

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

Liu, N., Santala, S. & Stephanopoulos, G., 1 Apr 2020, In : CURRENT OPINION IN BIOTECHNOLOGY. 62, p. 15-21 7 p.
Research output: Contribution to journal > Review Article > Scientific > peer-review

Linking volatile and non-volatile compounds to sensory profiles and consumer liking of wild edible Nordic mushrooms

Aisala, H., Manninen, H., Laaksonen, T., Linderborg, K. M., Myoda, T., Hopia, A. & Sandell, M., 30 Jan 2020, In : Food Chemistry. 304, 125403.

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

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

Dessi, P., Chatterjee, P., Mills, S., Kokko, M., Lakaniemi, A-M., Collins, G. & Lens, P. N. L., 1 Dec 2019, In : Bioresource Technology. 294, 122115.

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

Programmable responsive hydrogels inspired by classical conditioning algorithm

Zhang, H., Zeng, H., Priimägi, A. & Ikkala, O., 1 Dec 2019, In : Nature Communications. 10, 1, 3267.

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

Anaerobic treatment of LCFA-containing synthetic dairy wastewater at 20°C: Process performance and microbial community dynamics

Singh, S., Rinta-Kanto, J. M., Kettunen, R., Tolvanen, H., Lens, P., Collins, G., Kokko, M. & Rintala, J., 15 Nov 2019, In : Science of the Total Environment. 691, p. 960-968 9 p.

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

Lewis Base-Catalyzed Modification of Ortho-Substituted Phenols

Assoah, B., 15 Nov 2019, Tampere University. 76 p. (Tampere University Dissertations; vol. 160)

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

Miniature CoCr laser welds under cyclic shear: Fatigue evolution and crack growth

Kanerva, M., Besharat, Z., Pärnänen, T., Jokinen, J., Honkanen, M., Sarlin, E., Göthelid, M. & Schlenzka, D., 1 Nov 2019, In : Journal of the Mechanical Behavior of Biomedical Materials. 99, p. 93-103 11 p.

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

Effects of elevated pressures on the activity of acidophilic bioleaching microorganisms

Hajdu-Rahkama, R., Ahoranta, S., Lakaniemi, A-M. & Puhakka, J. A., 15 Oct 2019, In : Biochemical Engineering Journal. 150, 107286.

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

Utilizing mixed-mineralogy ferroan magnesite tailings as the source of magnesium oxide in magnesium potassium phosphate cement

Ismailov, A., Merilaita, N., Solismaa, S., Karhu, M. & Levänen, E., 9 Oct 2019, In : Construction and building materials. 231, 117098.

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

Saegusa, T., Sakai, H., Nagashima, H., Kobori, Y., Tkachenko, N. V. & Hasobe, T., 18 Sep 2019, In : Journal of the American Chemical Society. 141, 37, p. 14720-14727 8 p.

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

Effects of nanofibrillated cellulose hydrogels on adipose tissue extract and hepatocellular carcinoma cell spheroids in freeze-drying

Auvinen, V.-V., Merivaara, A., Kiiskinen, J., Paukkonen, H., Laurén, P., Hakkarainen, T., Koivuniemi, R., Sarkanen, R., Ylikomi, T., Laaksonen, T. & Yliperttula, M., 15 Sep 2019, In : *Cryobiology*.

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

Antibacterial polymer fibres by rosin compounding and melt-spinning

Kanerva, M., Puolakka, A., Takala, T. M., Elert, A. M., Mylläri, V., Jönkkäri, I., Sarlin, E., Seitsonen, J., Ruokolainen, J., Saris, P. & Vuorinen, J., Sep 2019, In : *Materials Today Communications*. 20, 100527.

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

Critical Sensitizer Quality Attributes for Efficient Triplet–Triplet Annihilation Upconversion with Low Power Density Thresholds

Durandin, N., Isokuortti, J., Efimov, A., Vuorimaa-Laukkanen, E., Tkachenko, N. V. & Laaksonen, T., 26 Aug 2019, In : *Journal of Physical Chemistry C*. 123, 37, p. 22865–22872

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

Nano-structured TiO₂ grown by low-temperature reactive sputtering for planar perovskite solar cells

Alberti, A., Smecca, E., Sanzaro, S., Bongiorno, C., Giannazzo, F., Mannino, G., La Magna, A., Liu, M., Vivo, P., Listorti, A., Calabro', E., Matteocci, F. & Di Carlo, A., 16 Aug 2019, In : *ACS Applied Energy Materials*. 2, 9, p. 6218-6229 12 p.

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

Chlorine induced high-temperature corrosion mechanisms in HVOF and HVOF sprayed Cr₃C₂-based hardmetal coatings

Fantozzi, D., Matikainen, V., Uusitalo, M., Koivuluoto, H. & Vuoristo, P., 14 Aug 2019, In : *Corrosion Science*. 108166.

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

Alkane and wax ester production from lignin-related aromatic compounds

Salmela, M., Lehtinen, T., Efimova, E., Santala, S. & Santala, V., 1 Aug 2019, In : *Biotechnology and Bioengineering*. 116, 8, p. 1934-1945 12 p.

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

Photochemistry of dithiophosphate Ni(S₂P(i-Bu)₂)₂ complex in CCl₄. 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

Pyrolytic behavior of lignocellulosic-based polysaccharides

Ghalibaf, M., Doddapaneni, T. R. K. C. & Alén, R., Jul 2019, In : *Journal of Thermal Analysis and Calorimetry*. 137, 1, p. 121-131

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

Photocontrol of Supramolecular Azo-Containing Block Copolymer Thin Films during Dip-Coating: Toward Nanoscale Patterned Coatings

Vapaavuori, J., Grosrenaud, J., Siiskonen, A., Priimägi, A., Pellerin, C. & Bazuin, C. G., 28 Jun 2019, In : *ACS Applied Nano Materials*. 2, 6, p. 3526-3537 12 p.

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

Photoreversible Soft Azo Dye Materials: Toward Optical Control of Bio-Interfaces

Chang, V. Y., Fedele, C., Priimägi, A., Shishido, A. & Barrett, C. J., 29 May 2019, In : *Advanced Optical Materials*. p. 1900091

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

Lasing in Ni Nanodisk Arrays

Pourjamal, S., Hakala, T. K., Nečada, M., Freire-Fernández, F., Kataja, M., Rekola, H., Martikainen, J. P., Törmä, P. & Van Dijken, S., 28 May 2019, In : *ACS Nano*. 13, 5, p. 5686-5692 7 p.

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

Photoinduced Charge Transfer Processes at Organic-Semiconductor Interfaces

Virkki, K., 24 May 2019, Tampere University. 55 p. (Tampere University Dissertations; vol. 67)

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

Bioinspired Light Robots from Liquid Crystal Networks

Wani, O., 17 May 2019, Tampere University. 70 p. (Tampere University Dissertations; vol. 64)

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

Dopant-free hole-transporting materials via thionation approach towards stable and efficient perovskite solar cells

Liu, M. & Vivo, P., 12 May 2019.

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

Long-term performance evaluation of an anoxic sulfur oxidizing moving bed biofilm reactor under nitrate limited conditions

Khanongnuch, R., Di Capua, F., Lakaniemi, A-M., Rene, E. R. & Lens, P., 29 Apr 2019, In : Environmental Science: Water Research & Technology. 5, 6, p. 1072-1081

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

Halide Perovskite Nanocrystals for Next-Generation Optoelectronics

Liu, M., Zhang, H., Gedamu, D., Fourmont, P., Rekola, H., Hiltunen, A., Cloutier, S. G., Nechache, R., Priimägi, A. & Vivo, P., 23 Apr 2019, In : Small. 1900801.

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

H₂S removal and microbial community composition in an anoxic biotrickling filter under autotrophic and mixotrophic conditions

Khanongnuch, R., Di Capua, F., Lakaniemi, A-M., Rene, E. R. & Lens, P., 5 Apr 2019, In : Journal of Hazardous Materials. 367, p. 397-406

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

GIS-data related route optimization, hierarchical clustering, location optimization, and kernel density methods are useful for promoting distributed bioenergy plant planning in rural areas

Laasasenaho, K., Lensu, A., Lauhanen, R. & Rintala, J., 1 Apr 2019, In : Sustainable Energy Technologies and Assessments. 32, p. 47-57 11 p.

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

Impacts of short-term temperature fluctuations on biohydrogen production and resilience of thermophilic microbial communities

Okonkwo, O., Escudié, R., Bernet, N., Mangayil, R., Lakaniemi, A-M. & Trably, E., 29 Mar 2019, In : International Journal of Hydrogen Energy. 44, 16, p. 8028-8037

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

Thiocyanate precursor impact on the formation of cobalt complexes: Synthesis and characterization

Hannachi, A., Valkonen, A., Rzaigui, M. & Smirani, W., 15 Mar 2019, In : Polyhedron. 161, p. 222-230

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

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.

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

Vertical stratification of bacteria and archaea in sediments of a small boreal humic lake

Rissanen, A. J., Peura, S., Mpamah, P. A., Taipale, S., Tirola, M., Biasi, C., Mäki, A. & Nykänen, H., 1 Mar 2019, In : FEMS Microbiology Letters. 366, 5

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

Quantitative Sequential Photoenergy Conversion Process from Singlet Fission to Intermolecular Two-Electron Transfers Utilizing Tetracene Dimer

Nakamura, S., Sakai, H., Nagashima, H., Kobori, Y., Tkachenko, N. V. & Hasobe, T., 11 Jan 2019, In : ACS Energy Letters. 4, 1, p. 26-31 6 p.

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

The economics of renewable CaC_2 and C_2H_2 production from biomass and CaO

Pääkkönen, A., Tolvanen, H. & Kokko, L., 1 Jan 2019, In : Biomass and Bioenergy. 120, p. 40-48 9 p.

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

An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks

Wani, O. M., Verpaalen, R., Zeng, H., Priimagi, A. & Schenning, A. P. H. J., Jan 2019, In : Advanced Materials. 31, 2, 1805985.

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

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

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

Charge carrier dynamics in tantalum oxide overlayers and tantalum doped hematite photoanodes

Ruoko, T-P., Hiltunen, A., Iivonen, T., Ulkuniemi, R., Lahtonen, K., Ali-Löyty, H., Mizohata, K., Valden, M., Leskelä, M. & Tkachenko, N. V., Jan 2019, In : Journal of Materials Chemistry A. 7, 7, p. 3206-3215 10 p.

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

Acetotrophic Activity Facilitates Methanogenesis from LCFA at Low Temperatures: Screening from Mesophilic Inocula

Singh, S., Rinta-Kanto, J., Kettunen, R., Lens, P., Collins, G., Kokko, M. & Rintala, J., 2019, In : ARCHAEA. 2019, 1751783.

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

Bio-hydrogen Production from Sewage Sludge: Screening for Pretreatments and Semi-continuous Reactor Operation

El-Qelish, M., Chatterjee, P., Dessì, P., Kokko, M., El-Gohary, F., Abo-Aly, M. & Rintala, J., 2019, In : Waste and Biomass Valorization.

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

Charge transfer dynamics in CsPbBr_3 perovskite quantum dots-anthraquinone/fullerene (C_{60}) hybrids

Mandal, S., George, L. & Tkachenko, N. V., 2019, In : Nanoscale. 11, 3, p. 862-869 8 p.

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

Effect of macro- and micro-nutrients addition during anaerobic mono-digestion of grass silage in leach-bed reactors

Jagadabhi, P. S., Kaparaju, P., Väisänen, A. & Rintala, J., 2019, In : Environmental Technology. 40, 4, p. 418-429 12 p.

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

Exclusive occurrence of photoinduced energy transfer and switching of its direction by rectangular π -extension of nanographenes

Umeyama, T., Hanaoka, T., Yamada, H., Namura, Y., Mizuno, S., Ohara, T., Baek, J., Park, J., Takano, Y., Stranius, K., Tkachenko, N. V. & Imahori, H., 2019, In : Chemical Science. 10, 27, p. 6642-6650 9 p.

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

Influence of titanium dioxide surface activation on the performance of mesoscopic perovskite solar cells

Masood, M. T., Weinberger, C., Qudsia, S., Rosqvist, E., Sandberg, O., Nyman, M., Sänden, S., Vivo, P., Aitola, K., Lund, P. D., Österbacka, R. & Smått, J-H., 2019, In : Thin Solid Films. 686, 137418.

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

Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation

Shin, M., Kim, J., Jung, Y. K., Ruoko, T-P., Priimagi, A., Walsh, A. & Shin, B., 2019, In : Journal of Materials Chemistry C. 7, 13, p. 3945-3951 7 p.

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

Metabolic profiling of water-soluble compounds from the extracts of dark septate endophytic fungi (DSE) isolated from scots pine (*Pinus sylvestris* L.) seedlings using UPLC–orbitrap–MS

Tienaho, J., Karonen, M., Muilu-Mäkelä, R., Wähälä, K., Denegri, E. L., Franzén, R., Karp, M., Santala, V. & Sarjala, T., 2019, In : *Molecules*. 24, 12, 2330.

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

Multiphoton Excitation of CsPbBr₃ Perovskite Quantum Dots (PQDs): How Many Electrons Can One PQD Donate to Multiple Molecular Acceptors?

Mandal, S. & Tkachenko, N. V., 2019, In : *Journal of Physical Chemistry Letters*. p. 2775-2781 7 p.

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

O₂-requiring molecular reporters of gene expression for anaerobic microorganisms

Guglielmetti, S., Santala, V., Mangayil, R., Ciranna, A. & Karp, M. T., 2019, In : *Biosensors and Bioelectronics*. 123, p. 1-6 6 p.

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

Photoreactions of macrocyclic dyes on (1010) wurtzite surface – Interplay between conformation and electronic effects

Golovanova, V. V., Nazarchuk, B. V., Postnyi, O. V., Rantala, T. T., Tkachenko, N. V. & Golovanov, V. V., 2019, In : *Ukrainian Journal of Physics*. 64, 1, p. 63-71 9 p.

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

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

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*.

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

Sustainability of bioenergy in finland and globally – fact check

Vakkilainen, E., Kontinen, J., Orasuo, V. & Aalto, P., 2019, *27th European Biomass Conference and Exhibition, EUBCE 2019*. ETA-Florence Renewable Energies, p. 1634-1635 2 p. (European Biomass Conference and Exhibition Proceedings).

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

Synthesis of 6,12-disubstituted methanodibenzo[b,f][1,5]dioxocins: Pyrrolidine catalyzed self-condensation of 2'-Hydroxyacetophenones

Assoah, B., Riihonen, V., Vale, J. R., Valkonen, A. & Candeias, N. R., 2019, In : *Molecules*. 24, 13, 2405.

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

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

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

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

Zinc phthalocyanine activated by conventional indoor light makes a highly efficient antimicrobial material from regular cellulose

Grammatikova, N. E., George, L., Ahmed, Z., Candeias, N. R., Durandin, N. A. & Efimov, A., 2019, In : *Journal of Materials Chemistry B*. 7, 28, p. 4379-4384

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

Reversible photodoping of TiO₂ nanoparticles

Joost, U., Sutka, A., Oja, M., Smits, K., Doebelin, N., Loot, A., Järvekülg, M., Hirsimäki, M., Valden, M. & Nommiste, E., 26 Dec 2018, In : *Chemistry of Materials*. 30, 24, p. 8968-8974

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

Bioengineering optimization and microbial characterization of elemental sulfur-fueled denitrifying biofilms

Kostrzytsia, A., 6 Dec 2018, 142 p.

