

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

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

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

**Sorption and retention of ethylene glycol monoethyl ether (EGME) on silicas**

Kellomäki, A., Kuula-Väisänen, P. & Nieminen, P., 1989, In : Journal of Colloid and Interface Science. 129, 2, p. 373-378 6 p.

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

**Thermophilic anaerobic digestion of source-sorted household solid waste: the effects of enzyme additions**

Rintala, J. A. & Ahring, B. K., Feb 1994, In : Applied Microbiology and Biotechnology. 40, 6, p. 916-919 4 p.

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

**A two-stage thermophilic anaerobic process for the treatment of source sorted household solid waste**

Rintala, J. A. & Ahring, B. K., Oct 1994, In : Biotechnology Letters. 16, 10, p. 1097-1102 6 p.

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

**Start-up and Operation of Laboratory-Scale Thermophilic Upflow Anaerobic Sludge Blanket Reactors Treating Vegetable Processing Wastewaters**

Lepistö, S. S. & Rintala, J. A., Mar 1997, In : Journal of Chemical Technology and Biotechnology. 68, 3, p. 331-339 9 p.

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

**Biokalvojen rakenteen ja toiminnan simulointi tuo uutta tietoa rasvoista**

Translated title of the contribution: : Structure and dynamic properties of biological membranes studied by molecular dynamics simulations: New information on polyunsaturated lipids

Hyvönen, M. T., Rantala, T. T. & Ala-Korpela, M., 1999, In : Kemia - Kemi. 26, 3, p. 222-225 4 p.

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

**Anaerobically digested poultry slaughterhouse wastes as fertiliser in agriculture**

Salminen, E., Rintala, J., Härkönen, J., Kuitunen, M., Högmander, H. & Oikari, A., 2001, In : Bioresource Technology. 78, 1, p. 81-88 8 p.

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

**Biological treatment of pulp and paper mill process and wastewaters under thermophilic conditions - A review**

Suvilampi, J., Lepistö, R. & Rintala, J., 2001, In : Paperi ja puu. 83, 4, p. 320-325 6 p.

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

**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

**Anaerobic digestion of organic solid poultry slaughterhouse waste - A review**

Salminen, E. & Rintala, J., 2002, In : Bioresource Technology. 83, 1, p. 13-26 14 p.

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

**Modeling of anaerobic degradation of solid slaughterhouse waste: Inhibition effects of long-chain fatty acids or ammonia**

Lokshina, L. Y., Vavilin, V. A., Salminen, E. & Rintala, J., Apr 2003, In : Applied Biochemistry and Biotechnology. 109, 1-3, p. 15-32 18 p.

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

**Comparison of laboratory-scale thermophilic biofilm and activated sludge processes integrated with a mesophilic activated sludge process**

Suvilampi, J., Lehtomäki, A. & Rintala, J., Jul 2003, In : Bioresource Technology. 88, 3, p. 207-214 8 p.

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

### **Modeling solid waste decomposition**

Vavilin, V. A., Lokshina, L. Y., Jokela, J. P. Y. & Rintala, J. A., Aug 2004, In : *Bioresource Technology*. 94, 1, p. 69-81 13 p.

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

### **Hydrolysis rates, methane production and nitrogen solubilisation of grey waste components during anaerobic degradation**

Jokela, J. P. Y., Vavilin, V. A. & Rintala, J. A., Mar 2005, In : *Bioresource Technology*. 96, 4, p. 501-508 8 p.

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

### **Anaerobic on-site treatment of kitchen waste in combination with black water in UASB-septic tanks at low temperatures**

Luostarinen, S. & Rintala, J., Jul 2007, In : *Bioresource Technology*. 98, 9, p. 1734-1740 7 p.

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

### **Statistical modeling of water vapor transmission rates for extrusion-coated papers**

Lahtinen, K. & Kuusipalo, J., 2008, *TAPPI 2008 PLACE Conference: Innovations in Flexible Consumer Packaging*.

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

### **Effects of solid-liquid separation on recovering residual methane and nitrogen from digested dairy cow manure**

Kaparaju, P. L. N. & Rintala, J. A., Jan 2008, In : *Bioresource Technology*. 99, 1, p. 120-127 8 p.

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

### **Anaerobic digestion of grass silage in batch leach bed processes for methane production**

Lehtomäki, A., Huttunen, S., Lehtinen, T. M. & Rintala, J. A., May 2008, In : *Bioresource Technology*. 99, 8, p. 3267-3278 12 p.

