

A novel electrical charging condensing heat exchanger for efficient particle emission reduction in small wood boilers. / Grigonytė-Lopez Rodriguez, Julija; Suhonen, Heikki; Laitinen, Ari; Tissari, Jarkko; Kortelainen, Miika; Tiitta, Petri; Lähde, Anna; Keskinen, Jorma; Jokiniemi, Jorma; Sippula, Olli.
In: *Renewable Energy*, Vol. 145, 01.2020, p. 521-529.
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](#)

Building university-industry co-innovation networks in transnational innovation ecosystems : Towards a transdisciplinary approach of integrating social sciences and artificial intelligence. / Cai, Yuzhuo; Ferrer, Borja Ramis; Lastra, Jose Luis Martinez.
In: *Sustainability*, Vol. 11, No. 17, 4633, 01.09.2019.
Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

The potential of biomethane in replacing fossil fuels in heavy transport-a case study on Finland. / Pääkkönen, Anna; Aro, Kalle; Aalto, Pami; Konttinen, Jukka; Kojo, Matti.
In: *Sustainability*, Vol. 11, No. 17, 4750, 01.09.2019.
Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Towards a circular economy by leveraging hazardous resources : A case study of Fortum HorsePower. / Tura, Nina; Ahola, Tuomas.
In: *Journal of Cleaner Production*, Vol. 230, 01.09.2019, p. 518-526.
Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched GaInNAsSb solar junctions grown by molecular beam epitaxy on GaAs. / Isoaho, Riku; Aho, Arto; Tukiainen, Antti; Aho, Timo; Raappana, Marianna; Salminen, Turkka; Reuna, Jarno; Guina, Mircea.
In: *Solar Energy Materials and Solar Cells*, Vol. 195, 15.06.2019, p. 198-203.
Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Impact of Different Concrete Types on Radio Propagation : Fundamentals and Practical RF Measurements. / Asp, Ari; Hentilä, Tuomo; Valkama, Mikko; Pikkuvirta, Jussa; Hujanen, Arto; Huhtinen, Ismo.
2019 4th International Conference on Smart and Sustainable Technologies, SpliTech 2019. ed. / Joel J.P.C. Rodrigues; Petar Solic; Toni Perkovic; Katarina Vukojevic; Joel J.P.C. Rodrigues; Luigi Patrono; Sandro Nizetic. IEEE, 2019.
Research output: [Chapter in Book/Report/Conference proceeding](#) › [Conference contribution](#) › [Scientific](#) › [peer-review](#)

Pre-Grant Signaling for Energy-Efficient 5G and Beyond Mobile Devices : Method and Analysis. / Rostami, Soheil; Heiska, Kari; Puchko, Oleksandr; Leppanen, Kari; Valkama, Mikko.
In: *IEEE Transactions on Green Communications and Networking*, Vol. 3, No. 2, 8616818, 01.06.2019, p. 418-432.
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](#)

Energy Detection-Based Spectrum Sensing over Fisher-Snedecor F Fading Channels. / Yoo, Seong Ki; Cotton, Simon L.; Sofotasios, Paschalis C.; Muhaidat, Sami; Badarneh, Osamah S.; Karagiannidis, George K.
2018 IEEE Global Communications Conference. IEEE, 2019. 8647778.
Research output: [Chapter in Book/Report/Conference proceeding](#) › [Conference contribution](#) › [Scientific](#) › [peer-review](#)

Improved Session Continuity in 5G NR with Joint Use of Multi-Connectivity and Guard Bandwidth. / Kovalchukov, Roman; Moltchanov, Dmitri; Begishev, Vyacheslav; Samuylov, Andrey; Andreev, Sergey; Koucheryavy, Yevgeni; Samuylov, Konstantin.

2018 IEEE Global Communications Conference, GLOBECOM 2018. IEEE, 2019.

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

Impedance-based interactions in grid-tied three-phase inverters in renewable energy applications. / Suntio, Teuvo; Messo, Tuomas; Berg, Matias; Alenius, Henrik; Reinikka, Tommi; Luhtala, Roni; Zenger, Kai.

