

Mixed carbon substrates : a necessary nuisance or a missed opportunity? / Liu, Nian; Santala, Suvi; Stephanopoulos, Gregory.

In: CURRENT OPINION IN BIOTECHNOLOGY, Vol. 62, 01.04.2020, p. 15-21.

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, Heikki; Manninen, Hanna; Laaksonen, Timo; Linderborg, Kaisa M.; Myoda, Takao; Hopia, Anu; Sandell, Mari.

In: Food Chemistry, Vol. 304, 125403, 30.01.2020.

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. / Dessì, Paolo; Chatterjee, Pritha; Mills, Simon; Kokko, Marika; Lakaniemi, Aino-Maija; Collins, Gavin; Lens, Piet N.L.

In: Bioresource Technology, Vol. 294, 122115, 01.12.2019.

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

Programmable responsive hydrogels inspired by classical conditioning algorithm. / Zhang, Hang; Zeng, Hao; Priimägi, Arri; Ikkala, Olli.

In: Nature Communications, Vol. 10, No. 1, 3267, 01.12.2019.

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, Suniti; Rinta-Kanto, Johanna M.; Kettunen, Riitta; Tolvanen, Henrik; Lens, Piet; Collins, Gavin; Kokko, Marika; Rintala, Jukka.

In: Science of the Total Environment, Vol. 691, 15.11.2019, p. 960-968.

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

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.

In: Journal of the Mechanical Behavior of Biomedical Materials, Vol. 99, 01.11.2019, p. 93-103.

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

Effects of elevated pressures on the activity of acidophilic bioleaching microorganisms. / Hajdu-Rahkama, Réka; Ahoranta, Sarita; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.

In: Biochemical Engineering Journal, Vol. 150, 107286, 15.10.2019.

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, Arnold; Merilaita, Niina; Solismaa, Soili; Karhu, Marjaana; Levänen, Erkki.

In: Construction and building materials, Vol. 231, 117098, 20.01.2020.

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, Toshiyuki; Sakai, Hayato;

Nagashima, Hiroki; Kobori, Yasuhiro; Tkachenko, Nikolai V.; Hasobe, Taku.

In: Journal of the American Chemical Society, Vol. 141, No. 37, 18.09.2019, p. 14720-14727.

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, Johanna; Dessì, Paolo; Chatterjee, Pritha; Honkanen, Mari; Noori, Md Tabish; Kokko, Marika;

Lakaniemi, Aino Maija; Lens, Piet N.L.; Puhakka, Jaakko A.

In: Chemical Engineering Journal, Vol. 372, 15.09.2019, p. 141-150.

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, Vili-Veli; Merivaara, Arto; Kiiskinen, Jasmi; Paukkonen, Heli; Laurén, Patrick; Hakkarainen, Tiina; Koivuniemi, Raili; Sarkanen, Riina; Ylikomi, Timo; Laaksonen, Timo; Yliperttula, Marjo.

In: Cryobiology, 15.09.2019.

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, Nikita; Isokuortti, Jussi; Efimov, Alexandre; Vuorimaa-Laukkanen, Elina; Tkachenko, Nikolai V.; Laaksonen, Timo.

In: Journal of Physical Chemistry C, Vol. 123, No. 37, 26.08.2019, 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, Alessandra; Smecca, Emanuele; Sanzaro, Salvatore; Bongiorno, Corrado; Giannazzo, Filippo; Mannino, Giovanni; La Magna, Antonino; Liu, Maning; Vivo, Paola; Listorti, Andrea; Calabro', Emanuele; Matteocci, Fabio ; Di Carlo, Aldo.

In: ACS Applied Energy Materials, Vol. 2, No. 9, 16.08.2019, p. 6218-6229.

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, Davide; Matikainen, Ville; Uusitalo, Mikko; Koivuluoto, Heli; Vuoristo, Petri.

In: Corrosion Science, 14.08.2019.

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

Alkane and wax ester production from lignin-related aromatic compounds. / Salmela, Milla; Lehtinen, Tapio; Efimova, Elena; Santala, Suvi; Santala, Ville.

In: Biotechnology and Bioengineering, Vol. 116, No. 8, 01.08.2019, p. 1934-1945.

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

Photochemistry of dithiophosphinate Ni(S₂P(i-Bu)₂)₂ complex in CCl₄. Transient species and TD-DFT calculations. / Solovyev, Aleksey I.; Mikheyli, Aleksandr V.; Plyusnin, Victor F.; Shubin, Aleksandr A.; Grivin, Vjacheslav P.; Larionov, Stanislav V.; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Journal of Photochemistry and Photobiology A: Chemistry, Vol. 381, 111857, 01.08.2019.

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

Pyrolytic behavior of lignocellulosic-based polysaccharides. / Ghalibaf, Maryam; Doddapaneni, Tharaka Rama Krishna C.; Alén, Raimo.

In: Journal of Thermal Analysis and Calorimetry, Vol. 137, No. 1, 07.2019, 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, Jaana; Grosrenaud, Josué; Siiskonen, Antti; Priimägi, Arri; Pellerin, Christian; Bazuin, C. Geraldine.

In: ACS Applied Nano Materials, Vol. 2, No. 6, 28.06.2019, p. 3526-3537.

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

Photoreversible Soft Azo Dye Materials: Toward Optical Control of Bio-Interfaces. / Chang, Victoria Y.; Fedele, Chiara; Priimägi, Arri; Shishido, Atsushi; Barrett, Christopher J. .

In: Advanced Optical Materials, 29.05.2019, p. 1900091.

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

Lasing in Ni Nanodisk Arrays. / Pourjamal, Sara; Hakala, Tommi K.; Nečada, Marek; Freire-Fernández, Francisco; Kataja, Mikko; Rekola, Heikki; Martikainen, Jani Petri; Törmä, Päivi; Van Dijken, Sebastiaan.

In: ACS Nano, Vol. 13, No. 5, 28.05.2019, p. 5686-5692.

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

Photoinduced Charge Transfer Processes at Organic-Semiconductor Interfaces. / Virkki, Kirsi.

Tampere University, 2019. 55 p. (Tampere University Dissertations; Vol. 67).

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

Bioinspired Light Robots from Liquid Crystal Networks. / Wani, Owies.
Tampere University, 2019. 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, Maning; Vivo, Paola.
2019. Paper presented at HOPV 2019, Rome, Italy.
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, Ramita; Di Capua, Francesco; Lakaniemi, Aino-Maija; Rene, Eldon R.; Lens, Piet.
In: Environmental Science: Water Research & Technology, Vol. 5, No. 6, 29.04.2019, p. 1072-1081.
Research output: Contribution to journal > Article > Scientific > peer-review

Halide Perovskite Nanocrystals for Next-Generation Optoelectronics. / Liu, Maning; Zhang, Haichang; Gedamu, Dawit; Fourmont, Paul; Rekola, Heikki; Hiltunen, Arto; Cloutier, Sylvain G.; Nechache, Riad; Priimägi, Arri; Vivo, Paola.
In: Small, 23.04.2019.
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, Ramita; Di Capua, Francesco; Lakaniemi, Aino-Maija; Rene, Eldon R.; Lens, Piet.
In: Journal of Hazardous Materials, Vol. 367, 05.04.2019, 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.
In: Sustainable Energy Technologies and Assessments, Vol. 32, 01.04.2019, p. 47-57.
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, Onyinye; Escudié, Renaud; Bernet, Nicolas; Mangayil, Rahul; Lakaniemi, Aino-Maija; Trably, Eric.
In: International Journal of Hydrogen Energy, Vol. 44, No. 16, 29.03.2019, 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, Anissa; Valkonen, Arto; Rzaigui, Mohamed; Smirani, Wajda.
In: Polyhedron, Vol. 161, 15.03.2019, 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, Jin; Lehtinen, Tapio; Efimova, Elena; Santala, Ville; Santala, Suvi.
In: Microbial Cell Factories, Vol. 18, No. 1, 48, 11.03.2019.
Research output: Contribution to journal > Article > Scientific > peer-review

Vertical stratification of bacteria and archaea in sediments of a small boreal humic lake. / Rissanen, Antti J.; Peura, Sari; Mpamah, Promise A.; Taipale, Sami; Tirola, Marja; Biasi, Christina; Mäki, Anita; Nykänen, Hannu.
In: FEMS Microbiology Letters, Vol. 366, No. 5, 01.03.2019.
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, Shunta; Sakai, Hayato; Nagashima, Hiroki; Kobori, Yasuhiro; Tkachenko, Nikolai V.; Hasobe, Taku.
In: ACS Energy Letters, Vol. 4, No. 1, 11.01.2019, p. 26-31.
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.

In: Biomass and Bioenergy, Vol. 120, 01.01.2019, p. 40-48.

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

An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks. / Wani, Owies M.; Verpaalen, Rob; Zeng, Hao; Priimagi, Arri; Schenning, Albert P.H.J.

In: Advanced Materials, Vol. 31, No. 2, 1805985, 01.2019.

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

A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities. / Kuroda, Kiyonori; Yazaki, Kohei; Tanaka, Yuya; Akita, Munetaka; Sakai, Hayato; Hasobe, Taku; Tkachenko, Nikolai V.; Yoshizawa, Michito.

In: Angewandte Chemie - International Edition, Vol. 58, No. 4, 01.2019, 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, Tero-Petri; Hiltunen, Arto; Iivonen, Tomi; Ulkuniemi, Riina; Lahtonen, Kimmo; Ali-Löytty, Harri; Mizohata, Kenichiro; Valden, Mika; Leskelä, Markku; Tkachenko, Nikolai V.

In: Journal of Materials Chemistry A, Vol. 7, No. 7, 01.2019, p. 3206-3215.

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

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

Singh, Suniti; Rinta-Kanto, Johanna; Kettunen, Riitta; Lens, Piet; Collins, Gavin; Kokko, Marika; Rintala, Jukka.

In: ARCHAEA, Vol. 2019, 1751783, 2019.

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.

In: Materials Today Communications, 2019.

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, Mohamed; Chatterjee, Pritha; Dessi, Paolo; Kokko, Marika; El-Gohary, Fatma; Abo-Aly, Mohamed; Rintala, Jukka.

In: Waste and Biomass Valorization, 2019.

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

Charge transfer dynamics in CsPbBr_3 perovskite quantum dots-anthraquinone/fullerene (C_{60}) hybrids. / Mandal, Sadananda; George, Lijo; Tkachenko, Nikolai V.

In: Nanoscale, Vol. 11, No. 3, 2019, p. 862-869.

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, Padma Shanthi; Kaparaju, Prasad; Väisänen, Ari; Rintala, Jukka.

In: Environmental Technology, Vol. 40, No. 4, 2019, p. 418-429.

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, Tomokazu; Hanaoka, Takuma; Yamada, Hiroki; Namura, Yuki; Mizuno, Satoshi; Ohara, Tomoya; Baek, Jinseok; Park, Jaehong; Takano, Yuta; Stranius, Kati; Tkachenko, Nikolai V.; Imahori, Hiroshi.

In: Chemical Science, Vol. 10, No. 27, 2019, p. 6642-6650.

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

Influence of titanium dioxide surface activation on the performance of mesoscopic perovskite solar cells. / Masood, Muhammad Talha; Weinberger, Christian; Qudsia, Syeda; Rosqvist, Emil; Sandberg, Oskar; Nyman, Mathias; Sänden, Simon; Vivo, Paola; Aitola, Kerttu; Lund, Peter D. ; Österbacka, Ronald; Smått, Jan-Henrik.

In: Thin Solid Films, Vol. 686, 137418, 2019.

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

Low-dimensional formamidinium lead perovskite architectures via controllable solvent intercalation. / Shin, Mingue; Kim, Joonyun; Jung, Young Kwang; Ruoko, Tero-Petri; Priimagi, Arri; Walsh, Aron; Shin, Byungha.

In: *Journal of Materials Chemistry C*, Vol. 7, No. 13, 2019, p. 3945-3951.

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, Jenni; Karonen, Maarit; Muilu-Mäkelä, Riina; Wähälä, Kristiina; Denegri, Eduardo Leon; Franzén, Robert; Karp, Matti; Santala, Ville; Sarjala, Tytti.

In: *Molecules*, Vol. 24, No. 12, 2330, 2019.

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, Sadananda; Tkachenko, Nikolai V.

In: *Journal of Physical Chemistry Letters*, 2019, p. 2775-2781.

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

O₂-requiring molecular reporters of gene expression for anaerobic microorganisms. / Guglielmetti, Simone; Santala, Ville; Māngayil, Rahul; Ciranna, Alessandro; Karp, Matti T.

In: *Biosensors and Bioelectronics*, Vol. 123, 2019, p. 1-6.

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.

In: *Ukrainian Journal of Physics*, Vol. 64, No. 1, 2019, p. 63-71.

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

Storing of exoelectrogenic analyte for efficient microbial fuel cell recovery. / Haavisto, Johanna M.; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.

In: *Environmental Technology*, Vol. 40, No. 11, 2019.

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

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

Fliervoet, Lies A.L.; Lisitsyna, Ekaterina S.; Durandin, Nikita A.; Kotsis, Ilias; Maas-Bakker, Roel F.M.; Yliperttula, Marjo; Hennink, Wim E.; Vuorimaa-Laukkanen, Elina; Vermonden, Tina.

In: *Biomacromolecules*, 2019.

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

Sustainability of bioenergy in finland and globally – fact check. / Vakkilainen, Esa; Kontinen, Jukka; Orasuo, Varpu; Aalto, Pami.

27th European Biomass Conference and Exhibition, EUBCE 2019. ETA-Florence Renewable Energies, 2019. p. 1634-1635 (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, Benedicta; Riihonen, Vesa; Vale, João R.; Valkonen, Arto; Candeias, Nuno R.

In: *Molecules*, Vol. 24, No. 13, 2405, 2019.

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, Tejaswini; Rene, Eldon R.; Rintala, Jukka; Lens, Piet N.L.

In: *Separation Science and Technology (Philadelphia)*, 2019.

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, Natalia E.; George, Lijo; Ahmed, Zafar; Candeias, Nuno R.; Durandin, Nikita A.; Efimov, Alexander.

In: Journal of Materials Chemistry B, Vol. 7, No. 28, 2019, p. 4379-4384.

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

Reversible photodoping of TiO₂ nanoparticles. / Joost, Urmas; Sutka, Andris; Oja, Marek; Smits, Krisjanis; Doebelin, Nicola; Loot, Ardi; Järvekülg, Martin; Hirsimäki, Mika; Valden, Mika; Nommiste, Ergo.

In: Chemistry of Materials, Vol. 30, No. 24, 26.12.2018, p. 8968-8974.

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

Bioengineering optimization and microbial characterization of elemental sulfur-fueled denitrifying biofilms. / Kostrytsia, Anastasiia.

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, Vicente.

2018. 237 p.

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

Optimization of fermentative biohydrogen production by *Thermotoga neapolitana*. / Dreschke, Gilbert.

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, Fábio M. F.; Dominguez, Zoe; Alcaide, María M.; Matos, Ana I.; Florindo, Helena F.; R. Candeias, Nuno; Gois, Pedro M. P.; Pischel, Uwe.

In: ChemPhotoChem, Vol. 2, No. 12, 12.2018, 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, Tatu; Andrade, Joana; Nunes, Alexandra; Ntungwe, Epole; Fernandes, Ana S.; Vale, Joao R.; Rodrigues, Joao; Gomes, Joao Paulo; Rijo, Patricia; Candeias, Nuno R.

In: ACS Omega, Vol. 3, No. 11, 29.11.2018, p. 16191-16202.

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

Liquid Crystal Polymer Networks and Elastomers for Light-Fueled Robotics. / Zeng, Hao; Lahikainen, Markus; Wani, Owies M.; Berdin, Alex; Priimagi, Arri.

Photoactive Functional Soft Materials. ed. / Quan Li. John Wiley & Sons, Ltd, 2018. p. 197-226.

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, Hayato; Inaya, Ryutaro; Tkachenko, Nikolai V.; Hasobe, Taku.

In: Chemistry - A European Journal, Vol. 24, No. 64, 16.11.2018, p. 17062-17071.

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

Understanding Dissolution and Crystallization with Imaging : A Surface Point of View. / Novakovic, Dunja; Isomäki, Antti; Pleunis, Bibi; Fraser-Miller, Sara J.; Peltonen, Leena; Laaksonen, Timo; Strachan, Clare J.

In: Molecular Pharmaceutics, Vol. 15, No. 11, 05.11.2018, p. 5361-5373.

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

Production and Synthetic Modifications of Shikimic Acid. / Candeias, Nuno R.; Assoah, Benedicta; Simeonov, Svilen P.

In: Chemical Reviews, Vol. 118, No. 20, 24.10.2018, p. 10458-10550.

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, Anisha; Zhurina, Anastasia; Assoah, Benedicta; Paakkunainen, Aleks; Musa, Aliyu; Kute, Dinesh; Saravanan, Konda Mani; Yli-Harja, Olli; Candeias, Nuno R; Kandhavelu, Meenakshisundaram.
In: *European Journal of Pharmacology*, Vol. 837, 15.10.2018, p. 105-116.
Research output: Contribution to journal > Article > Scientific > peer-review

Reconfigurable photoactuator through synergistic use of photochemical and photothermal effects. / Lahikainen, Markus; Zeng, Hao; Priimägi, Arri.
In: *Nature Communications*, Vol. 9, 4148, 08.10.2018.
Research output: Contribution to journal > Article > Scientific > peer-review

Quantification of bio-anode capacitance in bioelectrochemical systems using Electrochemical Impedance Spectroscopy. / Heijne, Annemiek ter; Liu, Dandan; Sulonen, Mira; Sleutels, Tom; Fabregat-Santiago, Francisco.
In: *Journal of Power Sources*, Vol. 400, 01.10.2018, p. 533-538.
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, Rohan; Peräniemi, Sirpa; Jordan, Norbert; Vogel, Manja; Weiss, Stephan; Foerstendorf, Harald; Lakaniemi, Aino-Maija.
In: *Water Research*, Vol. 142, 01.10.2018, p. 167-175.
Research output: Contribution to journal > Article > Scientific > peer-review

Electro-concentration for chemical-free nitrogen capture as solid ammonium bicarbonate. / Jermakka, Johannes; Thompson Brewster, Emma; Ledezma, Pablo; Freguia, Stefano.
In: *Separation and Purification Technology*, Vol. 203, 12.09.2018, p. 48-55.
Research output: Contribution to journal > Article > Scientific > peer-review

Entangled and colloidally stable microcrystalline cellulose matrices in controlled drug release. / Dong, Yujiao; Paukkonen, Heli; Fang, Wenwen; Kontturi, Eero; Laaksonen, Timo; Laaksonen, Päivi.
In: *International Journal of Pharmaceutics*, Vol. 548, No. 1, 05.09.2018, p. 113-119.
Research output: Contribution to journal > Article > Scientific > peer-review

Post operation inactivation of acidophilic bioleaching microorganisms using natural chloride-rich mine water. / Bomberg, Malin; Miettinen, Hanna; Wahlström, Margareta; Kaartinen, Tommi; Ahoranta, Sarita; Lakaniemi, Aino-Maija; Kinnunen, Päivi.
In: *Hydrometallurgy*, Vol. 180, 01.09.2018, p. 236-245.
Research output: Contribution to journal > Article > Scientific > peer-review

Recent progress in biohydrometallurgy and microbial characterisation. / Kaksonen, Anna H.; Boxall, Naomi J.; Gumulya, Yosephine; Khaleque, Himel N.; Morris, Christina; Bohu, Tsing; Cheng, Ka Yu; Usher, Kayley M.; Lakaniemi, Aino-Maija.
In: *Hydrometallurgy*, Vol. 180, 01.09.2018, p. 7-25.
Research output: Contribution to journal > Article > Scientific > peer-review

Photoinduced Energy Transfer in ZnCdSeS Quantum Dot-Phthalocyanines Hybrids. / Mandal, Sadananda; Garcia Iglesias, Miguel; Ince, Mine; Torres, Tomás; Tkachenko, Nikolai V.
In: *ACS Omega*, Vol. 3, No. 8, 31.08.2018, p. 10048-10057.
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.; Rojalín, T.; Niemi, L.; Nivaro, O.; Laaksonen, T.; Yliperttula, M.; Vuorimaa-Laukkanen, E.
In: *Journal of Controlled Release*, Vol. 284, 28.08.2018, p. 133-143.
Research output: Contribution to journal > Review Article > Scientific > peer-review

Optimization of Fin Arrays Cooled by Forced or Natural Convection. / Lampio, Kaj.
Tampere University of Technology, 2018. 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, Reijo; Lampio, Kaj.

