

### **Formation of corrosion products on zinc in wet supercritical and subcritical CO<sub>2</sub>: 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.

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

### **Optimization of photogenerated charge carrier lifetimes in ald grown tio<sub>2</sub> 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.

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

### **Nucleation and growth behavior of Er<sup>3+</sup> 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.

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.

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

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

Unban, K., Khanongnuch, R., Kanpiengjai, A., Shetty, K. & Khanongnuch, C., May 2020, In : Applied Biochemistry and Biotechnology.

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**

Palmroth, A., Pitkänen, S., Hannula, M., Paakinaho, K., Hyttinen, J., Miettinen, S. & Kellomäki, M., 1 Apr 2020, In : Journal of the Royal Society. Interface. 17, 165, 12 p., 20200102.

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

### **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.

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

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

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

### **Investigation of well-defined pinholes in TiO<sub>2</sub> 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**

Silvonen, J., Levänen, E. & Uusitalo, M., 2020, In : Cogent Engineering. 7, 1, 1720057.

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### **In-flight wind field identification and prediction of parafoil systems**

Gao, H., Tao, J., Dehmer, M., Emmert-Streib, F., Sun, Q., Chen, Z., Xie, G. & Zhou, Q., 2020, In : Applied Sciences (Switzerland). 10, 6, 15 p., 1958.

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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**

Olin, M. & Dal Maso, M., 2020, In : Journal of Aerosol Science. 150, 10 p., 105618.

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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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### **Effects of elevated pressures on the activity of acidophilic bioleaching microorganisms**

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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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### **Multiresonant High-Q Plasmonic Metasurfaces**

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### **Shedding frequency in cavitation erosion evolution tracking**

Ylönen, M., Franc, J. P., Miettinen, J., Saarenrinne, P. & Fivel, M., 1 Sep 2019, In : International Journal of Multiphase Flow. 118, p. 141-149 9 p.

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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 Cr<sub>3</sub>C<sub>2</sub>-based hardmetal coatings**  
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**Characterisation and in vitro and in vivo evaluation of supercritical-CO<sub>2</sub>-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(S<sub>2</sub>P(i-Bu)<sub>2</sub>)<sub>2</sub> complex in CCl<sub>4</sub>. Transient species and TD-DFT calculations**

Solovyev, A. I., Mikheyli, A. V., Plyusnin, V. F., Shubin, A. A., Grivin, V. P., Larionov, S. V., Tkachenko, N. V. & Lemmetyinen, H., 1 Aug 2019, In : Journal of Photochemistry and Photobiology A: Chemistry. 381, 111857.

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**Alkane and wax ester production from lignin-related aromatic compounds**

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**Observation of Coexistence of Yu-Shiba-Rusinov States and Spin-Flip Excitations**

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**An architectural understanding of natural sway frequencies in trees**

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**Tailoring Second-Harmonic Emission from (111)-GaAs Nanoantennas**

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**Synthetic metabolic pathway for the production of 1-alkenes from lignin-derived molecules**

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

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**Kinetics and thermochemistry of the reaction of 3-methylpropargyl radical with molecular oxygen**

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**A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities**

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**Cost-optimal energy performance measures in a new daycare building in cold climate**

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**Textile-integrated three-dimensional printed and embroidered structures for wearable wireless platforms**

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**Reliability evaluation of wearable radio frequency identification tags: Design and fabrication of a two-part textile antenna**

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**Towards the EU emissions targets of 2050: optimal energy renovation measures of Finnish apartment buildings**

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**Volatile fatty acid adsorption on anion exchange resins: kinetics and selective recovery of acetic acid**

Eregowda, T., Rene, E. R., Rintala, J. & Lens, P. N. L., 2019, In : Separation Science and Technology (Philadelphia).

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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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**Activity Level and Body Mass Index as Predictors of Physical Workload During Working Career**

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

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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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**Mechanical impact stimulation platform tailored for high-resolution light microscopy**

Halonen, H. T., Hyttinen, J. A. K. & Ihalainen, T. O., 2019, In : *HEALTH AND TECHNOLOGY*.