In: *Energies*, Vol. 12, No. 3, 464, 31.01.2019.

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

Direct fixed-step maximum power point tracking algorithms with adaptive perturbation frequency. / Amer, Eyal; Kuperman, Alon; Suntio, Teuvo.

In: *Energies*, Vol. 12, No. 3, 399, 27.01.2019.

Research output: Contribution to journal > Article > 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

Why social sustainability counts : The impact of corporate social sustainability culture on financial success. / Schönborn, Gregor; Berlin, Cecilia; Pinzone, Marta; Hanisch, Christoph; Georgoulas, Konstantinos; Lanz, Minna.

In: *Sustainable Production and Consumption*, Vol. 17, 01.01.2019, p. 1-10.

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

Charge carrier dynamics in tantalum oxide overlayered 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

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

Combined experimental and theoretical study of acetylene semi-hydrogenation over $\text{Pd}/\text{Al}_2\text{O}_3$. / Gonçalves, Liliana P.L.; Wang, Jianguang; Vinati, Simone; Barborini, Emanuele; Wei, Xian Kui; Heggen, Marc; Franco, Miguel; Sousa, Juliana P.S.; Petrovykh, Dmitri Y.; Soares, Olívia Salomé G.P.; Kovnir, Kirill; Akola, Jaakko; Kolen'ko, Yury V.

In: *International Journal of Hydrogen Energy*, 2019.

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

Cost-optimal energy performance measures in a new daycare building in cold climate. / Sankelo, Paula; Jokisalo, Juha; Nyman, Jonathan; Vinha, Juha; Sirén, Kai.

In: *International Journal of Sustainable Energy*, Vol. 38, No. 2, 2019, p. 104-122.

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

Effect of apartment building energy renovation on hourly power demand. / Hirvonen, Janne; Jokisalo, Juha; Heljo, Juhani; Kosonen, Risto.

In: *International Journal of Sustainable Energy*, 2019.

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

Identification of three-phase grid impedance in the presence of parallel converters. / Luhtala, Roni; Messo, Tuomas; Roinila, Tomi; Alenius, Henrik; Jong, Erik De; Burstein, Andrew; Fabian, Alejandra.

In: *Energies*, Vol. 12, No. 14, 2674, 2019.

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

Power electronics in renewable energy systems. / Suntio, Teuvo; Messo, Tuomas.

In: *Energies*, Vol. 12, No. 10, en12101852, 2019.

Research output: Contribution to journal › Editorial › Scientific

Sustainability of bioenergy in finland and globally – fact check. / Vakkilainen, Esa; Konttinen, 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

Technology valuation method for supporting knowledge management in technology decisions to gain sustainability. / Mämmelä, Janne; Juuti, Tero; Julkunen, Pasi.

In: *Sustainability (Switzerland)*, Vol. 11, No. 12, 3410, 2019.

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

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

Hirvonen, Janne; Jokisalo, Juha; Heljo, Juhani; Kosonen, Risto.

In: *International Journal of Sustainable Energy*, Vol. 38, No. 7, 2019.

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

How and why does willow biochar increase a clay soil water retention capacity? / Rasa, Kimmo; Heikkinen, Jaakko;

Hannula, Markus; Arstila, Kai; Kulju, Sampo; Hyväluoma, Jari.

In: *Biomass and Bioenergy*, Vol. 119, 01.12.2018, p. 346-353.

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

Energiatohokkaan arkkitehtisuunnittelun ohjekortisto. / Moisio, Malin; Kaasalainen, Tapio; Lehtinen, Taru; Hedman, Markku.

Tampereen teknillinen yliopisto. Arkkitehtuurin laboratorio, 2018. 142 p. (Tampereen teknillinen yliopisto. Arkkitehtuurin laboratorio. Asuntosuunnittelu. Julkaisu; Vol. 32).