International Heat Transfer Conference, IHTC-16, August 10-15, 2018, Beijing, China. 2018. p. 5041-5048 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.

In: Heat and Mass Transfer/Waerme- und Stoffuebertragung, Vol. 54, No. 8, 08.2018, 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, Lea Chua; Espinosa-Ortiz, Erika J.; Nancharaiah, Yarlagadda V.; van Hullebusch, Eric D.; Gerlach, Robin; Lens, Piet Nl.

In: Journal of Chemical Technology and Biotechnology, Vol. 93, No. 8, 08.2018, 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, Arto; Ruoko, Tero-Petri; Iivonen, Tomi; Lahtonen, Kimmo; Ali-Löyty, Harri; Sarlin, Essi; Valden, Mika; Leskelä, Markku; Tkachenko, Nikolai.

In: Sustainable Energy & Fuels, Vol. 2, No. 9, 31.07.2018, 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.

In: Royal Society Open Science, Vol. 5, No. 7, 180323, 11.07.2018.

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

Halogen-bond driven self-assembly of triangular macrocycles. / Szell, Patrick M. J.; Siiskonen, Antti; Catalano, Luca; Cavallo, Gabriella; Terraneo, Giancarlo; Priimägi, Arri; Bryce, David L.; Metrangolo, Pierangelo.

In: New Journal of Chemistry, Vol. 42, No. 13, 07.07.2018, p. 10467-10471.

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

Metabolic pairing of aerobic and anaerobic production in a one-pot batch cultivation. / Salmela, Milla; Lehtinen, Tapio; Efimova, Elena; Santala, Suvi; Mangayil, Rahul.

In: Biotechnology for Biofuels, Vol. 11, No. 1, 187, 03.07.2018.

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

Pectin and Mucin Enhance the Bioadhesion of Drug Loaded Nanofibrillated Cellulose Films. / Laurén, Patrick; Paukkonen, Heli; Lipiäinen, Tiina; Dong, Yujiao; Oksanen, Timo; Rääkkönen, Heikki; Ehlers, Henrik; Laaksonen, Päivi; Yliperttula, Marjo; Laaksonen, Timo.

In: Pharmaceutical Research, Vol. 35, No. 7, 145, 01.07.2018.

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, Hayato; Inaya, Ryutaro; Nagashima, Hiroki; Nakamura, Shunta; Kobori, Yasuhiro; Tkachenko, Nikolai V.; Hasobe, Taku.

In: Journal of Physical Chemistry Letters, Vol. 9, No. 12, 21.06.2018, p. 3354-3360.

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

Light-Activated Antimicrobial Materials Based on Perylene Imides and Phthalocyanines. / George, Lijo.

Tampere University of Technology, 2018. 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, Marika; Epple, Stefanie; Gescher, Johannes; Kerzenmacher, Sven.

In: Bioresource Technology, Vol. 258, 01.06.2018, p. 376-389.

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

Lewis Base Catalyzed Intramolecular Reduction of Salicylaldehydes by Pinacol-Derived Chlorohydrosilane. / Assoah, Benedicta; Vale, João R.; Kalenius, Elina; Veiros, Luis; Rafael Candeias, Nuno.

In: *European Journal of Organic Chemistry*, Vol. 2018, No. 23, 01.06.2018, 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. / George, Lijo; Hiltunen, Arto; Santala, Ville; Efimov, Alexander.

In: *Journal of Inorganic Biochemistry*, Vol. 183, 01.06.2018, p. 94-100.

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, Kirsi; Tervola, Essi; Medel, Maria; Torres, Tomás; Tkachenko, Nikolai V.

In: *ACS Omega*, Vol. 3, No. 5, 31.05.2018, p. 4947-4958.

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

Mesophilic and thermophilic biohydrogen and bioelectricity production from real and synthetic wastewaters. / Dessi, Paolo. Université Paris-Est, 2018. 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, Paolo; Porca, Estefania; Frunzo, Luigi; Lakaniemi, Aino-Maija; Collins, Gavin; Esposito, Giovanni; Lens, Piet N.L.

In: *International Journal of Hydrogen Energy*, Vol. 43, No. 19, 10.05.2018, 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, Kaisa; Vuorimaa-Laukkanen, Elina; Strachan, Clare J.; Laaksonen, Timo.

In: *Molecular Pharmaceutics*, Vol. 15, No. 5, 07.05.2018, p. 1964-1971.

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

Investigating the kinetics and biofuel properties of *Alstonia congensis* and *Ceiba pentandra* via torrefaction. / Oluoti, Kehinde; Doddapaneni, Tharaka Rama K.C.; Richards, Tobias.

In: *Energy*, Vol. 150, 01.05.2018, p. 134-141.

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

Free amino acids and 5'-nucleotides in Finnish forest mushrooms. / Manninen, Hanna; Rotola-Pukkila, Minna; Aisala, Heikki; Hopia, Anu; Laaksonen, Timo.

In: *Food Chemistry*, Vol. 247, 05.2018, p. 23-28.

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, Marika; Koskue, Veera; Rintala, Jukka.

In: *Water Research*, Vol. 133, 15.04.2018, p. 218-226.

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, Raffaele; Honkanen, Mari; Kolppo, Kari; Lepistö, Raghida.

In: *Journal of Environmental Management*, Vol. 212, 15.04.2018, p. 433-439.

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, Musammir; Koivisto, Janne; Hukka, Terttu; Hokka, Mikko; Kellomäki, Minna.

In: *ACS Applied Materials & Interfaces*, Vol. 10, No. 14, 11.04.2018, p. 11950-11960.

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

Process Integration Approaches to Improve the Techno-Economic Feasibility of Torrefaction Process. / Doddapaneni, Tharaka Rama Krishna C.
Tampere University of Technology, 2018. 84 p. (Tampere University of Technology. Publication; Vol. 1539).
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. / Kannisto, Matti.
Tampere University of Technology, 2018. 64 p. (Tampere University of Technology. Publication; Vol. 1532).
Research output: Book/Report › Doctoral thesis › Collection of Articles

Thermal Isomerization of Hydroxyazobenzenes as a Platform for Vapor Sensing. / Poutanen, Mikko; Ahmed, Zafar; Rautkari, Lauri; Ikkala, Olli; Priimägi, Arri.
In: ACS Macro Letters, Vol. 7, No. 3, 20.03.2018, p. 381-386.
Research output: Contribution to journal › Article › Scientific › peer-review

Modeling of Charge Transfer at Dye-Semiconductor Interfaces in p-Type Solar Cells. / Kontkanen, Outi Vilhelmiina.
Tampere University of Technology, 2018. 117 p. (Tampere University of Technology. Publication; Vol. 1530).
Research output: Book/Report › Doctoral thesis › Monograph

Techno-economic analysis of a power to biogas system operated based on fluctuating electricity price. / Pääkkönen, A.; Tolvanen, H.; Rintala, J.
In: Renewable Energy, Vol. 117, 03.2018, p. 166-174.
Research output: Contribution to journal › Article › Scientific › peer-review

Critical role and modification of surface states in hematite films for enhancing oxygen evolution activity. / Pyeon, Myeongwhun; Ruoko, Tero-Petri; Leduc, Jennifer; Goenuellue, Yakup; Deo, Meenal; Tkachenko, Nikolai V.; Mathur, Sanjay.
In: Journal of Materials Research, Vol. 33, No. 4, 28.02.2018, p. 455-466.
Research output: Contribution to journal › Review Article › Scientific › peer-review

UV-Blocking Synthetic Biopolymer from Biomass-Based Bifuran Diester and Ethylene Glycol. / Kainulainen, Tuomo P.; Sirviö, Juho A.; Sethi, Jatin; Hukka, Terttu I.; Heiskanen, Juha P.
In: Macromolecules, Vol. 51, No. 5, 21.02.2018, p. 1822-1829.
Research output: Contribution to journal › Article › Scientific › peer-review

Pot-economy autooxidative condensation of 2-Aryl-2-lithio-1,3-dithianes. / Vale, Joao R.; Rimpiläinen, Tatu; Sievänen, Elina; Rissanen, Kari; Afonso, Carlos A.M.; Candeias, Nuno R.
In: Journal of Organic Chemistry, Vol. 83, No. 4, 16.02.2018, p. 1948-1958.
Research output: Contribution to journal › Article › Scientific › peer-review

Quantitative Real-time PCR Monitoring Dynamics Of *Thermotoga Neapolitana* In Synthetic Co-Culture For Biohydrogen Production. / Okonkwo, Onyinye; Lakaniemi, Aino-Maija; Santala, Ville; Karp, Matti; Mangayil, Rahul.
In: International Journal of Hydrogen Energy, Vol. 43, No. 6, 08.02.2018, p. 3133-3141.
Research output: Contribution to journal › Article › Scientific › peer-review

Controlled Growth of Supported ZnO Inverted Nanopyramids with Downward Pointing Tips. / Barreca, Davide; Carraro, Giorgio; Maccato, Chiara; Altantzis, Thomas; Kaunisto, Kimmo; Gasparotto, Alberto.
In: Crystal Growth and Design, Vol. 18, No. 4, 02.2018, p. 2579-2587.
Research output: Contribution to journal › Article › Scientific › peer-review

Ultralong 20 Milliseconds Charge Separation Lifetime for Photoilluminated Oligophenylenevinylene–Azafullerene Systems. / Rotas, Georgios; Stranius, Kati; Tkachenko, Nikolai; Tagmatarchis, Nikos.
In: Advanced Functional Materials, Vol. 28, No. 7, 1702278, 02.2018.
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. / Kato, Daiki; Sakai, Hayato; Araki, Yasuyuki; Wada, Takehiko; Tkachenko, Nikolai V.; Hasobe, Taku.

In: *Physical Chemistry Chemical Physics*, Vol. 20, No. 13, 01.01.2018, p. 8695-8706.

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

Ortho-Fluorination of azophenols increases the mesophase stability of photoresponsive hydrogen-bonded liquid crystals. / Saccone, Marco; Kuntze, Kim; Ahmed, Zafar; Siiskonen, Antti; Giese, Michael; Priimagi, Arri.

In: *Journal of Materials Chemistry C*, Vol. 6, No. 37, 01.01.2018, p. 9958-9963.

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

A Bioscreening Technique for Ultraviolet Irradiation Protective Natural Substances. / Tienaho, Jenni; Poikulainen, Emmi; Sarjala, Tytti; Muilu-Mäkelä, Riina; Santala, Ville; Karp, Matti.

In: *Photochemistry and Photobiology*, Vol. 94, No. 6, 2018, p. 1273-1280.

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

Adsorption of furfural from torrefaction condensate using torrefied biomass. / Doddapaneni, Tharaka Rama Krishna C.; Jain, Rohan; Praveenkumar, Ramasamy; Rintala, Jukka; Romar, Henrik; Kontinen, Jukka.

In: *Chemical Engineering Journal*, Vol. 334, 2018, p. 558-568.

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

Archaea are prominent members of the prokaryotic communities colonizing common forest mushrooms. / Rinta-Kanto, J. M.; Pehkonen, K.; Sinkko, H.; Tamminen, M. V.; Timonen, S.

In: *Canadian Journal of Microbiology*, Vol. 64, No. 10, 2018, p. 716-726.

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

Bio-electrochemical conversion of industrial wastewater-COD combined with downstream methanol synthesis-an economic and life cycle assessment. / Streeck, J.; Hank, C.; Neuner, M.; Gil-Carrera, L.; Kokko, M.; Pauliuk, S.; Schaadt, A.; Kerzenmacher, S.; White, R. J.

In: *Green Chemistry*, Vol. 20, No. 12, 2018, p. 2742-2762.

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

Composition and role of the attached and planktonic microbial communities in mesophilic and thermophilic xylose-fed microbial fuel cells. / Dessi, Paolo; Porca, Estefania; Haavisto, Johanna; Lakaniemi, Aino-Maija; Collins, Gavin; Lens, Piet N.L.

In: *RSC Advances*, Vol. 8, No. 6, 2018, p. 3069-3080.

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

Conjugated Heat Transfer Simulation of a Fin-and-Tube Heat Exchanger. / Välikangas, Turo; Karvinen, Reijo.

In: *Heat Transfer Engineering*, Vol. 39, No. 13-14, 2018, p. 1192-1200.

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

Effect of elevated nitrate and sulfate concentrations on selenate removal by mesophilic anaerobic granular sludge bed reactors. / Tan, Lea Chua; Nancharaiah, Yarlagadda V.; van Hullebusch, Eric D.; Lens, Piet N. L.

In: *Environmental Science: Water Research & Technology*, Vol. 4, No. 2, 2018, 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. / Khanongnuch, Ramita; Di Capua, Francesco; Lakaniemi, Aino-Maija; Rene, Eldon R.; Lens, Piet N.L.

In: *Process Biochemistry*, Vol. 68, 2018, p. 171-181.

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. / Siipola, Virpi; Tamminen, Tarja; Kalli, Anssi; Lahti, Riikka; Romar, Henrik; Rasa, Kimmo; Keskinen, Riikka; Hyvaluoma, Jari; Hannula, Markus; Wikberg, Hanne.

In: BioResources, Vol. 13, No. 3, 2018, p. 5976-6002.

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

Efficient photon upconversion at remarkably low annihilator concentrations in a liquid polymer matrix: when less is more. / Durandin, Nikita A.; Isokuortti, Jussi; Efimov, Alexander; Vuorimaa-Laukkanen, Elina; Tkachenko, Nikolai V.; Laaksonen, Timo.

In: Chemical Communications, Vol. 54, No. 99, 2018, p. 14029-14032.

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

Electronic waste as a secondary source of critical metals : Management and recovery technologies. / Işildar, Arda; Rene, Eldon R.; van Hullebusch, Eric D.; Lens, Piet N.L.

In: Resources, Conservation and Recycling, Vol. 135, 2018, p. 296-312.

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

Fin-and-tube heat exchanger enhancement with a combined herringbone and vortex generator design. / Välikangas, Turo ; Singh, Shobhana; Sørensen, Kim; Condra, Thomas.

In: International Journal of Heat and Mass Transfer, Vol. 118, 2018, p. 602-616.

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

Gammaproteobacterial methanotrophs dominate methanotrophy in aerobic and anaerobic layers of boreal lake waters. / Rissanen, Antti J.; Saarenheimo, Jatta; Tirola, Marja Annika; Peura, Sari; Aalto, Sanni L; Karvinen, Anu; Nykänen, Hannu.

In: Aquatic Microbial Ecology, Vol. 81, No. 3, 2018, p. 257-276.

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.

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, 2018. p. 839-842 (IFMBE Proceedings; Vol. 65).

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

Identification of feasible pathway information for c-di-GMP binding proteins in cellulose production. / Hassan, Syeda Sakira ; Mangayil, Rahul; Aho, Tommi; Yli-Harja, Olli; Karp, Matti.

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, 2018. p. 667-670 (IFMBE Proceedings; Vol. 65).

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, Hao; Wasylczyk, Piotr; Wiersma, Diederik S.; Priimagi, Arri.

In: Advanced Materials, Vol. 30, No. 24, 1703554, 2018.

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

On the molecular optical nonlinearity of halogen-bond-forming azobenzenes. / Virkki, Matti; Maurice, Anthony; Forni, Alessandra; Sironi, Maurizio; Dichiarante, Valentina; Brevet, Pierre Francois; Metrangolo, Pierangelo; Kauranen, Martti; Priimagi, Arri.

In: Physical Chemistry Chemical Physics, Vol. 20, No. 45, 2018, p. 28810-28817.

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

Pathvalue : Pathways with value. / Losoi, Pauli; Aho, Tommi.

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, 2018. p. 583-586 (IFMBE Proceedings; Vol. 65).

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

Photoinduced Charge Separation in Semiconductor-Quantum-Dot/Organic-Molecule Hybrids. / Tkachenko, Nikolai.

In: ChemPhotoChem, Vol. 2, No. 3, 2018, p. 112-120.

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

Programming Photoresponse in Liquid Crystal Polymer Actuators with Laser Projector. / Wani, Owies M.; Zeng, Hao; Wasylczyk, Piotr; Priimagi, Arri.

In: *Advanced Optical Materials*, Vol. 6, No. 1, 1700949, 2018.

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

Sediment diffusion method improves wastewater nitrogen removal in the receiving lake sediments. / Aalto, Sanni L.; Saarenheimo, Jatta; Ropponen, J; Juntunen, J; Rissanen, Antti J.; Tirola, Marja.

In: *Water Research*, Vol. 138, 2018, p. 312-322.

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. / Sulonen, Mira L.K.; Kokko, Marika E.; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.

In: *Hydrometallurgy*, Vol. 176, 2018, p. 129-138.

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

Stable blue phase polymeric Langmuir-Schaefer films based on unsymmetrical hydroxyalkadiynyl N-arylcarbamate derivatives. / Alekseev, Alexander; Ihalainen, Petri; Ivanov, Artem; Domnin, Ivan; Rosqvist, Emil; Lemmetyinen, Helge; Vuorimaa-Laukkanen, Elina; Peltonen, Jouko; Vyaz'min, Sergey.