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**Deposition of dry particles on a fin-and-tube heat exchanger by a coupled soft-sphere DEM and CFD**

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

Ayodele, O. B., Cai, R., Wang, J., Ziouani, Y., Liang, Z., Spadaro, M. C., Kovnir, K., Arbiol, J., Akola, J., Palmer, R. E. & Kolen'ko, Y. V., 2019, In : *ACS CATALYSIS*. p. 451-457 7 p.

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**Characterization of the anisotropic deformation of the right ventricle during open heart surgery**

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

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

Czaplicki, R., Kiviniemi, A., Huttunen, M. J., Zang, X., Stolt, T., Vartiainen, I., Butet, J., Kuittinen, M., Martin, O. J. F. & Kauranen, M., 12 Dec 2018, In : *Nano Letters*. 18, 12, p. 7709-7714 6 p.

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**Dynamic decoupling of biomass and wax ester biosynthesis in *Acinetobacter baylyi* by an autonomously regulated switch**

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**The importance of controlled mismatch of biomechanical compliances of implantable scaffolds and native tissue for articular cartilage regeneration**

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**Aminobenzylated 4-Nitrophenols as Antibacterial Agents Obtained from 5-Nitrosalicylaldehyde through a Pétasis Borono-Mannich Reaction**

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**High-Yield Generation of Triplet Excited States by an Efficient Sequential Photoinduced Process from Energy Transfer to Singlet Fission in Pentacene-Modified CdSe/ZnS Quantum Dots**

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#### **Molecular-Scale Ligand Effects in Small Gold-Thiolate Nanoclusters**

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#### **Chromatographic studies of n-Propyl Propionate: Adsorption equilibrium, modelling and uncertainties determination**

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#### **Tribocorrosion behaviour of aluminium bronze in 3.5 wt.% NaCl solution**

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#### **Novel osteoconductive $\beta$ -tricalcium phosphate/poly(L-lactide-co- $\epsilon$ -caprolactone) scaffold for bone regeneration: a study in a rabbit calvarial defect**

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#### **Molecular Communications Pulse-based Jamming Model for Bacterial Biofilm Suppression**

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#### **Temperature control as key factor for optimal biohydrogen production from thermomechanical pulping wastewater**

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#### **Electro-concentration for chemical-free nitrogen capture as solid ammonium bicarbonate**

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#### **Performance of a biotrickling filter for the anaerobic utilization of gas-phase methanol coupled to thiosulphate reduction and resource recovery through volatile fatty acids production**

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#### **Effects of pyrolysis temperature on the hydrologically relevant porosity of willow biochar**

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#### **Photoinduced Energy Transfer in ZnCdSeS Quantum Dot-Phthalocyanines Hybrids**

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**Selenate removal in biofilm systems: Effect of nitrate and sulfate on selenium removal efficiency, biofilm structure and microbial community**

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**High Bending-Mode Sensitivity of Printed Piezoelectric Poly(vinylidene fluoride- co-trifluoroethylene) Sensors**

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**Effect of surfactant type and sonication energy on the electrical conductivity properties of nanocellulose-CNT nanocomposite films**

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

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

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

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

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

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

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

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

**Effect of Co-Adsorbate and Hole Transporting Layer on the Photoinduced Charge Separation at the TiO<sub>2</sub>-Phthalocyanine Interface**

Virkki, K., Tervola, E., Medel, M., Torres, T. & Tkachenko, N. V., 31 May 2018, In : ACS Omega. 3, 5, p. 4947-4958 12 p.

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 TiO<sub>2</sub> 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 Er<sup>3+</sup>-doped TiO<sub>2</sub> 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 NaYF<sub>4</sub>:Er<sup>3+</sup>,Yb<sup>3+</sup> 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**

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

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

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### **Decomposition of persistent luminescent microparticles in corrosive phosphate glass melt**

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

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

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### **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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### **Deactivation of Pt/SiO<sub>2</sub>-ZrO<sub>2</sub> 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**

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**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.

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

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**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.

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

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

Uddin, R., Nur-E-Habiba, N., Rena, G., Hwu, E. T. & Boisen, A., 22 Sep 2017, In : ACS Sensors. 2, 9, p. 1329-1336 8 p.

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**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.

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**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.

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**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.

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

**The effects of calcium and potassium on CO<sub>2</sub> 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.

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**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.

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#### **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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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**

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

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

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

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

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

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

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#### **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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**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.