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

### **Leachate and gaseous emissions from initial phases of landfilling mechanically and mechanically-biologically treated municipal solid waste residuals**

Sormunen, K., Einola, J., Ettala, M. & Rintala, J., May 2008, In : *Bioresource Technology*. 99, 7, p. 2399-2409 11 p.

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

### **Group-specific quantification of methanotrophs in landfill gas-purged laboratory biofilters by tyramide signal amplification-fluorescence in situ hybridization**

Wang, H., Einola, J., Heinonen, M., Kulomaa, M. & Rintala, J., Sep 2008, In : *Bioresource Technology*. 99, 14, p. 6426-6433 8 p.

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

### **Effects of storage on characteristics and hygienic quality of digestates from four co-digestion concepts of manure and biowaste**

Paavola, T. & Rintala, J., Oct 2008, In : *Bioresource Technology*. 99, 15, p. 7041-7050 10 p.

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

### **Storing energy crops for methane production: Effects of solids content and biological additive**

Pakarinen, O., Lehtomäki, A., Rissanen, S. & Rintala, J., Oct 2008, In : *Bioresource Technology*. 99, 15, p. 7074-7082 9 p.

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

### **The effects of corona and flame treatment: Part 2. PE-HD and PP coated papers**

Lahti, J., Tuominen, M., Penttinen, T., Räsänen, J. P. & Kuusipalo, J., 2009, *TAPPI Press - 12th European PLACE Conference 2009*. Vol. 1. p. 278-314 37 p.

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

### **Impact of crop species on bacterial community structure during anaerobic co-digestion of crops and cow manure**

Wang, H., Lehtomäki, A., Tolvanen, K., Puhakka, J. & Rintala, J., Apr 2009, In : *Bioresource Technology*. 100, 7, p. 2311-2315 5 p.

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

**Biogas production from boreal herbaceous grasses - Specific methane yield and methane yield per hectare**

Seppälä, M., Paavola, T., Lehtomäki, A. & Rintala, J., Jun 2009, In : *Bioresource Technology*. 100, 12, p. 2952-2958 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**On entropy-based molecular descriptors: Statistical analysis of real and synthetic chemical structures**

Dehmer, M., Varmuza, K., Borgert, S. & Emmert-Streib, F., 27 Jul 2009, In : *Journal of Chemical Information and Modeling*. 49, 7, p. 1655-1663 9 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Surface science analysis and surface modification methods for biomaterials research**

Kanninen, L., Jokinen, N., Lahtonen, K., Jussila, P., Ali-Löytty, H., Hirsimäki, M., Leppiniemi, J., Hytönen, V., Kulomaa, M., Ahola, N., Paakinaho, K., Kellomäki, M. & Valden, M., 1 Jan 2010, In : *European Cells and Materials*. 20, SUPPL. 3, p. 133 1 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Effect of micro-aeration and leachate replacement on COD solubilization and VFA production during mono-digestion of grass-silage in one-stage leach-bed reactors**

Jagadabhi, P. S., Kaparaju, P. & Rintala, J., Apr 2010, In : *Bioresource Technology*. 101, 8, p. 2818-2824 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Vähä-Nissi, M., Hirvikorpi, T., Sievänen, J., Salo, E., Harlin, A., Johansson, P. & Kuusipalo, J., 2011, *13th European PLACE Conference 2011*. Vol. 1. p. 447 1 p.

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

**Enrichment polymer layers for detection of volatile vapors by ATR FT-IR**

Giannarco, J. M., Zdyrko, B., Hu, J., Agarwal, A., Kimerling, L., Carlie, N., Petit, L., Richardson, K. & Luzinov, I., 2011, In : *ACS National Meeting Book of Abstracts*.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Nanoparticle deposition on packaging materials by the liquid flame spray**

Teisala, H., Tuominen, M., Aromaa, M., Mäkelä, J. M., Stepien, M., Saarinen, J. J., Toivakka, M. & Kuusipalo, J., 2011, *13th European PLACE Conference 2011*. Vol. 1. 2 p.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Chimeric avidin shows stability against harsh chemical conditions-biochemical analysis and 3D structure**