In: *Thin Solid Films*, Vol. 645, 2018, p. 108-118.

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

Supramolecular design principles for efficient photoresponsive polymer-azobenzene complexes. / Vapaavuori, Jaana; Bazuin, C. Geraldine; Priimagi, Arri.

In: *Journal of Materials Chemistry C*, Vol. 6, No. 9, 2018, p. 2168-2188.

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

Techno-economic evaluation of integrating torrefaction with anaerobic digestion. / Doddapaneni, Tharaka Rama Krishna C.; Praveenkumar, Ramasamy; Tolvanen, Henrik; Rintala, Jukka; Kontinen, Jukka.

In: *Applied Energy*, Vol. 213, 2018, p. 272-284.

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

Thermophilic versus mesophilic dark fermentation in xylose-fed fluidised bed reactors : Biohydrogen production and active microbial community. / Dessì, Paolo; Porca, Estefania; Waters, Nicholas R.; Lakaniemi, Aino-Maija; Collins, Gavin; Lens, Piet N.L.

In: *International Journal of Hydrogen Energy*, Vol. 43, No. 11, 2018, p. 5473-5485.

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, Anne; Mäki, Antti-Juhana; Mettänen, Marja; Lahtinen, Panu; Kallio, Pasi.

In: *Biomacromolecules*, Vol. 18, No. 12, 11.12.2017, p. 3936-3953.

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

Technology Development and Techno-Economic Analysis of Hydrogen Production by Thermal Decomposition of Methane. / Keipi, Tiina.

Tampere University of Technology, 2017. 68 p. (Tampere University of Technology. Publication; Vol. 1519).

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, Ekaterina S.; Ketola, Tiia-Maaria; Morin-Picardat, Emmanuelle; Liang, Huamin; Hanzlíková, Martina; Urtti, Arto; Yliperttula, Marjo; Vuorimaa-Laukkanen, Elina.

In: *Journal of Physical Chemistry B*, Vol. 121, No. 48, 07.12.2017, p. 10782-10792.

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

Photodynamic self-disinfecting surface using pyridinium phthalocyanine. / George, Lijo; Müller, Alexander; Röder, Beate; Santala, Ville; Efimov, Alexander.

In: *Dyes and Pigments*, Vol. 147, 01.12.2017, p. 334-342.

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. / Tao, Ran; Kinnunen, Viljami; Praveenkumar, Ramasamy; Lakaniemi, Aino-Maija; Rintala, Jukka A.

In: *Journal of Applied Phycology*, Vol. 29, No. 6, 12.2017, p. 2845–2856.

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

Carbazole-based small molecule electron donors : Syntheses, characterization, and material properties. / Sippola, Roosa J.; Hadipour, Afshin; Kastinen, Tuuva; Vivo, Paola; Hukka, Terttu I.; Aernouts, Tom; Heiskanen, Juha P.

In: *Dyes and Pigments*, Vol. 150, j.dyepig.2017.11.014, 08.11.2017, p. 79-88.

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

Multimodal Nonlinear Optical Imaging for Sensitive Detection of Multiple Pharmaceutical Solid-State Forms and Surface Transformations. / Novakovic, Dunja; Saarinen, Jukka; Rojalin, Tatu; Antikainen, Osmo; Fraser-Miller, Sara J.; Laaksonen, Timo; Peltonen, Leena; Isomaki, Antti; Strachan, Clare J.

In: *Analytical Chemistry*, Vol. 89, No. 21, 07.11.2017, p. 11460-11467.

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

Azopolymer photopatterning for directional control of angiogenesis. / Fedele, Chiara; De Gregorio, Maria; Netti, Paolo A.; Cavalli, Silvia; Attanasio, Chiara.

In: *Acta Biomaterialia*, Vol. 63, 01.11.2017, p. 317-325.

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. / Haavisto, Johanna M.; Kokko, Marika E.; Lay, Chyi-How; Puhakka, Jaakko A.

In: *International Journal of Hydrogen Energy*, Vol. 42, 01.11.2017, p. 27494-27502.

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

Modelling recovery of ammonium from urine by electro-concentration in a 3-chamber cell. / Thompson Brewster, Emma; Jermakka, Johannes; Freguia, Stefano; Batstone, Damien J.

In: *Water Research*, Vol. 124, 01.11.2017, p. 210-218.

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

Nanofibrillar cellulose hydrogels and reconstructed hydrogels as matrices for controlled drug release. / Paukkonen, Heli; Kunnari, Mikko; Laurén, Patrick; Hakkarainen, Tiina; Auvinen, Vili-Veli; Oksanen, Timo; Koivuniemi, Raili; Yliperttula, Marjo; Laaksonen, Timo.

In: *International Journal of Pharmaceutics*, Vol. 532, No. 1, 30.10.2017, p. 269-280.

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

A demand-based nutrient utilization approach to urban biogas plant investment based on regional crop fertilization. / Tampio, Elina; Lehtonen, Eeva; Kinnunen, Viljami; Mönkäre, Tiina; Ervasti, Satu; Kettunen, Riitta; Rasi, Saija; Rintala, Jukka.

In: *Journal of Cleaner Production*, Vol. 164, 15.10.2017, p. 19-29.

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

Effect of natural convection and radiation inside of a hollow beam in a standard fire. / Välikangas, Turo; Pajunen, Sami; Baczkiewicz, Jolanta; Singh, Shobhana; Sørensen, Kim.

Proceedings of the 58th Conference on Simulation and Modelling (SIMS 58) Reykjavik, Iceland, September 25th – 27th, 2017. ed. / Magnus Thor Jonsson. Vol. 138 Linköping : Linköping University Electronic Press, 2017. p. 121-127 16 (Linköping Electronic Conference Proceedings; No. 138).

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

New Evidence for the Mechanism of Action of a Type-2 Diabetes Drug Using a Magnetic Bead-Based Automated Biosensing Platform. / Uddin, Rokon; Nur-E-Habiba, N.; Rena, Graham; Hwu, En Te; Boisen, Anja.

In: ACS Sensors, Vol. 2, No. 9, 22.09.2017, p. 1329-1336.

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

Bioelectrochemical Recovery of Energy and Metals from Simulated Mining Waters. / Sulonen, Mira.

Tampere University of Technology, 2017. 98 p. (Tampere University of Technology. Publication; Vol. 1485).

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

Hole-Transporting Materials for Printable Perovskite Solar Cells. / Vivo, Paola; Salunke, Jagadish K.; Priimagi, Arri.

In: Materials, Vol. 10, No. 9, 15.09.2017.

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

Understanding selenium biogeochemistry in engineered ecosystems : Transformation and analytical methods. / Jain, Rohan; Van Hullebusch, Eric D.; Lenz, Markus; Farges, François.

Bioremediation of Selenium Contaminated Wastewater. Springer International Publishing, 2017. p. 33-56.

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

Comparison of liposomal drug formulations for transdermal iontophoretic drug delivery. / Malinovskaja-Gomez, K.;

Espuelas, S.; Garrido, M. J.; Hirvonen, J.; Laaksonen, T.

In: European Journal of Pharmaceutical Sciences, Vol. 106, 30.08.2017, p. 294-301.

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

Locomotion of light-driven soft microrobots through a hydrogel via local melting. / Palagi, Stefano; Mark, Andrew G.;

Melde, Kai; Qiu, Tian; Zeng, Hao; Parmeggiani, Camilla; Martella, Daniele; Wiersma, Diederik S.; Fischer, Peer.

International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings. IEEE, 2017.

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, Francesco; Milone, Ivana; Lakaniemi, Aino-Maija; Hullebusch, Eric D.van; Lens, Piet N.L.; Esposito, Giovanni.

In: Bioresource Technology, Vol. 238, 01.08.2017, p. 534-541.

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

Nanofibrillar cellulose-alginate hydrogel coated surgical sutures as cell-carrier systems. / Laurén, Patrick; Somersalo, Petter; Pitkänen, Irina; Lou, Yan Ru; Urtti, Arto; Partanen, Jouni; Seppälä, Jukka; Madetoja, Mari; Laaksonen, Timo; Mäkitie, Antti; Yliperttula, Marjo.

In: PLoS ONE, Vol. 12, No. 8, e0183487, 01.08.2017.

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

Photoresponsive Polymer Hydrogel Coatings that Change Topography. / Stumpel, Jelle E.; ter Schiphorst, Jeroen;

Schenning, Albertus P. H. J.

Responsive Polymer Surfaces: Dynamics in Surface Topography. ed. / Danqing Liu; Dirk Broer. Wiley-VCH, 2017. 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, Phuong; Nguyen, Tien; Yli-Harja, Olli; Candeias, Nuno R; Kandhavelu, Meenakshisundaram.

In: European Journal of Pharmaceutical Sciences, Vol. 107, 17.07.2017, p. 208-216.

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

Long-Range Observation of Exciplex Formation and Decay Mediated by One-Dimensional Bridges. / Baek, Jinseok;

Umeyama, Tomokazu; Stranius, Kati; Yamada, Hiroki; Tkachenko, Nikolai V.; Imahori, Hiroshi.

In: Journal of Physical Chemistry C, Vol. 121, No. 25, 29.06.2017, p. 13952-13961.

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, Antti J; Karvinen, Anu; Nykänen, Hannu; Peura, Sari; Tiirola, Marja; Mäki, Anita; Kankaala, Paula.

In: FEMS Microbiology Ecology, Vol. 93, No. 7, 15.06.2017.

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

The role of inorganics in modelling of biomass gasification. / Konttinen, Jukka; Kramb, Jason; DeMartini, Nikolai; Gomez-Barea, Alberto.

EUBCE 2017 Online Conference Proceedings. ed. / L. Ek; H. Ernrooth; N. Scarlat; A. Grassi; P. Helm. ETA-Florence Renewable Energies, 2017. p. 443-447 (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, Hao; Wani, Owies M.; Wasylczyk, Piotr; Kaczmarek, Radosław; Priimägi, Arri.

In: Advanced Materials, 07.06.2017.

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, Niko P.; Tolvanen, Henrik; Saarinen, Teemu; Leppänen, Aino; Joronen, Tero.

In: Energy, Vol. 128, 01.06.2017, p. 676-687.

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, Muhammad Talha; Weinberger, Christian; Sarfraz, Jawad; Rosqvist, Emil; Sandén, Simon; Sandberg, Oskar; Vivo, Paola; Hashmi, Ghufuran; Lund, Peter D.; Österbacka, Ronald; Smått, Jan-Henrik.

In: ACS Applied Materials and Interfaces, Vol. 9, No. 21, 31.05.2017, p. 17906-17913.

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

Charge Carrier Dynamics in Solar Water Oxidation. / Ruoko, Tero-Petri.

Tampere University of Technology, 2017. 49 p. (Tampere University of Technology. Publication; Vol. 1473).

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

Biohydrogen production from xylose by fresh and digested activated sludge at 37, 55 and 70 °C. / Dessì, Paolo; Lakaniemi, Aino-Maija; Lens, Piet N L.

In: Water Research, Vol. 115, 15.05.2017, p. 120-129.

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

The effects of calcium and potassium on CO₂ gasification of birch wood in a fluidized bed. / Kramb, Jason; Gómez-Barea, Alberto; DeMartini, Nikolai; Romar, Henrik; Döddapaneni, Tharaka Rama K. C.; Konttinen, Jukka.

In: Fuel, Vol. 196, 15.05.2017, p. 398-407.

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

Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods : Aggregation Effects. / Virkki, Kirsi; Hakola, Hanna; Urbani, Maxence; Tejerina, Lara; Ince, Mine; Martínez-Díaz, M. Victoria; Torres, Tomás; Golovanova, Viktoria; Golovanov, Viacheslav; Tkachenko, Nikolai V.

In: Journal of Physical Chemistry C, Vol. 121, No. 17, 04.05.2017, p. 9594-9605.

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

Alkyl thiophene vinylene electropolymerization in C8mimPF₆, potential use in solar cells. / Rojas, Vania; Martinez, Francisco; Bernede, Jean Christian; Guenadez, Linda Cattin; Efimov, Alexander; Lemmetyinen, Helge.

In: Materials Sciences and Applications, Vol. 8, No. 5, 05.2017, p. 405-417.

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

Elucidation of Compression-Induced Surface Crystallization in Amorphous Tablets Using Sum Frequency Generation (SFG) Microscopy. / Mah, Pei T.; Novakovic, Dunja; Saarinen, Jukka; van Landeghem, Stijn; Peltonen, Leena; Laaksonen, Timo; Isomäki, Antti; Strachan, Clare J.

In: *Pharmaceutical Research*, Vol. 34, No. 5, 05.2017, p. 957-970.
Research output: Contribution to journal > Article > Scientific > peer-review

Crystallisation-enhanced bulk hole mobility in phenothiazine-based organic semiconductors. / Shinde, D. B.; Salunke, Jagadish K.; Candeias, Nuno R.; Francesca, Tinti; Massimo, Gazzano; Wadgaonkar, P. P.; Priimagi, Arri; Nadia, Camaioni; Vivo, Paola.

In: *Scientific Reports*, Vol. 7, 46268, 12.04.2017.
Research output: Contribution to journal > Article > Scientific > peer-review

Building up colors : multilayered arrays of peryleneimides on flat surfaces and on mesoporous layers. / George, Lijo; Efimova, Elena; Sariola-Leikas, Essi; Lahtonen, Kimmo; Valden, Mika; Vivo, Paola; Hakola, Hanna; Hiltunen, Arto; Efimov, Alexander.

In: *ChemPlusChem*, 07.04.2017.
Research output: Contribution to journal > Article > Scientific > peer-review

Halogen bonding stabilizes a cis-azobenzene derivative in the solid state : A crystallographic study. / Saccone, Marco; Siiskonen, Antti; Fernandez-Palacio, Francisco; Priimägi, Arri; Terraneo, Giancarlo; Resnati, Giuseppe; Metrangolo, Pierangelo.

In: *ACTA CRYSTALLOGRAPHICA SECTION B : STRUCTURAL SCIENCE, CRYSTAL ENGINEERING AND MATERIALS*, Vol. 73, No. 2, 01.04.2017, p. 227-233.
Research output: Contribution to journal > Article > Scientific > peer-review

High-rate autotrophic denitrification in a fluidized-bed reactor at psychrophilic temperatures. / Di Capua, Francesco; Milone, Ivana; Lakaniemi, Aino-Maija; N.L. Lens, Piet; Esposito, Giovanni.

In: *Chemical Engineering Journal*, 04.2017.
Research output: Contribution to journal > Article > Scientific > peer-review

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

Paukkonen, Heli; Ukkonen, Anni; Szilvay, Geza; Yliperttula, Marjo; Laaksonen, Timo.
In: *European Journal of Pharmaceutical Sciences*, Vol. 100, 30.03.2017, p. 238-248.

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

Hexaphyrin as a Potential Theranostic Dye for Photothermal Therapy and ¹⁹F Magnetic Resonance Imaging. / Higashino, Tomohiro; Nakatsuji, Hirota; Fukuda, Ryosuke; Okamoto, Haruki; Imai, Hirohiko; Matsuda, Tetsuya; Tochio, Hidehito; Shirakawa, Masahiro; Tkachenko, Nikolai V.; Hashida, Mitsuru; Murakami, Tatsuya; Imahori, Hiroshi.

In: *ChemBioChem*, Vol. 18, No. 10, 24.03.2017, p. 951-959.
Research output: Contribution to journal > Article > Scientific > peer-review

Hierarchical Self-Assembly of Halogen-Bonded Block Copolymer Complexes into Upright Cylindrical Domains. / Milani, Roberto; Houbenov, Nikolay; Fernandez-Palacio, Francisco; Cavallo, Gabriella; Luzio, Alessandro; Haataja, Johannes; Giancane, Gabriele; Saccone, Marco; Priimägi, Arri; Metrangolo, Pierangelo; Ikkala, Olli.

In: *CheM*, Vol. 2, No. 3, 09.03.2017, p. 417-426.
Research output: Contribution to journal > Article > Scientific > peer-review

Twin-layer biosensor for real-time monitoring of alkane metabolism. / Lehtinen, Tapio; Santala, Ville; Santala, Suvi.

In: *FEMS Microbiology Letters*, Vol. 364, No. 6, fnx053, 01.03.2017.
Research output: Contribution to journal > Article > Scientific > peer-review

UV exposure in artificial and natural weathering : A comparative study. / Heikkilä, A.; Kazadzis, S.; Meinander, O.; Vaskuri, A.; Kärhä, P.; Mylläri, V.; Syrjälä, S.; Koskela, T.

RADIATION PROCESSES IN THE ATMOSPHERE AND OCEAN (IRS2016): Proceedings of the International Radiation Symposium (IRC/IAMAS). American Institute of Physics, 2017. 110004 (AIP conference proceedings; Vol. 1810).

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

Periodic Surface Structures Induced by a Single Laser Beam Irradiation. / Noga, Joanna; Sobolewska, Anna; Bartkiewicz, Stanislaw; Virkki, Matti; Priimägi, Arri.

In: *Macromolecular Materials and Engineering*, Vol. 302, No. 2, 13.02.2017.

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

Benchmarking DFT methods with small basis sets for the calculation of halogen-bond strengths. / Siiskonen, Antti; Priimägi, Arri.

In: *Journal of Molecular Modeling*, Vol. 23, No. 2, 50, 01.02.2017.

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

Anaerobic batch conversion of pine wood torrefaction condensate. / Doddapaneni, Tharaka Rama Krishna C.; Praveenkumar, Ramasamy; Tolvanen, Henrik; Palmroth, Marja R. T.; Kontinen, Jukka; Rintala, Jukka.

In: *Bioresource Technology*, Vol. 225, 02.2017, p. 299-307.

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

High-rate thiosulfate-driven denitrification at pH lower than 5 in fluidized-bed reactor. / Di Capua, Francesco; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.; Lens, Piet N. L.; Esposito, Giovanni.

In: *Chemical Engineering Journal*, Vol. 310, Part 1, 02.2017, p. 282-291.

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

The Role of Inorganics in Biomass Gasification : Catalytic Effects on Char Reactions and Toxic Emissions. / Kramb, Jason.

Tampere University of Technology, 2017. 81 p. (Tampere University of Technology. Publication; Vol. 1450).

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

Enhancing the activity of iron-oxidising bacteria: A case study with process liquors from heap bioleaching of a complex sulphide ore. / Ahoranta, Sarita H.; Peltola, Minna K.; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.

In: *Hydrometallurgy*, Vol. 167, 01.2017, p. 163-172.

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. / Schoelch, Simon; Vapaavuori, Jaana; Rollet, Frédéric-Guillaume; Barrett, Christopher J.