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**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**

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

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**Long-term stability of bioelectricity generation coupled with tetrathionate disproportionation**

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**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.

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**Modeling of the catalytic effects of potassium and calcium on spruce wood gasification in CO<sub>2</sub>**

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**Hydrothermal carbonization of pulp mill streams**

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**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<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells**  
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**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**  
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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**  
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**Metal chalcogenide quantum dots: Biotechnological synthesis and applications**  
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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**  
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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  
Research output: Contribution to journal > Article > Scientific > peer-review

**Remarkable Dependence of the Final Charge Separation Efficiency on the Donor-Acceptor Interaction in Photoinduced Electron Transfer**  
Higashino, T., Yamada, T., Yamamoto, M., Furube, A., Tkachenko, N. V., Miura, T., Kobori, Y., Jono, R., Yamashita, K. & Imahori, H., 2016, In : *Angewandte Chemie (International Edition)*. 55, 2, p. 629-633

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**

Solala, I., Koistinen, A., Siljander, S., Vuorinen, J. & Vuorinen, T., 2016, In : BioResources. 11, 1, p. 1125-1140 16 p.

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

#### **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.

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

#### **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)- $\beta$ -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 Fe<sub>2</sub>O<sub>3</sub>/TiO<sub>2</sub> 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 Fe<sub>3</sub>O<sub>4</sub>-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 TiO<sub>2</sub> sol-gel coated steel by the application of SiO<sub>2</sub> 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 MgAl<sub>2</sub>O<sub>4</sub> granule beds**

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

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

**Sol-gel synthesis of quaternary (P<sub>2</sub>O<sub>5</sub>)<sub>55</sub>-(CaO)<sub>25</sub>-(Na<sub>2</sub>O)<sub>(20-x)</sub>-(TiO<sub>2</sub>)<sub>x</sub> 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 CO<sub>2</sub> 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 TiO<sub>2</sub> 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

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### **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.

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### **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 $\pi$ -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**

Kamppuri, 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., Frochet, C., Mordon, S., Tillement, O., Vanderesse, R., Lux, F., Perriat, P., Guillemain, 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**

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., Ernsting, 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**

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

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

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**Development and characterization of poly( $\epsilon$ -caprolactone) hollow fiber membranes for vascular tissue engineering**

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

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**Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography**

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

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

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

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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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### **Understanding the Role of Lipids in Signaling Through Atomistic and Multiscale Simulations of Cell Membranes**

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### **Waves in hyperbolic and double negative metamaterials including rogues and solitons**

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### **Liquid flame spray—a hydrogen-oxygen flame based method for nanoparticle synthesis and functional nanocoatings**

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

### **Enablers and barriers of smart data-based asset management services in industrial business networks**

Ahonen, T., Hanski, J., Hyvärinen, M., Kortelainen, H., Uusitalo, T., Vainio, H., Kunttu, S. & Koskinen, K., 2019, *Lecture Notes in Mechanical Engineering*. Pleiades Publishing, p. 51-60 10 p. (Lecture Notes in Mechanical Engineering).

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

### **Understanding selenium biogeochemistry in engineered ecosystems: Transformation and analytical methods**

Jain, R., Van Hullebusch, E. D., Lenz, M. & Farges, F., 2 Sep 2017, *Bioremediation of Selenium Contaminated Wastewater*. Springer International Publishing, p. 33-56 24 p.

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

### **Nanostructured Ionomeric Elastomers**

Basu, D., Das, A., Stöckelhuber, K. W. & Wießner, S., 17 Aug 2016, *Designing of Elastomer Nanocomposites: From Theory to Applications*. Stöckelhuber, K. W., Das, A. & Klüppel, M. (eds.). Springer International Publishing, p. 235-266 32 p. (Advances in Polymer Science; vol. 275).

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

### **Framework for optimization and scheduling of a copper production plant**

Suominen, O., Mörsky, V., Ritala, R. & Vilkkö, M., 25 Jun 2016, *26th European Symposium on Computer Aided Process Engineering, 2016*. Elsevier Science B.V., Vol. 38. p. 1243-1248 6 p. (Computer Aided Chemical Engineering).