Määttä, J. A. E., Eisenberg-Domovich, Y., Nordlund, H. R., Hayouka, R., Kulomaa, M. S., Livnah, O. & Hytönen, V. P., Mar 2011, In : *Biotechnology and Bioengineering*. 108, 3, p. 481-490 10 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Daculsi, G., Goyenvalle, E., Cognet, R., Aguado, E. & Suokas, E. O., Apr 2011, In : *Biomaterials*. 32, 12, p. 3166-3177 12 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Jagadabhi, P. S., Kaparaju, P. & Rintala, J., Apr 2011, In : *Bioresource Technology*. 102, 7, p. 4726-4733 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Zorzi, G. K., Párraga, J. E., Seijo, B. & Sánchez, A., 7 Jul 2011, In : *MACROMOLECULAR BIOSCIENCE*. 11, 7, p. 905-913 9 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Linko, V., Leppiniemi, J., Paasonen, S. T., Hytönen, V. P. & Jussi Toppari, J., 8 Jul 2011, In : *Nanotechnology*. 22, 27, 275610.

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

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

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

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

**The effect of organic loading rate and retention time on hydrogen production from a methanogenic CSTR**

Pakarinen, O., Kaparaju, P. & Rintala, J., Oct 2011, In : *Bioresource Technology*. 102, 19, p. 8952-8957 6 p.

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

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

Heikkinen, J. J., Kivimäki, L., Määttä, J. A. E., Mäkelä, I., Hakalahti, L., Takkinen, K., Kulomaa, M. S., Hytönen, V. P. & Hormi, O. E. O., 15 Oct 2011, In : *Colloids and Surfaces B: Biointerfaces*. 87, 2, p. 409-414 6 p.

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

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

Amps, K., Andrews, P. W., Anyfantis, G., Armstrong, L., Avery, S., Baharvand, H., Baker, J., Baker, D., Munoz, M. B., Beil, S., Benvenisty, N., Ben-Yosef, D., Biancotti, J. C., Bosman, A., Brena, R. M., Brison, D., Caisander, G., Camarasa, M. V., Chen, J., Chiao, E., Choi, Y. M., Choo, A. B. H., Collins, D., Colman, A., Crook, J. M., Daley, G. Q., Dalton, A., De Sousa, P. A., Denning, C., Downie, J., Dvorak, P., Montgomery, K. D., Feki, A., Ford, A., Fox, V., Fraga, A. M., Frumkin, T., Ge, L., Gokhale, P. J., Golan-Lev, T., Gourabi, H., Gropp, M., Guangxiu, L., Hampl, A., Harron, K., Healy, L., Herath, W., Holm, F., Hovatta, O., Hyllner, J., Inamdar, M. S., Irwanto, A. K., Ishii, T., Jaconi, M., Jin, Y., Kimber, S., Kiselev, S., Knowles, B. B., Kopper, O., Kukhareenko, V., Kuliev, A., Lagarkova, M. A., Laird, P. W., Lako, M., Laslett, A. L., Lavon, N., Lee, D. R., Lee, J. E., Li, C., Lim, L. S., Ludwig, T. E., Ma, Y., Maltby, E., Mateizel, I., Mayshar, Y., Mileikovsky, M., Minger, S. L., Miyazaki, T., Moon, S. Y., Moore, H., Mummery, C., Nagy, A., Nakatsuji, N., Narwani, K., Oh, S. K. W., Oh, S. K., Olson, C., Otonkoski, T., Pan, F., Park, I. H., Pells, S., Pera, M. F., Pereira, L. V., Qi, O., Raj, G. S., Reubinoff, B., Robins, A., Robson, P., Rossant, J., Salekdeh, G. H., Schulz, T. C., Sermon, K., Mohamed, J. S., Shen, H., Sherrer, E., Sidhu, K., Sivarajah, S., Skottman, H., Spits, C., Stacey, G. N., Strehl, R., Strelchenko, N., Suemori, H., Sun, B., Suuronen, R., Takahashi, K., Tuuri, T., Venu, P., Verlinsky, Y., Oostwaard, D. W. V., Weisenberger, D. J., Wu, Y., Yamanaka, S., Young, L. & Zhou, Q., Dec 2011, In : *Nature Biotechnology*. 29, 12, p. 1132-1144 13 p.

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

**Synthesis of depsipeptides from L-amino acids and lactones**

Cao, H., Feng, Y., Wang, H., Zhang, L., Khan, M. & Guo, J., Dec 2011, In : *Frontiers of Chemical Science and Engineering*. 5, 4, p. 409-415 7 p.

Research output: Contribution to journal > Article > 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*.