In: *Macromolecular Rapid Communications*, Vol. 38, No. 1, 01.2017.

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

A comparison of fate and toxicity of selenite, biogenically and chemically synthesized selenium nanoparticles to zebrafish (*Danio rerio*) embryogenesis. / Mal, Joyabrata; Veneman, Wouter J.; Nancharaiah, Y. V.; van Hullebusch, Eric D.; Peijnenburg, Willie J. G. M.; Vijver, Martina G.; Lens, Piet N. L.

In: *Nanotoxicology*, Vol. 11, No. 1, 2017, p. 1-34.

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

A light-driven artificial flytrap. / Wani, Owies M; Zeng, Hao; Priimägi, Arri.

In: *Nature Communications*, Vol. 8, 15546, 2017.

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

Base catalysed N-functionalisation of boroxazolidones. / J., Raunio; Mannoja, J.; Nguyen, T.; N., Ahmad; N. M., Kempainen; Franzén, R. G.; Kandhavelu, M.; Candeias, N. R.

In: *RSC Advances*, Vol. 7, No. 33, 2017, p. 20620-20627.

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

Bioelectrochemical Systems for Heavy Metal Removal and Recovery. / Modestra, Jampala Annie; Velvizhi, Gokuladoss; Krishna, Kamaja Vamshi; Arunasri, Kotakonda; Lens, Piet N. L.; Nancharaiah, YarlalagaddaVenkata; Venkata Mohan, S. Sustainable Heavy Metal Remediation: Volume 1: Principles and Processes. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 165-198 (Environmental Chemistry for a Sustainable World).

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

Biological removal of selenate and ammonium by activated sludge in a sequencing batch reactor. / Mal, J.; Nancharaiah, Y. V.; van Hullebusch, E. D.; Lens, P. N.L.

In: *Bioresource Technology*, Vol. 229, 2017, p. 11-19.

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

Biological Sulphate Reduction. / Kijjanapanich, Pimluck; Lens, Piet N. L.

Sustainable Heavy Metal Remediation: Volume 2: Case studies. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 115-132 (*Environmental Chemistry for a Sustainable World*).

Research output: [Chapter in Book/Report/Conference proceeding](#) > [Chapter](#) > [Scientific](#) > [peer-review](#)

Biorecovery of Metals from Electronic Waste. / Iildar, Arda; van de Vossenberg, Jack; Rene, Eldon R.; van Hullebusch, Eric D.; Lens, Piet N. L.

Sustainable Heavy Metal Remediation: Volume 2: Case studies. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 241-278 (*Environmental Chemistry for a Sustainable World*).

Research output: [Chapter in Book/Report/Conference proceeding](#) > [Chapter](#) > [Scientific](#) > [peer-review](#)

Biosynthesis of CdSe nanoparticles by anaerobic granular sludge. / Mal, Joyabrata; Nancharaiah, Yarlagadda V.; Bera, Santanu; Maheshwari, Neeraj; Van Hullebusch, Eric D.; Lens, Piet N.L.

In: *Environmental Science: Nano*, Vol. 4, No. 4, 2017, p. 824-833.

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

Controlling azobenzene photoswitching through combined ortho-fluorination and -amination. / Ahmed, Z.; Siiskonen, A.; Virkki, M.; Priimägi, A.

In: *Chemical Communications*, Vol. 53, No. 93, 2017, p. 12520-12523.

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

Cultivation of *Scenedesmus acuminatus* in different liquid digestates from anaerobic digestion of pulp and paper industry biosludge. / Tao, Ran; Lakaniemi, Aino-Maija; Rintala, Jukka A.

In: *Bioresource Technology*, Vol. 245, No. A, 2017, p. 706-713.

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

Difference in the core-shell dynamics of polyethyleneimine and poly(L-lysine) DNA polyplexes. / Vuorimaa-Laukkanen, Elina; Lisitsyna, Ekaterina S.; Ketola, Tiia-Maaria; Morin-Pickardat, Emmanuelle; Liang, Huamin; Hanzlíková, Martina; Yliperttula, Marjo.

In: *European Journal of Pharmaceutical Sciences*, Vol. 103, 2017, p. 122-127.

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

Effects of orientation at the phthalocyanine-CdSe interface on the electron transfer characteristics. / Golovanov, V. V.; Nazarchuk, B. V.; Golovanova, V. V.; Tkachenko, N. V.; Rantala, T. T.

In: *Physical Chemistry Chemical Physics*, Vol. 19, No. 16, 2017, p. 10511-10517.

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

Evaluation of long-term post process inactivation of bioleaching microorganisms. / Bomberg, Malin; Miettinen, Hanna; Wahlström, Margareta; Kaartinen, Tommi; Ahoranta, Sarita; Lakaniemi, Aino-Maija; Kinnunen, Päivi.

22nd International Biohydrometallurgy Symposium. Trans Tech Publications Ltd, 2017. p. 57-60 (*Solid State Phenomena*; Vol. 262 SSP).

Research output: [Chapter in Book/Report/Conference proceeding](#) > [Conference contribution](#) > [Scientific](#) > [peer-review](#)

Fate of metallic engineered nanomaterials in constructed wetlands : prospection and future research perspectives. / Auvinen, Hannele; Gagnon, Vincent; Rousseau, Diederik P L; du Laing, Gijs.

In: *Reviews in Environmental Science and Bio-Technology*, Vol. 16, No. 2, 2017, p. 207-222.

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

Fluorescence spectroscopy "knife" for polyplex "cakes": taste the filling. / Vuorimaa-Laukkanen, Elina; Lisitsyna, Ekaterina S.; Ketola, Tiia-Maaria; Morin-Pickardat, Emmanuelle; Liang, Huamin; Hanzlíková, Martina; Urtti, Arto; Yliperttula, Marjo L.; Lisitsyna, Ekaterina; Laaksonen, Timo.

2017. Paper presented at 30 Years of Drug Delivery Research, Kuopio, Finland.

Research output: [Other conference contribution](#) > [Paper, poster or abstract](#) > [Scientific](#)

Influence of TiO₂ compact layer precursor on the performance of perovskite solar cells. / Vivo, Paola; Ojanperä, Anniina; Smått, Jan-Henrik; Sänden, Simon; Hashmi, Syed Ghufuran; Kaunisto, Kimmo; Ihalainen, Petri; Masood, Muhammad Talha; Österbacka, Ronald; Lund, Peter D.; Lemmetyinen, Helge.
In: *Organic Electronics*, Vol. 41, 2017, p. 287-293.

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

Leaching and Recovery of Metals. / Sethurajan, Manivannan; Lens, Piet N. L.; Horn, Heinrich A.; Figueiredo, Luiz H. A.; van Hullebusch, Eric D.
Sustainable Heavy Metal Remediation: Volume 2: Case studies. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 161-206 (Environmental Chemistry for a Sustainable World).
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Leaching and Recovery of Molybdenum from Spent Catalysts. / Vemic, Mirjana; Bordas, Francois; Guibaud, Gilles; Lens, Piet N. L.; van Hullebusch, Eric D.
Sustainable Heavy Metal Remediation: Volume 2: Case studies. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 207-239 (Environmental Chemistry for a Sustainable World).
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Light-Driven, Caterpillar-Inspired Miniature Inching Robot. / Zeng, Hao; Wani, Owies M; Wasylczyk, Piotr; Priimägi, Arri.
In: *Macromolecular Rapid Communications*, Vol. 39, No. 1, 2017, p. 1700224.
Research output: Contribution to journal › Article › Scientific › peer-review

Metal Recovery from Industrial and Mining Wastewaters. / Gómez, Denys Kristalia Villa; Lens, Piet N. L.
Sustainable Heavy Metal Remediation: Volume 2: Case studies. ed. / Eldon R. Rene; Erkan Sahinkaya; Alison Lewis; Piet N.L. Lens. Cham : Springer International Publishing, 2017. p. 81-114 (Environmental Chemistry for a Sustainable World).
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Microbial community response on wastewater discharge in boreal lake sediments. / Saarenheimo, Jatta; Aalto, Sanni L; Rissanen, Antti J.; Tirola, Marja.
In: *Frontiers in Microbiology*, Vol. 8, 750, 2017.
Research output: Contribution to journal › Article › Scientific › peer-review

Molding Optical Waveguides with Nematicons. / Karimi, Nazanin; Virkki, Matti; Alberucci, Alessandro; Buchnev, Oleksander; Kauranen, Martti; Priimägi, Arri; Assanto, Gaetano.
In: *Advanced Optical Materials*, Vol. 5, No. 14, 1700199, 2017.
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. / Umeyama, Tomokazu; Baek, Jinseok; Mihara, Junya; Tkachenko, Nikolai V.; Imahori, Hiroshi.
In: *Chemical Communications*, Vol. 53, 2017, p. 1025-1028.
Research output: Contribution to journal › Article › Scientific › peer-review

Optimization of convectively cooled heat sinks. / Lampio, Kaj; Karvinen, Reijo.
In: *Microelectronics Reliability*, Vol. 79, 2017, p. 473-479.
Research output: Contribution to journal › Article › Scientific › peer-review

Optimizing ammonium adsorption on natural zeolite for wastewaters with high loads of ammonium and solids. / Taddeo, Raffaele; Prajapati, Sumitra; Lepistö, Raghida.
In: *Journal of Porous Materials*, Vol. 24, No. 6, 2017, p. 1545-1554.
Research output: Contribution to journal › Article › Scientific › peer-review

Orientational optical nonlinearities in polymer-stabilized dye-doped liquid crystals. / Wang, Jing; Aihara, Yosuke; Kinoshita, Motoi; Mamiya, Jun-ichi; Priimägi, Arri; Shishido, Atsushi.
In: *The Japanese Liquid Crystal Society journal EKISHO*, Vol. 21, No. 1, 2017, p. 57-67.

Origin and fate of methane in the Eastern Tropical North Pacific oxygen minimum zone. / Chronopoulou, Panagiota-Myrsini; Shelley, Felicity; Pritchard, William J; Maanoja, Susanna T; Trimmer, Mark.

In: ISME Journal, Vol. 11, 2017, p. 1386–1399.

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

Photoinduced Electron Transfer in 9-Substituted 10-Methylacridinium Ions. / Tsudaka, Takeshi; Kotani, Hiroaki; Ohkubo, Kei; Nakagawa, Tatsuo; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Fukuzumi, Shunichi.

In: Chemistry: A European Journal, Vol. 23, No. 6, 2017, p. 1306-1317.

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

Photophysical properties of porphyrin dimer-single-walled carbon nanotube linked systems. / Baek, Jinseok; Umeyama, Tomokazu; Mizuno, Satoshi; Tkachenko, Nikolai V.; Imahori, Hiroshi.

In: Journal of Physical Chemistry C, Vol. 121, No. 39, 2017.

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, Marco; Palacio, Francisco Fernandez; Cavallo, Gabriella; Dichiarante, Valentina; Virkki, Matti; Terraneo, Giancarlo; Priimagi, Arri; Metrangolo, Pierangelo.

In: Faraday Discussions, Vol. 203, 2017, p. 407-422.

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

Release of Potassium during Devolatilization of Spruce Bark. / Wang, Liang; Moilanen, Antero; Lehtinen, Jere; Konttinen, Jukka; Matas, Berta Guell.

In: Energy Procedia, Vol. 105, 2017, p. 1295-1301.

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

Shape change of biogenic elemental selenium nanomaterials from nanospheres to nanorods decreases their colloidal stability. / Jain, Rohan; Jordan, Norbert; Tsushima, Satoru; Hübner, René; Weiss, Stephan; Lens, Piet N.L.

In: Environmental Science: Nano, Vol. 4, No. 5, 2017, p. 1054-1063.

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. / Kato, Daiki; Sakai, Hayato; Saegusa, Toshiyuki; Tkachenko, Nikolai V.; Hasobe, Taku.

In: Journal of Physical Chemistry C, Vol. 121, No. 16, 2017, p. 9043-9052.

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

Structural characterization, spectroscopic, thermal, AC conductivity and dielectric properties and antimicrobial studies of $(C_8H_{12}N)_2[SnCl_6]$. / Mathlouthi, Maha; Valkonen, Arto; Rzaigui, Mohamed; Smirani, Wajda.

In: PHASE TRANSITIONS, Vol. 90, No. 4, 2017, p. 399-414.

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

Supramolecular control of liquid crystals by doping with halogen-bonding dyes. / Vapaavuori, Jaana; Siiskonen, Antti; Dichiarante, Valentina; Forni, Alessandra; Saccone, Marco; Pilati, Tullio; Pellerin, Christian; Shishido, Atsushi; Metrangolo, Pierangelo; Priimagi, Arri.

In: RSC Advances, Vol. 7, No. 64, 2017, p. 40237-40242.

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

Surface-Relief Gratings in Halogen-Bonded Polymer–Azobenzene Complexes : A Concentration-Dependence Study. / Stumpel, Jelle E.; Saccone, Marco; Dichiarante, Valentina; Lehtonen, Ossi; Virkki, Matti; Metrangolo, Pierangelo; Priimagi, Arri.

In: Molecules, Vol. 22, No. 11, 2017.

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

Sustainable Heavy Metal Remediation : Volume 2: Case studies. / Rene, Eldon R. (Editor); Sahinkaya, Erkan (Editor); Lewis, Alison (Editor); Lens, Piet N. L. (Editor).
Springer International Publishing, 2017. 278 p. (Environmental Chemistry for a Sustainable World).
Research output: Book/Report > Anthology > Scientific > peer-review

Synthesis of new acylsilanes. / Rafael Candeias, Nuno; Campos Do Vale, João.
2017. Paper presented at XXV Portuguese Chemical Society Meeting , Lisbon, Portugal.
Research output: Other conference contribution > Paper, poster or abstract > Scientific

Synthesis of phenol-derivatives and biological screening for anticancer activity. / Karjalainen, Anzhelika ; Doan, Phuong; Sandberg, Ossi ; Chandraseelan, Jerome G.; Yli-Harja, Olli; R. Candeias, Nuno; Kandhavelu, Meenakshisundaram.
In: Anti-Cancer Agents in Medicinal Chemistry, Vol. 17, No. 12, 2017, p. 1710-1720.
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. / Lahbib, Ikram; Valkonen, Arto; Rzaigui, Mohamed; Smirani, Wajda.
In: Journal of Cluster Science, Vol. 28, No. 4, 2017, p. 2239-2252.
Research output: Contribution to journal > Article > Scientific > peer-review

The impact of long-term water level draw-down on microbial biomass : A comparative study from two peatland sites with different nutrient status. / Mpamah, Promise Anyalewachi; Taipale, Sami; Rissanen, Antti Juhani; Biasi, Christina; Nykänen, Hannu Kalevi.
In: EUROPEAN JOURNAL OF SOIL BIOLOGY, Vol. 80, 2017, p. 59-68.
Research output: Contribution to journal > Article > Scientific > peer-review

Vapor Phase Fabrication of Nanoheterostructures Based on ZnO for Photoelectrochemical Water Splitting. / Barreca, Davide; Carraro, Giorgio; Gasparotto, Alberto; Maccato, Chiara; Altantzis, Thomas; Sada, Cinzia; Kaunisto, Kimmo; Ruoko, Tero-Petri; Bals, Sara.
In: Advanced Materials Interfaces, Vol. 4, No. 18, 1700161, 2017.
Research output: Contribution to journal > Article > Scientific > peer-review

Controlling the shape of Janus nanostructures through supramolecular modification of ABC terpolymer bulk morphologies. / Hiekkataipale, Panu; Löbbling, Tina I.; Poutanen, Mikko; Priimägi, Arri; Abetz, Volker; Ikkala, Olli; Gröschel, Andre H.
In: Polymer, Vol. 107, 19.12.2016, p. 456-465.
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, Tharaka Rama Krishna C; Konttinen, Jukka; Hukka, Terttu I.; Moilanen, Antero.
In: Industrial Crops and Products, Vol. 92, 15.12.2016, p. 244-254.
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, Tomokazu; Hanaoka, Takuma; Baek, Jinseok; Higashino, Tomohiro; Abou-Chahine, Fawzi; Tkachenko, Nikolai; Imahori, Hiroshi.
In: Journal of Physical Chemistry C, Vol. 120, No. 49, 07.12.2016, 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.
In: Bioresource Technology, Vol. 221, 01.12.2016, p. 78-84.
Research output: Contribution to journal > Article > Scientific > peer-review

Anaerobic digestion of microalgae and pulp and paper biosludge. / Kinnunen, Viljami.
Tampere University of Technology, 2016. 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, Francisco; Poutanen, Mikko; Saccone, Marco; Siiskonen, Antti; Terraneo, Giancarlo; Resnati, Giuseppe; Ikkala, Olli; Metrangolo, Pierangelo; Priimägi, Arri.

In: *Chemistry of Materials*, Vol. 28, No. 22, 22.11.2016, p. 8314-8321.

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, Bohwa; Praveenkumar, Ramasamy; Lee, Jiye; Nam, Bora; Kim, Dong Myung; Lee, Kyubock; Lee, Young Chul; Oh, You Kwan.

In: *Bioresource Technology*, Vol. 219, 01.11.2016, p. 608-613.

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

Mild pressure induces rapid accumulation of neutral lipid (triacylglycerol) in *Chlorella* spp. / Ramasamy, Praveen; Kim, Bohwa; Lee, Jiye; Vijayan, Durairaj; Lee, Kyubock; Nam, Bora; Jeon, Sang Goo; Kim, Dong Myung; Oh, You Kwan.

In: *Bioresource Technology*, Vol. 220, 01.11.2016, p. 661-665.

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

Two-step bioleaching of copper and gold from discarded printed circuit boards (PCB). / Işildar, Arda; van de Vossenberg, Jack; Rene, Eldon R.; van Hullebusch, Eric D.; Lens, Piet N L.

In: *Waste Management*, Vol. 57, 11.2016, p. 149-157.

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

Recombinant antibodies for specific detection of clostridial [Fe-Fe] hydrogenases. / Mangayil, Rahul; Karp, Matti; Lamminmäki, Urpo; Santala, Ville.

In: *Scientific Reports*, Vol. 6, 36034, 27.10.2016.

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

Elimination of arsenic-containing emissions from gasification of chromated copper arsenate wood. / Kramb, Jason; Kontinen, Jukka; Backman, Rainer; Salo, Kari; Roberts, Michael.

In: *Fuel*, Vol. 181, 01.10.2016, p. 319-324.

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, Francesco; Ahoranta, Sarita H.; Papiro, Stefano; Lens, Piet N.L.; Esposito, Giovanni.

In: *Process Biochemistry*, Vol. 51, No. 10, 01.10.2016, p. 1576-1584.

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

Fossil Feedstock-free Preparation of Hydroquinone. / Rafael Candeias, Nuno; Assoah, Benedicta. 2016. Paper presented at 3rd Ibero-American Symposium of Organic Chemistry, Porto, Portugal.