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

### **Two models for hydraulic cylinders in flexible multibody simulations**

Ylinen, A., Mäkinen, J. & Kouhia, R., 2016, *Computational Methods for Solids and Fluids: Multiscale Analysis, Probability Aspects and Model Reduction*. Springer, p. 463-493 31 p. (Computational Methods in Applied Sciences; vol. 41).

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

### **Functional model for organisational and safety culture**

Porkka, P. L., 2016, *Chemical Engineering Transactions*. Italian Association of Chemical Engineering AIDIC, p. 907-912 6 p. (Chemical Engineering Transactions; vol. 48).

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

### **Enhancing CT 3D Images by Independent Component Analysis of Projection Images**

Hannula, M., Hyttinen, J. A. K. & Tanskanen, J. M. A., 2020, *15th Mediterranean Conference on Medical and Biological Engineering and Computing – MEDICON 2019 - Proceedings of MEDICON 2019*. Henriques, J., de Carvalho, P. & Neves, N. (eds.). Springer, p. 381-389 9 p. (IFMBE Proceedings; vol. 76).

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

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

Haddad, S., Harju, J., Tarniceriu, A., Halkola, T., Parak, J., Korhonen, I., Yli-Hankala, A. & Vehkaoja, A., 2020, *15th Mediterranean Conference on Medical and Biological Engineering and Computing – MEDICON 2019 - Proceedings of MEDICON 2019*. Henriques, J., de Carvalho, P. & Neves, N. (eds.). Springer, p. 150-158 9 p. (IFMBE Proceedings; vol. 76).

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

### **Deformability analysis and improvement in stretchable electronics systems through finite element analysis**

Di Vito, D., Mosallaei, M., Vahed, B. K., Kanerva, M. & Mäntysalo, M., 2020, *Proceedings of XXIV AIMETA Conference 2019*. Carcaterra, A., Graziani, G. & Paolone, A. (eds.). Springer, p. 755-763 9 p. (Lecture Notes in Mechanical Engineering).

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

### **Moving Web and Dynamic Problem of Aerothermoelastic Vibrations and Instability**

Banichuk, N., Ivanova, S. & Jeronen, J., 2020, *Advanced Problems in Mechanics: Proceedings of the 47th International Summer School-Conference on Advanced Problems in Mechanics, APM 2019*. Indeitsev, D. A. & Krivtsov, A. M. (eds.). Springer, p. 66-71 6 p. (Lecture Notes in Mechanical Engineering).

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

### **Miniaturized stimulator for imaging of live cell responses to high frequency mechanical vibration**

Halonen, H. T., Hyttinen, J. A. K. & Ihalainen, T. O., 11 May 2019, *CMBEBIH 2019 - Proceedings of the International Conference on Medical and Biological Engineering*. Badnjevic, A., Gurbeta Pokvić, L., Škrbić, R., Badnjevic, A. & Gurbeta Pokvić, L. (eds.). Springer Verlag, p. 21-27 7 p. (IFMBE Proceedings; vol. 73).

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

### **The electrical conductivity of human cerebrospinal fluid in vivo**

Latikka, J. & Eskola, H., 2019, *World Congress on Medical Physics and Biomedical Engineering 2018*. Springer, p. 773-776 4 p. (IFMBE Proceedings; vol. 68, no. 1).

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

### **μCT based characterization of biomaterial scaffold microstructure under compression**

Hannula, M., Narra, N., Paakinaho, K., Haaparanta, A-M., Kellomäki, M. & Hyttinen, J., 2019, *World Congress on Medical Physics and Biomedical Engineering 2018*. Springer, p. 165-169 5 p. (IFMBE Proceedings; vol. 68, no. 3).

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

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

Lylykangas, J., Ilves, M., Venesvirta, H., Rantanen, V., Mäkelä, E., Vehkaoja, A., Verho, J., Lekkala, J., Rautiainen, M. & Surakka, V., 2019, *CMBEBIH 2019 - Proceedings of the International Conference on Medical and Biological Engineering*. Badnjevic, A., Gurbeta Pokvić, L., Škrbić, R., Badnjevic, A. & Gurbeta Pokvić, L. (eds.). Springer Verlag, p. 7-11 5 p. (IFMBE Proceedings; vol. 73).

