Pyrolysed cellulose nanofibrils and dandelion pappus in supercapacitor application
Research output: Scientific - peer-review › Article

Aspects of moisture ingress in polymer housed surge arresters
Research output: Scientific - peer-review › Article

Output power variation of different PV array configurations during irradiance transitions caused by moving clouds
Research output: Scientific - peer-review › Article

Effects of PV array layout, electrical configuration and geographic orientation on mismatch losses caused by moving clouds
Research output: Scientific - peer-review › Article

Utilization Possibilities of Electrical Energy Storages in Households' Energy Management in Finland
Research output: Scientific - peer-review › Article

Simulation Environment for Centralized Protection and Control applying dSPACE and RTDS with IEC 61850 9-2 Communication
Research output: Scientific - peer-review › Conference contribution

31% European InGaP/GaAs/InGaNAs Solar Cells For Space Application
Research output: Scientific - peer-review › Conference contribution

Novel Concepts for High-efficiency lightweight space solar cells
Research output: Scientific - peer-review › Conference contribution

Performance of Dilute Nitride Triple Junction Space Solar Cell Grown by MBE
Research output: Scientific - peer-review › Conference contribution

Chlorine-Induced High Temperature Corrosion of Inconel 625 Sprayed Coatings Deposited with Different Thermal Spray Techniques
Fantozzi, D., Matikainen, V., Uusitalo, M., Koivuluoto, H. & Vuoristo, P. 23 Dec 2016 In : Surface and Coatings Technology.
Research output: Scientific - peer-review › Article

Enhancement of Photocurrent In GainNAs Solar Cells using Ag/Cu Double-Layer Back Reflector
Research output: Scientific - peer-review › Article
Thermal Modification of ALD Grown Titanium Oxide Ultra Thin Film for Photoanode Applications
Research output: Scientific › Paper, poster or abstract

Ambient-Pressure XPS of Electrochemical Interfaces for Solar Fuel Production
Research output: Scientific › Paper, poster or abstract

Modeling and experimental verification of magneto-mechanical energy harvesting device based on construction steel
Research output: Scientific › Paper, poster or abstract

Thermo-catalytic decomposition of methane: The effect of reaction parameters on process design and the utilization possibilities of the produced carbon
Research output: Scientific - peer-review › Article

A comparative study between surge arrester monitoring through capacitive/resistive measurement bridge and digital decomposition
Research output: Scientific - peer-review › Conference contribution

Fabrication of topographically microstructured titanium silicide interface for advanced photonic applications
Research output: Scientific - peer-review › Article

Optically Enhanced GaInNAs Solar Cell
Research output: Scientific › Paper, poster or abstract

Improving Recovery Boiler Availability through Understanding Fume Behavior
Research output: Scientific - peer-review › Article

Color Bricks: Building Highly Organized and Strongly Absorbing Multicomponent Arrays of Terpyridyl Perylenes on Metal Oxide Surfaces
Research output: Scientific - peer-review › Article

Microbial electrochemical technologies with the perspective of harnessing bioenergy: Maneuvering towards upscaling
A study on raw, torrefied, and steam-exploded wood: Fine grinding, drop-tube reactor combustion tests in N\textsubscript{2}/O\textsubscript{2} and CO\textsubscript{2} atmospheres, particle geometry analysis, and numerical kinetics modeling
Research output: Scientific - peer-review › Article

Characterization of fine fraction mined from two Finnish landfills
Research output: Scientific - peer-review › Article

Detection of Subsynchronous Torsional Oscillation Frequencies Using Phasor Measurement
Research output: Scientific - peer-review › Article

Dilute Nitride Four-Junction Solar Cell
Research output: Scientific › Paper, poster or abstract

Dilute nitride solar cells fabricated by combined MBE-MOCVD epitaxy
Research output: Scientific › Paper, poster or abstract

Electrical isolation of dilute nitride solar cells by wet etching
Research output: Scientific › Paper, poster or abstract

Electrical isolation of high-efficiency dilute nitride multijunction solar cells
Research output: Scientific › Conference contribution

HCl-based wet etching of III-V dilute nitride materials for multijunction solar cells
Research output: Scientific › Paper, poster or abstract

High efficiency dilute nitride solar cells: Simulations meet experiments
Research output: Scientific › peer-review › Article

High-efficiency III-V solar cells: From drawing board to real devices
Research output: Scientific › Paper, poster or abstract

Improving Disturbance Management with Combined Electricity and Mobile Network Situation Awareness System
Research output: Scientific - peer-review › Article

Increasing the quantum efficiency of GaInNAs solar cells by advanced optical design
Research output: Scientific › Paper, poster or abstract
Optimizing iron alloy catalyst materials for photoelectrochemical water splitting: Passivation of FeCr alloy surface by water vapour using near-ambient-pressure photoelectron spectroscopy
Research output: Professional › Commissioned report