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

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

Tirkkonen, L., Haimi, S., Huttunen, S., Wolff, J., Pirhonen, E., Sándor, G. K. & Miettinen, S., 2012, In : *European Cells and Materials*. 25, p. 144-158 15 p.

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

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

Mousa, A., Heinrich, G., Kretzschmar, B., Wagenknecht, U. & Das, A., 2012, In : *INTERNATIONAL JOURNAL OF CHEMICAL ENGINEERING*. 121496.

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

#### **Human adipose tissue extract induces angiogenesis and adipogenesis in vitro**

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

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

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

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

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

#### **Highly exfoliated natural rubber/Clay composites by "propping-open procedure": The influence of fatty-acid chain length on exfoliation**

Rooj, S., Das, A., Stöckelhuber, K. W., Reuter, U. & Heinrich, G., Apr 2012, In : Macromolecular Materials and Engineering. 297, 4, p. 369-383 15 p.

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

#### **Structural characteristics and flammability of fire retarding EPDM/layered double hydroxide (LDH) nanocomposites**

Wang, D. Y., Das, A., Leuteritz, A., Mahaling, R. N., Jehnichen, D., Wagenknecht, U. & Heinrich, G., 21 Apr 2012, In : RSC Advances. 2, 9, p. 3927-3933 7 p.

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

#### **Molecular mechanisms of ion-specific effects on proteins**

Rembert, K. B., Paterová, J., Heyda, J., Hilty, C., Jungwirth, P. & Cremer, P. S., 20 Jun 2012, In : Journal of the American Chemical Society. 134, 24, p. 10039-10046 8 p.

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

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

Kousoulidou, M., Ntziachristos, L., Fontaras, G., Martini, G., Dilara, P. & Samaras, Z., Aug 2012, In : Fuel. 98, p. 88-94 7 p.

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

#### **Biomimetic surface modification of polycarbonateurethane film via phosphorylcholine-graft for resisting platelet adhesion**

Gao, W., Feng, Y., Lu, J., Khan, M. & Guo, J., Oct 2012, In : Macromolecular Research. 20, 10, p. 1063-1069 7 p.

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

#### **Fabrication of ssDNA/oligo(ethylene glycol) monolayers and complex nanostructures by an irradiation-promoted exchange reaction**

Khan, M. N., Tjong, V., Chilkoti, A. & Zharnikov, M., 8 Oct 2012, In : Angewandte Chemie (International Edition). 51, 41, p. 10303-10306 4 p.

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

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

Steinhauser, D., Subramaniam, K., Das, A., Heinrich, G. & Klüppel, M., Nov 2012, In : Express Polymer Letters. 6, 11, p. 927-936 10 p.

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

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

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

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

**Improving the effect of a nanoscale barrier coating on BOPP film properties by surface pretreatments**

Lahtinen, K., Lahti, J., Johansson, P., Seppänen, T. & Cameron, D. C., 2013, *14th European PLACE Conference 2013*. TAPPI Press, Vol. 1. p. 469-493 25 p.

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

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

Kulig, W. & Agmon, N., Jan 2013, In : *Nature Chemistry*. 5, 1, p. 29-35 7 p.

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

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

Wang, H., Feng, Y., Zhao, H., Fang, Z., Khan, M. & Guo, J., Feb 2013, In : *Journal Nanoscience and Nanotechnology*. 13, 2, p. 1578-1582 5 p.

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

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

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

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

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

Rasappa, S., Borah, D., Faulkner, C. C., Lutz, T., Shaw, M. T., Holmes, J. D. & Morris, M. A., 15 Feb 2013, In : *Nanotechnology*. 24, 6, 065503.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Mechanisms of acceleration and retardation of water dynamics by ions**

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

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

**Reversible biofunctionalization of surfaces with a switchable mutant of avidin**

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

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

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

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

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

**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

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

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

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

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

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

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

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

Lahti, J., Johansson, P., Lahtinen, K., Cameron, D. C. & Seppänen, T., 2014, *TAPPI PLACE Conference 2014*. TAPPI Press, Vol. 2. p. 1039-1061 23 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**Stimuli-responsive photonic polymer coatings**

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



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

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

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

**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

**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

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

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

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

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

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

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

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

**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

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

**Metals removal and recovery in bioelectrochemical systems: A review**

Nancharaiah, Y. V., Venkata Mohan, S. & Lens, P. N. L., 2015, In : *Bioresource Technology*. 195, p. 102-114 13 p.