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

Experimental and Modeling Assessment of the Main Bio-physical-chemical mechanisms and Kinetics in High-solids Anaerobic Digestion of Organic Waste

Pastor Poquet, V., 5 Dec 2018, 237 p.

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

Optimization of fermentative biohydrogen production by *Thermotoga neapolitana*

Dreschke, G., 5 Dec 2018, 124 p.

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

Highly Efficient Energy Transfer Cassettes by Assembly of Boronic Acid Derived Salicylidenehydrazone Complexes

Santos, F. M. F., Dominguez, Z., Alcaide, M. M., Matos, A. I., Florindo, H. F., R. Candeias, N., Gois, P. M. P. & Pischel, U., Dec 2018, In : ChemPhotoChem. 2, 12, p. 1038-1045

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

Liquid Crystal Polymer Networks and Elastomers for Light-Fueled Robotics

Zeng, H., Lahikainen, M., Wani, O. M., Berdin, A. & Priimagi, A., 19 Nov 2018, *Photoactive Functional Soft Materials*. Li, Q. (ed.). John Wiley & Sons, Ltd, p. 197-226 30 p.

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

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

Understanding Dissolution and Crystallization with Imaging: A Surface Point of View

Novakovic, D., Isomäki, A., Pleunis, B., Fraser-Miller, S. J., Peltonen, L., Laaksonen, T. & Strachan, C. J., 5 Nov 2018, In : Molecular Pharmaceutics. 15, 11, p. 5361-5373 13 p.

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

Production and Synthetic Modifications of Shikimic Acid

Candeias, N. R., Assoah, B. & Simeonov, S. P., 24 Oct 2018, In : Chemical Reviews. 118, 20, p. 10458-10550 93 p.

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

Decane-1,2-diol derivatives as potential antitumor agents for the treatment of glioblastoma

Viswanathan, A., Zhurina, A., Assoah, B., Paakkunainen, A., Musa, A., Kute, D., Saravanan, K. M., Yli-Harja, O., Candeias, N. R. & Kandhavelu, M., 15 Oct 2018, In : European Journal of Pharmacology. 837, p. 105-116

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

Reconfigurable photoactuator through synergistic use of photochemical and photothermal effects

Lahikainen, M., Zeng, H. & Priimagi, A., 8 Oct 2018, In : Nature Communications. 9, 9 p., 4148.

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

Quantification of bio-anode capacitance in bioelectrochemical systems using Electrochemical Impedance Spectroscopy
Heijne, A. T., Liu, D., Sulonen, M., Sleutels, T. & Fabregat-Santiago, F., 1 Oct 2018, In : *Journal of Power Sources*. 400, p. 533-538 6 p.

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

Removal and recovery of uranium(VI) by waste digested activated sludge in fed-batch stirred tank reactor

Jain, R., Peräniemi, S., Jordan, N., Vogel, M., Weiss, S., Foerstendorf, H. & Lakaniemi, A-M., 1 Oct 2018, In : *Water Research*. 142, p. 167-175 9 p.

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

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

Jermakka, J., Thompson Brewster, E., Ledezma, P. & Freguia, S., 12 Sep 2018, In : *Separation and Purification Technology*. 203, p. 48-55 8 p.

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

Entangled and colloiddally stable microcrystalline cellulose matrices in controlled drug release

Dong, Y., Paukkonen, H., Fang, W., Kontturi, E., Laaksonen, T. & Laaksonen, P., 5 Sep 2018, In : *International Journal of Pharmaceutics*. 548, 1, p. 113-119 7 p.

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

Post operation inactivation of acidophilic bioleaching microorganisms using natural chloride-rich mine water

Bomberg, M., Miettinen, H., Wahlström, M., Kaartinen, T., Ahoranta, S., Lakaniemi, A-M. & Kinnunen, P., 1 Sep 2018, In : *Hydrometallurgy*. 180, p. 236-245 10 p.

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

Recent progress in biohydrometallurgy and microbial characterisation

Kaksonen, A. H., Boxall, N. J., Gumulya, Y., Khaleque, H. N., Morris, C., Bohu, T., Cheng, K. Y., Usher, K. M. & Lakaniemi, A-M., 1 Sep 2018, In : *Hydrometallurgy*. 180, p. 7-25 19 p.

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

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

FLIM reveals alternative EV-mediated cellular up-take pathways of paclitaxel

Saari, H., Lisitsyna, E., Rautaniemi, K., Rojalin, T., Niemi, L., Nivaro, O., Laaksonen, T., Yliperttula, M. & Vuorimaa-Laukkanen, E., 28 Aug 2018, In : *Journal of Controlled Release*. 284, p. 133-143 11 p.

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

Optimization of Fin Arrays Cooled by Forced or Natural Convection

Lampio, K., 24 Aug 2018, Tampere University of Technology. 71 p. (Tampere University of Technology. Publication; vol. 1558)

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

Methods to design optimum heat sink geometries

Karvinen, R. & Lampio, K., 10 Aug 2018, *International Heat Transfer Conference, IHTC-16, August 10-15, 2018, Beijing, China*. p. 5041-5048 8 p. IHTC16-23247

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

Tan, L. C., Espinosa-Ortiz, E. J., Nancharaiyah, Y. V., van Hullebusch, E. D., Gerlach, R. & Lens, P. N., Aug 2018, In : Journal of Chemical Technology and Biotechnology. 93, 8, p. 2380-2389
Research output: Contribution to journal > Article > Scientific > peer-review

Design aspects of all atomic layer deposited TiO₂-Fe₂O₃ scaffold-absorber photoanodes for water splitting

Hiltunen, A., Ruoko, T-P., Iivonen, T., Lahtonen, K., Ali-Löytty, H., Sarlin, E., Valden, M., Leskelä, M. & Tkachenko, N., 31 Jul 2018, In : Sustainable Energy & Fuels. 2, 9, p. 2124-2130
Research output: Contribution to journal > Article > Scientific > peer-review

Comparison of electron injection and recombination on TiO₂ nanoparticles and ZnO nanorods photosensitized by phthalocyanine

Virkki, K., Tervola, E., Ince, M., Torres, T. & Tkachenko, N. V., 11 Jul 2018, In : Royal Society Open Science. 5, 7, 180323.
Research output: Contribution to journal > Article > Scientific > peer-review

Halogen-bond driven self-assembly of triangular macrocycles

Szell, P. M. J., Siiskonen, A., Catalano, L., Cavallo, G., Terraneo, G., Priimägi, A., Bryce, D. L. & Metrangolo, P., 7 Jul 2018, In : New Journal of Chemistry. 42, 13, p. 10467-10471 5 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Metabolic pairing of aerobic and anaerobic production in a one-pot batch cultivation

Salmela, M., Lehtinen, T., Efimova, E., Santala, S. & Mangayil, R., 3 Jul 2018, In : Biotechnology for Biofuels. 11, 1, 187.
Research output: Contribution to journal > Article > Scientific > peer-review

Pectin and Mucin Enhance the Bioadhesion of Drug Loaded Nanofibrillated Cellulose Films

Laurén, P., Paukkonen, H., Lipiäinen, T., Dong, Y., Oksanen, T., Räikkönen, H., Ehlers, H., Laaksonen, P., Yliperttula, M. & Laaksonen, T., 1 Jul 2018, In : Pharmaceutical Research. 35, 7, 145.
Research output: Contribution to journal > Article > Scientific > peer-review

Multiexciton Dynamics Depending on Intramolecular Orientations in Pentacene Dimers: Recombination and Dissociation of Correlated Triplet Pairs

Sakai, H., Inaya, R., Nagashima, H., Nakamura, S., Kobori, Y., Tkachenko, N. V. & Hasobe, T., 21 Jun 2018, In : Journal of Physical Chemistry Letters. 9, 12, p. 3354-3360 7 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Light-Activated Antimicrobial Materials Based on Perylene Imides and Phthalocyanines

George, L., 6 Jun 2018, Tampere University of Technology. 92 p. (Tampere University of Technology. Publication; vol. 1554)
Research output: Book/Report > Doctoral thesis > Collection of Articles

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

Lewis Base Catalyzed Intramolecular Reduction of Salicylaldehydes by Pinacol-Derived Chlorohydrosilane

Assoah, B., Vale, J. R., Kalenius, E., Veiros, L. & Rafael Candeias, N., 1 Jun 2018, In : European Journal of Organic Chemistry. 2018, 23, p. 2910-2917
Research output: Contribution to journal > Article > Scientific > peer-review

Photo-antimicrobial efficacy of zinc complexes of porphyrin and phthalocyanine activated by inexpensive consumer LED lamp

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

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

Mesophilic and thermophilic biohydrogen and bioelectricity production from real and synthetic wastewaters

Dessi, P., 23 May 2018, Université Paris-Est. 89 p.
Research output: Book/Report > Doctoral thesis > Collection of Articles

Inoculum pretreatment differentially affects the active microbial community performing mesophilic and thermophilic dark fermentation of xylose

Dessi, P., Porca, E., Frunzo, L., Lakaniemi, A-M., Collins, G., Esposito, G. & Lens, P. N. L., 10 May 2018, In : International Journal of Hydrogen Energy. 43, 19, p. 9233-9245
Research output: Contribution to journal > Article > Scientific > peer-review

Crystallization Kinetics of an Amorphous Pharmaceutical Compound Using Fluorescence-Lifetime-Imaging Microscopy

Rautaniemi, K., Vuorimaa-Laukkanen, E., Strachan, C. J. & Laaksonen, T., 7 May 2018, In : Molecular Pharmaceutics. 15, 5, p. 1964-1971 8 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Investigating the kinetics and biofuel properties of *Alstonia congensis* and *Ceiba pentandra* via torrefaction

Oluoti, K., Doddapaneni, T. R. K. C. & Richards, T., 1 May 2018, In : Energy. 150, p. 134-141 8 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Free amino acids and 5'-nucleotides in Finnish forest mushrooms

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

Anaerobic digestion of 30–100-year-old boreal lake sedimented fibre from the pulp industry: Extrapolating methane production potential to a practical scale

Kokko, M., Koskue, V. & Rintala, J., 15 Apr 2018, In : Water Research. 133, p. 218-226 9 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Nutrient management via struvite precipitation and recovery from various agroindustrial wastewaters: Process feasibility and struvite quality

Taddeo, R., Honkanen, M., Kolppo, K. & Lepistö, R., 15 Apr 2018, In : Journal of Environmental Management. 212, p. 433-439 7 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Composite Hydrogels Using Bioinspired Approach with in Situ Fast Gelation and Self-Healing Ability as Future Injectable Biomaterial

Khan, M., Koivisto, J., Hukka, T., Hokka, M. & Kellomäki, M., 11 Apr 2018, In : ACS Applied Materials & Interfaces. 10, 14, p. 11950-11960
Research output: Contribution to journal > Article > Scientific > peer-review

Process Integration Approaches to Improve the Techno-Economic Feasibility of Torrefaction Process

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

Metabolic Engineering of *Acinetobacter baylyi* ADP1 for Improved Growth and Wax Ester Production Using Components of Lignocellulosic Hydrolysates as Carbon Sources

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

Thermal Isomerization of Hydroxyazobenzenes as a Platform for Vapor Sensing

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

Modeling of Charge Transfer at Dye-Semiconductor Interfaces in p-Type Solar Cells

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Techno-economic analysis of a power to biogas system operated based on fluctuating electricity price

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

Critical role and modification of surface states in hematite films for enhancing oxygen evolution activity

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

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

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

Pot-economy autooxidative condensation of 2-Aryl-2-lithio-1,3-dithianes

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Quantitative Real-time PCR Monitoring Dynamics Of Thermotoga Neapolitana In Synthetic Co-Culture For Biohydrogen Production

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

Controlled Growth of Supported ZnO Inverted Nanopyramids with Downward Pointing Tips

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

Ultralong 20 Milliseconds Charge Separation Lifetime for Photoilluminated Oligophenylenevinylene-Azafullerene Systems

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

Concentration-dependent photophysical switching in mixed self-assembled monolayers of pentacene and perylene diimide on gold nanoclusters

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Ortho-Fluorination of azophenols increases the mesophase stability of photoresponsive hydrogen-bonded liquid crystals

Saccone, M., Kuntze, K., Ahmed, Z., Siiskonen, A., Giese, M. & Priimägi, A., 1 Jan 2018, In : Journal of Materials Chemistry C. 6, 37, p. 9958-9963 6 p.

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

A Bioscreening Technique for Ultraviolet Irradiation Protective Natural Substances

Tienaho, J., Poikulainen, E., Sarjala, T., Muilu-Mäkelä, R., Santala, V. & Karp, M., 2018, In : Photochemistry and Photobiology. 94, 6, p. 1273-1280

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

Adsorption of furfural from torrefaction condensate using torrefied biomass

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

Archaea are prominent members of the prokaryotic communities colonizing common forest mushrooms

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Bio-electrochemical conversion of industrial wastewater-COD combined with downstream methanol synthesis-an economic and life cycle assessment

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

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

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

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Effect of elevated nitrate and sulfate concentrations on selenate removal by mesophilic anaerobic granular sludge bed reactors

Tan, L. C., Nanchaiah, Y. V., van Hullebusch, E. D. & Lens, P. N. L., 2018, In : Environmental Science: Water Research & Technology. 4, 2, p. 303-314

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

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

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

Effects of Biomass Type, Carbonization Process, and Activation Method on the Properties of Bio-Based Activated Carbons

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

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

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Electronic waste as a secondary source of critical metals: Management and recovery technologies

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

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

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

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

Gammaproteobacterial methanotrophs dominate methanotrophy in aerobic and anaerobic layers of boreal lake waters

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

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

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

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

Light Robots: Bridging the Gap between Microrobotics and Photomechanics in Soft Materials

Zeng, H., Wasylczyk, P., Wiersma, D. S. & Priimagi, A., 2018, In : Advanced Materials. 30, 24, 1703554.

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

On the molecular optical nonlinearity of halogen-bond-forming azobenzenes

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Pathvalue: Pathways with value

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Photoinduced Charge Separation in Semiconductor-Quantum-Dot/Organic-Molecule Hybrids

Tkachenko, N., 2018, In : ChemPhotoChem. 2, 3, p. 112-120 9 p.

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Sediment diffusion method improves wastewater nitrogen removal in the receiving lake sediments

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

Simultaneous removal of tetrathionate and copper from simulated acidic mining water in bioelectrochemical and electrochemical systems

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Stable blue phase polymeric Langmuir-Schaefer films based on unsymmetrical hydroxyalkadiynyl N-arylcarbamate derivatives

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

Supramolecular design principles for efficient photoresponsive polymer-azobenzene complexes

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Techno-economic evaluation of integrating torrefaction with anaerobic digestion

Doddapaneni, T. R. K. C., Praveenkumar, R., Tolvanen, H., Rintala, J. & Kontinen, J., 2018, In : Applied Energy. 213, p. 272-284 13 p.

