J., May 2013, In : Macromolecular Research. 21, 5, p. 541-549 9 p.

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

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

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

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

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

Chemically tailored dielectric-to-metal transition for the design of metamaterials from nanoimprinted colloidal nanocrystals

Fafarman, A. T., Hong, S. H., Caglayan, H., Ye, X., Diroll, B. T., Paik, T., Engheta, N., Murray, C. B. & Kagan, C. R., 13 Feb 2013, In : Nano Letters. 13, 2, p. 350-357 8 p.

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

A potential nonthrombogenic small-diameter vascular scaffold with polyurethane/poly(ethylene glycol) hybrid materials by electrospinning technique

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

A 'clusters-in-liquid' method for calculating infrared spectra identifies the proton-transfer mode in acidic aqueous solutions

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

New reports on anti-bacterial and anti-candidal activities of fatty acid methyl esters (FAME) obtained from *Scenedesmus bijugatus* var. *bicellularis* biomass

Mubarakali, D., Praveenkumar, R., Shenbagavalli, T., Mari Nivetha, T., Parveez Ahamed, A., Al-Dhabi, N. A. & Thajuddin, N., 28 Nov 2012, In : RSC Advances. 2, 30, p. 11552-11556 5 p.

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

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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

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.

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

Impact of biodiesel application at various blending ratios on passenger cars of different fueling technologies

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

Molecular mechanisms of ion-specific effects on proteins

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

Demonstration of increased lipid accumulation potential of stigeoclonium sp., Kütz. BUM11007 under nitrogen starved regime: A new source of lipids for biodiesel production

Praveenkumar, R., Johny, K., MubarakAli, D., Vijayan, D., Thajuddin, N. & Gunasekaran, M., Apr 2012, In : Journal of Biobased Materials and Bioenergy. 6, 2, p. 209-213 5 p.

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

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Human adipose tissue extract induces angiogenesis and adipogenesis in vitro

Sarkanen, J. R., Kaila, V., Mannerström, B., Rätty, S., Kuokkanen, H., Miettinen, S. & Ylikomi, T., 1 Jan 2012, In : Tissue Engineering Part A. 18, 1-2, p. 17-25 9 p.

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Utilization of agrowaste polymers in PVC/NBR alloys: Tensile, thermal, and morphological properties

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Osteogenic medium is superior to growth factors in differentiation of human adipose stem cells towards boneforming cells in 3D culture

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

Screening ethnically diverse human embryonic stem cells identifies a chromosome 20 minimal amplicon conferring growth advantage

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Synthesis of depsipeptides from L-amino acids and lactones

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Versatile bio-ink for covalent immobilization of chimeric avidin on sol-gel substrates

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Defined-size DNA triple crossover construct for molecular electronics: Modification, positioning and conductance properties

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

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Two-stage anaerobic digestion of tomato, cucumber, common reed and grass silage in leach-bed reactors and upflow anaerobic sludge blanket reactors

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Osteoconductive properties of poly(96L/4D-lactide)/beta-tricalcium phosphate in long term animal model

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Ectopic Beat Detection from Wrist Optical Signals for Sinus Rhythm and Atrial Fibrillation Subjects

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

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

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Electrical stimulation of eye blink in individuals with dry eye symptoms caused by chronic unilateral facial palsy

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

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

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Computational model for multifocal imaging in optical projection tomography and numerical analysis of all-in-focus fusion in tomographic image reconstruction

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A strategy for dissecting the kinetics of transcription repression mechanisms

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Nonlinear local projection filter for impedance pneumography

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Evaluation of the accuracy and reliability for photoplethysmography based heart rate and beat-to-beat detection during daily activities

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Wearable RFID perspiration sensor tags for well-being applications – From laboratory to field use

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

Artificial eye blink pacemaker - A first investigation into the blink production using constant-interval electrical stimulation

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Connectivity analysis of full montage EEG in traumatic brain injury patients in the ICU

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Optical projection tomography imaging of single cells in 3D gellan gum hydrogel

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Texture-property relations of bioamine crosslinked gellan gum hydrogels

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Low-latency EMG onset and termination detection for facial pacing

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Linearity of simultaneously recorded impedance pneumography and direct pneumotachography in thoracic surgery patients

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Automated pipeline for brain ROI analysis with results comparable to previous freehand measures in clinical settings