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

**Multifunctional ultrasmall nanoplatfoms for vascular-targeted interstitial photodynamic therapy of brain tumors guided by real-time MRI**

Bechet, D., Auger, F., Couleaud, P., Marty, E., Ravasi, L., Durieux, N., Bonnet, C., Plénat, F., Frochot, C., Mordon, S., Tillement, O., Vanderesse, R., Lux, F., Perriat, P., 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

**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

**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

**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

**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

**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

**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

**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

**Multi-stable dynamics of the non-adiabatic repressilator**

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

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

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

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

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

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

Martins, L., Fonseca, J. & Ribeiro, A., 17 Apr 2015, *Proceedings - 2015 IEEE 4th Portuguese Meeting on Bioengineering, ENBENG 2015*. The Institute of Electrical and Electronics Engineers, Inc., 7088854

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › 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

**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

**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

**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

**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

**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

**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

**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

**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

**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

**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. & Konttinen, 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

**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

**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

**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

**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

**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

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

Le, H. H., Parsaker, M., Sriharish, M. N., Henning, S., Menzel, M., Wießner, S., Das, A., Do, Q. K., Heinrich, G. & 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

**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

**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

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

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

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

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

Mäki, A. J., Peltokangas, M., Kreuzer, 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

**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

**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.

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

**A novel generic algorithm for robust physiological signal classification**

Mahdiani, S., Vanhala, J. & Viik, J., 2016, *XIV Mediterranean Conference on Medical and Biological Engineering and Computing 2016: MEDICON 2016, March 31st–April 2nd 2016, Paphos, Cyprus*. Springer Verlag, p. 1038-1043 6 p. (IFMBE Proceedings; vol. 57).

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

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

Mahdiani, S., Jeyhani, V. & Vehkaoja, A., 2016, *IFMBE Proceedings*. Springer Verlag, Vol. 57. p. 151-156 6 p. (IFMBE Proceedings).

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

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

Prakash, M., Peltomäki, T. & Eskola, H., 2016, *XIV Mediterranean Conference on Medical and Biological Engineering and Computing 2016: MEDICON 2016, March 31st–April 2nd 2016, Paphos, Cyprus*. Springer Verlag, p. 430-433 4 p. (IFMBE Proceedings; vol. 57).

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

**Biological and Bioelectrochemical Recovery of Critical and Scarce Metals**

Nancharaiah, 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

**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

**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

**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

**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

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

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > 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

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

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

#### **Nanoscale barrier coating on BOPP packaging film by ALD**

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

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

#### **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

#### **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

#### **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

#### **Remarkable Dependence of the Final Charge Separation Efficiency on the Donor-Acceptor Interaction in Photoinduced Electron Transfer**

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

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

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

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

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

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

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

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Mahlamäki, K., Niemi, A., Jokinen, J. & Borgman, J., 1 Jan 2016, In : *International Journal of COMADEM*. 19, 1, p. 3-10 8 p.

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

#### **Human Adipose Stem Cells Differentiated on Braided Polylactide Scaffolds is a Potential Approach for Tendon Tissue Engineering**

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#### **Metal chalcogenide quantum dots: Biotechnological synthesis and applications**

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#### **Effect of heavy metal co-contaminants on selenite bioreduction by anaerobic granular sludge**

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

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#### **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 high-temperature sulfuric acid solution ageing on the properties of laminated vinyl-ester joints**

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**The Influence of Phosphorus Exposure on a Natural-Gas-Oxidation Catalyst**

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**Designing of Elastomer Nanocomposites: From Theory to Application**

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

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

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

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

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

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

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

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

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

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

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

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**Electrode comparison for textile-integrated electrocardiogram and impedance pneumography measurement**

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**Short-term stability of combined finger and toe photoplethysmogram analysis**

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

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

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

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

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

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

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

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### **Bioamine-crosslinked gellan gum hydrogel for neural tissue engineering**

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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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### **The effects of calcium and potassium on CO<sub>2</sub> gasification of birch wood in a fluidized bed**

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

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

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

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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**

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

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

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

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

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**Oxygen and water vapor transmission rates of starch-poly(vinyl alcohol) barrier coatings for flexible packaging paper**

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**Photodynamic self-disinfecting surface using pyridinium phthalocyanine**

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

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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.

Research output: Contribution to journal › Article › 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, *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. 1065-1068 4 p. (IFMBE Proceedings; vol. 65).