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Thermophilic versus mesophilic dark fermentation in xylose-fed fluidised bed reactors: Biohydrogen production and active microbial community

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

Cellulose Nanofiber Alignment Using Evaporation-Induced Droplet-Casting, and Cell Alignment on Aligned Nanocellulose Surfaces

Skogberg, A., Mäki, A-J., Mettänen, M., Lahtinen, P. & Kallio, P., 11 Dec 2017, In : Biomacromolecules. 18, 12, p. 3936-3953 18 p.

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

Technology Development and Techno-Economic Analysis of Hydrogen Production by Thermal Decomposition of Methane

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

Time-Resolved Fluorescence Spectroscopy Reveals Fine Structure and Dynamics of Poly(L-lysine) and Polyethylenimine Based DNA Polyplexes

Lisitsyna, E. S., Ketola, T-M., Morin-Picardat, E., Liang, H., Hanzlíková, M., Urtti, A., Yliperttula, M. & Vuorimaa-Laukkanen, E., 7 Dec 2017, In : Journal of Physical Chemistry B. 121, 48, p. 10782-10792 11 p.

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

Photodynamic self-disinfecting surface using pyridinium phthalocyanine

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

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

Comparison of *Scenedesmus acuminatus* and *Chlorella vulgaris* cultivation in liquid digestates from anaerobic digestion of pulp and paper industry and municipal wastewater treatment sludge

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Carbazole-based small molecule electron donors: Syntheses, characterization, and material properties

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Multimodal Nonlinear Optical Imaging for Sensitive Detection of Multiple Pharmaceutical Solid-State Forms and Surface Transformations

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Azopolymer photopatterning for directional control of angiogenesis

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

Effect of hydraulic retention time on continuous electricity production from xylose in up-flow microbial fuel cell

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

Modelling recovery of ammonium from urine by electro-concentration in a 3-chamber cell

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Nanofibrillar cellulose hydrogels and reconstructed hydrogels as matrices for controlled drug release

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A demand-based nutrient utilization approach to urban biogas plant investment based on regional crop fertilization

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Effect of natural convection and radiation inside of a hollow beam in a standard fire

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

Hole-Transporting Materials for Printable Perovskite Solar Cells

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Understanding selenium biogeochemistry in engineered ecosystems: Transformation and analytical methods

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Comparison of liposomal drug formulations for transdermal iontophoretic drug delivery

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Locomotion of light-driven soft microrobots through a hydrogel via local melting

Palagi, S., Mark, A. G., Melde, K., Qiu, T., Zeng, H., Parmeggiani, C., Martella, D., Wiersma, D. S. & Fischer, P., 3 Aug 2017, *International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings*. IEEE

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

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

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

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

Nanofibrillar cellulose-alginate hydrogel coated surgical sutures as cell-carrier systems

Laurén, P., Somersalo, P., Pitkänen, I., Lou, Y. R., Urtti, A., Partanen, J., Seppälä, J., Madetoja, M., Laaksonen, T., Mäkitie, A. & Yliperttula, M., 1 Aug 2017, In : *PLoS ONE*. 12, 8, e0183487.

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

Photoresponsive Polymer Hydrogel Coatings that Change Topography

Stumpel, J. E., ter Schiphorst, J. & Schenning, A. P. H. J., 21 Jul 2017, *Responsive Polymer Surfaces: Dynamics in Surface Topography*. Liu, D. & Broer, D. (eds.). Wiley-VCH, p. 159-173

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

Effect of alkylaminophenols on growth inhibition and apoptosis of bone cancer cells

Doan, P., Nguyen, T., Yli-Harja, O., Candeias, N. R. & Kandhavelu, M., 17 Jul 2017, In : *European Journal of Pharmaceutical Sciences*. 107, p. 208-216 9 p.

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

Long-Range Observation of Exciplex Formation and Decay Mediated by One-Dimensional Bridges

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

Effects of alternative electron acceptors on the activity and community structure of methane-producing and consuming microbes in the sediments of two shallow boreal lakes

Rissanen, A. J., Karvinen, A., Nykänen, H., Peura, S., Tiirola, M., Mäki, A. & Kankaala, P., 15 Jun 2017, In : *FEMS Microbiology Ecology*. 93, 7

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

The role of inorganics in modelling of biomass gasification

Konttinen, J., Kramb, J., DeMartini, N. & Gomez-Barea, A., 13 Jun 2017, *EUBCE 2017 Online Conference Proceedings*. Ek, L., Ernrooth, H., Scarlat, N., Grassi, A. & Helm, P. (eds.). ETA-Florence Renewable Energies, p. 443-447 5 p. (European biomass conference and exhibition proceedings).

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

Self-Regulating Iris Based on Light-Actuated Liquid Crystal Elastomer

Zeng, H., Wani, O. M., Wasylczyk, P., Kaczmarek, R. & Priimägi, A., 7 Jun 2017, In : *Advanced Materials*.

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

CFD based reactivity parameter determination for biomass particles of multiple size ranges in high heating rate devolatilization

Niemelä, N. P., Tolvanen, H., Saarinen, T., Leppänen, A. & Joronen, T., 1 Jun 2017, In : Energy. 128, p. 676-687 12 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Impact of film thickness of ultra-thin dip-coated compact TiO₂ layers on the performance of mesoscopic perovskite solar cells

Masood, M. T., Weinberger, C., Sarfraz, J., Rosqvist, E., Sandén, S., Sandberg, O., Vivo, P., Hashmi, G., Lund, P. D., Österbacka, R. & Smått, J.-H., 31 May 2017, In : ACS Applied Materials and Interfaces. 9, 21, p. 17906-17913
Research output: Contribution to journal > Article > Scientific > peer-review

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

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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

Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods: Aggregation Effects

Virkki, K., Hakola, H., Urbani, M., Tejerina, L., Ince, M., Martínez-Díaz, M. V., Torres, T., Golovanova, V., Golovanov, V. & Tkachenko, N. V., 4 May 2017, In : Journal of Physical Chemistry C. 121, 17, p. 9594-9605 12 p.

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

Alkyl thiophene vinylene electropolymerization in C₈mimPF₆, potential use in 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

Building up colors: multilayered arrays of peryleneimides on flat surfaces and on mesoporous layers

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

Halogen bonding stabilizes a cis-azobenzene derivative in the solid state: A crystallographic study

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

High-rate autotrophic denitrification in a fluidized-bed reactor at psychrophilic temperatures

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Hydrophobin-nanofibrillated cellulose stabilized emulsions for encapsulation and release of BCS class II drugs

Paukkonen, H., Ukkonen, A., Szilvay, G., Yliperttula, M. & Laaksonen, T., 30 Mar 2017, In : European Journal of Pharmaceutical Sciences. 100, p. 238-248 11 p. Research output: Contribution to journal > Article > Scientific > peer-review

Hexaphyrin as a Potential Theranostic Dye for Photothermal Therapy and ¹⁹F Magnetic Resonance Imaging

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

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UV exposure in artificial and natural weathering: A comparative study

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

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The Role of Inorganics in Biomass Gasification: Catalytic Effects on Char Reactions and Toxic Emissions

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Enhancing the activity of iron-oxidising bacteria: A case study with process liquors from heap bioleaching of a complex sulphide ore

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

The Orange Side of Disperse Red 1: Humidity-Driven Color Switching in Supramolecular Azo-Polymer Materials Based on Reversible Dye Aggregation

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A comparison of fate and toxicity of selenite, biogenically and chemically synthesized selenium nanoparticles to zebrafish (*Danio rerio*) embryogenesis

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

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

Fluorescence spectroscopy "knife" for polyplex "cakes": taste the filling

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

Influence of TiO₂ compact layer precursor on the performance of perovskite solar cells

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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 > Chapter > Scientific > peer-review

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Microbial community response on wastewater discharge in boreal lake sediments

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

Occurrence of photoinduced charge separation by the modulation of the electronic coupling between pyrene dimers and chemically converted graphenes

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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

Optimizing ammonium adsorption on natural zeolite for wastewaters with high loads of ammonium and solids

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Research output: Contribution to journal › Review 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

Photoresponsive ionic liquid crystals assembled: Via halogen bond: En route towards light-controllable ion transporters

Saccone, M., Palacio, F. F., Cavallo, G., Dichiarante, V., Virkki, M., Terraneo, G., Priimägi, A. & Metrangolo, P., 2017, In : *Faraday Discussions*. 203, p. 407-422 16 p.

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

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

Structural and Photophysical Properties of Pentacene Alkanethiolate Monolayer-Protected Gold Nanoclusters and Nanorods: Supramolecular Intercalation and Photoinduced Electron Transfer with C60

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

Structural characterization, spectroscopic, thermal, AC conductivity and dielectric properties and antimicrobial studies of $(C_8H_{12}N)_2[SnCl_6]$

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

Surface-Relief Gratings in Halogen-Bonded Polymer–Azobenzene Complexes: A Concentration-Dependence Study

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Synthesis of new acylsilanes

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

Synthesis of phenol-derivatives and biological screening for anticancer activity

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

Synthesis, Structural Characterization, Hirshfeld Surface and Antioxidant Activity Analysis of a Novel Organic Cation Antimonate Complex

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The impact of long-term water level draw-down on microbial biomass: A comparative study from two peatland sites with different nutrient status

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Vapor Phase Fabrication of Nanoheterostructures Based on ZnO for Photoelectrochemical Water Splitting

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Controlling the shape of Janus nanostructures through supramolecular modification of ABC terpolymer bulk morphologies

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

Influence of torrefaction pretreatment on the pyrolysis of Eucalyptus clone: A study on kinetics, reaction mechanism and heat flow

Doddapaneni, T. R. K. C., Konttinen, J., Hukka, T. I. & Moilanen, A., 15 Dec 2016, In : *Industrial Crops and Products*. 92, p. 244-254 11 p.

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

Remarkable Dependence of Exciplex Decay Rate on Through-Space Separation Distance Between Porphyrin and Chemically Converted Graphene

Umeyama, T., Hanaoka, T., Baek, J., Higashino, T., Abou-Chahine, F., Tkachenko, N. & Imahori, H., 7 Dec 2016, In : *Journal of Physical Chemistry C*. 120, 49, p. 28337-28344

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

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

Kinnunen, V. & Rintala, J., 1 Dec 2016, In : *Bioresource Technology*. 221, p. 78-84 7 p.

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

Anaerobic digestion of microalgae and pulp and paper biosludge

Kinnunen, V., 25 Nov 2016, Tampere University of Technology. 67 p. (Tampere University of Technology. Publication; vol. 1434)

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

Efficient Light-Induced Phase Transitions in Halogen-Bonded Liquid Crystals

Fernandez-Palacio, F., Poutanen, M., Saccone, M., Siiskonen, A., Terraneo, G., Resnati, G., Ikkala, O., Metrangolo, P. & Priimägi, A., 22 Nov 2016, In : *Chemistry of Materials*. 28, 22, p. 8314-8321 8 p.

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

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

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

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

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

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

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

Two-step bioleaching of copper and gold from discarded printed circuit boards (PCB)

Işildar, A., van de Vossenberg, J., Rene, E. R., van Hullebusch, E. D. & Lens, P. N. L., Nov 2016, In : *Waste Management*. 57, p. 149-157

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

Recombinant antibodies for specific detection of clostridial [Fe-Fe] hydrogenases

Mangayil, R., Karp, M., Lamminmäki, U. & Santala, V., 27 Oct 2016, In : *Scientific Reports*. 6, 9 p., 36034.

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

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

Kramb, J., Konttinen, J., Backman, R., Salo, K. & Roberts, M., 1 Oct 2016, In : *Fuel*. 181, p. 319-324 6 p.

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

Impacts of sulfur source and temperature on sulfur-driven denitrification by pure and mixed cultures of *Thiobacillus*

Di Capua, F., Ahoranta, S. H., Papirio, S., Lens, P. N. L. & Esposito, G., 1 Oct 2016, In : *Process Biochemistry*. 51, 10, p. 1576-1584

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

Fossil Feedstock-free Preparation of Hydroquinone

Rafael Candeias, N. & Assoah, B., 23 Sep 2016.

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

Utilization of Food Waste via Anaerobic Digestion: From Feedstock to Biogas and Fertilizers

Tampio, E., 10 Sep 2016, Tampere University of Technology. 75 p. (Tampere University of Technology. Publication; vol. 1405)

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

Photoinduced hole transfer in QD–phthalocyanine hybrids

Arvani, M., Virkki, K., Abou-Chahine, F., Efimov, A., Schramm, A., Tkachenko, N. V. & Lupo, D., 5 Sep 2016, In : Physical Chemistry Chemical Physics. 18, 39, p. 27414-27421

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

Long-term stability of bioelectricity generation coupled with tetrathionate disproportionation

Sulonen, M. L. K., Lakaniemi, A. M., Kokko, M. E. & Puhakka, J. A., 1 Sep 2016, In : Bioresource Technology. 216, p. 876-882 7 p.

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

Selenium: environmental significance, pollution, and biological treatment technologies

Tan, L. C., Nancharaiyah, Y. V., van Hullebusch, E. D. & Lens, P. N. L., 1 Sep 2016, In : Biotechnology Advances. 34, 5, p. 886-907 22 p.

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

Vesi-insinöörit arvojen välittäjinä: Infrastruktuurien hallinta muodostaa kivijalan kestäväälle tulevaisuudelle

Heino, O., 1 Sep 2016, In : Kuntatekniikka. 75, 5, p. 14-15 2 p.

Research output: Contribution to journal > Article > Professional

Higher Cd adsorption on 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., Sep 2016, In : ENVIRONMENTAL CHEMISTRY LETTERS. 14, 3, p. 381-386 6 p.

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

Multicomponent Petasis-borono Mannich Preparation of Alkylaminophenols and Antimicrobial Activity Studies

Neto, Í., Andrade, J., Pinto Reis, C., Salunke, J. K., Priimagi, A., R. Candeias, N. & Rijo, P., Sep 2016, In : CHEMMEDCHEM. 11, 18, p. 2015-2023

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

Methodological approaches for fractionation and speciation to estimate trace element bioavailability in engineered anaerobic digestion ecosystems: An overview

van Hullebusch, E. D., Guibaud, G., Simon, S., Lenz, M., Yekta, S. S., Feroso, F. G., Jain, R., Duester, L., Roussel, J., Guillon, E., Skjellberg, U., Almeida, C. M. R., Pechaud, Y., Garuti, M., Frunzo, L., Esposito, G., Carliell-Marquet, C., Ortner, M. & Collins, G., 17 Aug 2016, In : Critical Reviews in Environmental Science and Technology. 46, 16, p. 1324-1366 43 p.

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

Structural photoactivation of a full-length bacterial phytochrome

Björling, A., Berntsson, 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

The red, purple and blue modifications of polymeric unsymmetrical hydroxyalkadiynyl-N-arylcarbamate derivatives in Langmuir-Schaefer films

Alekseev, A., Ihalainen, P., Ivanov, A., Domnin, I., Klechkovskaya, V., Orekhov, A., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Peltonen, J. & Vyaz'min, S., 1 Aug 2016, In : Thin Solid Films. 612, p. 463-471 9 p.