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

Utilization of Food Waste via Anaerobic Digestion : From Feedstock to Biogas and Fertilizers. / Tampio, Elina. Tampere University of Technology, 2016. 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.

In: *Physical Chemistry Chemical Physics*, Vol. 18, No. 39, 05.09.2016, p. 27414-27421.

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

Long-term stability of bioelectricity generation coupled with tetrathionate disproportionation. / Sulonen, Mira L K; Lakaniemi, Aino Maija; Kokko, Marika E.; Puhakka, Jaakko A.

In: *Bioresource Technology*, Vol. 216, 01.09.2016, p. 876-882.

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

Selenium : environmental significance, pollution, and biological treatment technologies. / Tan, Lea Chua; Nancharaiah, Yarlagadda V.; van Hullebusch, Eric D.; Lens, Piet N L.

In: *Biotechnology Advances*, Vol. 34, No. 5, 01.09.2016, p. 886-907.

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

Vesi-insinöörit arvojen välittäjinä : Infrastruktuurien hallinta muodostaa kivijalan kestäväälle tulevaisuudelle. / Heino, Ossi.

In: *Kuntatekniikka*, Vol. 75, No. 5, 01.09.2016, p. 14-15.

Research output: [Contribution to journal](#) > [Article](#) > [Professional](#)

Higher Cd adsorption on biogenic elemental selenium nanoparticles. / Jain, Rohan; Dominic, Domician; Jordan, Norbert; Rene, Eldon R.; Weiss, Stephan; van Hullebusch, Eric D.; Hübner, René; Lens, Piet N L.

In: *ENVIRONMENTAL CHEMISTRY LETTERS*, Vol. 14, No. 3, 09.2016, p. 381-386.

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

Multicomponent Petasis-borono Mannich Preparation of Alkylaminophenols and Antimicrobial Activity Studies. / Neto, Íris ; Andrade, Joana; Pinto Reis, Catarina; Salunke, Jagadish K.; Priimägi, Arri; R. Candeias, Nuno; Rijo, Patricia.

In: *CHEMMEDCHEM*, Vol. 11, No. 18, 09.2016, 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, Eric D.; Guibaud, Gilles; Simon, Stéphane; Lenz, Markus; Yekta, Sepehr Shakeri; Feroso, Fernando G.; Jain, Rohan; Duyster, Lars; Roussel, Jimmy; Guillon, Emmanuel; Skyllberg, Ulf; Almeida, C. Marisa R; Pechaud, Yoan; Garuti, Mirco; Frunzo, Luigi; Esposito, Giovanni; Carliell-Marquet, Cynthia; Ortner, Markus; Collins, Gavin.

In: *Critical Reviews in Environmental Science and Technology*, Vol. 46, No. 16, 17.08.2016, p. 1324-1366.

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

Structural photoactivation of a full-length bacterial phytochrome. / Björling, Alexander; Berntsson, Oskar; Lehtivuori, Heli; Takala, Heikki; Hughes, Ashley J.; Panman, Matthijs; Hoernke, Maria; Niebling, Stephan; Henry, Léocadie; Henning, Robert; Kosheleva, Irina; Chukharev, Vladimir; Tkachenko, Nikolai V.; Menzel, Andreas; Newby, Gemma; Khakhulin, Dmitry; Wulff, Michael; A. Ihalainen, Janne; Westenhoff, Sebastian.

In: *Science Advances*, Vol. 2, No. 8, e1600920, 12.08.2016.

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, Alexander; Ihalainen, Petri; Ivanov, Artem; Domnin, Ivan; Klechkovskaya, Vera; Orekhov, Anton; Lemmetyinen, Helge; Vuorimaa-Laukkanen, Elina; Peltonen, Jouko; Vyaz'min, Sergey.

In: *Thin Solid Films*, Vol. 612, 01.08.2016, p. 463-471.

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

Characterization and Potential Use of Source-Separated Urine. / Jaatinen, Sanna.

Tampere University of Technology, 2016. 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, Elina; Marttinen, Sanna; Rintala, Jukka.

In: *Journal of Cleaner Production*, Vol. 125, 07.2016, p. 22-32.

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

Structurally Controlled Dynamics in Azobenzene-Based Supramolecular Self-Assemblies in Solid State. / Poutanen, Mikko; Ikkala, Olli; Priimägi, Arri.

In: *Macromolecules*, Vol. 49, No. 11, 14.06.2016, p. 4095-4101.

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

Indocyanine Green-Loaded Liposomes for Light-Triggered Drug Release. / Lajunen, Tatu; Kontturi, Leena-Stiina; Viitala, Lauri; Manna, Moutusi; Cramariuc, Oana; Róg, Tomasz; Bunker, Alex; Laaksonen, Timo; Viitala, Tapani; Murtomäki, Lasse; Urtti, Arto.

In: *Molecular Pharmaceutics*, Vol. 13, No. 6, 06.06.2016, p. 2095-2107.
Research output: Contribution to journal > Article > Scientific > peer-review

Photoactive ZnO-Organic Nanostructures : Development and Characterization. / Hakola, Hanna.
Tampere University of Technology, 2016. 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.
In: *Physical Chemistry Chemical Physics*, Vol. 18, No. 21, 05.2016, p. 14382-14389.
Research output: Contribution to journal > Article > Scientific > peer-review

Photoexcitation and electron transfer at inorganic-organic interface — a DFT approach. / Niskanen, Mika Olavi; Kontkanen, Outi Vilhelmiina; Hukka, Terttu Inkeri; Rantala, Tapio T.
2016. Paper presented at Optics and Photonics days, Tampere, Finland.
Research output: Other conference contribution > Paper, poster or abstract > Scientific

Synthesis and biological screening for cytotoxic activity of N-substituted indolines and morpholines. / Doan, Phuong ; Karjalainen, Anzhelika ; Chandraseelan, Jerome G.; Sandberg, Ossi ; Yli-Harja, Olli; Rosholm, Tomi; Franzén, Robert; R. Candeias, Nuno; Kandhavelu, Meenakshisundaram.
In: *European Journal of Medicinal Chemistry*, Vol. 120, 05.2016, 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. / Hakola, Hanna; Sariola-Leikas, Essi; Efimov, Alexander; Tkachenko, Nikolai V.
In: *Journal of Physical Chemistry C*, Vol. 120, No. 13, 21.04.2016, p. 7044-7051.
Research output: Contribution to journal > Article > Scientific > peer-review

Syntheses, Charge Separation, and Inverted Bulk Heterojunction Solar Cell Application of Phenothiazine-Fullerene Dyads. / Blanco, Gwendolyn D.; Hiltunen, Arto J.; Lim, Gary N.; KC, Chandra B.; Kaunisto, Kimmo M.; Vuorinen, Tommi K.; Nesterov, Vladimir N.; Lemmetyinen, Helge J.; D'Souza, Francis.
In: *ACS Applied Materials and Interfaces*, Vol. 8, No. 13, 20.04.2016, p. 8481-8490.
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.
3rd International Conference on Competitive Materials and Technology Processes (IC-CMTP3) . 2016. (IOP Conference Series: Materials Science and Engineering; Vol. 123).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Coordination networks incorporating halogen-bond donor sites and azobenzene groups. / Fernandez-Palacio, Francisco; Saccone, Marco; Priimägi, Arri; Terraneo, Giancarlo; Pilati, Tullio; Metrangolo, Pierangelo; Resnati, Giuseppe.
In: *CrystEngComm*, Vol. 18, No. 13, 07.04.2016, p. 2251-2257.
Research output: Contribution to journal > Article > Scientific > peer-review

Arsenic removal from acidic solutions with biogenic ferric precipitates. / Ahoranta, Sarita H.; Kokko, Marika E.; Papirio, Stefano; Özkaya, Bestamin; Puhakka, Jaakko.
In: *Journal of Hazardous Materials*, Vol. 306, 05.04.2016, 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. / Sakuma, Takao; Sakai, Hayato; Araki, Yasuyuki; Mori, Tadashi; Wada, Takehiko; Tkachenko, Nikolai V.; Hasobe, Taku.
In: *Journal of Physical Chemistry A*, Vol. 120, No. 11, 31.03.2016, p. 1867-1875.
Research output: Contribution to journal > Article > Scientific > peer-review

Quenching nematicon fluctuations via photo-stabilization. / Karimi, Nazanin; Alberucci, Alessandro; Virkki, Matti; Priimägi, Arri; Kauranen, Martti; Assanto, Gaetano.

In: Photonics Letters of Poland, Vol. 8, No. 1, 31.03.2016, p. 2-4.

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

Agronomic characteristics of five different urban waste digestates. / Tampio, Elina; Salo, Tapio; Rintala, Jukka.

In: Journal of Environmental Management, Vol. 169, 15.03.2016, p. 293-302.

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

Phenothiazine and carbazole substituted pyrene based electroluminescent organic semiconductors for OLED devices. / Salunke, Jagadish K.; Wong, F. L.; Feron, Krishna; Manzhos, Sergei; Lo, Ming Fai; Shinde, Durgaprasad; Patil, Abhijeet; Lee, C. S.; Roy, V. A L; Sonar, Prashant; Wadgaonkar, Prakash P.

In: Journal of Materials Chemistry C, Vol. 4, No. 5, 07.02.2016, p. 1009-1018.

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. / Kastinen, Tuuva; Niskanen, Mika; Risko, Chad; Cramariuc, Oana; Hukka, Terttu I.

In: Journal of Physical Chemistry A, Vol. 120, No. 7, 03.02.2016, p. 1051-1064.

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, Päivi; Nybond, Susanna; Marcourt, Laurence; Ferreira Queiroz, Emerson; Wolfender, Jean Luc; Mettälä, Aila; Karp, Matti; Vuorela, Heikki; Vuorela, Pia; Hatakka, Annele; Tammela, Päivi.

In: Pharmaceutical Biology, Vol. 54, No. 6, 21.01.2016, p. 1-8.

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

Advanced Solid Fuel Characterization for Reactivity and Physical Property Comparison. / Tolvanen, Henrik.

Tampere University of Technology, 2016. 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, Juha P.; Vivo, Paola; Saari, Niko M.; Hukka, Terttu I.; Kastinen, Tuuva; Kaunisto, Kimmo; Lemmetyinen, Helge J.; Hormi, Osmo E.O.

In: Journal of Organic Chemistry, Vol. 81, No. 4, 15.01.2016, p. 1535–1546.

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

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

Carraro, Giorgio; Maccato, Chiara; Gasparotto, Alberto; Kaunisto, Kimmo; Sada, Cinzia; Barreca, Davide.

In: Plasma Processes and Polymers, Vol. 13, No. 1, 01.01.2016, p. 191-200.

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. /

Pla, S.; Niemi, M.; Martín-Gomis, L.; Fernández-Lázaro, F.; Lemmetyinen, H.; Tkachenko, N. V.; Sastre-Santos, A.

In: Physical Chemistry Chemical Physics, Vol. 18, No. 5, 01.2016, p. 3589-3606.

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. / Sariola-Leikas, Essi; Ahmed, Zafar; Vivo, Paola; Ojanperä, Anniina; Lahtonen, Kimmo; Saari, Jesse; Valden, Mika; Lemmetyinen, Helge; Efimov, Alexander.

In: Chemistry: A European Journal, Vol. 22, No. 4, 01.2016, p. 1501-1510.

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

Toward the prediction of porous membrane permeability from morphological data. / Nurra, Claudia; Pitol, Luizildo;

Carraud, Raphaëlle; Pertuz, Said; Puig, Domenec; Garcia, Miguel Angel; Salvado, Joan; Torras, Carles.

In: Polymer Engineering and Science, Vol. 56, No. 1, 01.2016, p. 118–124.

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

Alginate microgels created by selective coalescence between core drops paired with an ultrathin shell. / Lee, Tae Yong; Ramasamy, Praveenkumar; Oh, You Kwan; Lee, Kyubock; Kim, Shin Hyun.
In: *Journal of Materials Chemistry B*, Vol. 4, No. 19, 2016, p. 3232-3238.
Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

Anaerobes in bioelectrochemical systems. / Kokko, Marika E.; Mäkinen, Annukka E.; Puhakka, Jaakko A.
Anaerobes in Biotechnology. Springer Berlin Heidelberg, 2016. p. 263-292 (Advances in Biochemical Engineering/Biotechnology; Vol. 156).
Research output: [Chapter in Book/Report/Conference proceeding](#) > [Chapter](#) > [Scientific](#)

Are Sphagnum-species potential antagonists for pathogens? / Kuovi, Anu-Teija; Karp, Matti; Franzén, Robert; Sarjala, Tytti; Muilu-Mäkelä, Riina; Aro, Tuuli; Tienaho, Jenni; Silvan, Niko.
XIV Meeting of the IOBC-WPRS Working Group Biological Control of Fungal and Bacterial Plant Pathogens Biocontrol and Microbial Ecology. 2016. 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, Henrik; Keipi, Tiina; Raiko, Risto.
In: *Fuel*, Vol. 176, 2016, 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, Fábio M F; Rosa, João N.; Candeias, Nuno R.; Carvalho, Cátia Parente; Matos, Ana I.; Ventura, Ana E.; Florindo, Helena F.; Silva, Liana C.; Pischel, Uwe; Gois, Pedro M P.
In: *Chemistry: A European Journal*, Vol. 22, No. 5, 2016, p. 1631-1637.
Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

Biological and Bioelectrochemical Recovery of Critical and Scarce Metals. / Nancharaiah, Y. V.; Mohan, S. Venkata; Lens, P. N L.
In: *Trends in Biotechnology*, Vol. 34, No. 2, 2016, p. 137-155.
Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

Biomass-Based and Oxidant-Free Preparation of Hydroquinone from Quinic Acid. / Assoah, Benedicta; Veiros, Luis F.; Afonso, Carlos A. M.; R. Candeias, Nuno.
In: *European Journal of Organic Chemistry*, Vol. 2016, No. 22, 2016, p. 3856-3861.
Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

Chemical and bacterial leaching of metals from a smelter slag in acid solutions. / Kaksonen, Anna H.; Särkijärvi, Silja; Puhakka, Jaakko A.; Peuraniemi, Esa; Junnikkala, Saku; Tuovinen, Olli H.
In: *Hydrometallurgy*, Vol. 159, 2016, p. 46-53.
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.
In: *Scientific Reports*, Vol. 6, 35049, 2016.
Research output: [Contribution to journal](#) > [Article](#) > [Scientific](#) > [peer-review](#)

Controllable Electronic Structures and Photoinduced Processes of Bay-Linked Perylene-3,9-dimide Dimers and a Ferrocene-Linked Triad. / Horinouchi, Haruki; Sakai, Hayato; Araki, Yasuyuki; Sakanoue, Tomo; Takenobu, Taishi; Wada, Takehiko; Tkachenko, Nikolai V.; Hasobe, Taku.
In: *Chemistry: A European Journal*, Vol. 22, No. 28, 2016, p. 9631-9641.
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. / Seo, Jung Yoon; Ramasamy, Praveenkumar; Kim, Bohwa; Seo, Jeong Cheol; Park, Ji Yeon; Na, Jeong Geol; Jeon, Sang Goo; Park, Seung Bin; Lee, Kyubock; Oh, You Kwan.
In: Green Chemistry, Vol. 18, No. 14, 2016, p. 3981-3989.

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

Effect of source-separated urine storage on estrogenic activity detected using bioluminescent yeast *Saccharomyces cerevisiae*. / Jaatinen, Sanna; Kivistö, Anniina ; Palmroth, Marja; Karp, Matti.

In: Environmental Technology, Vol. 37, No. 17, 2016, p. 2172-2182.

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

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

Spataru, Ana; Jain, Rohan; Chung, Jae Wook; Gerner, Gabriel; Krebs, Rolf; Lens, Piet N. L.

In: RSC Advances, Vol. 6, No. 104, 2016, p. 101827-101834.

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

Formation and stability of porphyrin and phthalocyanine self-assembled monolayers on ZnO surfaces. / Hakola, Hanna; Sariola-Leikas, Essi; Jääntti, Paavo; Mokus, Thomas; Stranius, Kati; Efimov, Alexander; Tkachenko, Nikolai V.

In: Journal of Porphyrins and Phthalocyanines, Vol. 20, No. 08n11, 2016, p. 1264-1271.

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

High Water-Splitting Efficiency through Intentional In and Sn Codoping in Hematite Photoanodes. / Kaouk, Ali; Ruoko, Tero-Petri; Pyeon, Myeongwhun; Gönüllü, Yakup; Kaunisto, Kimmo; Lemmetyinen, Helge; Mathur, Sanjay.

In: Journal of Physical Chemistry C, Vol. 120, No. 49, 2016, p. 28345-28353.

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

High-Yield Excited Triplet States in Pentacene Self-Assembled Monolayers on Gold Nanoparticles through Singlet Exciton Fission. / Kato, Daiki; Sakai, Hayato; Tkachenko, Nikolai V.; Hasobe, Taku.

In: Angewandte Chemie (International Edition), Vol. 55, No. 17, 2016, p. 5230-5234.

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

Homologation Reaction of Ketones with Diazo Compounds. / Candeias, Nuno R.; Paterna, Roberta; Gois, Pedro M. P.

In: Chemical Reviews, Vol. 116, No. 5, 2016, p. 2937-2981.

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

Metathesis Reactions on Solid-Phase : Towards New Synthesis Challenges. / Franzen, Robert G.

In: Topics in Catalysis, Vol. 59, No. 13, 2016, p. 1143-1150.

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. / Kastinen, T.; Niskanen, M.; Risko, C.; Cramariuc, O.; Hukka, T. I.

In: Physical Chemistry Chemical Physics, Vol. 18, No. 39, 2016, p. 27654-27670.

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

Photoinduced nonlinear optical response in azobenzene-functionalized molecular glass. / Virkki, Matti; Tuominen, Ossi; Kauranen, Martti; Priimägi, Arri.

In: Optics Express, Vol. 24, No. 5, 2016, p. 4964-4971.

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

Photoresponsive liquid-crystalline polymer films bilayered with an inverse opal structure. / Akamatsu, Norihisa; Aizawa, Miho; Tatsumi, Ryoichi; Hisano, Kyohei; Priimägi, Arri; Shishido, Atsushi.

In: JOURNAL OF PHOTOPOLYMER SCIENCE AND TECHNOLOGY, Vol. 29, No. 1, 2016, p. 145-148.

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

Porphyrin-Based Donor-Acceptor Dyads : Engineering the Linker and Tuning the Photoinduced Electron Transfer. / Tkachenko, Nikolai V.; Efimov, Alexander; Lemmetyinen, Helge.