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

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

Koivumäki, J., Zhu, W. H. & Mattila, J., 2018, *BATH/ASME 2018 Symposium on Fluid Power and Motion Control, FPMC 2018*. ASME

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

**Adsorption of furfural from torrefaction condensate using torrefied biomass**

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

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

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

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

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

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

Nurmi, J., Aref, M. M. & Mattila, J., 2018, *BATH/ASME 2018 Symposium on Fluid Power and Motion Control, FPMC 2018*. ASME

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

**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

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

Rezaei Yousefi, Z., Parak, J., Tarniceriu, A., Harju, J., Yli-Hankala, A., Korhonen, I. & Vehkaoja, A., 2018, *World Congress on Medical Physics and Biomedical Engineering 2018*. Springer, Vol. 2. p. 399-404 6 p. (IFMBE Proceedings; vol. 68).

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, *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. 635-638 4 p. (IFMBE Proceedings; vol. 65).

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

**Auto-regression-driven, reallocation 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

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

Lampinen, S., Koivumäki, J. & Mattila, J., 2018, *BATH/ASME 2018 Symposium on Fluid Power and Motion Control, FPMC 2018*. ASME

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

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

Ojansivu, M., Wang, X., Hyväri, L., Kellomäki, M., Hupa, L., Vanhatupa, S. & Miettinen, S., 2018, In : *European Cells and Materials*. 35, p. 53-71 19 p.

Research output: Contribution to journal > Article > 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

**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, *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. 153-156 4 p. (IFMBE Proceedings; vol. 65).

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

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

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

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

### **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, *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. 282-285 4 p. (IFMBE Proceedings; vol. 65).

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

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

Välkangas, 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

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

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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., Kähkönen, M., Lázaro, J., Lehtinen, R., Nieminen, T., Nikus, K., Lehtimäki, T., Bailón, R. & 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*. Springer Verlag, p. 270-273 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**

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

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

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

### **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

### **Direct position control of electro-hydraulic excavator**

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

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

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

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

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

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#### **Effects of nitroglycerin to ballistocardiography by EMFI**

Alametsä, J. & Viik, J., 2018, *World Congress on Medical Physics and Biomedical Engineering 2018*. Springer, Vol. 2. p. 541-545 5 p. (IFMBE Proceedings; vol. 68).

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

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

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#### **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

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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

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

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

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

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

Mäkinen, P., Dmitrochenko, O. & Mattila, J., 2018, *BATH/ASME 2018 Symposium on Fluid Power and Motion Control, FPMC 2018*. ASME

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

Vuorinen, T., Laurila, M. M., Mangayil, R., Karp, M. & Mäntysalo, 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. 839-842 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, *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. 587-590 4 p. (IFMBE Proceedings; vol. 65).

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

#### **Identification of feasible pathway information for c-di-GMP binding proteins in cellulose production**

Hassan, S. S., Mangayil, R., Aho, T., Yli-Harja, O. & Karp, 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. 667-670 4 p. (IFMBE Proceedings; vol. 65).

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

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

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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

#### **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, *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. 1077-1080 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

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

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

Jokinen, V. I., Korpela, J., Lehtinen, E., Perttunen, J. & 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*. Springer Verlag, p. 125-128 4 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, *EMBEC and NBC 2017 - Joint Conference of the European Medical and Biological Engineering Conference EMBEC 2017 and the Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, NBC 2017*. Springer Verlag, Vol. 65. p. 815-818 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

#### **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

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

Tunninen, V., Kauppinen, T. & Eskola, 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. 847-851 5 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, *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. 583-586 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**

Kaappa, E. S., Joutsen, A. S. & Vanhala, 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. 237-240 4 p. (IFMBE Proceedings; vol. 65).

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

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

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

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

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

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

#### **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, *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. 811-814 4 p. (IFMBE Proceedings; vol. 65).

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

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

Ryynänen, T. & 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. 5-8 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

#### **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

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

Alametsä, J. & 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*. Springer Verlag, p. 1117-1120 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).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

#### **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

**A Ceramide-Regulated Element in the Late Endosomal Protein LAPT4B 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

**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

**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

**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

**Effects of wastewater constituents and operational conditions on the composition and dynamics of anodic microbial communities in bioelectrochemical systems**

Kokko, M., Epple, S., Gescher, J. & Kerzenmacher, S., 1 Jun 2018, In : Bioresource Technology. 258, p. 376-389 14 p.