Research output: Book/Report › Book › Professional

Peruskoulut ja energiatohokkuus : Tilallisista ja toiminnallisista suunnitteluperiaatteista. / Lehtinen, Taru; Papinsaari, Anna-Kristiina; Kaasalainen, Tapio; Moisio, Malin; Hedman, Markku.

Tampereen teknillinen yliopisto. Arkkitehtuurin laboratorio, 2018. 86 p. (Tampereen teknillinen yliopisto. Arkkitehtuurin laboratorio. Asuntosuunnittelu. Julkaisu; Vol. 34).

Research output: Book/Report › Book › Professional

Creating value in the circular economy : A structured multiple-case analysis of business models. / Ranta, Valter; Aarikka-Stenroos, Leena; Mäkinen, Saku J.

In: *Journal of Cleaner Production*, Vol. 201, 10.11.2018, p. 988-1000.

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

Alternative Power-Based Pricing Schemes for Distribution Network Tariff of Small Customers. / Lummi, Kimmo;

Rautiainen, Antti; Jarventausta, Pertti; Heine, Pirjo; Lehtinen, Jouni; Hyvarinen, Markku; Salo, Johannes.

International Conference on Innovative Smart Grid Technologies, ISGT Asia 2018. Institute of Electrical and Electronics Engineers Inc., 2018. p. 581-586.

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

Performance of a biotrickling filter for the anaerobic utilization of gas-phase methanol coupled to thiosulphate reduction and resource recovery through volatile fatty acids production. / Eregowda, Tejaswini; Matanhike, Luck; Rene, Eldon R.; Lens, Piet N.L.

In: *Bioresource Technology*, Vol. 263, 01.09.2018, p. 591-600.

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

A distributed automation architecture for distribution networks, from design to implementation. / Angioni, Andrea; Lu, Shengye; Hooshyar, Hossein; Cairo, Ignasi; Repo, Sami; Ponci, Ferdinanda; Della Giustina, Davide; Kulmala, Anna; Dedè, Alessio; Monti, Antonello; Del Rosario, Gerard; Vanfretti, Luigi; Garcia, Cristina Corchero.

In: Sustainable Energy, Grids and Networks, Vol. 15, 09.2018, p. 3-13.

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

Dilute nitride triple junction solar cells for space applications : Progress towards highest AM0 efficiency. / Aho, Arto; Isoaho, Riku; Tukiainen, Antti; Gori, Gabriele; Campesato, Roberta; Guina, Mircea.

In: Progress in Photovoltaics: Research and Applications, Vol. 26, No. 19, 09.2018, p. 740-744.

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

Lessons learnt from real-time monitoring of the low voltage distribution network. / Barbato, Antimo; Dedè, Alessio; Della Giustina, Davide; Massa, Giovanni; Angioni, Andrea; Lipari, Gianluca; Ponci, Ferdinanda; Repo, Sami.

In: Sustainable Energy, Grids and Networks, Vol. 15, 09.2018, p. 76-85.

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

Production of alkanes from CO₂ by engineered bacteria. / Lehtinen, Tapio; Virtanen, Henri; Santala, Suvi; Santala, Ville.

In: Biotechnology for Biofuels, Vol. 11, 228, 21.08.2018.

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-Löytty, 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

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

Online dynamic conductance estimation based maximum power point tracking of photovoltaic generators. / Sitbon, Moshe; Lineykin, Simon; Schacham, Shmuel; Suntio, Teuvo; Kuperman, Alon.

In: Energy Conversion and Management, Vol. 166, 15.06.2018, p. 687-696.

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

Effects of wastewater constituents and operational conditions on the composition and dynamics of anodic microbial communities in bioelectrochemical systems. / Kokko, 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

Role of Oxide Defects in ALD grown TiO₂ Coatings on Performance as Photoanode Protection Layer. / Saari, Jesse; Ali-Löytty, Harri; Valden, Mika.

2018. Paper presented at Optics & Photonics Days 2018, Jyväskylä, Finland.

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

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

Dynamic modeling and analysis of PCM-controlled DCM-operating buck converters-A reexamination. / Suntio, Teuvo.