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Physical characteristics of collimators for dual-isotope imaging with ^{99m}Tc and ^{123}I

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Nonlinear dynamics of heart rate variability in children with asthmatic symptoms

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Finite element mapping for efficient image reconstruction in rotational electrical impedance tomography

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Atrial fibrillation detection from wrist photoplethysmography data using artificial neural networks

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Effects of nitroglycerin to ballistocardiography by EMFI

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A neural network strategy for learning of nonlinearities toward feed-forward control of pressure-compensated hydraulic valves with a significant dead zone

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Floating frame of reference formulation for a flexible manipulator with hydraulic actuation - Modelling and experimental validation

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Addressing closed-chain dynamics for high-precision control of hydraulic cylinder actuated manipulators

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Novel equipment to simulate hot air heat sealability of packaging materials

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Effect of air gap on the adhesion of PET layer on cardboard substrate in extrusion coating

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

Novel bio-based materials for active and intelligent packaging

Lahti, J., Kamppuri, T. & Kuusipalo, J., 1 Jan 2017, *16th TAPPI European PLACE Conference 2017*. TAPPI Press, 1 p.

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

Tampere University of Technology, laboratory of materials science, paper converting and packaging technology Tampere, Finland

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

Electrode comparison for textile-integrated electrocardiogram and impedance pneumography measurement

Tuohimäki, K., Mahdiani, S., Jeyhani, V., Vehkaoja, A., Iso-Ketola, P., Vanhala, J., Viik, J. & Mäntysalo, M., 2017, *EMBEC and NBC 2017 - Joint Conference of the European Medical and Biological Engineering Conference EMBEC 2017 and the Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, NBC 2017*. Springer Verlag, Vol. 65. p. 302-305 4 p. (IFMBE Proceedings; vol. 65).

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

Day-to-day repeatability of the results of the finger-toe-plot analysis

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

Short-term stability of combined finger and toe photoplethysmogram analysis

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

X-ray microtomography of collagen and polylactide samples in liquids

Hannula, M., Haaparanta, A. M., Tamminen, I., Aula, A., Kellomäki, M. & Hyttinen, J., 2016, *XIV Mediterranean Conference on Medical and Biological Engineering and Computing 2016: MEDICON 2016, March 31st–April 2nd 2016, Paphos, Cyprus*. Springer Verlag, p. 420-424 5 p. (IFMBE Proceedings; vol. 57).

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

A novel generic algorithm for robust physiological signal classification

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

A review of transient suppression methods of IIR notch filters used for power-line interference rejection in ECG measurement

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

A tool for geometrical measurements of orthognathic surgery changes using cone beam computed tomography

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Optimal short distance electrode locations for impedance pneumography measurement from the frontal thoracic area
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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Nanoscale barrier coating on BOPP packaging film by ALD

Lahti, J., 2016, *TAPPI PLACE Conference 2016: Exploring New Frontiers*. TAPPI Press, p. 493-505 13 p.

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

Roll-to-roll application of photocatalytic TiO₂ nanoparticles for printed functionality

Saarinen, J. J., Valtakari, D., Bollström, R., Stepien, M., Haapanen, J., Mäkelä, J. M. & Toivakka, M., 2016, *Advanced Manufacturing, Electronics and Microsystems: TechConnect Briefs 2016*. TechConnect, Vol. 4. p. 47-50 4 p.

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

'miSimBa' - A simulator of synthetic time-lapsed microscopy images of bacterial cells

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

Improving the effect of nanoscale barrier coating on BOPP film properties: Influence of substrate contamination, web handling and pretreatments

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

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

Conductive layers on surface modified natural fibre based substrates for printed functionality

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

Nanoparticle deposition on packaging materials by the liquid flame spray

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

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

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Designing of Elastomer Nanocomposites: From Theory to Application

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Research output: Book/Report › Anthology › Scientific › peer-review

Modular Instrumentation for Controlling and Monitoring In-Vitro Cultivation Environment and Image-based Functionality Measurements of Human Stem Cells

Kattipparambil Rajan, D., 27 May 2020, Tampere University. (Tampere University Dissertations; vol. 256)

Research output: Book/Report › Doctoral thesis › Collection of Articles

A simulation case study of production planning and control in printed wiring board manufacturing

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Research output: Contribution to journal › Conference article › Scientific › peer-review