Handbook of Porphyrin Science : With Applications to Chemistry, Physics, Materials Science, Engineering, Biology and Medicine — Volume 42: Towards Tuned Properties of Porphyrinoids. ed. / Karl M Kadish; Kevin M Smith; Roger Guilard. Vol. 42 World Scientific Publishing, 2016. p. 121-171.

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

Sorption of zinc onto elemental selenium nanoparticles immobilized in *Phanerochaete chrysosporium* pellets. / Espinosa-Ortiz, Erika J.; Shakya, Manisha; Jain, Rohan; Rene, Eldon R.; van Hullebusch, Eric D.; Lens, Piet N. L.

In: Environmental Science and Pollution Research, Vol. 23, No. 21, 2016, p. 21619–21630.

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

Superfluorinated Ionic Liquid Crystals Based on Supramolecular, Halogen-Bonded Anions. / Cavallo, Gabriella; Terraneo, Giancarlo; Monfredini, Alessandro; Saccone, Marco; Priimägi, Arri; Pilati, Tullio; Resnati, Giuseppe; Metrangolo, Pierangelo; Bruce, Duncan W.

In: Angewandte Chemie (International Edition), Vol. 55, No. 21, 2016, 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. / Jaatinen, Sanna T.; Palmroth, Marja R.T.; Rintala, Jukka A.; Tuhkanen, Tuula A.

In: Environmental Technology, Vol. 37, No. 17, 2016, p. 2189-2198.

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

The Halogen Bond. / Cavallo, Gabriella; Metrangolo, Pierangelo; Milani, Roberto; Pilati, Tullio; Priimägi, Arri; Resnati, Giuseppe; Terraneo, Giancarlo.

In: Chemical Reviews, Vol. 116, No. 4, 2016, p. 2478-2601.

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, Elina; Ervasti, Satu; Paavola, Teija; Rintala, Jukka.

In: Bioresource Technology, Vol. 220, 2016, p. 47-54.

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, Matti; Björkroth, J.; Kuusipalo, J.; Jääskeläinen, E.

In: Food Packaging and Shelf Life, Vol. 6, 67, 01.12.2015, p. 53-60.

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.

In: RSC Advances, Vol. 5, No. 123, 13.11.2015, p. 101401-101407.

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, Stefanie; Strelow, Christian; Tavares, Luciana; Penttinen, Jussi-Pekka; Hakkarainen, Teemu V.; Schramm, Andreas; Osadnik, Andreas; Lützen, Arne; Kjelstrup-Hansen, Jakob; Mews, Alf; Kipp, Tobias.

In: ACS Photonics, Vol. 2, No. 11, 27.10.2015, p. 1532-1538.

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

Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds. / Vapaavuori, Jaana; Heikkinen, Ismo T S; Dichiarante, Valentina; Resnati, Giuseppe; Metrangolo, Pierangelo; Sabat, Ribal Georges; Bazuin, C. Geraldine; Priimagi, Arri; Pellerin, Christian.

In: Macromolecules, Vol. 48, No. 20, 27.10.2015, p. 7535-7542.

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

Changes in global gene expression of *Vibrio parahaemolyticus* induced by cold- and heat-stress. / Urmersbach, Sara; Aho, Tommi; Alter, Thomas; Hassan, Syeda Sakira; Autio, Reija; Huehn, Stephan.

In: BMC Microbiology, Vol. 15, No. 1, 229, 23.10.2015.

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, Praveenkumar; Gwak, Raekeun; Kang, Mijeong; Shim, Tae Soup; Cho, Soojeong; Lee, Jiye; Oh, You Kwan; Lee, Kyubock; Kim, Bongsoo.

In: ACS Applied Materials and Interfaces, Vol. 7, No. 40, 14.10.2015, p. 22702-22708.

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

Characterization of thermally aged polyetheretherketone fibres : Mechanical, thermal, rheological and chemical property changes. / Mylläri, Ville; Ruoko, Tero-Petri; Vuorinen, Jyrki; Lemmetyinen, Helge.

In: Polymer Degradation and Stability, Vol. 120, 01.10.2015, p. 419-426.

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

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

Polishchuk, Anna; Valev, Dimitar; Tarvainen, Marko; Mishra, Sujata; Kinnunen, Viljami; Antal, Taras; Yang, Baoru; Rintala, Jukka; Tyystjärvi, Esa.

In: Bioresource Technology, Vol. 193, 01.10.2015, p. 469-476.

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

Measuring the green color of vegetables from digital images using image analysis. / Manninen, Hanna; Paakki, Maija; Hopia, Anu; Franzén, Robert.

In: LWT: Food Science and Technology, Vol. 63, No. 2, 01.10.2015, p. 1184-1190.

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

Effects of anode potentials on bioelectrogenic conversion of xylose and microbial community compositions. / Kokko, Marika E.; Mäkinen, Annukka E.; Sulonen, Mira L K; Puhakka, Jaakko A.

In: Biochemical Engineering Journal, Vol. 101, 05.09.2015, p. 248-252.

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

Measuring synthesis yield in graphene oxide synthesis by modified hummers method. / Frankberg, Erkka J.; George, Lijo; Efimov, Alexander; Honkanen, Mari; Pessi, Jenni; Levänen, Erkki.

In: Fullerenes Nanotubes and Carbon Nanostructures, Vol. 23, No. 9, 02.09.2015, p. 755-759.

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.

In: Letters in Applied Microbiology, Vol. 61, No. 3, 01.09.2015, p. 231-237.

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, Cyril Jose E; Vainikka, Pasi; Hedman, Merja; Silvennoinen, Jaani; Heinanen, Teemu; Taipale, Raili; Konttinen, Jukka.

In: Fuel, Vol. 155, 01.09.2015, p. 25-36.

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, Davide; Carraro, Giorgio; Warwick, Michael E A; Kaunisto, Kimmo; Gasparotto, Alberto; Gombac, Valentina; Sada, Cinzia; Turner, Stuart; Van Tendeloo, Gustaaf; Maccato, Chiara; Fornasiero, Paolo.

In: CrystEngComm, Vol. 17, No. 32, 28.08.2015, p. 6219-6226.

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

Fluorescent Protein Based FRET Pairs with Improved Dynamic Range for Fluorescence Lifetime Measurements. / George Abraham, Bobin; Sarkisyan, Karen S.; Mishin, Alexander S.; Santala, Ville; Tkachenko, Nikolai V.; Karp, Matti.

In: PLoS ONE, Vol. 10, No. 8, e0134436, 03.08.2015.

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

Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids. / Virkki, Kirsi; Demir, Sinem; Lemmetyinen, Helge; Tkachenko, Nikolai V.

In: Journal of Physical Chemistry C, Vol. 119, No. 31, 23.07.2015, p. 17561-17572.

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

Subpicosecond to Second Time-Scale Charge Carrier Kinetics in Hematite-Titania Nanocomposite Photoanodes. / Ruoko, Tero Petri; Kaunisto, Kimmo; Bärtzsch, Mario; Pohjola, Juuso; Hiltunen, Arto; Niederberger, Markus; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Journal of Physical Chemistry Letters, Vol. 6, No. 15, 08.07.2015, p. 2859-2864.

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, Zafar; George, Lijo; Hiltunen, Arto; Lemmetyinen, Helge; Hukka, Terttu; Efimov, Alexander.

In: Journal of Materials Chemistry A, Vol. 3, No. 25, 07.07.2015, p. 13332-13339.

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

A comparison of rheology and FTIR in the study of polypropylene and polystyrene photodegradation. / Mylläri, Ville; Ruoko, Tero-Petri; Syrjälä, Seppo.

In: Journal of Applied Polymer Science, Vol. 132, No. 28, 42246, 01.07.2015.

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

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

Umeyama, Tomokazu; Baek, Jinseok; Sato, Yuta; Suenaga, Kazu; Abou-Chahine, Fawzi; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Imahori, Hiroshi.

In: Nature Communications, Vol. 6, 7732, 07.2015.

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, Fawzi; Fujii, Daisuke; Imahori, Hiroshi; Nakano, Haruyuki; Tkachenko, Nikolai V.; Matano, Yoshihiro; Lemmetyinen, Helge.

In: Journal of Physical Chemistry Part B, Vol. 119, No. 24, 18.06.2015, p. 7328-7337.

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.

In: Fuel, Vol. 150, 15.06.2015, p. 464-472.

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

Polymorph crystal packing effects on charge transfer emission in the solid state. / He, Xiaoyan; Benniston, Andrew C.; Saarenpää, Hanna; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Baisch, Ulrich.

In: Chemical Science, Vol. 6, No. 6, 01.06.2015, p. 3525-3532.

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

Laser-pointer-induced self-focusing effect in hybrid-aligned dye-doped liquid crystals. / Wang, Jing; Aihara, Yosuke; Kinoshita, Motoi; Mamiya, Jun-ichi; Priimagi, Arri; Shishido, Atsushi.

In: Scientific Reports, Vol. 5, 9890, 06.05.2015.

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, Anni E.; Vuorimaa-Laukkanen, Elina P.; Hakola, Hanna M.; Liang, Huamin; Ujula, Tiina A.; Valle-Delgado, Juan José; Österberg, Monika; Yliperttula, Marjo L.; Skottman, Heli.

In: Biomaterials, Vol. 51, 01.05.2015, p. 257-269.

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

Gene expression profiles of *Vibrio parahaemolyticus* in viable but non-culturable state. / Meng, Lu; Alter, Thomas; Aho, Tommi; Huehn, Stephan.

In: FEMS Microbiology Ecology, Vol. 91, No. 5, 035, 05.2015.

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

Light induced cytosolic drug delivery from liposomes with gold nanoparticles. / Lajunen, Tatu; Viitala, Lauri; Kontturi, Leena-Stiina; Laaksonen, Timo; Liang, Huamin; Vuorimaa-Laukkanen, Elina; Viitala, Tapani; Le Guevel, Xavier; Yliperttula, Marjo; Murtomaki, Lasse; Urtti, Arto.

In: *Journal of Controlled Release*, Vol. 203, 10.04.2015, p. 85-98.

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

Crystal structure of 2-methylpiperazine-1,4-dium bis(hydrogen maleate). / Wecharine, Intissar; Valkonen, Arto; Rzaigui, Mohamed; Sta, Wajda Smirani; Smith, G.

In: *Acta Crystallographica Section E : Structure Reports Online*, Vol. 71, No. 3, 01.03.2015, 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.

In: *Journal of Nanoelectronics and Optoelectronics*, Vol. 9, No. 6, 03.2015, p. 741-749.

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.

In: *CrystEngComm*, Vol. 17, No. 5, 07.02.2015, p. 1182-1188.

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

Integrated in vitro-in silico screening strategy for the discovery of antibacterial compounds. / Nybond, Susanna; Ghemtio, Leo; Nawrot, Dorota A.; Karp, Matti; Xhaard, Henri; Tammela, Päivi.

In: *Assay and Drug Development Technologies*, Vol. 13, No. 1, 01.02.2015, p. 25-33.

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

Glycerol as an Efficient Medium for the Petasis Borono-Mannich Reaction. / Rosholm, Tomi; Gois, Pedro M. P.; Franzen, Robert; R. Candéias, Nuno.

In: *ChemistryOpen*, Vol. 4, No. 1, 02.2015, p. 39-46.

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

Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning. / Saccone, Marco; Dichiarante, Valentina; Forni, Alessandra; Goulet-Hanssens, Alexis; Cavallo, Gabriella; Vapaavuori, Jaana; Terraneo, Giancarlo; Barrett, Christopher J.; Resnati, Giuseppe; Metrangolo, Pierangelo; Priimägi, Arri.

In: *Journal of Materials Chemistry C*, Vol. 3, 28.01.2015, p. 759-768.

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

Photophysical Study of a Self-Assembled Donor-Acceptor Two-Layer Film on TiO₂. / Stranius, Kati; George, Lijo; Efimov, Alexander; Ruoko, Tero-Petri; Pohjola, Juuso; Tkachenko, Nikolai V.

In: *Langmuir*, Vol. 31, No. 3, 27.01.2015, p. 944-952.

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

Controlled Regioselective Amination of Peryleneimides. / George, Lijo; Ahmed, Zafar; Lemmetyinen, Helge; Efimov, Alexander.

In: *European Journal of Organic Chemistry*, Vol. 2015, No. 3, 14.01.2015, p. 584-590.

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.

In: *Thin Solid Films*, Vol. 574, 01.01.2015, p. 196-206.

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

Photophysical properties of Sn (IV)tetraphenylporphyrin-pyrene dyad with a β -vinyl linker. / Reeta, P. Silviya; Khetubol, Adis; Jella, Tejaswi; Chukharev, Vladimir; Abou-Chahine, Fawzi; Tkachenko, Nikolai V.; Giribabu, L.; Lemmetyinen, Helge.

In: *Journal of Porphyrins and Phthalocyanines*, Vol. 19, No. 1-3, 01.01.2015, p. 288-300.

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

Branched thiophene oligomer/polymer bulk heterojunction organic solar cell. / Martinez, Francisco; Neculqueo, Gloria; Vasquez, Sergio O.; Lemmetyinen, Helge; Efimov, Alexander; Vivo, Paola.
Materials Research Society Symposium Proceedings. Vol. 1737 MATERIALS RESEARCH SOCIETY, 2015. p. 19-25.
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, Ergin; Özkaya, Bestemin; Hasar, Halil.
In: Water Science and Technology, Vol. 71, No. 3, 2015, p. 320-328.
Research output: Contribution to journal › Article › Scientific › peer-review

Fe₂O₃-TiO₂ Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation. / Barreca, Davide; Carraro, Giorgio; Gasparotto, Alberto; Maccato, Chiara; Warwick, Michael E A; Kaunisto, Kimmo; Sada, Cinzia; Turner, Stuart; Gönüllü, Yakup; Ruoko, Tero-Petri; Borgese, Laura; Bontempi, Elza; Van Tendeloo, Gustaaf; Lemmetyinen, Helge; Mathur, Sanjay.
In: Advanced Materials Interfaces, Vol. 2, No. 17, 2015.
Research output: Contribution to journal › Article › Scientific › peer-review

Halogen-bonded photoresponsive materials. / Saccone, Marco; Cavallo, Gabriella; Metrangolo, Pierangelo; Resnati, Giuseppe; Priimägi, Arri.
Halogen Bonding II: Impact on Materials Chemistry and Life Sciences. Springer International Publishing, 2015. p. 147-166 (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, Matti; Tuominen, Ossi; Forni, Alessandra; Saccone, Marco; Metrangolo, Pierangelo; Resnati, Giuseppe; Kauranen, Martti; Priimägi, Arri.
In: Journal of Materials Chemistry C, Vol. 3, 2015, p. 3003-3006.
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, Heikki; Lázaro-Ibáñez, Elisa; Viitala, Tapani; Vuorimaa-Laukkanen, Elina; Siljander, Pia; Yliperttula, Marjo.
In: Journal of Controlled Release, Vol. 220, 2015, p. 727-737.
Research output: Contribution to journal › Article › Scientific › peer-review

Nano-graphite cold cathodes for electric solar wind sail. / Kleshch, Victor I.; Smolnikova, Elena A.; Orekhov, Anton S.; Kalvas, Taneli; Tarvainen, Olli; Kauppinen, Janne; Nuottajärvi, Antti; Koivisto, Hannu; Janhunen, Pekka; Obratsov, Alexander N.
In: Carbon, Vol. 81, 2015, p. 132-136.
Research output: Contribution to journal › Article › Scientific › peer-review

Role of the bridge in photoinduced electron transfer in porphyrin-fullerene dyads. / Pelado, Beatriz; Abou-Chahine, Fawzi; Calbo, Joaquín; Caballero, Rubén; delaCruz, Pilar; Junquera-Hernández, José M.; Ortí, Enrique; Tkachenko, Nikolai V.; Langa, Fernando.
In: Chemistry: A European Journal, Vol. 21, No. 15, 2015, p. 5814-5825.
Research output: Contribution to journal › Article › Scientific › peer-review

Synthesis of fluorescent naphthoquinolizines via intramolecular houben-hoesch reaction. / Stasyuk, Anton J.; Smoleń, Sabina; Glodkowska-Mrowka, Eliza; Brutkowski, Wojciech; Cyrański, Michał K.; Tkachenko, Nikolai; Gryko, Daniel T.
In: Chemistry - An Asian Journal, Vol. 10, No. 3, 2015, p. 553-558.
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. / Karilainen, Topi; Cramariuc, Oana; Kuisma, Mikael; Tappura, Kirsi; Hukka, Terttu I.
In: Journal of Computational Chemistry, Vol. 36, No. 9, 2015, p. 612-621.
Research output: Contribution to journal › Article › Scientific › peer-review

π -Expanded α,β -unsaturated ketones : Synthesis, optical properties, and two-photon-induced polymerization. / Nazir, Rashid; Bourquard, Florent; Balčiūnas, Evaldas; Smoleń, Sabina; Gray, David; Tkachenko, Nikolai V.; Farsari, Maria; Gryko, Daniel T.

In: ChemPhysChem, Vol. 16, No. 3, 2015, p. 682–690.

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, Jenni; Niskanen, Mika; Kaunisto, Kimmo; Manninen, Venla; Mundy, M. Elizabeth; Virkki, Kirsi; Hakola, Hanna; Hukka, Terttu I.; Lemmetyinen, Helge.

In: Journal of Porphyrins and Phthalocyanines, Vol. 18, No. 12, 2014, p. 1108-1124.

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

Photochemistry of self-assembled donor-acceptor architectures for photoactive supramolecular devices. / Stranius, Kati. Tampere : Tampere University of Technology, 2014. 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. / Manninen, Venla. Tampere University of Technology, 2014. (Tampere University of Technology. Publication; Vol. 1214).

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

Binding Affinity and Mechanism of Polymer-DNA Polyplexes for Gene Delivery. / Ketola, Tiia-Maaria Caroline. Tampere University of Technology, 2014. 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, Jaana; Goulet-Hanssens, Alexis; Heikkinen, Ismo T.S.; Barrett, Christopher J.; Priimägi, Arri.

In: Chemistry of Materials, Vol. 26, No. 17, 2014, p. 5089-5096.

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

Charge-Transfer Dynamics in Poly(3-hexylthiophene):Peryleneimide-C-60 Blend Films Studied by Ultrafast Transient Absorption. / Kaunisto, Kimmo M.; Vivo, Paola; Dubey, Rajeev K.; Chukharev, Vladimir I.; Efimov, Alexander; Tkachenko, Nikolai V.; Lemmetyinen, Helge J.

In: Journal of Physical Chemistry C, Vol. 118, No. 20, 2014, p. 10625-10630.

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. Kodiah; Valkonen, Arto; Rissanen, Kari.

In: CrystEngComm, Vol. 16, No. 18, 2014, p. 3758-3764.

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, Arto; Tukiainen, Antti; Tkachenko, N. V.; Guina, M.