In: Energies, Vol. 11, No. 5, en11051267, 2018, p. 1-18.

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

Improved Light Trapping in Quantum Dot Solar Cells Using Double-sided Nanostructuring. / Elsehrawy, Farid; Aho, Timo; Niemi, Tapio; Guina, Mircea; Cappelluti, Federica.

Optics and Photonics for Energy and the Environment 2018. OSA - The Optical Society, 2018.

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

Light-trapping enhanced thin-film III-V quantum dot solar cells fabricated by epitaxial lift-off. / Cappelluti, F.; Kim, D.; van Eerden, M.; Cédola, A. P.; Aho, T.; Bissels, G.; Elsehrawy, F.; Wu, J.; Liu, H.; Mulder, P.; Bauhuis, G.; Schermer, J.; Niemi, T.; Guina, M.

In: Solar Energy Materials and Solar Cells, Vol. 181, 2018, p. 83-92.

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

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

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

Atomikerroskasvatusmenetelmällä kasvatetun titaanidioksidikalvon ominaisuudet valosähkökemiallisessa veden hajottamisessa. / Saari, Jesse.

2017. 74 p.

Research output: Book/Report › Master's Thesis › Scientific

Electropolymerized polyazulene as active material in flexible supercapacitors. / Suominen, Milla; Lehtimäki, Suvi; Yewale, Rahul; Damlin, Pia; Tuukkanen, Sampo; Kvarnström, Carita.

In: Journal of Power Sources, Vol. 356, 15.07.2017, p. 181-190.

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

Hafnium oxide thin films as a barrier against copper diffusion in solar absorbers. / Kotilainen, Minna; Krumpolec, Richard; Franta, Daniel; Souček, Pavel; Homola, Tomáš; Cameron, David C.; Vuoristo, Petri.

In: Solar Energy Materials and Solar Cells, Vol. 166, 01.07.2017, p. 140-146.

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

On the Efficient Calculation of the Periodic Steady-State Response of Grid-Connected Wind Parks - Part I. / Garcia, Norberto; Acha, Enrique.

In: IEEE Transactions on Sustainable Energy, Vol. 8, No. 2, 01.04.2017, p. 458-467.

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

Effects of PV array layout, electrical configuration and geographic orientation on mismatch losses caused by moving clouds. / Lappalainen, Kari; Valkealahti, Seppo.

In: *Solar Energy*, Vol. 144, 01.03.2017, p. 548-555.

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

Design of a 25 MWe Solar Thermal Power Plant in Iran with Using Parabolic Trough Collectors and a Two-Tank Molten Salt Storage System. / Kordmahaleh, Aidin Alinezhad; Naghashzadegan, Mohammad; Javaherdeh, Kourosh; Khoshgoftar, Mohammadreza.

In: *International Journal of Photoenergy*, Vol. 2017, 4210184, 2017.

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

Thermal Modification of ALD Grown Titanium Oxide Ultra Thin Film for Photoanode Applications. / Hannula, Markku Kalevi; Lahtonen, Kimmo Tapio; Isotalo, Tero Jesse; Saari, Jesse Samuli; Valden, Mika Olavi.

2016. Paper presented at Symposium on Future Prospects for Photonics, Tampere, Finland.

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

Apparent velocity of shadow edges caused by moving clouds. / Lappalainen, Kari; Valkealahti, Seppo.

In: *Solar Energy*, Vol. 138, 15.11.2016, p. 47-52.

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

Analysis of shading periods caused by moving clouds. / Lappalainen, Kari; Valkealahti, Seppo.

In: *Solar Energy*, Vol. 135, 01.10.2016, p. 188-196.

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

Exposure to biological and chemical agents at biomass power plants. / Laitinen, Sirpa; Laitinen, Juha; Fagernäs, Leena; Korpijärvi, Kirsi; Korpinen, Leena; Ojanen, Kari; Aatamila, Marjaleena; Jumpponen, Mika; Koponen, Hanna; Jokiniemi, Jorma.

In: *Biomass & Bioenergy*, Vol. 93, 01.10.2016, p. 78-86.