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

#### **Nanocellulose and Poly(lactic Acid) Based Multilayer Coatings for Barrier Applications**

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

#### **Market implementation of active and intelligent packaging-opportunities from a socio-economic perspective**

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

#### **Effect of polyolefin molecular structure on product properties in extrusion coating**

Suokas, E., 2019, *17th Biennial TAPPI European PLACE Conference 2019*. TAPPI Press, p. 89-98 10 p.

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

#### **Detection and assessment of sleep-disordered breathing with emfit mattress**

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

#### **Time characteristics of prolonged partial obstruction periods using an Emfit mattress**

Perez-Macias, J. M., Viik, J., Värri, A., Himanen, S.-L. & Tenhunen, M., 2018, *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, p. 775-778 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Auto-regression-driven, reallocative particle filtering approaches in PPG-based respiration rate estimation**

Pirhonen, M., Suominen, O. & Vehkaoja, A., 2018, *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, p. 1020-1024 5 p. (IFMBE Proceedings; vol. 65).

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

#### **Altered synaptic signaling due to $\beta$ -amyloid interference in astrocytes: A modeling study**

Havela, R., Manninen, T. & Linne, M. L., 2018, *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, p. 679-682 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Performance analysis of novel flexible electrodes for wearable ECG/heart rate monitoring**

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

#### **Stimulation waveform selection to suppress functional electrical stimulation artifact from surface EMG signals**

Rantanen, V., Vehkaoja, A. & Verho, J., 2018, *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, p. 422-425 4 p. (IFMBE Proceedings; vol. 65).

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

#### **A case study of focal bayesian EEG inversion for whitney element source spaces: Mesh-based vs. cartesian orientations**

Miinalainen, T. & Pursiainen, S., 2018, *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, p. 1065-1068 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Pathvalue: Pathways with value**

Losoi, P. & Aho, T., 2018, *EMBECE 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, p. 583-586 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Temperature effect on the baseline noise in MEA measurements**

Ryynänen, T. & Lekkala, J., 2018, *EMBECE 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, p. 5-8 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Dry electrode sizes in recording ECG and heart rate in wearable applications**

Joutsen, A. S., Kaappa, E. S., Karinsalo, T. J. & Vanhala, J., 2018, *EMBECE 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, p. 735-738 4 p. (IFMBE Proceedings; vol. 65).

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

#### **High resolution E-jet printed temperature sensor on artificial skin**

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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

#### **Nocturnal use of light compression garments and recovery**

Jokinen, V. I., Korpela, J., Lehtinen, E., Perttunen, J. & Viik, J., 2018, *EMBECE 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, p. 125-128 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Human activity recognition using a single optical heart rate monitoring wristband equipped with triaxial accelerometer**

Mehrang, S., Pietilä, J., Tolonen, J., Helander, E., Jimison, H., Pavel, M. & Korhonen, I., 2018, *EMBECE 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, p. 587-590 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Reproducible preparation method of hydrogels for cell culture applications – Case study with spermidine crosslinked gellan gum**

Gering, C., Koivisto, J. T., Parraga, J. E. & Kellomäki, M., 2018, *EMBECE 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, p. 811-814 4 p. (IFMBE Proceedings; vol. 65).

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

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

Koskela, O., Pursiainen, S., Belay, B., Montonen, T., Figueiras, E. & Hyttinen, J., 2018, *EMBECE 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, p. 282-285 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Multiresolution MAPEM method for 3D reconstruction of symmetrical particles with electron microscopy**

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

#### **Twelve years follow-up of ballistocardiography**

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

#### **Predicting gene expression levels from histone modification signals with convolutional recurrent neural networks**

Zhu, L., Kesseli, J., Nykter, M. & Huttunen, H., 2018, *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, p. 555-558 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Characterization of chloride channels in human embryonic stem cell derived retinal pigment epithelium**

Korkka, I., Johansson, J. K., Skottman, H., Hyttinen, J. & Nymark, S., 2018, *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, p. 454-457 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Evaluating different shapes of cranial fixation mini-plates using finite element method**

Chamrad, J., Marcián, P., Narra, N. & Borák, L., 2018, *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, p. 747-750 4 p. (IFMBE Proceedings; vol. 65).