Pohjoismaiden energiapoliittikka 2030: Hillineutraalimpaan energijärjestelmään osin yhdessä, osin eri polkuja pitkä
Research output: Professional › Discussion paper

Revisiting cellulase production and redefining current strategies based on major challenges Article reference: RSER5103
Research output: Scientific - peer-review › Article

Techno-economic analysis of four concepts for thermal decomposition of methane: Reduction of CO2 emissions in natural gas combustion
Research output: Scientific - peer-review › Article

Transformation of ALD grown TiO2 film to topographically microstructured titanium silicide for photonics applications
Research output: Professional › Commissioned report

Use of diluted urine for cultivation of Chlorella vulgaris
Research output: Scientific - peer-review › Article

X-ray photoelectron spectroscopy of electrochemical interfaces for solar fuel production
Research output: Scientific - peer-review › Paper, poster or abstract

Mesophilic anaerobic digestion of pulp and paper industry biosludge-long-term reactor performance and effects of thermal pretreatment
Research output: Scientific - peer-review › Article

Single-source multibattery solar charger: Case study and implementation issues
Research output: Scientific - peer-review › Article

Factors Affecting Efficiency of LVDC Distribution Network – Power Electronics Perspective
Rekola, J. 20 Nov 2015 Tampere University of Technology. 133 p. (Tampere University of Technology. Publication; vol. 1340)
Research output: Monograph › Doctoral Thesis
Dilute Nitride Multijunction Solar Cells Grown by Molecular Beam Epitaxy
Aho, A. 14 Nov 2015 Tampere University of Technology. 80 p. (Tampere University of Technology. Publication; vol. 1343)
Research output: Collection of articles › Doctoral Thesis

Aspects of Electric Vehicles and Demand Response in Electricity Grids
Rautiainen, A. 6 Nov 2015 Tampere University of Technology. 80 p. (Tampere University of Technology. Publication; vol. 1327)
Research output: Collection of articles › Doctoral Thesis

A Versatile Solution for Continuous On-line PD Monitoring
Research output: Scientific - peer-review › Conference contribution

Performance analysis of Q-f droop anti-islanding protection in the presence of mixed types of DG
Research output: Scientific - peer-review › Conference contribution

Smart Frequency Control in Power Transmission Systems Using a BESS
Research output: Scientific - peer-review › Conference contribution

Methodology for Dynamic Stability and Robustness Analysis of Commercial-Power-Module-Based DC-Distributed Systems
Vesti, S. 9 Oct 2015 Tampere University of Technology. 147 p. (Tampere University of Technology. Publication; vol. 1326)
Research output: Monograph › Doctoral Thesis

Partial discharge activity in distribution MOSAs due to internal moisture
Research output: Scientific - peer-review › Conference contribution

Compensation of PV generator output power fluctuations with energy storage systems
Research output: Scientific - peer-review › Conference contribution

Recognition of shading events caused by moving clouds and determination of shadow velocity from solar radiation measurements
Research output: Scientific - peer-review › Conference contribution

Risk Assessment of Major Storm Situation in Distribution System
Dehghani, N., Supponen, A. & Repo, S. 1 Sep 2015 2015 50th International Universities Power Engineering Conference (UPEC). IEEE
Research output: Scientific - peer-review › Conference contribution

Effects of thinning and heating for TiO2/AlnP junctions
Research output: Scientific - peer-review › Article

Low-Voltage DC Distribution-Utilization Potential in a Large Distribution Network Company
Lipid production by eukaryotic microorganisms isolated from palm oil mill effluent
Research output: Scientific - peer-review › Article

Improved adaptive input voltage control of a solar array interfacing current mode controlled boost power stage
Research output: Scientific - peer-review › Article

Real-Time Low Voltage Network Monitoring - ICT Architecture and Field Test Experience
Research output: Scientific - peer-review › Article

Change Detection of Electric Customer Behavior Based on AMR measurements
Research output: Scientific - peer-review › Conference contribution

Monetary impact of dynamic pricing and demand response on households: The winners and losers
Research output: Scientific - peer-review › Conference contribution

A communication based protection system for solving DG related protection challenges
Research output: Scientific - peer-review › Conference contribution

Demonstration of the Inter-Organizational Situation Awareness System to Major Disturbances
Research output: Scientific - peer-review › Conference contribution

Implementation Possibilities of Power-based Distribution Tariff by Using Smart Metering Technology
Research output: Scientific - peer-review › Conference contribution

Modelling of simultaneous fault to reliability enhancement in distribution system
Research output: Scientific - peer-review › Conference contribution

Novel Sensor Solutions for On-Line PD Monitoring
Research output: Scientific - peer-review › Conference contribution

Practical Implementation of Demand Response in Finland
Research output: Scientific - peer-review › Conference contribution