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

Comparison of photovoltaic and wind generators as dynamic input sources to power processing interfaces. / Kolesnik, S.; Sitbon, M.; Agranovich, G.; Kuperman, A.; Suntio, T.

2016 2nd International Conference on Intelligent Energy and Power Systems, IEPS 2016 - Conference Proceedings. IEEE, 2016.

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

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

Power quality in distribution networks with electric vehicle charging - A research methodology based on field tests and real data. / Supponen, Antti; Rautiainen, Antti; Markkula, Joni; Mäkinen, Antti; Järventausta, Pertti; Repo, Sami.

2016 11th International Conference on Ecological Vehicles and Renewable Energies, EVER 2016. IEEE, 2016.

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

Influence of As/group-III flux ratio on defects formation and photovoltaic performance of GaInNAs solar cells. / Polojärvi, Ville; Aho, Arto; Tukiainen, Antti; Raappana, Marianna; Aho, Timo; Schramm, Andreas; Guina, Mircea.

In: *Solar Energy Materials and Solar Cells*, Vol. 149, 01.05.2016, p. 213-220.

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

Antireflection composite coatings for organic solar cells. / Suleimanov, S. Kh; Berger, P.; Dyskin, V. G.; Dzhanlich, M. U.; Bugakov, A. G.; Dudko, O. A.; Kulagina, N. A.; Kim, M.
In: Applied Solar Energy (English translation of Geliotekhnika), Vol. 52, No. 2, 01.04.2016, p. 157-158.
Research output: Contribution to journal > Article > Scientific > peer-review

Planning land use for biogas energy crop production : The potential of cutaway peat production lands. / Laasasenaho, Kari; Lensu, Anssi; Rintala, Jukka.
In: Biomass & Bioenergy, Vol. 85, 01.02.2016, p. 355-362.
Research output: Contribution to journal > Article > Scientific > peer-review

Microbial electrochemical technologies with the perspective of harnessing bioenergy : Maneuvering towards upscaling. / Butti, Sai Kishore; Velvizhi, G.; Sulonen, Mira L K; Haavisto, Johanna M.; Oguz Koroglu, Emre; Yusuf Cetinkaya, Afsin; Singh, Surya; Arya, Divyanshu; Annie Modestra, J.; Vamsi Krishna, K.; Verma, Anil; Ozkaya, Bestami; Lakaniemi, Aino-Maija; Puhakka, Jaakko A.; Venkata Mohan, S.
In: Renewable and Sustainable Energy Reviews, Vol. 53, 01.2016, p. 462-476.
Research output: Contribution to journal > Review Article > Scientific > peer-review

Influence of temperature-induced copper diffusion on degradation of selective chromium oxy-nitride solar absorber coatings. / Kotilainen, M.; Honkanen, M.; Mizohata, K.; Vuoristo, P.
In: Solar Energy Materials and Solar Cells, Vol. 145, 2016, p. 323-332.
Research output: Contribution to journal > Article > Scientific > peer-review

Metabolic engineering of Acinetobacter baylyi ADP1 for removal of Clostridium butyricum growth inhibitors produced from lignocellulosic hydrolysates. / Kannisto, Matti S.; Mangayil, Rahul K.; Shrivastava-Bhattacharya, Ankita; Pletschke, Brett I.; Karp, Matti T.; Santala, Ville P.
In: Biotechnology for Biofuels, Vol. 8, No. 1, 198, 01.12.2015.
Research output: Contribution to journal > Article > Scientific > peer-review

Single-source multibattery solar charger : Case study and implementation issues. / Gadelovits, Shlomo; Sitbon, Moshe; Suntio, Teuvo; Kuperman, Alon.
In: Progress in Photovoltaics: Research and Applications, Vol. 23, No. 12, 25.11.2015, p. 1916-1928.
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

Improved adaptive input voltage control of a solar array interfacing current mode controlled boost power stage. / Sitbon, Moshe; Schacham, Shmuel; Suntio, Teuvo; Kuperman, Alon.
In: Energy Conversion and Management, Vol. 98, 01.07.2015, p. 369-375.
Research output: Contribution to journal > Article > Scientific > peer-review

