

#### **Impact of heavy metals on denitrification of simulated mining wastewaters**

Zou, G., Ylinen, A., Di Capua, F., Papirio, S., Lakaniemi, A-M. & Puhakka, J., 2013, In : *Advanced Materials Research*. 825, p. 500-503 4 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](#)

#### **High rate autotrophic denitrification in fluidized-bed biofilm reactors**

Zou, G., Papirio, S., Lakaniemi, A-M., Ahoranta, S. H. & Puhakka, J. A., 2016, In : *Chemical Engineering Journal*. 284, p. 1287-1294

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

#### **Biological Nitrogen Removal from Acidic, Heavy-metal Containing Waters**

Zou, G., 2015, Tampere: Tampere University of Technology. 92 p. (Tampere University of Technology. Publication; vol. 1314)

Research output: [Book/Report](#) > [Doctoral thesis](#) > [Collection of Articles](#)

#### **Resilient performance of an anoxic biotrickling filter for hydrogen sulphide removal from a biogas mimic: Steady, transient state and neural network evaluation**

Watsuntorn, W., Khanongnuch, R., Chulalaksananukul, W., Rene, E. R. & Lens, P. N. L., 18 Nov 2019, In : *Journal of Cleaner Production*. p. 119351

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

#### **High Nitrogen Removal in a Constructed Wetland Receiving Treated Wastewater in a Cold Climate**

Uusheimo, S., Huotari, J., Tulonen, T., Aalto, S. L., Rissanen, A. J. & Arvola, L., 20 Nov 2018, In : *Environmental science & technology*. 52, 22, p. 13343-13350 8 p.

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#### **Quantifying the pore structure of different biochars and their impacts on the water retention properties of Sphagnum moss growing media**

Turunen, M., Hyväluoma, J., Heikkinen, J., Keskinen, R., Kaseva, J., Hannula, M. & Rasa, K., 2020, In : *Biosystems Engineering*. 191, p. 96-106 11 p.

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

#### **Method with high-throughput screening potential for antioxidative substances using Escherichia coli biosensor katG':lux**

Tienaho, J., Sarjala, T., Franzén, R. & Karp, M., 2015, In : *Journal of Microbiological Methods*. 118, p. 78-80 3 p., 4723.

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

#### **Detecting bioavailable toxic metals and metalloids from natural water samples using luminescent sensor bacteria**

Tauriainen, S. M., Virta, M. P. J. & Karp, M. T., Jul 2000, In : *Water Research*. 34, 10, p. 2661-2666 6 p.

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

#### **Biological treatment of selenium-laden wastewater containing nitrate and sulfate in an upflow anaerobic sludge bed reactor at pH 5.0**

Tan, L. C., Nancharaiah, Y. V., Lu, S., van Hullebusch, E. D., Gerlach, R. & Lens, P. N. L., 1 Nov 2018, In : *Chemosphere*. 211, p. 684-693 10 p.

Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

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Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

**Use of laboratory anaerobic digesters to simulate the increase of treatment rate in full-scale high nitrogen content sewage sludge and co-digestion biogas plants**

Tampio, E., Ervasti, S., Paavola, T. & Rintala, J., 2016, In : *Bioresource Technology*. 220, p. 47-54 8 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

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**Reduced Inorganic Sulfur Compounds of Simulated Mining Waters Support Bioelectrochemical and Electrochemical Current Generation**

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Research output: Chapter in Book/Report/Conference proceeding › Chapter › 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.  
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Research output: Book/Report › Doctoral thesis › Collection of Articles

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### **Fluorination of pyrene-based organic semiconductors enhances the performance of light emitting diodes and halide perovskite solar cells**

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

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

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

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

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

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**Stable carbon isotopic composition of peat columns, subsoil and vegetation on natural and forestry-drained boreal peatlands**

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

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

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**Characterization of fine fraction mined from two Finnish landfills**

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**Gene expression profiles of *Vibrio parahaemolyticus* in viable but non-culturable state**

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

**Impact of film thickness of ultra-thin dip-coated compact TiO<sub>2</sub> layers on the performance of mesoscopic perovskite solar cells**

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

**Cultivation and safety aspects of *Arthrospira platensis* (Spirulina) grown with struvite recovered from anaerobic digestion plant as phosphorus source**

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

**Lipid production by eukaryotic microorganisms isolated from palm oil mill effluent**

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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.