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

Characterization and Potential Use of Source-Separated Urine

Jaatinen, S., 1 Jul 2016, Tampere University of Technology. 95 p. (Tampere University of Technology. Publication; vol. 1391)

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

Liquid fertilizer products from anaerobic digestion of food waste: Mass, nutrient and energy balance of four digestate liquid treatment systems

Tampio, E., Marttinen, S. & Rintala, J., Jul 2016, In : Journal of Cleaner Production. 125, p. 22–32 11 p.

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

Structurally Controlled Dynamics in Azobenzene-Based Supramolecular Self-Assemblies in Solid State

Poutanen, M., Ikkala, O. & Priimägi, A., 14 Jun 2016, In : Macromolecules. 49, 11, p. 4095–4101 7 p.

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

Indocyanine Green-Loaded Liposomes for Light-Triggered Drug Release

Lajunen, T., Kontturi, L-S., Viitala, L., Manna, M., Cramariuc, O., Róg, T., Bunker, A., Laaksonen, T., Viitala, T., Murtomäki, L. & Urtti, A., 6 Jun 2016, In : Molecular Pharmaceutics. 13, 6, p. 2095–2107 13 p.

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

Photoactive ZnO-Organic Nanostructures: Development and Characterization

Hakola, H., 27 May 2016, Tampere University of Technology. 60 p. (Tampere University of Technology. Publication; vol. 1385)

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

Electronic structure of p-type perylene monoimide-based donor–acceptor dyes on the nickel oxide (100) surface: a DFT approach

Kontkanen, O. V., Niskanen, M., Hukka, T. I. & Rantala, T. T., May 2016, In : Physical Chemistry Chemical Physics. 18, 21, p. 14382–14389

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

Photoexcitation and electron transfer at inorganic–organic interface — a DFT approach

Niskanen, M. O., Kontkanen, O. V., Hukka, T. I. & Rantala, T. T., May 2016. 1 p.

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

Synthesis and biological screening for cytotoxic activity of N-substituted indolines and morpholines

Doan, P., Karjalainen, A., Chandraseelan, J. G., Sandberg, O., Yli-Harja, O., Rosholm, T., Franzén, R., R. Candeias, N. & Kandhavelu, M., May 2016, In : European Journal of Medicinal Chemistry. 120, p. 296–303

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

Effect of Hole Transporting Material on Charge Transfer Processes in Zinc Phthalocyanine Sensitized ZnO Nanorods

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

Syntheses, Charge Separation, and Inverted Bulk Heterojunction Solar Cell Application of Phenothiazine-Fullerene Dyads

Blanco, G. D., Hiltunen, A. J., Lim, G. N., KC, C. B., Kaunisto, K. M., Vuorinen, T. K., Nesterov, V. N., Lemmetyinen, H. J. & D'Souza, F., 20 Apr 2016, In : ACS Applied Materials and Interfaces. 8, 13, p. 8481–8490 10 p.

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

Effect of temperature and concentration of precursors on morphology and photocatalytic activity of zinc oxide thin films prepared by hydrothermal route

Heinonen, S., Nikkanen, J. P., Hakola, H., Huttunen-Saarivirta, E., Kannisto, M., Hyvärinen, L., Järveläinen, M. & Levänen, E., 15 Apr 2016, *3rd International Conference on Competitive Materials and Technology Processes (IC-CMTP3)*. (IOP Conference Series: Materials Science and Engineering; vol. 123).

Coordination networks incorporating halogen-bond donor sites and azobenzene groups

Fernandez-Palacio, F., Saccone, M., Priimägi, A., Terraneo, G., Pilati, T., Metrangolo, P. & Resnati, G., 7 Apr 2016, In : *CrystEngComm*. 18, 13, p. 2251-2257 7 p.

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

Arsenic removal from acidic solutions with biogenic ferric precipitates

Ahoranta, S. H., Kokko, M. E., Papirio, S., Özkaya, B. & Puhakka, J., 5 Apr 2016, In : *Journal of Hazardous Materials*. 306, p. 124-132

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

Long-Lived Triplet Excited States of Bent-Shaped Pentacene Dimers by Intramolecular Singlet Fission

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

Quenching nematicon fluctuations via photo-stabilization

Karimi, N., Alberucci, A., Virkki, M., Priimägi, A., Kauranen, M. & Assanto, G., 31 Mar 2016, In : *Photonics Letters of Poland*. 8, 1, p. 2-4 3 p.

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

Agronomic characteristics of five different urban waste digestates

Tampio, E., Salo, T. & Rintala, J., 15 Mar 2016, In : *Journal of Environmental Management*. 169, p. 293-302 10 p.

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

Phenothiazine and carbazole substituted pyrene based electroluminescent organic semiconductors for OLED devices

Salunke, J. K., Wong, F. L., Feron, K., Manzhos, S., Lo, M. F., Shinde, D., Patil, A., Lee, C. S., Roy, V. A. L., Sonar, P. & Wadgaonkar, P. P., 7 Feb 2016, In : *Journal of Materials Chemistry C*. 4, 5, p. 1009-1018 10 p.

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

Intrinsic Properties of Two Benzodithiophene-Based Donor-Acceptor Copolymers Used in Organic Solar Cells: A Quantum-Chemical Approach

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

Cell-based bioreporter assay coupled to HPLC micro-fractionation in the evaluation of antimicrobial properties of the basidiomycete fungus *Pycnoporus cinnabarinus*

Järvinen, P., Nybond, S., Marcourt, L., Ferreira Queiroz, E., Wolfender, J. L., Mettälä, A., Karp, M., Vuorela, H., Vuorela, P., Hatakka, A. & Tammela, P., 21 Jan 2016, In : *Pharmaceutical Biology*. 54, 6, p. 1-8 8 p.

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

Advanced Solid Fuel Characterization for Reactivity and Physical Property Comparison

Tolvanen, H., 19 Jan 2016, Tampere University of Technology. 66 p. (Tampere University of Technology. Publication; vol. 1359)

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

Synthesis of Benzothiadiazole Derivatives by Applying C-C Cross-Couplings

Heiskanen, J. P., Vivo, P., Saari, N. M., Hukka, T. I., Kastinen, T., Kaunisto, K., Lemmetyinen, H. J. & Hormi, O. E. O., 15 Jan 2016, In : *Journal of Organic Chemistry*. 81, 4, p. 1535-1546 12 p.

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

Plasma-Assisted Fabrication of Fe₂O₃ - Co₃O₄ Nanomaterials as Anodes for Photoelectrochemical Water Splitting

Carraro, G., Maccato, C., Gasparotto, A., Kaunisto, K., Sada, C. & Barreca, D., 1 Jan 2016, In : *Plasma Processes and Polymers*. 13, 1, p. 191-200 10 p.

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

Charge separation and charge recombination photophysical studies in a series of perylene-C₆₀ linear and cyclic dyads
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Research output: Contribution to journal › Article › Scientific › peer-review

Color Bricks: Building Highly Organized and Strongly Absorbing Multicomponent Arrays of Terpyridyl Perylenes on Metal Oxide Surfaces

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

Toward the prediction of porous membrane permeability from morphological data

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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

Anaerobes in bioelectrochemical systems

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

Are Sphagnum-species potential antagonists for pathogens?

Kuovi, A.-T., Karp, M., Franzén, R., Sarjala, T., Muilu-Mäkelä, R., Aro, T., Tienaho, J. & Silvan, N., 2016, *XIV Meeting of the IOBC-WPRS Working Group Biological Control of Fungal and Bacterial Plant Pathogens Biocontrol and Microbial Ecology*. 067

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

A study on raw, torrefied, and steam-exploded wood: Fine grinding, drop-tube reactor combustion tests in N₂/O₂ and CO₂/O₂ atmospheres, particle geometry analysis, and numerical kinetics modeling

Tolvanen, H., Keipi, T. & Raiko, R., 2016, In : *Fuel*. 176, p. 153-164

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

A Three-Component Assembly Promoted by Boronic Acids Delivers a Modular Fluorophore Platform (BASHY Dyes)

Santos, F. M. F., Rosa, J. N., Candeias, N. R., Carvalho, C. P., Matos, A. I., Ventura, A. E., Florindo, H. F., Silva, L. C., Pischel, U. & Gois, P. M. P., 2016, In : *Chemistry: A European Journal*. 22, 5, p. 1631-1637

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

Biological and Bioelectrochemical Recovery of Critical and Scarce Metals

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

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

Biomass-Based and Oxidant-Free Preparation of Hydroquinone from Quinic Acid

Assoah, B., Veiros, L. F., Afonso, C. A. M. & R. Candeias, N., 2016, In : *European Journal of Organic Chemistry*. 2016, 22, p. 3856-3861 6 p.

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

Chemical and bacterial leaching of metals from a smelter slag in acid solutions

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

Compact hematite buffer layer as a promoter of nanorod photoanode performances

Milan, R., Cattarin, S., Comisso, N., Baratto, C., Kaunisto, K., Tkachenko, N. V. & Concina, I., 2016, In : Scientific Reports. 6, 10 p., 35049.

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

Controllable Electronic Structures and Photoinduced Processes of Bay-Linked Perylenediimide Dimers and a Ferrocene-Linked Triad

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

Downstream integration of microalgae harvesting and cell disruption by means of cationic surfactant-decorated Fe₃O₄ nanoparticles

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

Effect of source-separated urine storage on estrogenic activity detected using bioluminescent yeast *Saccharomyces cerevisiae*

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

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

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

Formation and stability of porphyrin and phthalocyanine self-assembled monolayers on ZnO surfaces

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

High Water-Splitting Efficiency through Intentional In and Sn Codoping in Hematite Photoanodes

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

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

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

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

Metathesis Reactions on Solid-Phase: Towards New Synthesis Challenges

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

On describing the optoelectronic characteristics of poly(benzodithiophene-: Co -quinoxaline)-fullerene complexes: The influence of optimally tuned density functionals

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

Photoinduced nonlinear optical response in azobenzene-functionalized molecular glass

Virkki, M., Tuominen, O., Kauranen, M. & Priimägi, A., 2016, In : *Optics Express*. 24, 5, p. 4964-4971 8 p.

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

Photoresponsive liquid-crystalline polymer films bilayered with an inverse opal structure

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

Porphyrin-Based Donor-Acceptor Dyads: Engineering the Linker and Tuning the Photoinduced Electron Transfer

Tkachenko, N. V., Efimov, A. & Lemmetyinen, H., 2016, *Handbook of Porphyrin Science : With Applications to Chemistry, Physics, Materials Science, Engineering, Biology and Medicine — Volume 42: Towards Tuned Properties of Porphyrinoids*. Kadish, K. M., Smith, K. M. & Guillard, R. (eds.). World Scientific Publishing, Vol. 42. p. 121-171 51 p.

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

Sorption of zinc onto elemental selenium nanoparticles immobilized in *Phanerochaete chrysosporium* pellets

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

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

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

The effect of urine storage on antiviral and antibiotic compounds in the liquid phase of source-separated urine

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

The Halogen Bond

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Research output: Contribution to journal › Review 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

Preparation and antimicrobial characterization of silver-containing packaging materials for meat

Kuuliala, L., Pippuri, T., Hultman, J., Auvinen, S-M., Kolppo, K., Nieminen, T., Karp, M., Björkroth, J., Kuusipalo, J. & Jääskeläinen, E., 1 Dec 2015, In : *Food Packaging and Shelf Life*. 6, p. 53-60 8 p., 67.

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

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

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

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

Organic Molecular Films as Light-Emitting and Light-Confining Material in Rolled-Up AlInP Semiconductor Microtube Resonators

Kietzmann, S., Strelow, C., Tavares, L., Penttinen, J-P., Hakkarainen, T. V., Schramm, A., Osadnik, A., Lützen, A., Kjelstrup-Hansen, J., Mews, A. & Kipp, T., 27 Oct 2015, In : *ACS Photonics*. 2, 11, p. 1532-1538 7 p.

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

Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds

Vapaavuori, J., Heikkinen, I. T. S., Dichiarante, V., Resnati, G., Metrangolo, P., Sabat, R. G., Bazuin, C. G., Priimagi, A. & Pellerin, C., 27 Oct 2015, In : *Macromolecules*. 48, 20, p. 7535-7542 8 p.

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

Changes in global gene expression of *Vibrio parahaemolyticus* induced by cold- and heat-stress

Urmersbach, S., Aho, T., Alter, T., Hassan, S. S., Autio, R. & Huehn, S., 23 Oct 2015, In : *BMC Microbiology*. 15, 1, 229.

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

Regenerative Astaxanthin Extraction from a Single Microalgal (*Haematococcus pluvialis*) Cell Using a Gold Nano-Scalpel

Ramasamy, P., Gwak, R., Kang, M., Shim, T. S., Cho, S., Lee, J., Oh, Y. K., Lee, K. & Kim, B., 14 Oct 2015, In : *ACS Applied Materials and Interfaces*. 7, 40, p. 22702-22708 7 p.

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

Characterization of thermally aged polyetheretherketone fibres: Mechanical, thermal, rheological and chemical property changes

Mylläri, V., Ruoko, T-P., Vuorinen, J. & Lemmetyinen, H., 1 Oct 2015, In : *Polymer Degradation and Stability*. 120, p. 419-426 8 p.

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

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

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

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

Measuring the green color of vegetables from digital images using image analysis

Manninen, H., Paakki, M., Hopia, A. & Franzén, R., 1 Oct 2015, In : *LWT: Food Science and Technology*. 63, 2, p. 1184-1190 7 p.

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

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

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

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

Measuring synthesis yield in graphene oxide synthesis by modified hummers method

Frankberg, E. J., George, L., Efimov, A., Honkanen, M., Pessi, J. & Levänen, E., 2 Sep 2015, In : *Fullerenes Nanotubes and Carbon Nanostructures*. 23, 9, p. 755-759 5 p.

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

Gene expression profiles of *Vibrio parahaemolyticus* in the early stationary phase

Meng, L., Alter, T., Aho, T. & Huehn, S., 1 Sep 2015, In : *Letters in Applied Microbiology*. 61, 3, p. 231-237 7 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

Fe₂O₃-TiO₂ 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

Fluorescent Protein Based FRET Pairs with Improved Dynamic Range for Fluorescence Lifetime Measurements

George Abraham, B., Sarkisyan, K. S., Mishin, A. S., Santala, V., Tkachenko, N. V. & Karp, M., 3 Aug 2015, In : PLoS ONE. 10, 8, 15 p., e0134436.

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

Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids

Virkki, K., Demir, S., Lemmetyinen, H. & Tkachenko, N. V., 23 Jul 2015, In : Journal of Physical Chemistry C. 119, 31, p. 17561-17572 12 p.

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

Subpicosecond to Second Time-Scale Charge Carrier Kinetics in Hematite-Titania Nanocomposite Photoanodes

Ruoko, T. P., Kaunisto, K., Bärtsch, M., Pohjola, J., Hiltunen, A., Niederberger, M., Tkachenko, N. V. & Lemmetyinen, H., 8 Jul 2015, In : Journal of Physical Chemistry Letters. 6, 15, p. 2859-2864 6 p.