Characteristics and agronomic usability of digestates from laboratory digesters treating food waste and autoclaved food waste. / Tampio, Elina; Ervasti, Satu; Rintala, Jukka.
In: Journal of Cleaner Production, Vol. 94, 01.05.2015, p. 86-92.
Research output: Contribution to journal > Article > Scientific > peer-review

Engineered nanomaterials reduce but do not resolve life cycle environmental impacts of power capacitors. / Alaviitala, Tiina; Mattila, Tuomas J.
In: Journal of Cleaner Production, Vol. 93, 15.04.2015, p. 347-353.
Research output: Contribution to journal > Article > Scientific > peer-review

Fermentative metabolism of an anaerobic, thermophilic consortium on plant polymers and commercial paper samples. / Carver, Sarah M.; Nelson, Michael C.; Yu, Zhongtang; Tuovinen, Olli H.
In: Biomass & Bioenergy, Vol. 75, 01.04.2015, p. 11-22.
Research output: Contribution to journal > Article > Scientific > peer-review

Improved bioconversion of crude glycerol to hydrogen by statistical optimization of media components. / Mangayil, Rahul; Aho, Tommi; Karp, Matti; Santala, Ville.

In: *Renewable Energy*, Vol. 75, 01.03.2015, p. 583-589.

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

Driving pattern analysis of Nordic region based on National Travel Surveys for electric vehicle integration. / Liu, Zhaoxi; Wu, Qiuwei; Christensen, Linda; Rautiainen, Antti; Xue, Yusheng.

In: *Journal of Modern Power Systems and Clean Energy*, Vol. 3, No. 2, 01.01.2015, p. 180-189.

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

Interfacing renewable energy sources for maximum power transfer-Part II : Dynamics. / Kolesnik, Sergei; Sitbon, Moshe; Gadelovits, Shlomo; Suntio, Teuvo; Kuperman, Alon.

In: *Renewable and Sustainable Energy Reviews*, Vol. 51, 2015, p. 1771-1783.

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

Composition dependent growth dynamics in molecular beam epitaxy of GaInNAs solar cells. / Aho, Arto; Polojärvi, Ville; Korpijärvi, Ville Markus; Salmi, Joel; Tukiainen, Antti; Laukkanen, Pekka; Guina, Mircea.

In: *Solar Energy Materials and Solar Cells*, Vol. 124, 05.2014, p. 150-158.

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

Inhibitory effects of substrate and soluble end products on biohydrogen production of the alkalithermophile *Caloramator celer* : Kinetic, metabolic and transcription analyses. / Ciranna, Alessandro; Ferrari, Roberto; Santala, Ville; Karp, Matti.

In: *International Journal of Hydrogen Energy*, Vol. 39, No. 12, 15.04.2014, p. 6391-6401.

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

Design driven world of cellulose-from bulk to luxury? / Qvintus, Pia; Kataja, Kirsi; Heikkilä, Pirjo; Salmela, Juha; Lehmonen, Jani; Ketoja, Jukka; Hänninen, Tuomas; Harlin, Ali; Härkäsalmi, Tiina; Vuorinen, Jyrki; Vuorinen, Tapani. Fibre Value Chain Conference and Expo 2014: Pulp and Paper Bioenergy Bioproducts. Appita Inc., 2014. p. 67-74.

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

Nanocellulose aerogel membranes for optimal electrolyte filling in dye solar cells. / Miettunen, Kati; Vapaavuori, Jaana; Tiihonen, Armi; Poskela, Aapo; Lahtinen, Panu; Halme, Janne; Lund, Peter.

In: *NANO ENERGY*, Vol. 8, 2014, p. 95-102.

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

Scanner abdominal : Étude comparative de l'exposition patient en routine clinique sur des appareils avec et sans reconstruction itérative. / Gomes, M.; Leroy, C.; Lemaire, S.; Marmin, C.; Mordon, S.; Ernst, O.