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Marjakangas, J. M., Chen, C-Y., Lakaniemi, A-M., Puhakka, J. A., Whang, L-M. & Chang, J-S., Sep 2015, In : *Bioresource Technology*. 191, p. 369-376 8 p.

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

**Production of Oleaginous Microbial Biomass by Reusing Wastewaters**

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

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**Methane oxidation potential of boreal landfill cover materials: The governing factors and enhancement by nutrient manipulation**

Maanoja, S. T. & Rintala, J. A., 2015, In : *Waste Management*. 46, p. 399-407 9 p.

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

**Factors affecting the elimination capacity of a passive methane biofilter**

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**Compacted bentonite as a source of substrates for sulfate-reducing microorganisms in a simulated excavation-damaged zone of a spent nuclear fuel repository**

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**Recovering Nitrogen as a Solid without Chemical Dosing: Bio-Electroconcentration for Recovery of Nutrients from Urine**  
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Research output: Contribution to journal › Article › Scientific › peer-review

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**Sub- and Supercritical Water Liquefaction of Kraft Lignin and Black Liquor Derived Lignin**

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**Production of Electricity and Butanol from Microalgal Biomass in Microbial Fuel Cells**

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

**Mine wastewater treatment using *Phalaris arundinacea* plant material hydrolyzate as substrate for sulfate-reducing bioreactor**

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**Growth of *Dunaliella tertiolecta* and associated bacteria in photobioreactors**

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

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

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**Biomass Resource Allocation for Bioenergy Production on Cutaway Peatlands with Geographical Information (GI) Analyses**

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

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**Clashing coalitions: A discourse analysis of an artificial groundwater recharge project in Finland**

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

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

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**Methane production from 30-100 year old sedimented fibre from pulp and paper industry**

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Research output: Other conference contribution > Paper, poster or abstract > Scientific

**Mesophilic anaerobic digestion of pulp and paper industry biosludge-long-term reactor performance and effects of thermal pretreatment**

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**Vesihuolto tarvitsee tutkimusta ja koulutusta**

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**Metabolic engineering of Acinetobacter baylyi ADP1 for improved growth on gluconate and glucose**

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

**Metabolic engineering of Acinetobacter baylyi ADP1 for removal of Clostridium butyricum growth inhibitors produced from lignocellulosic hydrolysates**

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

**Culturable psychrotolerant methanotrophic bacteria in landfill cover soil**

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

**UV-Blocking Synthetic Biopolymer from Biomass-Based Bifuran Diester and Ethylene Glycol**

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### **Water supply and sanitation services in finland before world war 2**

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

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

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

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

### **Uranium Removal via Sorption Using Peat and Waste Digested Activated Sludge**

Jain, R., Lakaniemi, A-M., Peräniemi, S., Kankkunen, J., Turunen, J. & Vepsäläinen, J., 2017.

Research output: Other conference contribution > Paper, poster or abstract > Scientific

### **Use of diluted urine for cultivation of *Chlorella vulgaris***

Jaatinen, S., Lakaniemi, A-M. & Rintala, J., 2016, In : Environmental Technology. 37, 9, p. 1159-1170 12 p.

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

### **Energy Demands of Nitrogen Supply in Mass Cultivation of Two Commercially Important Microalgal Species, *Chlorella vulgaris* and *Dunaliella tertiolecta***

Hulatt, C. J., Lakaniemi, A-M., Puhakka, J. A. & Thomas, D. N., 2012, In : BioEnergy Research. 5, 3, p. 669-684

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

### **Enabling and Integrative Infrastructure Policy: The Role of Inverse Infrastructures in Local Infrastructure Provision with Special Reference to Finnish Water Cooperatives**

Heino, O. & Anttiroiko, A-V., 28 Nov 2014, MPRA. (MPRA Paper; no. 60276)

Research output: Book/Report > Commissioned report > Professional

### **Storing of exoelectrogenic anolyte for efficient microbial fuel cell recovery**

Haavisto, J. M., Lakaniemi, A-M. & Puhakka, J. A., 2019, In : Environmental Technology. 40, 11

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

### **Bi-directional cell-pericellular matrix interactions direct stem cell fate**

Ferreira, S. A., Motwani, M. S., Faull, P. A., Seymour, A. J., Yu, T. T. L., Enayati, M., Taheem, D. K., Salzlechner, C., Haghghi, T., Kania, E. M., Oommen, O. P., Ahmed, T., Loaiza, S., Parzych, K., Dazzi, F., Varghese, O. P., Festy, F., Grigoriadis, A. E., Auner, H. W., Snijders, A. P., Bozec, L. & Gentleman, E., Dec 2018, In : Nature Communications. 9, 1, 12 p., 4049.