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

Synthesis and study of electrochemical and optical properties of substituted perylenemonoimides in solutions and on solid surfaces

Ahmed, Z., George, L., Hiltunen, A., Lemmetyinen, H., Hukka, T. & Efimov, A., 7 Jul 2015, In : Journal of Materials Chemistry A. 3, 25, p. 13332-13339 8 p.

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

A comparison of rheology and FTIR in the study of polypropylene and polystyrene photodegradation

Mylläri, V., Ruoko, T-P. & Syrjälä, S., 1 Jul 2015, In : Journal of Applied Polymer Science. 132, 28, 6 p., 42246.

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

Molecular interactions on single-walled carbon nanotubes revealed by high-resolution transmission microscopy

Umeyama, T., Baek, J., Sato, Y., Suenaga, K., Abou-Chahine, F., Tkachenko, N. V., Lemmetyinen, H. & Imahori, H., Jul 2015, In : Nature Communications. 6, 9 p., 7732.

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

Synthesis and Photophysical Properties of Two Diazaporphyrin-Porphyrin Hetero Dimers in Polar and Nonpolar Solutions

Abou-Chahine, F., Fujii, D., Imahori, H., Nakano, H., Tkachenko, N. V., Matano, Y. & Lemmetyinen, H., 18 Jun 2015, In : Journal of Physical Chemistry Part B. 119, 24, p. 7328-7337 10 p.

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

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

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

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

Polymorph crystal packing effects on charge transfer emission in the solid state

He, X., Benniston, A. C., Saarenpää, H., Lemmetyinen, H., Tkachenko, N. V. & Baisch, U., 1 Jun 2015, In : Chemical Science. 6, 6, p. 3525-3532 8 p.

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

Laser-pointer-induced self-focusing effect in hybrid-aligned dye-doped liquid crystals

Wang, J., Aihara, Y., Kinoshita, M., Mamiya, J., Priimagi, A. & Shishido, A., 6 May 2015, In : Scientific Reports. 5, 7 p., 9890.

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

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

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

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

Meng, L., Alter, T., Aho, T. & Huehn, S., May 2015, In : FEMS Microbiology Ecology. 91, 5, 12 p., 035.

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

Light induced cytosolic drug delivery from liposomes with gold nanoparticles

Lajunen, T., Viitala, L., Kontturi, L-S., Laaksonen, T., Liang, H., Vuorimaa-Laukkanen, E., Viitala, T., Le Guevel, X., Yliperttula, M., Murtomaki, L. & Urtti, A., 10 Apr 2015, In : Journal of Controlled Release. 203, p. 85-98 14 p.

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

Crystal structure of 2-methylpiperazine-1,4-dium bis(hydrogen maleate)

Wecharine, I., Valkonen, A., Rzaigui, M., Sta, W. S. & Smith, G., 1 Mar 2015, In : Acta Crystallographica Section E : Structure Reports Online. 71, 3, p. o193-o194

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

Photocurrent Generation and Charge Recombination in Multilayer Stacks of Hole Transporting Layer, Electron Donor-Acceptor Dyad and Electron Transporting Layer

Alekseev, A. S., Lemmetyinen, H. & Tolkki, A., Mar 2015, In : Journal of Nanoelectronics and Optoelectronics. 9, 6, p. 741-749 9 p.

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

Encapsulation of secondary and tertiary ammonium salts by resorcinarenes and pyrogallarenes: The effect of size and charge concentration

Beyeh, N. K., Pan, F., Valkonen, A. & Rissanen, K., 7 Feb 2015, In : CrystEngComm. 17, 5, p. 1182-1188 7 p.

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

Integrated in vitro-in silico screening strategy for the discovery of antibacterial compounds

Nybond, S., Ghemtio, L., Nawrot, D. A., Karp, M., Xhaard, H. & Tammela, P., 1 Feb 2015, In : Assay and Drug Development Technologies. 13, 1, p. 25-33 9 p.

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

Glycerol as an Efficient Medium for the Petasis Borono-Mannich Reaction

Rosholm, T., Gois, P. M. P., Franzen, R. & R. Candeias, N., Feb 2015, In : ChemistryOpen. 4, 1, p. 39-46 8 p.

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

Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning

Saccone, M., Dichiarante, V., Forni, A., Goulet-Hanssens, A., Cavallo, G., Vapaavuori, J., Terraneo, G., Barrett, C. J., Resnati, G., Metrangolo, P. & Priimägi, A., 28 Jan 2015, In : Journal of Materials Chemistry C. 3, p. 759-768 10 p.

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

Photophysical Study of a Self-Assembled Donor-Acceptor Two-Layer Film on TiO₂

Stranius, K., George, L., Efimov, A., Ruoko, T-P., Pohjola, J. & Tkachenko, N. V., 27 Jan 2015, In : Langmuir. 31, 3, p. 944-952 9 p.

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

Controlled Regioselective Amination of Peryleneimides

George, L., Ahmed, Z., Lemmetyinen, H. & Efimov, A., 14 Jan 2015, In : European Journal of Organic Chemistry. 2015, 3, p. 584-590 7 p.

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

Aryl end-capped quaterthiophenes applied as anode interfacial layers in inverted organic solar cells

Heiskanen, J. P., Manninen, V. M., Pankov, D., Omar, W. A. E., Kastinen, T., Hukka, T. I., Lemmetyinen, H. J. & Hormi, O. E. O., 1 Jan 2015, In : Thin Solid Films. 574, p. 196-206 11 p.

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

Photophysical properties of Sn (IV)tetraphenylporphyrin-pyrene dyad with a β -vinyl linker

Reeta, P. S., Khetubol, A., Jella, T., Chukharev, V., Abou-Chahine, F., Tkachenko, N. V., Giribabu, L. & Lemmetyinen, H., 1 Jan 2015, In : Journal of Porphyrins and Phthalocyanines. 19, 1-3, p. 288-300 13 p.

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

Branched thiophene oligomer/polymer bulk heterojunction organic solar cell

Martinez, F., Neculqueo, G., Vasquez, S. O., Lemmetyinen, H., Efimov, A. & Vivo, P., 2015, *Materials Research Society Symposium Proceedings*. MATERIALS RESEARCH SOCIETY, Vol. 1737. p. 19-25 7 p.

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

Combination of a novel electrode material and artificial mediators to enhance power generation in an MFC

Taskan, E., Özkaya, B. & Hasar, H., 2015, In : Water Science and Technology. 71, 3, p. 320-328 9 p.

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

Fe₂O₃-TiO₂ Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation

Bañera, D., Carraro, G., Gasparotto, A., Maccato, C., Warwick, M. E. A., Kaunisto, K., Sada, C., Turner, S., Gönüllü, Y., Ruoko, T-P., Borgese, L., Bontempi, E., Van Tendeloo, G., Lemmetyinen, H. & Mathur, S., 2015, In : Advanced Materials Interfaces. 2, 17

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

Halogen-bonded photoresponsive materials

Saccone, M., Cavallo, G., Metrangolo, P., Resnati, G. & Priimägi, A., 2015, *Halogen Bonding II: Impact on Materials Chemistry and Life Sciences*. Springer International Publishing, p. 147-166 20 p. (Topics in Current Chemistry; vol. 359).

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

Halogen bonding enhances nonlinear optical response in poled supramolecular polymers

Virkki, M., Tuominen, O., Forni, A., Saccone, M., Metrangolo, P., Resnati, G., Kauranen, M. & Priimägi, A., 2015, In : Journal of Materials Chemistry C. 3, p. 3003-3006 4 p.

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

Microvesicle- and exosome-mediated drug delivery enhances the cytotoxicity of Paclitaxel in autologous prostate cancer cells

Saari, H., Lázaro-Ibáñez, E., Viitala, T., Vuorimaa-Laukkanen, E., Siljander, P. & Yliperttula, M., 2015, In : Journal of Controlled Release. 220, p. 727-737 11 p.

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

Nano-graphite cold cathodes for electric solar wind sail

Kleshch, V. I., Smolnikova, E. A., Orekhov, A. S., Kalvas, T., Tarvainen, O., Kauppinen, J., Nuottajärvi, A., Koivisto, H., Janhunen, P. & Obraztsov, A. N., 2015, In : Carbon. 81, p. 132-136 5 p.

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

Role of the bridge in photoinduced electron transfer in porphyrin-fullerene dyads

Pelado, B., Abou-Chahine, F., Calbo, J., Caballero, R., delaCruz, P., Junquera-Hernández, J. M., Ortí, E., Tkachenko, N. V. & Langa, F., 2015, In : Chemistry: A European Journal. 21, 15, p. 5814-5825 12 p.

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

Synthesis of fluorescent naphthoquinolizines via intramolecular houben-hoesch reaction

Stasyuk, A. J., Smoleń, S., Glodkowska-Mrowka, E., Brutkowski, W., Cyrański, M. K., Tkachenko, N. & Gryko, D. T., 2015, In : Chemistry - An Asian Journal. 10, 3, p. 553-558 6 p.

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

Van der Waals interactions are critical in Car-Parrinello molecular dynamics simulations of porphyrin-fullerene dyads

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

π -Expanded α,β -unsaturated ketones: Synthesis, optical properties, and two-photon-induced polymerization

Nazir, R., Bourquard, F., Balčiūnas, E., Smoleň, S., Gray, D., Tkachenko, N. V., Farsari, M. & Gryko, D. T., 2015, In : ChemPhysChem. 16, 3, p. 682–690 9 p.

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

Monoisomeric phthalocyanine-fullerene dyads with e- and cis-3 addition pattern; synthesis, modeling, photovoltage and solar cell experiments

Ranta, J., Niskanen, M., Kaunisto, K., Manninen, V., Mundy, M. E., Virkki, K., Hakola, H., Hukka, T. I. & Lemmetyinen, H., Dec 2014, In : Journal of Porphyrins and Phthalocyanines. 18, 12, p. 1108-1124 17 p.

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

Photochemistry of self-assembled donor-acceptor architectures for photoactive supramolecular devices

Stranius, K., 26 Nov 2014, Tampere: Tampere University of Technology. 147 p. (Tampere University of Technology. Publication; vol. 1269)

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

Molecular modifications of active and anode buffer layers of bulk heterojunction solar cell

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

Binding Affinity and Mechanism of Polymer-DNA Polyplexes for Gene Delivery

Ketola, T-M. C., 31 Jan 2014, Tampere University of Technology. 64 p. (Tampere University of Technology. Publication; no. 1187)

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

Are two azo groups better than one? Investigating the photoresponse of polymer-bisazobenzene complexes

Vapaavuori, J., Goulet-Hanssens, A., Heikkinen, I. T. S., Barrett, C. J. & Priimägi, A., 2014, In : Chemistry of Materials. 26, 17, p. 5089-5096 8 p.

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

Charge-Transfer Dynamics in Poly(3-hexylthiophene):Perylenediimide-C-60 Blend Films Studied by Ultrafast Transient Absorption

Kaunisto, K. M., Vivo, P., Dubey, R. K., Chukharev, V. I., Efimov, A., Tkachenko, N. V. & Lemmetyinen, H. J., 2014, In : Journal of Physical Chemistry C. 118, 20, p. 10625-10630 6 p.

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

Deprotonation of resorcinarenes by mono- and diamine bases: complexation and intermolecular interactions in the solid state

Beyeh, N. K., Valkonen, A. & Rissanen, K., 2014, In : CrystEngComm. 16, 18, p. 3758-3764 7 p.

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

Dynamics of time-resolved photoluminescence in GaInNAs and GaNAsSb solar cells

Gubanov, A., Polojärvi, V., Aho, A., Tukiainen, A., Tkachenko, N. V. & Guina, M., 2014, In : Nanoscale Research Letters. 9, 80.

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

Effect of mutual position of electron donor and acceptor on photoinduced electron transfer in supramolecular chlorophyll-fullerene dyads

Stranius, K., Iashin, V., Nikkonen, T., Muuronen, M., Helaja, J. & Tkachenko, N., 2014, In : Journal of Physical Chemistry A. 118, 8, p. 1420-1429 10 p.

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

Electricity generating capacity and performance deterioration of a microbial fuel cell fed with beer brewery wastewater

Köroglu, E. O., Özkaya, B., Denktas, C. & Cakmakci, M., 2014, In : Journal of Bioscience and Bioengineering. 118, 6, p. 672-678 7 p.

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

Excited State Intramolecular Proton Transfer in π -Expanded Phenazine-Derived Phenols

Piechowska, J., Virkki, K., Sadowski, B., Lemmetyinen, H., Tkachenko, N. V. & Gryko, D. T., 2014, In : Journal of Physical Chemistry A. 118, 1, p. 144-151 8 p.

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

Femtosecond spectroscopy of the dithiolate Cu(II) and Ni(II) complexes

Plyusnin, V. F., Pozdnyakov, I. P., Grivin, V. P., Solovyev, A. I., Lemmetyinen, H., Tkachenko, N. V. & Larionov, S. V., 2014, In : DALTON TRANSACTIONS. 43, 47, p. 17766-17774 9 p.

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

Formation of a stable polymer blue phase under UV irradiation of Langmuir-Schaefer films of diin N-arylcarbamate derivative

Alekseev, A. S., Domnin, I. N., Ivanov, A. B., Vuorimaa-Laukkanen, E., Lemmetyinen, H. & Tereshchenko, N. A., 2014, In : Bulletin of the Lebedev Physics Institute. 41, 6, p. 160-164 5 p.

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

High-modulation-depth surface relief gratings using s-s polarization configuration in supramolecular polymer-azobenzene complexes

Sobolewska, A., Bartkiewicz, S. & Priimagi, A., 2014, In : Journal of Physical Chemistry C. 118, 40, p. 23279-23284 6 p.

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

Light-driven surface patterning of supramolecular polymers with extremely low concentration of photoactive molecules

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

Modeling of photoactive conjugated donor-acceptor copolymers: the effect of the exact HF exchange in DFT functionals on geometries and gap energies of oligomer and periodic models

Niskanen, M. & Hukka, T. I., 2014, In : Physical Chemistry Chemical Physics. 16, p. 13294-13305 12 p.

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

Monoisomeric phthalocyanines and phthalocyanine-fullerene dyads with polar side chains: synthesis, modeling, and photovoltage

Ranta, J., Kaunisto, K., Niskanen, M., Efimov, A., Hukka, T. I. & Lemmetyinen, H., 2014, In : Journal of Physical Chemistry C. 118, 5, p. 2754-2765 12 p.

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

Organic-inorganic azafullerene-gold C59N-Au nanohybrid: Synthesis, characterization, and properties

Rotas, G., Niemi, M., Tkachenko, N. V., Zhao, S., Shinohara, H. & Tagmatarchis, N., 2014, In : Chemistry: A European Journal. 20, 45, p. 14729-14735 7 p.

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

Photo-induced electron transfer at nanostructured semiconductor-zinc porphyrin interface

Hakola, H., Pyymaki Perros, A., Myllyperkiö, P., Kurotobi, K., Lipsanen, H., Imahori, H., Lemmetyinen, H. & Tkachenko, N. V., 2014, In : Chemical Physics Letters. 592, p. 47-51 5 p.

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

Recognition of N-Alkyl and N-Aryl acetamides by N-Alkyl ammonium resorcinarene chlorides

Beyeh, N. K., Ala-Korpi, A., Cetina, M., Valkonen, A. & Rissanen, K., 2014, In : Chemistry: A European Journal. 20, 46, p. 15144-15150 7 p.