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

#### **A strategy for dissecting the kinetics of transcription repression mechanisms**

Palma, C. S. D., Startceva, S., Neeli-Venkata, R., Zare, M., Goncalves, N. S. M., Fonseca, J. M., Oliveira, S. M. D. & Ribeiro, A. S., 2018, *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, p. 1097-1100 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Nonlinear local projection filter for impedance pneumography**

Gracia, J., Seppä, V. P., Pelkonen, A., Kotaniemi-Syrjänen, A., Mäkelä, M., Malmberg, P. & Viik, J., 2018, *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*. Singapore: Springer Verlag, p. 306-309 4 p. (IFMBE Proceedings; vol. 65).

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

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

Pietilä, J., Mehrang, S., Tolonen, J., Helander, E., Jimison, H., Pavel, M. & Korhonen, I., 2018, *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, p. 145-148 4 p. (IFMBE Proceedings; vol. 65).

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

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

Mulholland, K., Virkki, J., Raunonen, P. & Merilampi, S., 2018, *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, p. 1012-1015 4 p. (IFMBE Proceedings; vol. 65).

### **Impacts of laminin and polyethyleneimine surface coatings on morphology of differentiating human SH-SY5Y cells and networks**

Teppola, H., Sarkanen, J. R., Jalonen, T. O. & Linne, M. L., 2018, *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, p. 298-301 4 p. (IFMBE Proceedings; vol. 65).

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**

Lylykangas, J., Ilves, M., Venesvirta, H., Rantanen, V., Mäkelä, E., Vehkaoja, A., Verho, J., Lekkala, J., Rautiainen, M. & Surakka, V., 2018, *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, p. 522-525 4 p. (IFMBE Proceedings; vol. 65).

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

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

Lipping, T., Erkintalo, N., Särkelä, M., Takala, R. S. K., Katila, A., Frantzén, J., Posti, J. P., Müller, M. & Tenovuo, O., 2018, *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, p. 97-100 4 p. (IFMBE Proceedings; vol. 65).

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

### **Electric field of eeg during anesthesia**

Jääntti, V., Subramaniyam, N. P., Kamata, K., Ylinen, T., Yli-Hankala, A., Kauppinen, P. & Väisänen, O., 2018, *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, p. 354-357 4 p. (IFMBE Proceedings; vol. 65).

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

### **Learned vs. hand-designed features for ECG beat classification: A comprehensive study**

Ince, T., Zabihi, M., Kiranyaz, S. & Gabbouj, M., 2018, *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, p. 551-554 4 p. (IFMBE Proceedings; vol. 65).

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

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

Belay, B., Koivisto, J. T., Vuornos, K., Montonen, T., Koskela, O., Lehti-Polojärvi, M., Miettinen, S., Kellomäki, M., Figueiras, E. & Hyttinen, J., 2018, *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, p. 996-999 4 p. (IFMBE Proceedings; vol. 65).

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

### **Texture-property relations of bioamine crosslinked gellan gum hydrogels**

Koivisto, J. T., Koskela, O., Montonen, T., Parraga, J. E., Joki, T., Ylä-Outinen, L., Narkilahti, S., Figueiras, E., Hyttinen, J. & Kellomäki, M., 2018, *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, p. 189-192 4 p. (IFMBE Proceedings; vol. 65).

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

### **Low-latency EMG onset and termination detection for facial pacing**

Kontunen, A., Rantanen, V., Vehkaoja, A., Ilves, M., Lylykangas, J., Mäkelä, E., Rautiainen, M., Surakka, V. & Lekkala, J., 2018, *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, p. 1016-1019 4 p. (IFMBE Proceedings; vol. 65).

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

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

Jauhiainen, M., Gracia, J., Seppä, V. P., Mahrberg, H., Tuomisto, L., Laurikka, J. & Viik, J., 2018, *EMBECE 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, p. 1077-1080 4 p. (IFMBE Proceedings; vol. 65).

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

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

Ilvesmäki, T., Hakulinen, U. & Eskola, H., 2018, *EMBECE 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, p. 635-638 4 p. (IFMBE Proceedings; vol. 65).

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

### **Correlation of depth of anesthesia indexes with MAC in volatile anesthesia**

Olejarczyk, E., Lipping, T. & Marciniak, R., 2018, *EMBECE 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, p. 972-975 4 p. (IFMBE Proceedings; vol. 65).