In: Nanoscale Research Letters, Vol. 9, 80, 2014.

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, Kati; Iashin, Vladimir; Nikkonen, Taru; Muuronen, Mikko; Helaja, Juho; Tkachenko, Nikolai.

In: Journal of Physical Chemistry A, Vol. 118, No. 8, 2014, p. 1420-1429.

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.

In: Journal of Bioscience and Bioengineering, Vol. 118, No. 6, 2014, p. 672-678.

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

Excited State Intramolecular Proton Transfer in pi-Expanded Phenazine-Derived Phenols. / Piechowska, Joanna; Virkki, Kirsi; Sadowski, Bartłomiej; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Gryko, Daniel T.
In: Journal of Physical Chemistry A, Vol. 118, No. 1, 2014, p. 144-151.
Research output: Contribution to journal > Article > Scientific > peer-review

Femtosecond spectroscopy of the dithiolate Cu(II) and Ni(II) complexes. / Plyusnin, Victor F.; Pozdnyakov, Ivan P.; Grivin, Vjacheslav P.; Solovyev, Aleksey I.; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Larionov, Stanislav V.
In: DALTON TRANSACTIONS, Vol. 43, No. 47, 2014, p. 17766-17774.
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-arylcabamate derivative. / Alekseev, A.S.; Domnin, I.N.; Ivanov, A.B.; Vuorimaa-Laukkanen, E.; Lemmetyinen, H.; Tereshchenko, N.A.
In: Bulletin of the Lebedev Physics Institute, Vol. 41, No. 6, 2014, p. 160-164.
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.
In: Journal of Physical Chemistry C, Vol. 118, No. 40, 2014, p. 23279-23284.
Research output: Contribution to journal > Article > Scientific > peer-review

Light-driven surface patterning of supramolecular polymers with extremely low concentration of photoactive molecules. / Koskela, Jenni E.; Vapaavuori, Jaana; Ras, Robin H. A.; Priimagi, Arri.
In: ACS Macro Letters, Vol. 3, 2014, p. 1196-1200.
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.
In: Physical Chemistry Chemical Physics, Vol. 16, 2014, p. 13294-13305.
Research output: Contribution to journal > Article > Scientific > peer-review

Monoisomeric phthalocyanines and phthalocyanine-fullerene dyads with polar side chains: synthesis, modeling, and photovoltage. / Ranta, Jenni; Kaunisto, Kimmo; Niskanen, Mika; Efimov, Alexander; Hukka, Terttu I.; Lemmetyinen, Helge.
In: Journal of Physical Chemistry C, Vol. 118, No. 5, 2014, p. 2754-2765.
Research output: Contribution to journal > Article > Scientific > peer-review

Organic-inorganic azafullerene-gold C59N-Au nanohybrid: Synthesis, characterization, and properties. / Rotas, Georgios; Niemi, Marja; Tkachenko, Nikolai V.; Zhao, Sihan; Shinohara, Hisanori; Tagmatarchis, Nikos.
In: Chemistry: A European Journal, Vol. 20, No. 45, 2014, p. 14729-14735.
Research output: Contribution to journal > Article > Scientific > peer-review

Photo-induced electron transfer at nanostructured semiconductor-zinc porphyrin interface. / Hakola, Hanna; Pyymaki Perros, Alexander; Myllyperkiö, Pasi; Kurotobi, Kei; Lipsanen, Harri; Imahori, Hiroshi; Lemmetyinen, Helge; Tkachenko, Nikolai V.
In: Chemical Physics Letters, Vol. 592, 2014, p. 47-51.
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. Kodiah; Ala-Korpi, Altti; Cetina, Mario; Valkonen, Arto; Rissanen, Kari.
In: Chemistry: A European Journal, Vol. 20, No. 46, 2014, p. 15144-15150.
Research output: Contribution to journal > Article > Scientific > peer-review

ROFRET: A Molecular-Scale Fluorescent Probe Displaying Viscosity-Enhanced Intramolecular Förster Energy Transfer. / Bai, San; Benniston, Andrew C.; Whittle, Victoria L.; Lemmetyinen, Helge; Tkachenko, Nikolai V.
In: ChemPhysChem, Vol. 115, No. 14, 2014, p. 3089-3096.
Research output: Contribution to journal > Article > Scientific > peer-review

Slow charge recombination and enhanced photoelectrochemical properties of Diazaporphyrin-Fullerene linked dyad. / Yamamoto, Masanori; Takano, Yuta; Matano, Yoshihiro; Stranius, Kati; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Imahori, Hiroshi.

In: *Journal of Physical Chemistry C*, Vol. 118, No. 4, 2014, p. 1808-1820.

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

Solid state anion- π interactions involving polyhalides. / Giese, Michael; Albrecht, Markus; Bohnen, Christian; Repenko, Tatjana; Valkonen, Arto; Rissanen, Kari.

In: *DALTON TRANSACTIONS*, Vol. 43, No. 4, 2014, p. 1873-1880.

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

Spectroscopic study of a synthesized Alq3 end-capped oligothiophene applied in organic solar cells. / Manninen, Venla M.; Heiskanen, Juha P.; Kaunisto, Kimmo M.; Hormi, Osmo E. O.; Lemmetyinen, Helge J.

In: *RSC Advances*, Vol. 4, No. 17, 2014, p. 8846-8855.

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

Subcellular localization of bacteriophage PRD1 proteins in Escherichia coli. / Karttunen, Jenni; Mäntynen, Sari; Ihalainen, Teemu O.; Lehtivuori, Heli; Tkachenko, Nikolai V.; Vihinen-Ranta, Maija; Ihalainen, Janne A.; Bamford, Jaana K.H.; Oksanen, Hanna M.

In: *Virus Research*, Vol. 179, 2014, p. 44-52.

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

Synthesis and characterization of monoisomeric phthalocyanines, phthalocyanine-fullerene dyads, and phthalocyanine-silicon complexes. / Ranta, Jenni.

Tampere : Tampere University of Technology, 2014. 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.

In: *RSC Advances*, Vol. 4, 2014, p. 22733-22742.

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

Tetraidoethynyl resorcinarene cavitands as multivalent halogen bond donors. / Turunen, L.; Beyeh, N. K.; Pan, F.; Valkonen, A.; Rissanen, K.

In: *Chemical Communications*, Vol. 50, No. 100, 2014, p. 15920-15923.

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.

In: *Photochemical & Photobiological Sciences*, Vol. 13, No. 10, 2014, p. 1456-1468.

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, Kimmo M.; Subbaiyan, Navaneetha K.; Bikram K.C., Chandra; Chukharev, Vladimir I.; Hakola, Hanna M.; Vuorinen, Tommi K.; Manninen, Venla M.; Tkachenko, Nikolai V.; Lemmetyinen, Helge J.; D'Souza, Francis.

In: *Synthetic Metals*, Vol. 195, 2014, p. 193-200.

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

The effects of UV irradiation to polyetheretherketone fibres : Characterization by different techniques. / Mylläri, Ville; Ruoko, Tero Petri; Järvelä, Pentti.

In: *Polymer Degradation and Stability*, Vol. 109, 2014, p. 278-284.

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.
Comprehensive Organic Synthesis II (Second Edition). Oxford : Elsevier, 2014. p. 944-991.
Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific > peer-review

Ultrafast photophysical processes for Fe(III)-carboxylates. / Pozdnyakov, Ivan P.; Melnikov, Alexey A.; Tkachenko, Nikolai ; Chekalin, Sergey V.; Lemmetyinen, Helge; Plyusnin, Victor F.
In: DALTON TRANSACTIONS, Vol. 43, No. 47, 2014, p. 17590-17595.
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, Mika; Kuisma, Mikael; Cramariuc, Oana; Golovanov, Viacheslav; Hukka, Terttu I.; Tkachenko, Nikolai; Rantala, Tapio T.
In: Physical Chemistry Chemical Physics, Vol. 15, No. 40, 28.10.2013, p. 17408-17418.
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, Panagiotis; Gdaniec, Maria; Wicher, Barbara; Akrivos, Pericles D.; Tkachenko, Nikolai.
In: European Journal of Inorganic Chemistry, Vol. 2013, No. 29, 2013, p. 5196-5205.
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.
In: Russian Chemical Bulletin, Vol. 62, No. 7, 2013, p. 1540-1548.
Research output: Contribution to journal > Article > Scientific > peer-review

Charge transfer properties of a donor-acceptor dyad based on an expanded acridinium cation. / Benniston, Andrew C.; He, Xiaoyan; Lemmetyinen, Helge; Tkachenko, Nikolai V.
In: RSC Advances, Vol. 3, No. 15, 2013, p. 4995-5002.
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, Vladimir; Koso, Tatyana V.; Stranius, Kati; Muuronen, Mikko; Heikkinen, Sami; Kavakka, Jari; Tkachenko, Nikolai V.; Helaja, Juho.
In: RSC Advances, Vol. 3, No. 29, 2013, p. 11485-11488.
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, Andrew C.; Yang, Songjie; Lemmetyinen, Helge; Tkachenko, Nikolai V.
In: European Journal of Organic Chemistry, Vol. 2013, No. 30, 2013, p. 6859-6869.
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, Venla; Niskanen, Mika; Hukka, Terttu I.; Pasker, Felix; Claus, Simon; Höger, Sigurd; Baek, Jinseok; Umeyama, Tomokazu; Imahori, Hiroshi; Lemmetyinen, Helge.
In: Journal of Materials Chemistry A, Vol. 1, No. 25, 2013, p. 7451-7462.
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, Kaarlo; Hukka, Terttu Inkeri; Kastinen, Tuuva; Kellomäki, Minna.
In: Journal of Applied Polymer Science, Vol. 130, No. 6, 2013, p. 4209-4218.
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.Yu; Dyakova, Yu.A.; Yakunin, S.N.; Makhotkin, I.A.; Alekseev, A.S.; Klechkovskaya, V.V.; Terechenko, E.Yu.; Tkachenko, N.V.; Lemmetyinen, H.; Feigin, L.A.; Kovalchuk, M.V.

In: Crystallography Reports, Vol. 58, No. 6, 2013, p. 934-938.
Research output: Contribution to journal > Article > Scientific > peer-review

Dipyrroliodinyl-substituted perylene diimide as additive for poly(3-hexylthiophene): [6,6]-Phenyl C61 butyric acid methylester bulk-heterojunction blends. / Vivo, Paola; Dubey, Rajeev; Lehtonen, Elina; Kivistö, Hannele; Vuorinen, Tommi; Lemmetyinen, Helge.

In: Thin Solid Films, Vol. 548, 2013, p. 398-405.
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 pyrroliodinyl-substituted perylene diimide. / Dubey, Rajeev K.; Niemi, Marja; Kaunisto, Kimmo; Efimov, Alexander; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Chemistry: A European Journal, Vol. 19, No. 21, 2013, 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, Ali Hanoon; Efimov, Alexander; Niemi, Marja; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Chemical Physics Letters, Vol. 572, 2013, p. 96-100.
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, Rajeev K.; Niemi, Marja; Kaunisto, Kimmo; Stranius, Kati; Efimov, Alexander; Tkachenko, Nikolai; Lemmetyinen, Helge.

In: Inorganic Chemistry, Vol. 52, 2013, p. 9761-9773.
Research output: Contribution to journal > Article > Scientific > peer-review

Fluorescence properties of the chromophore-binding domain of bacteriophytochrome from Deinococcus radiodurans. / Lehtivuori, Heli; Rissanen, Ilona; Takala, Heikki; Bamford, Jaana; Tkachenko, Nikolai V.; Ihalainen, Janne A.

In: Journal of Physical Chemistry Part B, Vol. 117, 2013, p. 11049-11057.
Research output: Contribution to journal > Article > Scientific > peer-review

Homoleptic Bis(aryl)acenaphthenequinonediimine-CuI complexes - synthesis and characterization of a family of compounds with improved light-gathering characteristics. / Papanikolaou, Panagiotis; Akrivos, Pericles D.; Czapiak, Agnieszka; Wicher, Barbara; Gdaniec, Maria; Tkachenko, Nikolai.

In: European Journal of Inorganic Chemistry, Vol. 2013, No. 13, 2013, p. 2418-2431.
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, Niina; Veiranto, Minna; Rich, Jaana; Efimov, Alexander; Hannula, Markus; Seppälä, Jukka; Kellomäki, Minna.

In: Journal of Biomaterials Applications, Vol. 28, No. 4, 2013, 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, Tiia-Maaria; Hanzlikova, Martina; Leppänen, Linda; Ravina, Manuela; Bishop, Corey J.; Green, Jordan J.; Urtti, Arto; Lemmetyinen, Helge; Yliperttula, Marjo; Vuorimaa-Laukkanen, Elina.

In: Journal of Physical Chemistry Part B, Vol. 117, No. 36, 2013, p. 10405-10413.
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. / Pyykari Perros, Alexander; Hakola, Hanna; Sajavaara, Timo; Huhtio, Teppo; Lipsanen, Harri.

In: Journal of Physics D: Applied Physics, Vol. 46, No. 50, 505502, 2013.
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, Oana; Aittala, Pekka; Hukka, Terttu.

In: Journal of Molecular Modeling, Vol. 19, No. 2, 2013, 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.

In: Waste Management, Vol. 33, No. 4, 2013, p. 866-870.

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, Nikolai; Lemmetyinen, Helge.

In: Journal of Photochemistry and Photobiology, A: Chemistry, Vol. 251, No. 1, 2013, p. 57-62.

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

Plasma-assisted chemical vapor deposition of Fe:TiO₂ films for photoelectrochemical hydrogen production. /

Mettenbörger, A.; Merod, V.; Singh, A.P.; Lemmetyinen, H.; Mathur, S.

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, 2013. p. 81-88 (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.

In: Physical Chemistry Chemical Physics, Vol. 15, No. 31, 2013, p. 13128-13136.

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, Roberta; Andre, Vania; Duarte, M. Teresa; Veiros, Luis F.; Rafael Candeias, Nuno; Gois, Pedro M.P.

In: European Journal of Organic Chemistry, Vol. 2013, No. 28, 2013, p. 6280-6290.

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, Chandra B.; Stranius, Kati; D'Souza, Preston; Subbaiyan, Navaneetha K.; Lemmetyinen, Helge; Tkachenko, Nikolai V.; D'Souza, Francis.

In: Journal of Physical Chemistry C, Vol. 117, 2013, p. 763-773.

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

Short synthesis of the natural product 3 β -hydroxy-labd-8(17)-en-15-oic acid via microbial transformation of labdanolic acid. / Frijia, Luis M.T.; Garcia, Helga; Rodrigues, Catia; Martins, Isabel; Rafael Candeias, Nuno; Andre, Vania; Duarte, Maria Teresa; Pereira, Silva Cristina; Afonso, Carlos A.M.

In: Phytochemistry Letters, Vol. 6, No. 2, 2013, p. 165-169.

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

Studies on the structure of coumarin-modified dextran nanoparticles by fluorescence spectroscopy. / Wondraczek, Holger; Kotiaho, Anne; Niemi, Marja; Fardim, Pedro; Heinze, Thomas.

In: Carbohydrate Polymers, Vol. 97, No. 1, 2013, p. 45-51.

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, Yu. A.; Suvorova, E.I.; Orekhov, Andrei S.; Orekhov, Anton S.; Alekseev, A.S.; Gainutdinov, R. V.; Klechkovskaya, V.V.; Tereschenko, E.Yu.; Tkachenko, N.V.; Lemmetyinen, H.; Feigin, L.A.; Kovalchuk, M.V.

In: Crystallography Reports, Vol. 58, No. 6, 2013, p. 927-933.

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, Essi; Niemi, Marja; Lemmetyinen, Helge; Efimov, Alexander.

In: Organic and Biomolecular Chemistry, Vol. 11, 2013, p. 6397-6406.

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, Corey J.; Ketola, Tiia-Maaria; Tzeng, Stephany Y.; Sunshine, Joel C.; Urtti, Arto; Lemmetyinen, Helge; Vuorimaa-Laukkanen, Elina; Yliperttula, Marjo; Green, Jordan J.

In: *Journal of the American Chemical Society*, Vol. 135, No. 18, 2013, p. 6951-6957.

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

Triarylamine-substituted imidazole- and quinoxaline-fused push-pull porphyrins for dye-sensitized solar cells. / Hayashi, Hironobu; Touchy, Abeda Sultana; Kinjo, Yuriko; Kurotobi, Kei; Toude, Yuuki; Ito, Seigo; Saarenpää, Hanna; Tkachenko, Nikolai; Lemmetyinen, Helge; Imahori, Hiroshi.

In: *ChemSusChem*, Vol. 6, No. 3, 2013, p. 508-517.

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.

In: *Physical Chemistry Chemical Physics*, Vol. 15, No. 24, 2013, p. 9854-9861.

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

Algorithm for In Silico Optimization of Production Strains. / Heikkinen, Elli; Larjo, Antti; Santala, Ville; Yli-Harja, Olli; Aho, Tommi.

Proceedings of Ninth International Workshop on Computational Systems Biology, WCSB 2012, 4-6 June, Ulm, Germany. TICSP Series. ed. / Antti Larjo; Steffen Schober; Muhammad Farhan; Martin Bossert; Olli Yli-Harja. Tampere : Tampere University of Technology, 2012. p. 1-4 (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.

In: *Journal of Physical Chemistry Letters*, Vol. 3, No. 4, 2012, 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, Nuno; Carias, Carolina; Gomes, Luis F.R.; Andre, Vania; Teresa Duarte, M.; Gois, Pedro M.P.; Afonso, Carlos A.M.

In: *Advanced Synthesis and Catalysis*, Vol. 354, No. 16, 2012, 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.

In: *ChemPhysChem*, Vol. 13, No. 5, 2012, 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. / Karilainen, Topi; Cramariuc, Oana; Tappura, Kirsi; Hukka, Terttu.

Physics Days 2012, the 46th annual meeting of the Finnish Physical Society, 13.-15.3.2012, Joensuu, Finland. Joensuu : University of Eastern Finland; Suomen fyysikkoseura, 2012. p. 1-1 (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, Somnath; Efimov, Alexander; Lemmetyinen, Helge.

In: *European Journal of Organic Chemistry*, 2012, 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, Antti; Kaunisto, Kimmo; Efimov, Alexander; Kivistö, Hannele; Storbacka, Linda; Savikoski, Riitta; Huttunen, Kirsi; Lehtimäki, Suvi; Lemmetyinen, Helge.

In: Physical Chemistry Chemical Physics, Vol. 14, 2012, 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, Tomokazu; Hirose, Kohei; Noda, Kei; Matsushige, Kazumi; Shishido, Tetsuya; Saarenpää, Hanna; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Ono, Noboru; Imahori, Hiroshi.