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

ROFRET: A Molecular-Scale Fluorescent Probe Displaying Viscosity-Enhanced Intramolecular Förster Energy Transfer

Bai, S., Benniston, A. C., Whittle, V. L., Lemmetyinen, H. & Tkachenko, N. V., 2014, In : ChemPhysChem. 115, 14, p. 3089-3096 8 p.

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

Slow charge recombination and enhanced photoelectrochemical properties of Diazaporphyrin-Fullerene linked dyad

Yamamoto, M., Takano, Y., Matano, Y., Stranius, K., Tkachenko, N. V., Lemmetyinen, H. & Imahori, H., 2014, In : Journal of Physical Chemistry C. 118, 4, p. 1808-1820 13 p.

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

Solid state anion-pi interactions involving polyhalides

Giese, M., Albrecht, M., Bohnen, C., Repenko, T., Valkonen, A. & Rissanen, K., 2014, In : DALTON TRANSACTIONS. 43, 4, p. 1873-1880 8 p.

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

Spectroscopic study of a synthesized Alq3 end-capped oligothiophene applied in organic solar cells

Manninen, V. M., Heiskanen, J. P., Kaunisto, K. M., Hormi, O. E. O. & Lemmetyinen, H. J., 2014, In : RSC Advances. 4, 17, p. 8846-8855 10 p.

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

Subcellular localization of bacteriophage PRD1 proteins in Escherichia coli

Karttunen, J., Mäntynen, S., Ihalainen, T. O., Lehtivuori, H., Tkachenko, N. V., Vihinen-Ranta, M., Ihalainen, J. A., Bamford, J. K. H. & Oksanen, H. M., 2014, In : Virus Research. 179, p. 44-52 9 p.

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

Synthesis and characterization of monoisomeric phthalocyanines, phthalocyanine-fullerene dyads, and phthalocyanine-silicon complexes

Ranta, J., 2014, Tampere: Tampere University of Technology. 160 p. (Tampere University of Technology. Publication; vol. 1254)

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

Synthesis and properties of a meso- tris-ferrocene appended zinc(II) porphyrin and a critical evaluation of its dye sensitised solar cell (DSSC) performance

Sirbu, D., Turta, C., Benniston, A. C., Abou-Chahine, F., Lemmetyinen, H., Tkachenko, N. V., Wood, C. & Gibson, E., 2014, In : RSC Advances. 4, p. 22733-22742 10 p.

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

Tetraiodoethynyl resorcinarene cavitands as multivalent halogen bond donors

Turunen, L., Beyeh, N. K., Pan, F., Valkonen, A. & Rissanen, K., 2014, In : Chemical Communications. 50, 100, p. 15920-15923 4 p.

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

The effect of diketopyrrolopyrrole (DPP) group inclusion in p-cyanophenyl end-capped oligothiophene used as a dopant in P3HT:PCBM BHJ solar cells

Manninen, V. M., Heiskanen, J. P., Pankov, D., Kastinen, T., Hukka, T. I., Hormi, O. E. O. & Lemmetyinen, H. J., 2014, In : Photochemical & Photobiological Sciences. 13, 10, p. 1456-1468 13 p.

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

The effect of thiophene substituents of fulleropyrrolidine acceptors on the performance of inverted organic solar cells

Kaunisto, K. M., Subbaiyan, N. K., Bikram K.C., C., Chukharev, V. I., Hakola, H. M., Vuorinen, T. K., Manninen, V. M., Tkachenko, N. V., Lemmetyinen, H. J. & D'Souza, F., 2014, In : Synthetic Metals. 195, p. 193-200 8 p.

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

The effects of UV irradiation to polyetheretherketone fibres: Characterization by different techniques

Mylläri, V., Ruoko, T. P. & Järvelä, P., 2014, In : Polymer Degradation and Stability. 109, p. 278-284 7 p.

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

The Wolff Rearrangement

Candeias, N. R., Trindade, A. F., Gois, P. M. P. & Afonso, C. A. M., 2014, *Comprehensive Organic Synthesis II (Second Edition)*. Oxford: Elsevier, p. 944-991 48 p.

Ultrafast photophysical processes for Fe(III)-carboxylates

Pozdnyakov, I. P., Melnikov, A. A., Tkachenko, N., Chekalin, S. V., Lemmetyinen, H. & Plyusnin, V. F., 2014, In : DALTON TRANSACTIONS. 43, 47, p. 17590-17595 6 p.

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

Porphyrin adsorbed on the (1010) surface of the wurtzite structure of ZnO-conformation induced effects on the electron transfer characteristics

Niskanen, M., Kuisma, M., Cramariuc, O., Golovanov, V., Hukka, T. I., Tkachenko, N. & Rantala, T. T., 28 Oct 2013, In : Physical Chemistry Chemical Physics. 15, 40, p. 17408-17418 11 p.

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

Bis(aryl)acenaphthenequinonediimine substituent effect on the properties and coordination environment of ligands and their bis-chelate AgI complexes

Papanikolaou, P., Gdaniec, M., Wicher, B., Akrivos, P. D. & Tkachenko, N., 2013, In : European Journal of Inorganic Chemistry. 2013, 29, p. 5196-5205 10 p.

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

Chain processes in the photochemistry of PtIV halide complexes in aqueous solutions

Glebov, E. M., Kolomeets, A. V., Pozdnyakov, I. P., Grivin, V. P., Plyusnin, V. F., Tkachenko, N. V. & Lemmetyinen, H., 2013, In : Russian Chemical Bulletin. 62, 7, p. 1540-1548 9 p.

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

Charge transfer properties of a donor-acceptor dyad based on an expanded acridinium cation

Benniston, A. C., He, X., Lemmetyinen, H. & Tkachenko, N. V., 2013, In : RSC Advances. 3, 15, p. 4995-5002 8 p.

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

Chlorophyll tailored 20-trifluoroacetamide and its azacrown derivative as pH sensitive colorimetric sensor probe with response to AcO⁻, F⁻ and CN⁻ ions

Iashin, V., Koso, T. V., Stranius, K., Muuronen, M., Heikkinen, S., Kavakka, J., Tkachenko, N. V. & Helaja, J., 2013, In : RSC Advances. 3, 29, p. 11485-11488 4 p.

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

Complexation enhanced excited-state deactivation by lithium ion coordination to a borondipyromethene (Bodipy) donor-bridge-acceptor dyad

Benniston, A. C., Yang, S., Lemmetyinen, H. & Tkachenko, N. V., 2013, In : European Journal of Organic Chemistry. 2013, 30, p. 6859-6869 11 p.

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

Conjugated donor-acceptor (D-A) copolymers in inverted organic solar cells - a combined experimental and modelling study

Manninen, V., Niskanen, M., Hukka, T. I., Pasker, F., Claus, S., Höger, S., Baek, J., Umeyama, T., Imahori, H. & Lemmetyinen, H., 2013, In : Journal of Materials Chemistry A. 1, 25, p. 7451-7462 12 p.

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

Demonstrating the mechanism and efficacy of water-induced shape memory and the influence of water on the thermal properties of oriented poly(d,l-lactide)

Paakinaho, K., Hukka, T. I., Kastinen, T. & Kellomäki, M., 2013, In : Journal of Applied Polymer Science. 130, 6, p. 4209-4218 9 p.

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

Determination of preferential molecular orientation in porphyrin-fullerene dyad ZnDHD6ee monolayers by the X-ray standing-wave method and X-ray reflectometry

Seregin, A. Y., Dyakova, Y. A., Yakunin, S. N., Makhotkin, I. A., Alekseev, A. S., Klechkovskaya, V. V., Terechenko, E. Y., Tkachenko, N. V., Lemmetyinen, H., Feigin, L. A. & Kovalchuk, M. V., 2013, In : Crystallography Reports. 58, 6, p. 934-938 5 p.

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

Dipyrroldinyl-substituted perylene diimide as additive for poly(3-hexylthiophene): [6,6]-Phenyl C61 butyric acid methylester bulk-heterojunction blends

Vivo, P., Dubey, R., Lehtonen, E., Kivistö, H., Vuorinen, T. & Lemmetyinen, H., 2013, In : *Thin Solid Films*. 548, p. 398-405 8 p.

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

Direct evidence of significantly different chemical behavior and excited-state dynamics of 1,7- and 1,6-regioisomers of pyrroldinyl-substituted perylene diimide

Dubey, R. K., Niemi, M., Kaunisto, K., Efimov, A., Tkachenko, N. V. & Lemmetyinen, H., 2013, In : *Chemistry: A European Journal*. 19, 21, p. 6791-6806

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

Effect of anion coordination on electron transfer in double-linked zinc phthalocyanine-fullerene dyad

Al-Subi, A. H., Efimov, A., Niemi, M., Tkachenko, N. V. & Lemmetyinen, H., 2013, In : *Chemical Physics Letters*. 572, p. 96-100 5 p.

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

Excited-state interaction of red and green perylene diimides with luminescent Ru(II) polypyridine complex

Dubey, R. K., Niemi, M., Kaunisto, K., Stranius, K., Efimov, A., Tkachenko, N. & Lemmetyinen, H., 2013, In : *Inorganic Chemistry*. 52, p. 9761-9773 13 p.

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

Fluorescence properties of the chromophore-binding domain of bacteriophytochrome from *Deinococcus radiodurans*

Lehtivuori, H., Rissanen, I., Takala, H., Bamford, J., Tkachenko, N. V. & Ihalainen, J. A., 2013, In : *Journal of Physical Chemistry Part B*. 117, p. 11049-11057

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

Homoleptic Bis(aryl)acenaphtenequinonediimine-CuI complexes - synthesis and characterization of a family of compounds with improved light-gathering characteristics

Papanikolaou, P., Akrivos, P. D., Czapik, A., Wicher, B., Gdaniec, M. & Tkachenko, N., 2013, In : *European Journal of Inorganic Chemistry*. 2013, 13, p. 2418-2431 14 p.

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

Hydrolytic degradation of composites of poly(L-lactide-co-epsilon-caprolactone) 70/30 and beta-tricalcium phosphate

Ahola, N., Veiranto, M., Rich, J., Efimov, A., Hannula, M., Seppälä, J. & Kellomäki, M., 2013, In : *Journal of Biomaterials Applications*. 28, 4, p. 529-543

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

Independent versus cooperative binding in polyethylenimine-DNA and poly(L-lysine)-DNA polyplexes

Ketola, T-M., Hanzlikova, M., Leppänen, L., Ravina, M., Bishop, C. J., Green, J. J., Urtti, A., Lemmetyinen, H., Yliperttula, M. & Vuorimaa-Laukkanen, E., 2013, In : *Journal of Physical Chemistry Part B*. 117, 36, p. 10405-10413 9 p.

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

Influence of plasma chemistry on impurity incorporation in AlN prepared by plasma enhanced atomic layer deposition

Pyymäki Perros, A., Hakola, H., Sajavaara, T., Huhtio, T. & Lipsanen, H., 2013, In : *Journal of Physics D: Applied Physics*. 46, 50, 8 p., 505502.

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

Molecular dipole effects on tuning electron transfer in a porphine-quinone complex: A DFT and TDDFT study

Cramariuc, O., Aittala, P. & Hukka, T., 2013, In : *Journal of Molecular Modeling*. 19, 2, p. 697-704

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

Molecular weight distribution of a full-scale landfill leachate treatment by membrane bioreactor and nanofiltration membrane

Campagna, M., Cakmakci, M., Busra Yaman, F. & Özkaya, B., 2013, In : Waste Management. 33, 4, p. 866-870 5 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Photophysics of bis(ethylxanthato)nickel(II) [Ni(EtOCS₂)₂] complex studied by femtosecond pump-probe spectroscopy
Plyusnin, V. F., Kolomeets, A. V., Budkina, D. S., Pozdnyakov, I. P., Tkachenko, N. & Lemmetyinen, H., 2013, In : Journal of Photochemistry and Photobiology, A: Chemistry. 251, 1, p. 57-62 6 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Plasma-assisted chemical vapor deposition of Fe:TiO₂ films for photoelectrochemical hydrogen production
Mettenböcker, A., Merod, V., Singh, A. P., Lemmetyinen, H. & Mathur, S., 2013, *Nanostructured Materials and Nanotechnology V - 36th International Conference on Advanced Ceramics and Composites, ICACC 2012, Daytona Beach, FL, USA, 22.-27.1.2013*. American Ceramic Society, p. 81-88 8 p. (Ceramic Engineering and Science Proceedings; vol. 33, no. 7).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Probing the excited state dynamics of a new family of Cu(I)-complexes with an enhanced light absorption capacity: excitation-wavelength dependent population of states through branching
Papanikolaou, P. & Tkachenko, N. V., 2013, In : Physical Chemistry Chemical Physics. 15, 31, p. 13128-13136 9 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Ring-expansion reaction of isatins with ethyl diazoacetate catalyzed by dirhodium(II)/DBU metal-organic system: En route to viridicatin alkaloids
Paterna, R., Andre, V., Duarte, M. T., Veiros, L. F., Rafael Candeias, N. & Gois, P. M. P., 2013, In : European Journal of Organic Chemistry. 2013, 28, p. 6280-6290 11 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Sequential photoinduced energy and electron transfer directed improved performance of the supramolecular solar cell of a zinc porphyrin - zinc phthalocyanine conjugate modified TiO₂ surface
KC, C. B., Stranius, K., D'Souza, P., Subbaiyan, N. K., Lemmetyinen, H., Tkachenko, N. V. & D'Souza, F., 2013, In : Journal of Physical Chemistry C. 117, p. 763-773 11 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Short synthesis of the natural product 3β-hydroxy-labd-8(17)-en-15-oic acid via microbial transformation of labdanolic acid
Frija, L. M. T., Garcia, H., Rodrigues, C., Martins, I., Rafael Candeias, N., Andre, V., Duarte, M. T., Pereira, S. C. & Afonso, C. A. M., 2013, In : Phytochemistry Letters. 6, 2, p. 165-169 5 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Studies on the structure of coumarin-modified dextran nanoparticles by fluorescence spectroscopy
Wondraczek, H., Kotiaho, A., Niemi, M., Fardim, P. & Heinze, T., 2013, In : Carbohydrate Polymers. 97, 1, p. 45-51 7 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Study of structural order in porphyrin-fullerene dyad ZnDHD6ee monolayers by electron diffraction and atomic force microscopy
D'yakova, Y. A., Suvorova, E. I., Orekhov, A. S., Orekhov, A. S., Alekseev, A. S., Gainutdinov, R. V., Klechkovskaya, V. V., Tereschenko, E. Y., Tkachenko, N. V., Lemmetyinen, H., Feigin, L. A. & Kovalchuk, M. V., 2013, In : Crystallography Reports. 58, 6, p. 927-933 7 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Supramolecular assemblies of bay-substituted perylene diimides in solution and on a solid substrate
Sariola-Leikas, E., Niemi, M., Lemmetyinen, H. & Efimov, A., 2013, In : Organic and Biomolecular Chemistry. 11, p. 6397-6406 10 p.
Research output: Contribution to journal > Article > Scientific > peer-review

The Effect and Role of Carbon Atoms in Poly(β-amino ester)s for DNA Binding and Gene Delivery
Bishop, C. J., Ketola, T.-M., Tzeng, S. Y., Sunshine, J. C., Urtti, A., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Yliperttula, M. & Green, J. J., 2013, In : Journal of the American Chemical Society. 135, 18, p. 6951-6957 7 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Triarylamine-substituted imidazole- and quinoxaline-fused push-pull porphyrins for dye-sensitized solar cells

Hayashi, H., Touchy, A. S., Kinjo, Y., Kurotobi, K., Toude, Y., Ito, S., Saarenpää, H., Tkachenko, N., Lemmetyinen, H. & Imahori, H., 2013, In : *ChemSusChem*. 6, 3, p. 508-517 10 p.