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

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

Kaunisto, K., Kotilainen, M., Karhu, M., Lagerbom, J., Vuorinen, T., Honkanen, M., Vippola, M. & Turunen, E., 1 Jun 2018, In : Ceramics International. 44, 8, p. 9338-9346

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

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

Siljander, S., Keinänen, P., Rätty, A., Ramakrishnan, K. R., Tuukkanen, S., Kunnari, V., Harlin, A., Vuorinen, J. & Kanerva, M., 20 Jun 2018, In : International Journal of Molecular Sciences. 19, 6, 1819.

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**Fluid flow simulations meet high-speed video: Computer vision comparison of droplet dynamics**

Kulju, S., Riegger, L., Koltay, P., Mattila, K. & Hyvältuoma, J., 15 Jul 2018, In : Journal of Colloid and Interface Science. 522, p. 48-56 9 p.

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

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

Rajala, S., Schouten, M., Krijnen, G. & Tuukkanen, S., 23 Jul 2018, In : ACS Omega. 3, 7, p. 8067-8073 7 p.

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

**A new method to optimize natural convection heat sinks**

Lampio, K. & Karvinen, R., Aug 2018, In : Heat and Mass Transfer/Waerme- und Stoffuebertragung. 54, 8, p. 2571-2580

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

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

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

Mandal, S., Garcia Iglesias, M., Ince, M., Torres, T. & Tkachenko, N. V., 31 Aug 2018, In : ACS Omega. 3, 8, p. 10048-10057 10 p.

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

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

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

#### **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**

Eregowda, T., Matanhike, L., Rene, E. R. & Lens, P. N. L., 1 Sep 2018, In : Bioresource Technology. 263, p. 591-600 10 p.

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

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

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

Dessi, P., Porca, E., Lakaniemi, A-M., Collins, G. & Lens, P. N. L., 15 Sep 2018, In : Biochemical Engineering Journal. 137, p. 214-221 8 p.

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

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

Martins, D. P., Leetanasaksakul, K., Barros, M. T., Thamchaipenet, A., Donnelly, W. & Balasubramaniam, S., Oct 2018, In : IEEE Transactions on Nanobioscience. 17, 4, p. 533-542 12 p.

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

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

Pihlman, H., Keränen, P., Paakinaho, K., Linden, J., Hannula, M., Manninen, I. K., Hyttinen, J., Manninen, M. & Laitinen-Vapaavuori, O., 1 Oct 2018, In : Journal of Materials Science: Materials in Medicine. 29, 10, 156.

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

Huttunen-Saarivirta, E., Isotahdon, E., Metsäjoki, J., Salminen, T., Carpén, L. & Ronkainen, H., 1 Nov 2018, In : Corrosion Science. 144, p. 207-223 17 p.

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

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

Nogueira, I. B. R., Faria, R. P. V., Requião, R., Koivisto, H., Martins, M. A. F., Rodrigues, A. E., Loureiro, J. M. & Ribeiro, A. M., 2 Nov 2018, In : Computers and Chemical Engineering. 119, p. 371-382 12 p.

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

Chevrier, D. M., Raich, L., Rovira, C., Das, A., Luo, Z., Yao, Q., Chatt, A., Xie, J., Jin, R., Akola, J. & Zhang, P., 14 Nov 2018, In : Journal of the American Chemical Society. 140, 45, p. 15430-15436 7 p.

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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**

Sakai, H., Inaya, R., Tkachenko, N. V. & Hasobe, T., 16 Nov 2018, In : *Chemistry - A European Journal*. 24, 64, p. 17062-17071 10 p.

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

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

Rimpiläinen, T., Andrade, J., Nunes, A., Ntungwe, E., Fernandes, A. S., Vale, J. R., Rodrigues, J., Gomes, J. P., Rijo, P. & Candeias, N. R., 29 Nov 2018, In : *ACS Omega*. 3, 11, p. 16191-16202 12 p.

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

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

Gasik, M., Zühlke, A., Haaparanta, A-M., Muhonen, V., Laine, K., Bilotsky, Y., Kellomäki, M. & Kiviranta, I., 30 Nov 2018, In : *Frontiers in Bioengineering and Biotechnology*. 6, NOV, 187.

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

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

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

Mänttari, S. K., Oksa, J. A. H., Virkkala, J. & Pietilä, J. A. K., 2019, In : *Safety and Health at Work*.

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

Soltani, A., Lahti, J., Järvelä, K., Laurikka, J., Kuokkala, V. T. & Hokka, M., 2019, In : *COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING*. 12 p.