In: *Radioprotection*, Vol. 49, No. 1, 2014, p. 35-41.

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

Software design for simulating microbial bioprocesses in bioreactor. / Nikhil, ; Puhakka, J. A.; Visa, A.; Yli-Harja, O. 6th International Conference on Environmental Informatics, ISEIS 2007. International Society for Environmental Information Sciences, 2014. 60700018.

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

Non-sterile process for biohydrogen and 1,3-propanediol production from raw glycerol. / Kivistö, Anniina; Santala, Ville; Karp, Matti.

In: *International Journal of Hydrogen Energy*, Vol. 38, No. 27, 10.09.2013, p. 11749-11755.

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

Prospecting hydrogen production of *Escherichia coli* by metabolic network modeling. / Seppälä, Jenni J.; Larjo, Antti; Aho, Tommi; Yli-Harja, Olli; Karp, Matti T.; Santala, Ville.

In: *International Journal of Hydrogen Energy*, Vol. 38, No. 27, 10.09.2013, p. 11780-11789.

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

Renewable vs. traditional energy management solutions - A Finnish hospital facility case. / Kantola, Mikko; Saari, Arto.
In: Renewable Energy, Vol. 57, 09.2013, p. 539-545.

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

Attitude-behaviour gap in energy issues : Case study of three different Finnish residential areas. / Valkila, N.; Saari, A.
In: ENERGY FOR SUSTAINABLE DEVELOPMENT, Vol. 17, No. 1, 02.2013, p. 24-34.

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

Roll-to-roll atomic layer deposition for flexible substrates. / Lahtinen, K.; Maydannik, P.; Kääriäinen, T.; Seppänen, T.; Cameron, D. C.; Johansson, P.; Kraft, M.; Kuusipalo, J.
TAPPI International Conference on Nanotechnology 2013. TAPPI Press, 2013. p. 726-739.

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

Wear resistance of nanoparticle coatings on paperboard. / Stepien, Milena; Chinga-Carrasco, Gary; Saarinen, Jarkko J.; Teisala, Hannu; Tuominen, Mikko; Aromaa, Mikko; Haapanen, Janne; Kuusipalo, Jurkka; Mäkelä, Jyrki M.; Toivakka, Martti.

TAPPI International Conference on Nanotechnology 2013. TAPPI Press, 2013. p. 821-829.

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

Methane production from maize in Finland - Screening for different maize varieties and plant parts. / Seppälä, Mari; Pyykkönen, Ville; Laine, Antti; Rintala, Jukka.

In: Biomass & Bioenergy, Vol. 46, No. November, 11.2012, p. 282-290.

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

Consumer panel on the readiness of finns to behave in a more pro-environmental manner. / Valkila, Noora; Saari, Arto.
In: Sustainability, Vol. 4, No. 7, 07.2012, p. 1561-1579.

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

Demonstration of increased lipid accumulation potential of stigeoclonium sp., Kütz. BUM11007 under nitrogen starved regime : A new source of lipids for biodiesel production. / Praveenkumar, Ramasamy; Johncy, Kamarasu; MubarakAli, Davoodbhasha; Vijayan, Durairaj; Thajuddin, Nooruddin; Gunasekaran, Muthukumaran.

In: Journal of Biobased Materials and Bioenergy, Vol. 6, No. 2, 04.2012, p. 209-213.

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

Influence of nutrient deprivations on lipid accumulation in a dominant indigenous microalga Chlorella sp., BUM11008 : Evaluation for biodiesel production. / Praveenkumar, Ramasamy; Shameera, Kalifulla; Mahalakshmi, Gopalakrishnan; Akbarsha, Mohammad Abdulkader; Thajuddin, Nooruddin.

In: Biomass & Bioenergy, Vol. 37, 02.2012, p. 60-66.

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

High temperature oxidation behaviour of MnCO₂O₄ coating on crofer 22 APU manufactured by a novel solution precursor plasma spray process (SPPS). / Puranen, Jouni; Laakso, Jarmo; Hyvärinen, Leo; Kylmälahti, Mikko; Vuoristo, Petri.