In: Journal of Physical Chemistry C, Vol. 116, No. 33, 2012, 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, Ali H.; Niemi, Marja; Ranta, Jenni; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Chemical Physics Letters, Vol. 531, 2012, 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.

In: ChemPhysChem, Vol. 13, No. 16, 2012, 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, Yoshihiro; Matsumoto, Kazuaki; Hayashi, Hironobu; Nakao, Yoshihide; Kumpulainen, Tatu; Chukharev, Vladimir; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Shimizu, Soji; Kobayashi, Nagao; Sakamaki, Daisuke; Ito, Akihiro; Tanaka, Kazuyoshi; Imahori, Hiroshi.

In: Journal of the American Chemical Society, Vol. 134, No. 3, 2012, 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, Kirsi; Wrobel, Z.; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Gryko, D.T.

In: Journal of Physical Chemistry A, Vol. 116, No. 39, 2012, 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, Helge; Tkachenko, Nikolai V.; Clegg, W.; Harrington, R.W.

In: Physical Chemistry Chemical Physics, Vol. 14, No. 13, 2012, 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, Jihane; Niemi, Marja; Lemmetyinen, Helge; Wenger, Oliver S.

In: Journal of Physical Chemistry A, Vol. 116, No. 31, 2012, 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, Malgorzata E.; Cal, Pedro M. S. D.; Candeias, Nuno R.; Bogel-Lukasik, Rafal; Afonso, Carlos A. M.; Ponte, Manuel N.; Gois, Pedro M. P.

In: Green Chemistry Letters and Reviews, Vol. 5, No. 2, 2012, p. 211-240.
Research output: Contribution to journal > Article > Scientific > peer-review

Large Stokes Shift Fluorescent Dyes Based on a Highly Substituted Terephthalic Acid Core. / Benniston, Andrew C.; Winstanley, Thomas P.L.; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Harrington, Ross W.; Wills, Corinne.

In: Organic Letters, Vol. 14, No. 6, 2012, p. 1374-1377.
Research output: Contribution to journal > Article > Scientific > peer-review

Making expensive dirhodium(II) catalysts cheaper : Rh(II) recycling methods. / Candeias, Nuno R.; Afonso, Carlos A. M.; Gois, Pedro M. P.

In: Organic and Biomolecular Chemistry, Vol. 10, No. 17, 2012, p. 3357-3378.

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, Ibrahim; Özkaya, Bestamin; Demir, Selami; Cakmakci, Mehmet.

In: Journal of Renewable and Sustainable Energy, Vol. 4, No. 6, 063135, 2012.

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

Modulation of visible room temperature phosphorescence by weak magnetic fields. / Mani, Tomoyasu; Tanabe, Mana; Yamauchi, Seigo; Tkachenko, Nikolai V.; Vinogradov, Sergei A.

In: Journal of Physical Chemistry Letters, Vol. 3, No. 21, 2012, 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, Yu; Vaismaa, Matti J.P.; Rissanen, Kari; Franzen, Robert.

In: European Journal of Organic Chemistry, Vol. 2012, No. 8, 2012, p. 1569-1576.

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

Nature's Nonlinear Optical Antennas. / Huttunen, Mikko J.; Virkki, Matti; Bautista, Godofredo; Vuorimaa-Laukkanen, Elina; Der, Andras; Lemmetyinen, Helge; Kauranen, Martti.

CLEO 2012, San Jose, California, USA, 6-11 May 2012. Technical Digest. OSA, 2012. p. 1-2 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. / Tolkki, Antti; Kaunisto, Kimmo; Heiskanen, Juha P.; Omar Walaa, A.E.; Huttunen, Kirsi; Lehtimäki, Suvi; Hormi, Osmo E.O.; Lemmetyinen, Helge.

In: Thin Solid Films, Vol. 520, No. 13, 2012, 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, Alexey A.; George Abraham, Bobin; Lemmetyinen, Helge; Karp, Matti T.; Tkachenko, Nikolai V.

In: Analytical and Bioanalytical Chemistry, Vol. 402, No. 3, 2012, p. 1149-1158.

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

Photoinduced charge shift and charge recombination through an alkynyl spacer for an expanded acridinium-based dyad. / Benniston, A.C.; Hagon, J.; He, X.; Clegg, W.; Harrington, R.W.; Tkachenko, Nikolai; Lemmetyinen, Helge.

In: Physical Chemistry Chemical Physics, Vol. 14, No. 9, 2012, 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, Jihane; Niemi, Marja; Lemmetyinen, Helge; Wenger, Oliver S.

In: Inorganic Chemistry, Vol. 51, No. 11, 2012, 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.

In: Russian Journal of General Chemistry, Vol. 82, No. 2, 2012, 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, Ivan P.; Kolomeets, Alexander V.; Plyusnin, Victor F.; Melnikov, Alexey A.; Kompanets, Victor O.; Chekalin, Sergey V.; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Chemical Physics Letters, Vol. 530, 2012, 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.

In: *Chemistry: A European Journal*, Vol. 18, No. 14, 2012, 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, Niina; Veiranto, Minna; Männistö, Noora; Karp, Matti; Rich, Jaana; Efimov, Alexander; Seppälä, Jukka; Kellomäki, Minna.

In: *Biomatter*, Vol. 2, No. 4, 2012, p. 1-13.

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, Ali; Niemi, Marja; Tkachenko, Nikolai; Lemmetyinen, Helge.

In: *Journal of Physical Chemistry A*, Vol. 116, No. 39, 2012, 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.; Plyushin, V.F.; Grivin, V.P.; Tkachenko, Nikolai; Lemmetyinen, Helge.

In: *RSC Advances*, Vol. 2, No. 13, 2012, p. 5768-5778.

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

Rh-IndOleF_{ox} catalyzed conjugate addition/Heck-type coupling of organoboronics to a lactam or a lactone. / Kuuloja, Noora; Vaismaa, Matti; Franzen, Robert.

In: *Tetrahedron*, Vol. 68, No. 10, 2012, 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, Hanna; Sariola-Leikas, Essi; Pyymäki Perros, Alexander; Kontio, Juha M.; Efimov, Alexander; Hayashi, Hironobu; Lipsanen, Harri; Imahori, Hiroshi; Lemmetyinen, Helge; Tkachenko, Nikolai V.

In: *Journal of Physical Chemistry C*, Vol. 116, No. 3, 2012, 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, Rachel; Stranius, Kati; Maligaspe, Eranda; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Zandler, Melvin E.; D'Souza, Francis.

In: *Inorganic Chemistry*, Vol. 51, No. 6, 2012, 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, Venla M.; Omar, Walaa A.E.; Heiskanen, Juha P.; Lemmetyinen, Helge J.; Hormi, Osmo E.O.

In: *Journal of Materials Chemistry*, Vol. 22, No. 43, 2012, 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, Yu; Franzen, Robert.

In: *Synlett*, No. 6, 2012, 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, Essi; Hietala, Matti; Veselov, Alexey; Okhotnikov, Oleg; Semjonov, Sergei L.; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Efimov, Alexander.

In: *Journal of Colloid and Interface Science*, Vol. 369, No. 1, 2012, 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, Eeva K.; Nunes, M.R.; Silvestre, A.J.; Monteiro, O.C.
In: Journal of Materials Science, Vol. 47, No. 10, 2012, p. 4305-4312.
Research output: Contribution to journal › Article › Scientific › peer-review

The fluorine effect: photophysical properties of borondipyrromethene (bodipy) dyes appended at the meso position with fluorinated aryl groups. / Alamiry, Mohammed A.H.; Benniston, Andrew C.; Hagon, Jerry; Winstanley, Thomas P.L.; Lemmetyinen, Helge; Tkachenko, Nikolai V.
In: RSC Advances, Vol. 2, No. 11, 2012, 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.
Multiporphyrin Arrays : Fundamentals and Applications. ed. / Kim Dongho. Singapore : PAN STANFORD PUBLISHING, 2012. p. 537-586.
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Construction of bispirooxindoles containing three quaternary stereocentres in a cascade using a single multifunctional organocatalyst. / Tan, Bin; Candeias, Nuno R.; Barbas, Carlos F.
In: Nature Chemistry, Vol. 3, No. 6, 06.2011, p. 473-477.
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, Bin; Candeias, Nuno R.; Barbas, Carlos F.
In: Journal of the American Chemical Society, Vol. 133, No. 13, 06.04.2011, p. 4672-4675.
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, Rajeev K.; Efimov, Alexander; Lemmetyinen, Helge.
In: Chemistry of Materials, Vol. 23, No. 3, 2011, 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, Dogan.
In: International Journal of Hydrogen Energy, Vol. 36, No. 1, 2011, 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, Sarah; Munster, Uwe; Tuovinen, Olli Heikki.
In: Journal of Liquid Chromatography and Related Technologies, Vol. 34, No. 15, 2011, p. 1546-1555.
Research output: Contribution to journal › Article › Scientific › peer-review

Bay Region Borylation of Perylene Bisimides. / Dey, Somnath; Efimov, Alexander; Lemmetyinen, Helge.
In: European Journal of Organic Chemistry, Vol. 2011, No. 30, 2011, p. 5955-5958.
Research output: Contribution to journal › Article › Scientific › peer-review

Biohydrogen production in alkalithermophilic conditions: Thermobrachium celere as a case study. / Ciranna, Alessandro; Santala, Ville; Karp, Matti.
In: Bioresource Technology, Vol. 102, No. 18, 2011, 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, Tomokazu; Tezuka, Noriyasu; Kawashima, Fumiaki; Seki, Shu; Matano, Yoshihiro; Yoshihide, Nakao; Shishido, Tetsuya; Nishi, Masayuki; Hirao, Kazuyuki; Lehtivuori, Heli; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Imahori, Hiroshi.
In: Angewandte Chemie (International Edition), Vol. 50, No. 20, 2011, 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, Anna; Szabo, Hilda Marta; Nikinmaa, Mikko; Leskinen, Piia.

In: Aquatic Microbial Ecology, Vol. 65, No. 1, 2011, 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, Nikolai V.; Efimov, Alexander; Lemmetyinen, Helge.

In: Journal of Porphyrins and Phthalocyanines, Vol. 15, No. 9-10, 2011, 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, Nikolai V.; Lemmetyinen, Helge.

Handbook of Carbon Nano Materials, Volume 2: Electron Transfer and Applications. ed. / Francis D'Souza; Karl M. Kadish. Singapore : World Scientific Publishing, 2011. 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, Ali H.; Niemi, Marja; Tkachenko, Nikolai V.; Lemmetyinen, Helge.

In: Journal of Physical Chemistry A, Vol. 115, No. 15, 2011, 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, Vladimir; Tkachenko, Nikolai; Lemmetyinen, Helge; Yoshida, K.; Isoda, S.; Imahori, H.

In: Chemical Communications, Vol. 47, No. 42, 2011, 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, Somnath; Efimov, Alexander; Giri, Chandan; Rissanen, Kari; Lemmetyinen, Helge.

In: European Journal of Organic Chemistry, Vol. 2011, No. 31, 2011, 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, Somnath; Vivo, Paola; Efimov, Alexander; Lemmetyinen, Helge.

In: Journal of Materials Chemistry, Vol. 21, 2011, 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, Jari; Kananavicius, Robertas; Linnanto, Juha; Lehtivuori, Heli; Keraenen, Mika; Aumanen, Viivi; Tkachenko, Nikolai; Korppi-Tommola, Jouko.

In: Photosynthesis Research, Vol. 107, No. 2, 2011, p. 195-207.

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

Fused Alq3 derivatives: syntheses and photophysical characteristics. / Heiskanen, Juha P.; Tolkki, Antti E.; Lemmetyinen, Helge J.; Hormi, Osmo E. O.

In: Journal of Materials Chemistry, Vol. 21, 2011, 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, Noora; Tois, Jan; Franzen, Robert.

In: Tetrahedron : Asymmetry, Vol. 22, No. 4, 2011, 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, Simon; Iijima, Hiroaki; Toude, Yuuki; Umeyama, Tomokazu; Matano, Yoshihiro; Ito, Seigo; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Imahori, Hiroshi.

In: Journal of Physical Chemistry C, Vol. 115, No. 29, 2011, 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, Alexandr V.; Plyusnin, Victor F.; Grivin, Vyacheslav P.; Larionov, Stanislav V.; Lemmetyinen, Helge.

In: Journal of Photochemistry and Photobiology, A: Chemistry, Vol. 220, No. 2-3, 2011, p. 164-172.

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

Photochemistry of Dithiocarbamate Cu(II) Complex in CCl₄. / Plyusnin, Victor F.; Kolomeets, Alexandr V.; Grivin, Vyacheslav P.; Larionov, Stanislav V.; Lemmetyinen, Helge.

In: Journal of Physical Chemistry A, Vol. 115, No. 10, 2011, p. 1763-1773.

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

Photochromic processes in di(mercaptoquinolino)Ni(II) complex and perfluorodiphenyl disulfide solutions. / Vorobyev, D.Yu.; Kolomeets, A.V.; Ivanov, Yu.V.; Bogdanchikov, G.A.; Grivin, V.P.; Plyusnin, V.F.; Larionov, S.V.; Lemmetyinen, Helge.

In: Photochemical & Photobiological Sciences, Vol. 10, No. 7, 2011, p. 1196-1202.

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

Photocurrent generation in fullerene-phthalocyanine composite by in situ cationic polymerization. / Lintinen, Kalle; Storbäck, Linda; Efimov, Alexander; Tolkkio, Antti; Tkachenko, Nikolai; Lemmetyinen, Helge.

In: Solar Energy Materials and Solar Cells, Vol. 95, No. 3, 2011, 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, Channa A.; Niemi, Marja; Tkachenko, Nikolai V.; Subbaiyan, Navaneetha K.; Zandler, Melvin E.; Lemmetyinen, Helge; DSouza, Francis.

In: Journal of Porphyrins and Phthalocyanines, Vol. 15, No. 5-6, 2011, 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, Helge; Tkachenko, Nikolai V.; Efimov, Alexander; Niemi, Marja.

In: Physical Chemistry Chemical Physics, Vol. 13, 2011, p. 397-412.

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

Photoinduced processes in chromophore-gold nanoparticle assemblies. / Kotiaho, Anne; Lahtinen, Riikka; Lemmetyinen, Helge.

In: Pure and Applied Chemistry, Vol. 83, No. 4, 2011, 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, Noriyasu; Umeyama, Tomokazu; Matano, Yoshihiro; Shishido, Tetsuya; Yoshida, Kaname; Ogawa, Tetsuya; Isoda, Seiji; Stranius, Kati; Chukharev, Vladimir; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Imahori, Hiroshi.

In: Energy & Environmental Science, Vol. 4, No. 3, 2011, 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, Elina; Ketola, Tiia-Maaria; Green, Jordan J.; Hanzlikova, Martina; Lemmetyinen, Helge; Langer, Robert; Anderson, Daniel G.; Urtti, Arto; Yliperttula, Marjo.

In: Journal of Controlled Release, Vol. 154, No. 2, 2011, 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, Noora; Kylvälä, Tuula M.; Tois, Jan E.; Sjöholm, Rainer E.; Franzen, Robert G.

In: Synthetic Communications, Vol. 41, No. 7, 2011, 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, Tiia-Maaria; Hanzlikova, Martina; Urtti, Arto; Lemmetyinen, Helge; Yliperttula, Marjo; Vuorimaa, Elina.

In: Journal of Physical Chemistry Part B, Vol. 115, No. 8, 2011, 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, Alexey A.; Thur, Christoph; Efimov, Alexander; Guina, Mircea; Lemmetyinen, Helge; Tkachenko, Nikolai V.

In: Physica Status Solidi A: Applications And Materials Science, Vol. 208, No. 8, 2011, 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, Yu. A.; Suvorova, E. I.; Orekhov, A. S.; Alekseev, A. S.; Klechkovskaya, V. V.; Tereshchenko, E. Yu.; Tkachenko, Nikolai V.; Lemmetyinen, Helge; Feigin, L. A.; Kovalchuka, M. V.

In: Crystallography Reports, Vol. 56, No. 1, 2011, p. 157-163.

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, Michael; Pasenkiewicz-Gierula, Marta; Rog, Thomasz; Danne, Reinis; Orłowski, Adam; Karttunen, Mikko; Urtti, Arto; Yliperttula, Marjo; Vuorimaa, Elina; Bunker, Alex.

In: Langmuir, Vol. 27, No. 12, 2011, 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, Tomokazu; Odoi, Masaaki; Yoshikawa, Osamu; Sagawa, Takashi; Yoshikawa, Susumu; Evgenia, Douvogianni; Tezuka, Noriyasu; Matano, Yoshihiro; Stranius, Kati; Tkachenko, Nikolai; Lemmetyinen, Helge; Imahori, Hiroshi.

In: Journal of Materials Chemistry, Vol. 21, No. 33, 2011, 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, Pekka J.; Cramariuc, Oana; Hukka, Terttu I.

In: Chemical Physics Letters, Vol. 501, No. 4-6, 2011, 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, Francis; Wijesinghe, Channa A.; El-Khouly, Mohamed E.; Hudson, Jessica; Niemi, Marja; Lemmetyinen, Helge; Tkachenko, Nikolai V.; Zandler, Melvin E.; Fukuzumi, Shunichi.

In: Physical Chemistry Chemical Physics, Vol. 13, 2011, 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, Nikolai V.; Lemmetyinen, Helge.

In: Photochemical & Photobiological Sciences, Vol. 10, No. 10, 2011, p. 1709-1714.

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

Utilization of IndPHOX-ligands in palladium-catalysed asymmetric allylic aminations. / Wang, Yu; Vaismaa, Matti; Hämäläinen, Antti; Tois, Jan; Franzen, Robert.

In: Tetrahedron : Asymmetry, Vol. 22, No. 5, 2011, 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, Kalle.

Tampere : Tampere University of Technology, 2010. 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 alkoxyipyridylindolizine derivatives. / Aittala, Pekka.

Tampere : Tampere University of Technology, 2010. 87 p. (Tampere University of Technology. Publication; Vol. 936).
Research output: Book/Report › Doctoral thesis › Monograph

Multilayered thin films for organic photovoltaics. / Vivo, Paola.

Tampere : Tampere University of Technology, 2010. 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, Nuno R.; Montalbano, Francesco; Cal, Pedro M. S. D.; Gois, Pedro M. P.

In: Chemical Reviews, Vol. 110, No. 10, 10.2010, p. 6169-6193.

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

NHC-Iron-Catalyzed Aerobic Oxidative Aromatic Esterification of Aldehydes using Boronic Acids. / Rosa, Joao N.; Reddy, R. Sudarshan; Candeias, Nuno R.; Cal, Pedro M. S. D.; Gois, Pedro M. P.

In: Organic Letters, Vol. 12, No. 12, 18.06.2010, p. 2686-2689.

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