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

Sankelo, P., Jokisalo, J., Nyman, J., Vinha, J. & Sirén, K., 2019, In : *International Journal of Sustainable Energy*. 38, 2, p. 104-122 19 p.

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#### **$\mu$ CT 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).

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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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#### **Effect of apartment building energy renovation on hourly power demand**

Hirvonen, J., Jokisalo, J., Heljo, J. & Kosonen, R., 2019, In : *International Journal of Sustainable Energy*.

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

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### **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).

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### **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

### **High-speed production of antibacterial fabrics using liquid flame spray**

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

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

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

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

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

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

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### **Nanocellulose and Polylactic Acid Based Multilayer Coatings for Barrier Applications**

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

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

Chen, X., Ukkonen, L. & Virkki, J., 2019, In : *Textile Research Journal*. 89, 4

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

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

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

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

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

Hirvonen, J., Jokisalo, J., Heljo, J. & Kosonen, R., 2019, In : International Journal of Sustainable Energy. 38, 7

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

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

Kuroda, K., Yazaki, K., Tanaka, Y., Akita, M., Sakai, H., Hasobe, T., Tkachenko, N. V. & Yoshizawa, M., Jan 2019, In : Angewandte Chemie - International Edition. 58, 4, p. 1115-1119

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

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

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

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

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

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

Luo, J., Lehtinen, T., Efimova, E., Santala, V. & Santala, S., 11 Mar 2019, In : Microbial Cell Factories. 18, 1, 13 p., 48.

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

Manna, M., Nieminen, T. & Vattulainen, I., 6 May 2019, In : ANNUAL REVIEW OF BIOPHYSICS. 48, p. 421-439 19 p.

Research output: Contribution to journal › Review Article › 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).

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

Sautter, J. D., Xu, L., Miroshnichenko, A. E., Lysevych, M., Volkovskaya, I., Smirnova, D. A., Camacho-Morales, R., Zangeneh Kamali, K., Karouta, F., Vora, K., Tan, H. H., Kauranen, M., Staude, I., Jagadish, C., Neshev, D. N. & Rahmani, M., 12 Jun 2019, In : Nano Letters. 19, 6, p. 3905-3911 7 p.

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

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

Jackson, T., Shenkin, A., Moore, J., Bunce, A., van Emmerik, T., Kane, B., Burcham, D., James, K., Selker, J., Calders, K., Origo, N., Disney, M., Burt, A., Wilkes, P., Raunonen, P., Gonzalez de Tanago Menaca, J., Lau, A., Herold, M., Goodman, R. C., Fourcaud, T. & Malhi, Y., 28 Jun 2019, In : Journal of the Royal Society. Interface. 16, 155, 1 p.

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

Kezilebieke, S., Žitko, R., Dvorak, M., Ojanen, T. & Liljeroth, P., 10 Jul 2019, In : Nano Letters. 19, 7, p. 4614-4619 6 p.

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

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

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

### **Photochemistry of dithiophosphate $\text{Ni}(\text{S}_2\text{P}(\text{i-Bu})_2)_2$ complex in $\text{CCl}_4$ . 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.

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

### **Characterisation and in vitro and in vivo evaluation of supercritical-CO<sub>2</sub>-foamed $\beta$ -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.

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

### **Chlorine induced high-temperature corrosion mechanisms in HVOF and HVOF sprayed $\text{Cr}_3\text{C}_2$ -based hardmetal coatings**

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

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

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

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

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

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

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

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

Haavisto, J., Dessì, P., Chatterjee, P., Honkanen, M., Noori, M. T., Kokko, M., Lakaniemi, A. M., Lens, P. N. L. & Puhakka, J. A., 15 Sep 2019, In : *Chemical Engineering Journal*. 372, p. 141-150 10 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

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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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**Applications of nanocellulose/nanocarbon composites: Focus on biotechnology and medicine**

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

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

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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**

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

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

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#### **Investigation of well-defined pinholes in TiO<sub>2</sub> electron selective layers used in planar heterojunction perovskite solar cells**

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

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#### **Mixed carbon substrates: a necessary nuisance or a missed opportunity?**

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

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

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

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

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**Optimization of photogenerated charge carrier lifetimes in air grown TiO<sub>2</sub> for photonic applications**

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**Formation of corrosion products on zinc in wet supercritical and subcritical CO<sub>2</sub>: In-situ spectroscopic study**

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