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

Tuning the Förster overlap integral: energy transfer over 20 Ångstroms from a pyrene-based donor to borondipyrromethene (Bodipy)

Bai, D., Benniston, A. C., Hagon, J., Lemmetyinen, H., Tkachenko, N. V. & Harrington, R. W., 2013, In : *Physical Chemistry Chemical Physics*. 15, 24, p. 9854-9861 8 p.

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

Algorithm for In Silico Optimization of Production Strains

Heikkinen, E., Larjo, A., Santala, V., Yli-Harja, O. & Aho, T., 2012, *Proceedings of Ninth International Workshop on Computational Systems Biology, WCSB 2012, 4-6 June, Ulm, Germany. TICSP Series*. Larjo, A., Schober, S., Farhan, M., Bossert, M. & Yli-Harja, O. (eds.). Tampere: Tampere University of Technology, p. 1-4 4 p. (International Workshop on Computational Systems Biology; vol. 61).

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

A Photoconductive, Thiophene-Fullerene Double-Cable Polymer, Nanorod Device

Imahori, H., Kitaura, S., Kira, A., Hayashi, H., Nishi, M., Hirao, K., Isoda, S., Tsujimoto, M., Takano, M., Zhe, Z., Miyato, Y., Noda, K., Matsushige, K., Stranius, K., Tkachenko, N. V., Lemmetyinen, H., Qin, L., Hurst, S. J. & Mirkin, C. A., 2012, In : *Journal of Physical Chemistry Letters*. 3, 4, p. 478-481

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

Asymmetric Intramolecular C-H Insertion of alpha-Diazoacetamides in Water by Dirhodium(II) Catalysts Derived from Natural Amino Acids

Rafael Candeias, N., Carias, C., Gomes, L. F. R., Andre, V., Teresa Duarte, M., Gois, P. M. P. & Afonso, C. A. M., 2012, In : *Advanced Synthesis and Catalysis*. 354, 16, p. 2921-2927

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

Azafullerene C59N-Phthalocyanine Dyad: Synthesis, Characterisation and Photoinduced Electron Transfer

Rotas, G., Ranta, J., Efimov, A., Niemi, M., Lemmetyinen, H., Tkachenko, N. V. & Tagmatarchis, N., 2012, In : *ChemPhysChem*. 13, 5, p. 1246-1254

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

Car-parrinello molecular dynamics study of a porphyrin-fullerene electron donor-acceptor dyad

Translated title of the contribution: : Car-parrinello molecular dynamics study of a porphyrin-fullerene electron donor-acceptor dyad

Karilainen, T., Cramariuc, O., Tappura, K. & Hukka, T., 2012, *Physics Days 2012, the 46th annual meeting of the Finnish Physical Society, 13.-15.3.2012, Joensuu, Finland*. Joensuu: University of Eastern Finland; Suomen fyysikköseura, p. 1-1 1 p. (Physics Days / Fysiikan päivät : Annual Meeting of the Finnish Physical Society).

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

Diaryl-Substituted Perylene Bis(imides): Synthesis, Separation, Characterization and Comparison of Electrochemical and Optical Properties of 1,7- and 1,6-Regioisomer

Dey, S., Efimov, A. & Lemmetyinen, H., 2012, In : *European Journal of Organic Chemistry*. p. 2367-2374

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

Directed electron transfer in Langmuir-Schäfer layers of porphyrin-fullerene and phthalocyanine-fullerene dyads in inverted organic solar cells

Tolkki, A., Kaunisto, K., Efimov, A., Kivistö, H., Storbacka, L., Savikoski, R., Huttunen, K., Lehtimäki, S. & Lemmetyinen, H., 2012, In : *Physical Chemistry Chemical Physics*. 14, p. 3498-3504

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

Donor-acceptor alternating copolymer based on thermally converted isothianaphthene dimer and thiazolothiazole subunits

Umeyama, T., Hirose, K., Noda, K., Matsushige, K., Shishido, T., Saarenpää, H., Tkachenko, N. V., Lemmetyinen, H., Ono, N. & Imahori, H., 2012, In : *Journal of Physical Chemistry C*. 116, 33, p. 17414-17423

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

Effect of halide binding on intramolecular exciplex of double-linked zinc porphyrin-fullerene dyad

Al-Subi, A. H., Niemi, M., Ranta, J., Tkachenko, N. V. & Lemmetyinen, H., 2012, In : Chemical Physics Letters. 531, p. 164-168

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

Effect on Charge Transfer and Charge Recombination by Insertion of a Naphthalene-Based Bridge in Molecular Dyads Based on Borondipyrromethene (Bodipy)

Benniston, A. C., Clift, S., Hagon, J., Lemmetyinen, H., Tkachenko, N. V., Clegg, W. & Harrington, R. W., 2012, In : ChemPhysChem. 13, 16, p. 3672-3681

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

Effects of Carbon-Metal-Carbon Linkages on the Optical, Photophysical, and Electrochemical Properties of Phosphametallacycle-Linked Coplanar Porphyrin Dimers

Matano, Y., Matsumoto, K., Hayashi, H., Nakao, Y., Kumpulainen, T., Chukharev, V., Tkachenko, N. V., Lemmetyinen, H., Shimizu, S., Kobayashi, N., Sakamaki, D., Ito, A., Tanaka, K. & Imahori, H., 2012, In : Journal of the American Chemical Society. 134, 3, p. 1825-1839

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

Excited State Intramolecular Proton Transfer in Electron-Rich and Electron-Poor Derivatives of 10-Hydroxybenzo[h]quinoline

Piechowska, J., Huttunen, K., Wrobel, Z., Lemmetyinen, H., Tkachenko, N. V. & Gryko, D. T., 2012, In : Journal of Physical Chemistry A. 116, 39, p. 9614-9620

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

Exploring Förster electronic energy transfer in a decoupled anthracenyl-based borondipyrromethene (bodipy) dyad

Bai, D., Benniston, A. C., Hagon, J., Lemmetyinen, H., Tkachenko, N. V., Clegg, W. & Harrington, R. W., 2012, In : Physical Chemistry Chemical Physics. 14, 13, p. 4447-4456

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

Hydrogen-Bonding Effects on the Formation and Lifetimes of Charge-Separated States in Molecular Triads

Hankache, J., Niemi, M., Lemmetyinen, H. & Wenger, O. S., 2012, In : Journal of Physical Chemistry A. 116, 31, p. 8159-8168

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

Intramolecular C-H insertion catalyzed by dirhodium(II) complexes using CO₂ as the reaction media

Zakrzewska, M. E., Cal, P. M. S. D., Candeias, N. R., Bogel-Lukasik, R., Afonso, C. A. M., Ponte, M. N. & Gois, P. M. P., 2012, In : Green Chemistry Letters and Reviews. 5, 2, p. 211-240 30 p.

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

Large Stokes Shift Fluorescent Dyes Based on a Highly Substituted Terephthalic Acid Core

Benniston, A. C., Winstanley, T. P. L., Lemmetyinen, H., Tkachenko, N. V., Harrington, R. W. & Wills, C., 2012, In : Organic Letters. 14, 6, p. 1374-1377

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

Making expensive dirhodium(II) catalysts cheaper: Rh(II) recycling methods

Candeias, N. R., Afonso, C. A. M. & Gois, P. M. P., 2012, In : Organic and Biomolecular Chemistry. 10, 17, p. 3357-3378 22 p.

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

Meteorological parameters as an important factor on the energy recovery of landfill gas in landfills

Uyanik, I., Özkaya, B., Demir, S. & Cakmakci, M., 2012, In : Journal of Renewable and Sustainable Energy. 4, 6, 063135.

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

Modulation of visible room temperature phosphorescence by weak magnetic fields

Mani, T., Tanabe, M., Yamauchi, S., Tkachenko, N. V. & Vinogradov, S. A., 2012, In : Journal of Physical Chemistry Letters. 3, 21, p. 3115-3119

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

N-1-Functionalized Indole-Phosphane Oxazoline (IndPHOX) Ligands in Asymmetric Allylic Substitution Reactions

Wang, Y., Vaismaa, M. J. P., Rissanen, K. & Franzen, R., 2012, In : European Journal of Organic Chemistry. 2012, 8, p. 1569-1576

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

Nature's Nonlinear Optical Antennas

Huttunen, M. J., Virkki, M., Bautista, G., Vuorimaa-Laukkanen, E., Der, A., Lemmetyinen, H. & Kauranen, M., 2012, *CLEO 2012, San Jose, California, USA, 6-11 May 2012. Technical Digest*. OSA, p. 1-2 2 p. QM4F.8. (Conference on Lasers and Electro-Optics).

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

Organometallic tris(8-hydroxyquinoline)aluminum complexes as buffer layers and dopants in inverted organic solar cells

Tolkkio, A., Kaunisto, K., Heiskanen, J. P., Omar Walaa, A. E., Huttunen, K., Lehtimäki, S., Hormi, O. E. O. & Lemmetyinen, H., 2012, In : Thin Solid Films. 520, 13, p. 4475-4481

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

Photochemical properties and sensor applications of modified yellow fluorescent protein (YFP) covalently attached to the surfaces of etched optical fibers (EOFs)

Veselov, A. A., George Abraham, B., Lemmetyinen, H., Karp, M. T. & Tkachenko, N. V., 2012, In : Analytical and Bioanalytical Chemistry. 402, 3, p. 1149-1158

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

Photoinduced charge shift and charge recombination through an alkyne spacer for an expanded acridinium-based dyad

Benniston, A. C., Hagon, J., He, X., Clegg, W., Harrington, R. W., Tkachenko, N. & Lemmetyinen, H., 2012, In : Physical Chemistry Chemical Physics. 14, 9, p. 3194-3199

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

Photoinduced Electron Transfer in Linear Triarylamine-Photosensitizer-Anthraquinone Triads with Ruthenium(II), Osmium(II), and Iridium(III)

Hankache, J., Niemi, M., Lemmetyinen, H. & Wenger, O. S., 2012, In : Inorganic Chemistry. 51, 11, p. 6333-6344

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

Photolysis and Quantum-Chemical Calculations of the Nalidixic Acid Radical States

Polischuk, A. V., Emelina, T. B., Cramariuc, O., Chukharev, V. I., Karaseva, T. E. & Karasev, V. E., 2012, In : Russian Journal of General Chemistry. 82, 2, p. 323-328

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

Photophysics of Fe(III)-tartrate and Fe(III)-citrate complexes in aqueous solutions

Pozdnyakov, I. P., Kolomeets, A. V., Plyusnin, V. F., Melnikov, A. A., Kompanets, V. O., Chekalin, S. V., Tkachenko, N. V. & Lemmetyinen, H., 2012, In : Chemical Physics Letters. 530, p. 45-48

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

Preparation and Photophysical and Photoelectrochemical Properties of a Covalently Fixed Porphyrin-Chemically Converted Graphene Composite

Umeyama, T., Mihara, J., Tezuka, N., Matano, Y., Stranius, K., Chukharev, V., Tkachenko, N. V., Lemmetyinen, H., Noda, K., Matsushige, K., Shishido, T., Liu, Z., Hirose-Takai, K., Suenaga, K. & Imahori, H., 2012, In : Chemistry: A European Journal. 18, 14, p. 4250-4257

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

Processing and sustained in vitro release of rifampicin containing composites to enhance the treatment of osteomyelitis

Ahola, N., Veiranto, M., Männistö, N., Karp, M., Rich, J., Efimov, A., Seppälä, J. & Kellomäki, M., 2012, In : Biomatter. 2, 4, p. 1-13 13 p.

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

Quantitative Analysis of Intramolecular Exciplex and Electron Transfer in a Double-Linked Zinc Porphyrin-Fullerene Dyad
Al-Subi, A., Niemi, M., Tkachenko, N. & Lemmetyinen, H., 2012, In : *Journal of Physical Chemistry A*. 116, 39, p. 9653-9661

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

Redox processes in photochemistry of Pt(IV) hexahaloid complexes

Glebov, E. M., Kolomeets, A. V., Pozdnyakov, I. P., Plyusnin, V. F., Grivin, V. P., Tkachenko, N. & Lemmetyinen, H., 2012, In : *RSC Advances*. 2, 13, p. 5768-5778

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

Rh-IndOleF catalyzed conjugate addition/Heck-type coupling of organoboronics to a lactam or a lactone

Kuuloja, N., Vaismaa, M. & Franzen, R., 2012, In : *Tetrahedron*. 68, 10, p. 2313-2318

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

Self-Assembled Porphyrins on Modified Zinc Oxide Nanorods: Development of Model Systems for Inorganic-Organic Semiconductor Interface Studies

Saarenpää, H., Sariola-Leikas, E., Pyymaki Perros, A., Kontio, J. M., Efimov, A., Hayashi, H., Lipsanen, H., Imahori, H., Lemmetyinen, H. & Tkachenko, N. V., 2012, In : *Journal of Physical Chemistry C*. 116, 3, p. 2336-2343

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

Syntheses and Excitation Transfer Studies of Near-Orthogonal Free-Base Porphyrin – Ruthenium Phthalocyanine Dyads and Pentad

Jacobs, R., Stranius, K., Maligaspe, E., Lemmetyinen, H., Tkachenko, N. V., Zandler, M. E. & D'Souza, F., 2012, In : *Inorganic Chemistry*. 51, 6, p. 3656-3665

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

Synthesis and characterization of tris-(5-amino-8-hydroxyquinoline)aluminum complexes and their use as anode buffer layers in inverted organic solar cells

Manninen, V. M., Omar, W. A. E., Heiskanen, J. P., Lemmetyinen, H. J. & Hormi, O. E. O., 2012, In : *Journal of Materials Chemistry*. 22, 43, p. 22971-22982

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

Synthesis of 2-Aryl-Substituted Chromans by Intramolecular C-O Bond Formation

Wang, Y. & Franzen, R., 2012, In : *Synlett*. 6, p. 925-929

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

Synthesis of porphyrinoids with silane anchors and their covalent self-assembling and metallation on solid surface

Sariola-Leikas, E., Hietala, M., Veselov, A., Okhotnikov, O., Semjonov, S. L., Tkachenko, N. V., Lemmetyinen, H. & Efimov, A., 2012, In : *Journal of Colloid and Interface Science*. 369, 1, p. 58-70

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

Synthesis of titanate nanostructures using amorphous precursor material and their adsorption/photocatalytic properties

Ylhäinen, E. K., Nunes, M. R., Silvestre, A. J. & Monteiro, O. C., 2012, In : *Journal of Materials Science*. 47, 10, p. 4305-4312

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

The fluorine effect: photophysical properties of borondipyromethene (bodipy) dyes appended at the meso position with fluorinated aryl groups

Alamiry, M. A. H., Benniston, A. C., Hagon, J., Winstanley, T. P. L., Lemmetyinen, H. & Tkachenko, N. V., 2012, In : *RSC Advances*. 2, 11, p. 4944-4950

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

Vectorial Photoinduced Charge Transfer in Langmuir-Blodgett Films of Porphyrin-Based Donor-Acceptor Systems

Tkachenko, N. V. & Lemmetyinen, H., 2012, *Multiporphyrin Arrays: Fundamentals and Applications*. Dongho, K. (ed.). Singapore: PAN STANFORD PUBLISHING, p. 537-586

Construction of bispirooxindoles containing three quaternary stereocentres in a cascade using a single multifunctional organocatalyst

Tan, B., Candeias, N. R. & Barbas, C. F., Jun 2011, In : *Nature Chemistry*. 3, 6, p. 473-477 5 p.