ASME 2012 10th International Conference on Fuel Cell Science, Engineering and Technology Collocated with the ASME 2012 6th International Conference on Energy Sustainability, FUELCELL 2012. The American Society of Mechanical Engineers ASME, 2012. p. 213-218.

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

Hydrogen and methane yields of untreated, water-extracted and acid (HCl) treated maize in one- and two-stage batch assays. / Pakarinen, O. M.; Kaparaju, P. L N; Rintala, J. A.

In: International Journal of Hydrogen Energy, Vol. 36, No. 22, 11.2011, p. 14401-14407.

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

Trace compounds affecting biogas energy utilisation - A review. / Rasi, S.; Läntelä, J.; Rintala, J.

In: Energy Conversion and Management, Vol. 52, No. 12, 11.2011, p. 3369-3375.

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

Mitigation of greenhouse gas emissions by adopting anaerobic digestion technology on dairy, sow and pig farms in Finland. / Kaparaju, P.; Rintala, J.

In: *Renewable Energy*, Vol. 36, No. 1, 01.2011, p. 31-41.

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

Environmental and economic evaluation of solar thermal panels using exergy and dimensional analysis. / Medyna, Galina; Coatanea, Eric; Millet, Dominique.

Globalized Solutions for Sustainability in Manufacturing - Proceedings of the 18th CIRP International Conference on Life Cycle Engineering. 2011. p. 647-651.

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

Manganese-cobalt spinel coatings for SOFC metallic interconnects manufactured by conventional plasma spraying (PS) and suspension plasma spraying (SPS). / Puranen, Jouni; Hyvärinen, Leo; Lagerbom, Juha; Kymälähti, Mikko; Koivuluoto, Heli; Vuoristo, Petri.

ASME 2011 9th International Conference on Fuel Cell Science, Engineering and Technology. Collocated with ASME 2011 5th International Conference on Energy Sustainability, FUELCELL 2011. 2011. p. 237-244.

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

Determination of organic silicon compounds in biogas from wastewater treatments plants, landfills, and co-digestion plants. / Rasi, Saija; Lehtinen, Jenni; Rintala, Jukka.

In: *Renewable Energy*, Vol. 35, No. 12, 12.2010, p. 2666-2673.

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

One-stage H₂ and CH₄ and two-stage H₂ + CH₄ production from grass silage and from solid and liquid fractions of NaOH pre-treated grass silage. / Pakarinen, O. M.; Tähti, H. P.; Rintala, J. A.

In: *Biomass & Bioenergy*, Vol. 33, No. 10, 10.2009, p. 1419-1427.

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

Screening boreal energy crops and crop residues for methane biofuel production. / Lehtomäki, A.; Viinikainen, T. A.; Rintala, J. A.

In: *Biomass & Bioenergy*, Vol. 32, No. 6, 06.2008, p. 541-550.

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

Batch dark fermentative hydrogen production from grass silage : The effect of inoculum, pH, temperature and VS ratio. / Pakarinen, Outi; Lehtomäki, Annimari; Rintala, Jukka.

In: *International Journal of Hydrogen Energy*, Vol. 33, No. 2, 01.2008, p. 594-601.

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

Laboratory investigations on co-digestion of energy crops and crop residues with cow manure for methane production : Effect of crop to manure ratio. / Lehtomäki, A.; Huttunen, S.; Rintala, J. A.

In: *Resources Conservation and Recycling*, Vol. 51, No. 3, 09.2007, p. 591-609.

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

Trace compounds of biogas from different biogas production plants. / Rasi, S.; Veijanen, A.; Rintala, J.

In: *Energy*, Vol. 32, No. 8, 08.2007, p. 1375-1380.

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

Anaerobic co-digestion of potato tuber and its industrial by-products with pig manure. / Kaparaju, Prasad; Rintala, Jukka.

In: *Resources Conservation and Recycling*, Vol. 43, No. 2, 01.2005, p. 175-188.

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