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.

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

### **Anaerobic batch conversion of pine wood torrefaction condensate**

Doddapaneni, T. R. K. C., Praveenkumar, R., Tolvanen, H., Palmroth, M. R. T., Konttinen, J. & Rintala, J., Feb 2017, In : Bioresource Technology. 225, p. 299-307 9 p.

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

### **High-rate thiosulfate-driven denitrification at pH lower than 5 in fluidized-bed reactor**

Di Capua, F., Lakaniemi, A-M., Puhakka, J. A., Lens, P. N. L. & Esposito, G., Feb 2017, In : Chemical Engineering Journal. 310, Part 1, p. 282-291 10 p.

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



**Synthesis, crystal structure, physico-chemical characterization and dielectric properties of a new hybrid material, 1-Ethylpiperazine-1,4-dium tetrachlorocadmate**

Dhieb, A. C., Valkonen, A., Rzaigui, M. & Smirani, W., 15 Dec 2015, In : Journal of Molecular Structure. 1102, p. 50-56 7 p.

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

**Inhibitory effects of substrate and soluble end products on biohydrogen production of the alkalithermophile *Caloramator celer*: Kinetic, metabolic and transcription analyses**

Ciranna, A., Ferrari, R., Santala, V. & Karp, M., 15 Apr 2014, In : International Journal of Hydrogen Energy. 39, 12, p. 6391-6401 11 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

**Remediation of sedimented fiber originating from pulp and paper industry: Laboratory scale anaerobic reactor studies and ideas of scaling up**

Chatterjee, P., Lahtinen, L., Kokko, M. & Rintala, J., 15 Oct 2018, In : Water Research. 143, p. 209-217 9 p.

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

**Selective enrichment of biocatalysts for bioelectrochemical systems: A critical review**

Chatterjee, P., Dessi, P., Kokko, M., Lakaniemi, A-M. & Lens, P., Jul 2019, In : Renewable and Sustainable Energy Reviews. 109, p. 10-23 14 p.

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

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

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

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

**Microbial electrochemical technologies with the perspective of harnessing bioenergy: Maneuvering towards upscaling**

Butti, S. K., Velvizhi, G., Sulonen, M. L. K., Haavisto, J. M., Oguz Koroglu, E., Yusuf Cetinkaya, A., Singh, S., Arya, D., Annie Modestra, J., Vamsi Krishna, K., Verma, A., Ozkaya, B., Lakaniemi, A-M., Puhakka, J. A. & Venkata Mohan, S., Jan 2016, In : Renewable and Sustainable Energy Reviews. 53, p. 462-476

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

**Structural photoactivation of a full-length bacterial phytochrome**

Björling, A., Bertsson, O., Lehtivuori, H., Takala, H., Hughes, A. J., Panman, M., Hoernke, M., Niebling, S., Henry, L., Henning, R., Kosheleva, I., Chukharev, V., Tkachenko, N. V., Menzel, A., Newby, G., Khakhulin, D., Wulff, M., A. Ihalainen, J. & Westenhoff, S., 12 Aug 2016, In : Science Advances. 2, 8, 9 p., e1600920.

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

**Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> nanosystems by a hybrid PE-CVD/ALD approach: controllable synthesis, growth mechanism, and photocatalytic properties**

Barreca, D., Carraro, G., Warwick, M. E. A., Kaunisto, K., Gasparotto, A., Gombac, V., Sada, C., Turner, S., Van Tendeloo, G., Maccato, C. & Fornasiero, P., 28 Aug 2015, In : CrystEngComm. 17, 32, p. 6219-6226 8 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

#### **Sensory properties of Nordic edible mushrooms**

Aisala, H., Laaksonen, O., Manninen, H., Raittola, A., Hopia, A. & Sandell, M., 1 Jul 2018, In : Food Research International. 109, p. 526-536 11 p.

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

#### **Formation and use of biogenic jarosite carrier for high-rate iron oxidising biofilms**

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

#### **Resistant ammonia-oxidizing archaea endure, but adapting ammonia-oxidizing bacteria thrive in boreal lake sediments receiving nutrient-rich effluents**

Aalto, S. L., Saarenheimo, J., Mikkonen, A., Rissanen, A. J. & Tirola, M., 2018, In : Environmental Microbiology. 20, 10, p. 3616-3628 13 p.

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