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

Core-Structure-Motivated Design of a Phosphine-Catalyzed [3+2] Cycloaddition Reaction: Enantioselective Syntheses of Spirocyclopenteneoxindoles

Tan, B., Candeias, N. R. & Barbas, C. F., 6 Apr 2011, In : *Journal of the American Chemical Society*. 133, 13, p. 4672-4675 4 p.

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

1,7- And 1,6-Regioisomers of Diphenoxy and Dipyrrolidinyl Substituted Perylene Diimides: Synthesis, Separation, Characterization, and Comparison of Electrochemical and Optical Properties

Dubey, R. K., Efimov, A. & Lemmetyinen, H., 2011, In : *Chemistry of Materials*. 23, 3, p. 778-788

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

Anaerobic H₂ production at elevated temperature (60 °C) by enriched mixed consortia from mesophilic sources

Karadag, D., 2011, In : *International Journal of Hydrogen Energy*. 36, 1, p. 458-465

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

A solid phase extraction technique for HPLC analysis of short chain fatty acid fluxes during microbial degradation of plant polymers

Carver, S., Munster, U. & Tuovinen, O. H., 2011, In : *Journal of Liquid Chromatography and Related Technologies*. 34, 15, p. 1546-1555

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

Bay Region Borylation of Perylene Bisimides

Dey, S., Efimov, A. & Lemmetyinen, H., 2011, In : *European Journal of Organic Chemistry*. 2011, 30, p. 5955-5958

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

Biohydrogen production in alkalithermophilic conditions: *Thermobrachium celere* as a case study

Ciranna, A., Santala, V. & Karp, M., 2011, In : *Bioresource Technology*. 102, 18, p. 8714-8722

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

Carbon Nanotube Wiring of Donor-Acceptor Nanograins by Self-Assembly and Efficient Charge Transport

Umeyama, T., Tezuka, N., Kawashima, F., Seki, S., Matano, Y., Yoshihide, N., Shishido, T., Nishi, M., Hirao, K., Lehtivuori, H., Tkachenko, N. V., Lemmetyinen, H. & Imahori, H., 2011, In : *Angewandte Chemie (International Edition)*. 50, 20, p. 4615-4619

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

Comparison of sea surface microlayer and subsurface water bacterial communities in the Baltic sea

Lindroos, A., Szabo, H. M., Nikinmaa, M. & Leskinen, P., 2011, In : *Aquatic Microbial Ecology*. 65, 1, p. 29-42

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

Covalent phthalocyanine-fullerene dyads: synthesis, electron transfer in solutions and molecular films

Tkachenko, N. V., Efimov, A. & Lemmetyinen, H., 2011, In : *Journal of Porphyrins and Phthalocyanines*. 15, 9-10, p. 780-790

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

Dynamics of Photoinduced Charge Transfer of Fullerene Based Donor-Acceptor Systems: From Solution to Organized Molecular Films

Tkachenko, N. V. & Lemmetyinen, H., 2011, *Handbook of Carbon Nano Materials, Volume 2: Electron Transfer and Applications*. D'Souza, F. & Kadish, K. M. (eds.). Singapore: World Scientific Publishing, p. 405-440

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

Effect of Anion Ligation on Electron Transfer of Double-Linked Zinc Porphyrin - Fullerene Dyad

Al-Subi, A. H., Niemi, M., Tkachenko, N. V. & Lemmetyinen, H., 2011, In : Journal of Physical Chemistry A. 115, 15, p. 3263-3271

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

Effects of fullerene encapsulation on structure and photophysical properties of porphyrin-linked single-walled carbon nanotubes

Umeyama, T., Mihara, J., Hayashi, H., Kadota, N., Chukharev, V., Tkachenko, N., Lemmetyinen, H., Yoshida, K., Isoda, S. & Imahori, H., 2011, In : Chemical Communications. 47, 42, p. 11781-11783

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

Electronic Structure Manipulation of (Benzothiazole)zinc Complexes: Synthesis, Optical and Electrochemical Studies of 5-Substituted Derivatives

Dey, S., Efimov, A., Giri, C., Rissanen, K. & Lemmetyinen, H., 2011, In : European Journal of Organic Chemistry. 2011, 31, p. 6226-6232

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

Enhanced performance and stability of inverted organic solar cells by using novel zinc-benzothiazole complexes as anode buffer layer

Dey, S., Vivo, P., Efimov, A. & Lemmetyinen, H., 2011, In : Journal of Materials Chemistry. 21, p. 15587-15592

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

Excitation energy transfer in the LHC-II trimer: from carotenoids to chlorophylls in space and time

Martiskainen, J., Kananavicius, R., Linnanto, J., Lehtivuori, H., Keraenen, M., Aumanen, V., Tkachenko, N. & Korppi-Tommola, J., 2011, In : Photosynthesis Research. 107, 2, p. 195-207

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

Fused Alq3 derivatives: syntheses and photophysical characteristics

Heiskanen, J. P., Tolkki, A. E., Lemmetyinen, H. J. & Hormi, O. E. O., 2011, In : Journal of Materials Chemistry. 21, p. 14766-14775

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

Indole-olefin-oxazoline (IndOleOx)-ligands: synthesis and utilization in asymmetric Rh-catalyzed conjugate addition

Kuuloja, N., Tois, J. & Franzen, R., 2011, In : Tetrahedron : Asymmetry. 22, 4, p. 468-475

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

Optical, Electrochemical, and Photovoltaic Effects of an Electron-Withdrawing Tetrafluorophenylene Bridge in a Push -Pull Porphyrin Sensitizer Used for Dye-Sensitized Solar Cells

Mathew, S., Iijima, H., Toude, Y., Umeyama, T., Matano, Y., Ito, S., Tkachenko, N. V., Lemmetyinen, H. & Imahori, H., 2011, In : Journal of Physical Chemistry C. 115, 29, p. 14415-14424

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

Photochemical processes for dithiocarbamate metal complexes. Photochemistry of Ni(II)(n-Bu₂NCS₂)₂ complex in CCl₄

Kolomeets, A. V., Plyusnin, V. F., Grivin, V. P., Larionov, S. V. & Lemmetyinen, H., 2011, In : Journal of Photochemistry and Photobiology, A: Chemistry. 220, 2-3, p. 164-172

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

Photochemistry of Dithiocarbamate Cu(II) Complex in CCl₄

Plyusnin, V. F., Kolomeets, A. V., Grivin, V. P., Larionov, S. V. & Lemmetyinen, H., 2011, In : Journal of Physical Chemistry A. 115, 10, p. 1763-1773

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

Photochromic processes in di(mercaptoquinolino)Ni(II) complex and perfluordiphenyl disulfide solutions

Vorobyev, D. Y., Kolomeets, A. V., Ivanov, Y. V., Bogdanchikov, G. A., Grivin, V. P., Plyusnin, V. F., Larionov, S. V. & Lemmetyinen, H., 2011, In : Photochemical & Photobiological Sciences. 10, 7, p. 1196-1202

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

Photocurrent generation in fullerene-phthalocyanine composite by in situ cationic polymerization

Lintinen, K., Storbacka, L., Efimov, A., Tolkki, A., Tkachenko, N. & Lemmetyinen, H., 2011, In : Solar Energy Materials and Solar Cells. 95, 3, p. 909-916

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

Photoinduced electron transfer in a directly linked meso-triphenylamine zinc porphyrin-quinone dyad

Wijesinghe, C. A., Niemi, M., Tkachenko, N. V., Subbaiyan, N. K., Zandler, M. E., Lemmetyinen, H. & DSouza, F., 2011, In : Journal of Porphyrins and Phthalocyanines. 15, 5-6, p. 391-400

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

Photoinduced intra- and intermolecular electron transfer in solutions and in solid organized molecular assemblies

Lemmetyinen, H., Tkachenko, N. V., Efimov, A. & Niemi, M., 2011, In : Physical Chemistry Chemical Physics. 13, p. 397-412

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

Photoinduced processes in chromophore-gold nanoparticle assemblies

Kotiaho, A., Lahtinen, R. & Lemmetyinen, H., 2011, In : Pure and Applied Chemistry. 83, 4, p. 813-821

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

Photophysics and photoelectrochemical properties of nanohybrids consisting of fullerene-encapsulated single-walled carbon nanotubes and poly(3-hexylthiophene)

Tezuka, N., Umeyama, T., Matano, Y., Shishido, T., Yoshida, K., Ogawa, T., Isoda, S., Stranius, K., Chukharev, V., Tkachenko, N. V., Lemmetyinen, H. & Imahori, H., 2011, In : Energy & Environmental Science. 4, 3, p. 741-750

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

Poly(b-amino ester)-DNA complexes: Time-resolved fluorescence and cellular transfection studies

Vuorimaa, E., Ketola, T.-M., Green, J. J., Hanzlikova, M., Lemmetyinen, H., Langer, R., Anderson, D. G., Urtti, A. & Yliperttula, M., 2011, In : Journal of Controlled Release. 154, 2, p. 171-176

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

Preparation of triethylammonium tetra-arylborates (TETABs): coupling partners for the Suzuki reaction

Kuuloja, N., Kylmä, T. M., Tois, J. E., Sjöholm, R. E. & Franzen, R. G., 2011, In : Synthetic Communications. 41, 7, p. 1052-1063

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

Role of Polyplex Intermediate Species on Gene Transfer Efficiency: Polyethylenimine-DNA Complexes and Time-Resolved Fluorescence Spectroscopy

Ketola, T.-M., Hanzlikova, M., Urtti, A., Lemmetyinen, H., Yliperttula, M. & Vuorimaa, E., 2011, In : Journal of Physical Chemistry Part B. 115, 8, p. 1895-1902

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

Self-assembled monolayers (SAMs) of porphyrin deposited inside photonic crystal fibre (PCF)

Veselov, A. A., Thur, C., Efimov, A., Guina, M., Lemmetyinen, H. & Tkachenko, N. V., 2011, In : Physica Status Solidi A: Applications And Materials Science. 208, 8, p. 1858-1861

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

Structure of porphyrin-fullerene dyad monolayer on the water surface and solid substrate

Dyakovaa, Y. A., Suvorova, E. I., Orekhov, A. S., Alekseev, A. S., Klechkovskaya, V. V., Tereshchenko, E. Y., Tkachenko, N. V., Lemmetyinen, H., Feigin, L. A. & Kovalchuka, M. V., 2011, In : Crystallography Reports. 56, 1, p. 157-163 7 p.

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

Study of PEGylated Lipid Layers as a Model for PEGylated Liposome Surfaces: Molecular Dynamics Simulation and Langmuir Monolayer Studies

Stepniewski, M., Pasenkiewicz-Gierula, M., Rog, T., Danne, R., Orłowski, A., Karttunen, M., Urtti, A., Yliperttula, M., Vuorimaa, E. & Bunker, A., 2011, In : *Langmuir*. 27, 12, p. 7788-7798
Research output: Contribution to journal › Article › Scientific › peer-review

Synthesis and photovoltaic properties of thiopheneimide-fused thiophene alternating copolymers with different alkyl side chains

Umeyama, T., Odoi, M., Yoshikawa, O., Sagawa, T., Yoshikawa, S., Evgenia, D., Tezuka, N., Matano, Y., Stranius, K., Tkachenko, N., Lemmetyinen, H. & Imahori, H., 2011, In : *Journal of Materials Chemistry*. 21, 33, p. 12454-12461
Research output: Contribution to journal › Article › Scientific › peer-review

The excited states of a porphine-quinone complex under an external electrostatic field calculated by TDDFT

Aittala, P. J., Cramariuc, O. & Hukka, T. I., 2011, In : *Chemical Physics Letters*. 501, 4-6, p. 226-231
Research output: Contribution to journal › Article › Scientific › peer-review

Ultrafast excitation transfer and charge stabilization in a newly assembled photosynthetic antenna-reaction center mimic composed of boron dipyrin, zinc porphyrin and fullerene

D'Souza, F., Wijesinghe, C. A., El-Khouly, M. E., Hudson, J., Niemi, M., Lemmetyinen, H., Tkachenko, N. V., Zandler, M. E. & Fukuzumi, S., 2011, In : *Physical Chemistry Chemical Physics*. 13, p. 18168-18178
Research output: Contribution to journal › Article › Scientific › peer-review

Ultrafast pump-probe spectroscopy of IrCl₆²⁻ complex in alcohol solutions

Glebov, E. M., Kolomeets, A. V., Pozdnyakov, I. P., Plyusnin, V. F., Tkachenko, N. V. & Lemmetyinen, H., 2011, In : *Photochemical & Photobiological Sciences*. 10, 10, p. 1709-1714
Research output: Contribution to journal › Article › Scientific › peer-review

Utilization of IndPHOX-ligands in palladium-catalysed asymmetric allylic aminations

Wang, Y., Vaismaa, M., Hämäläinen, A., Tois, J. & Franzen, R., 2011, In : *Tetrahedron : Asymmetry*. 22, 5, p. 524-529
Research output: Contribution to journal › Article › Scientific › peer-review

Photopolymerizable liquid fullerene, phthalocyanine and porphyrin derivatives: synthesis, analysis and photocurrent generation

Lintinen, K., 3 Dec 2010, Tampere: Tampere University of Technology. 96 p. (Tampere University of Technology. Publication; vol. 942)
Research output: Book/Report › Doctoral thesis › Collection of Articles

Computational study of charge transfer in a porphine: quinone complex and novel alkoxypridylindolizine derivatives

Aittala, P., 26 Nov 2010, Tampere: Tampere University of Technology. 87 p. (Tampere University of Technology. Publication; vol. 936)
Research output: Book/Report › Doctoral thesis › Monograph

Multilayered thin films for organic photovoltaics

Vivo, P., 29 Oct 2010, Tampere: Tampere University of Technology. 86 p. (Tampere University of Technology. Publication; vol. 918)
Research output: Book/Report › Doctoral thesis › Monograph

Boronic Acids and Esters in the Petasis-Borono Mannich Multicomponent Reaction

Candeias, N. R., Montalbano, F., Cal, P. M. S. D. & Gois, P. M. P., Oct 2010, In : *Chemical Reviews*. 110, 10, p. 6169-6193 25 p.
Research output: Contribution to journal › Literature review › Scientific › peer-review