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

### **Physical characteristics of collimators for dual-isotope imaging with $^{99m}\text{Tc}$ and $^{123}\text{I}$**

Tunninen, V., Kauppinen, T. & Eskola, H., 2018, *EMBECE 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, p. 245-249 5 p. (IFMBE Proceedings; vol. 65).

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

### **Optimization of $^{99m}\text{Tc}$ -sestamibi/ $^{123}\text{I}$ subtraction SPECT/CT protocol for parathyroid scintigraphy**

Tunninen, V., Kauppinen, T. & Eskola, H., 2018, *EMBECE 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, p. 847-851 5 p. (IFMBE Proceedings; vol. 65).

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

### **Nonlinear dynamics of heart rate variability in children with asthmatic symptoms**

Milagro, J., Gil, E., Bolea, J., Seppä, V. P., Malmberg, L. P., Pelkonen, A. S., Kotaniemi-Syrjänen, A., Mäkelä, M. J., Viik, J. & Bailón, R., 2018, *EMBECE 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. 815-818 4 p. (IFMBE Proceedings; vol. 65).

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

### **Comparison of linear and non-linear heart rate variability indices between preterm infants at their theoretical term age and full term newborns**

Helander, E., Khodor, N., Kallonen, A., Värri, A., Patural, H., Carrault, G. & Pladys, P., 2018, *EMBECE 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, p. 153-156 4 p. (IFMBE Proceedings; vol. 65).

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

### **Coronary artery disease diagnosis by means of heart rate variability analysis using respiratory information**

Hernando, D., Kähönen, M., Lázaro, J., Lehtinen, R., Nieminen, T., Nikus, K., Lehtimäki, T., Bailón, R. & Viik, J., 2018, *EMBECE 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, p. 270-273 4 p. (IFMBE Proceedings; vol. 65).

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

Koskela, O., Lehti-Polojärvi, M., Seppänen, A., Figueiras, E. & Hyttinen, J., 2018, *World Congress on Medical Physics and Biomedical Engineering 2018*. Springer, Vol. 2. p. 901-904 4 p. (IFMBE Proceedings; vol. 68).

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



**Atrial fibrillation detection from wrist photoplethysmography data using artificial neural networks**

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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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**Bilateral teleoperation of a hydraulic robotic manipulator in contact with physical and virtual constraints**

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**Model-based control of a digital hydraulic transformer-based hybrid actuator**

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**Effect of driver and work cycle on losses of a loader**

Tikkanen, S., Ahola, V. & Koskela, E., 2018, *BATH/ASME 2018 Symposium on Fluid Power and Motion Control, FPMC 2018*. ASME  
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**Direct position control of electro-hydraulic excavator**

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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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### **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, *EMBE 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).  
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### **Day-to-day repeatability of the results of the finger-toe-plot analysis**

Peltokangas, M., Telembeci, A. A., Verho, J., Lekkala, J., Vehkaoja, A. & Oksala, N., 2017, *EMBE 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, p. 534-537 4 p. (IFMBE Proceedings; vol. 65).  
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### **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**

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

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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**

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

**Roll-to-roll application of photocatalytic TiO<sub>2</sub> nanoparticles for printed functionality**

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**Fungal treatment of landfill mining fine fraction to increase its stability and end-use potential**

Palmroth, M. R. T., Mönkäre, T. J. & Steffen, K. T., 2015, *Book of abstracts of the 6th European Bioremediation Conference*. Kalogerakis, N., Fava, F. & Manousaki, E. (eds.). p. 47 169

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**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

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

Valtakari, D., Bollström, R., Tuominen, M., Teisala, H., Aromaa, M., Toivakka, M., Kuusipalo, J., Mäkelä, J. M., Uozumi, J. & Saarinen, J. J., 2012, *AICHe 2012 - 2012 AICHe Annual Meeting, Conference Proceedings*.

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**Effect of pre-treatments on barrier properties of layers applied by atomic layer deposition onto polymer-coated substrates**

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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**

Kattiparambil 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**

Korhonen, H. M. E., Heikkilä, J. & Törnwall, J. M., 1 Dec 2001, In : Winter Simulation Conference Proceedings. 2, p. 844-847 4 p.

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