**Reserve Power – Alternative Solution to the Network Investments in Rural Area Networks?**

Research output: Scientific - peer-review › Conference contribution

**GaN/nAs Solar Cell with Back Surface Reflector**

Research output: Scientific - peer-review › Conference contribution

**Distributed Energy Systems – DESY**

Research output: Professional › Commissioned report

**A novel VSC-HVDC link model for dynamic power system simulations**

Research output: Scientific - peer-review › Article

**Demand Side Management in Open Electricity Markets from Retailer Viewpoint**

Research output: Scientific - peer-review › Conference contribution

**Product level accelerated reliability testing of motor drives with input power interruptions**

Research output: Scientific - peer-review › Article

**Role of public regulators in demand response business ecosystem - Case New York State electric power market**

Research output: Scientific - peer-review › Conference contribution

**Comprehensive dynamic analysis of photovoltaic generator interfacing DC-DC boost power stage**

Research output: Scientific - peer-review › Article

**Matlab/Simulink modeling to study the effect of partially shaded condition on photovoltaic array's maximum power point**

Research output: Scientific - peer-review › Article

**A Finite Element Simulation Tool for Predicting Hysteresis Losses in Superconductors Using an H-Oriented Formulation with Cohomology Basis Functions**

Research output: Scientific - peer-review › Article
Evolving Smart Meter Data Driven Model for Short-Term Forecasting of Electric loads
Research output: Scientific - peer-review » Conference contribution

Corrosion mechanisms of sintered Nd-Fe-B magnets in the presence of water as vapour, pressurised vapour and liquid
Research output: Scientific - peer-review » Article

Dynamics of photovoltaic-generator-interfacing voltage-controlled buck power stage
Research output: Scientific - peer-review » Article

Improved bioconversion of crude glycerol to hydrogen by statistical optimization of media components
Research output: Scientific - peer-review » Article

Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning
Research output: Scientific - peer-review » Article

Modeling Fume Particle Dynamics and Deposition with Alkali Metal Chemistry in Kraft Recovery Boilers
Leppänen, A. 9 Jan 2015 Tampere: Tampere University of Technology. 63 p. (Tampere University of Technology. Publication; vol. 1273)
Research output: Collection of articles » Doctoral Thesis

Driving pattern analysis of Nordic region based on National Travel Surveys for electric vehicle integration
Research output: Scientific - peer-review » Article

An accurate small-signal model of a three-phase VSI-based photovoltaic inverter with LCL-filter
Research output: Scientific - peer-review » Conference contribution

Appearance of a Drift Problem in Variable-step Perturbative MPPT Algorithms
Research output: Scientific - peer-review » Conference contribution

Closure to Discussion on “Effect of Multilevel Inverter Supply on Core Losses in Magnetic Materials and Electrical Machines”
Research output: Scientific » Article

Comments on An Efficient Partial Power Processing DC/DC Converter for Distributed PV Architectures
Research output: Scientific » Article
Designing Inter-Organizational SA System to Disturbances of Electricity Supply
Research output: Professional › Working paper

Development and Testing of New Equipment for Faulty Phase Earthing Applying RTDS
Research output: Scientific - peer-review › Review Article

Development of Modern Phase Earthing System for Improving Quality of Supply in MV Network
Research output: Scientific - peer-review › Review Article

Dielectric Breakdown Strength of Thermally Sprayed Ceramic Coatings: Effects of Different Test Arrangements
Research output: Scientific - peer-review › Article

Dynamic characteristics of three-phase Z-source-based photovoltaic inverter with asymmetric impedance network
Research output: Scientific - peer-review › Conference contribution

Effect of active damping on the output impedance of PV inverter
Research output: Scientific - peer-review › Conference contribution

Harmonic and Imbalance Voltage Mitigation in Smart Grids: A DSTATCOM Based Solution
Research output: Scientific - peer-review › Conference contribution

III-N/III-Bu-V based high efficiency solar cells: recent developments ad future prospects
Guina, M. 2015
Research output: Scientific › Paper, poster or abstract

Improving Recovery Boiler Availability through Understanding Fume Behavior
Research output: Professional › Conference contribution

Influence of Diffusion Barriers on Thermal Ageing Behaviour of Solar Absorber Coatings on Copper
Research output: Scientific - peer-review › Conference contribution

Interfacing renewable energy sources for maximum power transfer-Part II: Dynamics
Research output: Scientific - peer-review › Article

Konvergenssi ja divergenssi ongelmatyyppien luonnehtijoina: Esimerkkinä vesihuoltoinfrastruktuurin ikääntyminen
Research output: Scientific - peer-review › Article
Kysynnän jousto - Suomeen soveltuvat käytännön ratkaisut ja vaikutukset verkkoyhtiöille (DR pooli): Loppuraportti
Research output: Professional › Commissioned report

MBE GROWN GaInNAsSb MULTIJUNCTION SOLAR CELLS: PATH TOWARDS 50% EFFICIENCY
Research output: Professional › Conference contribution

Nano-graphite cold cathodes for electric solar wind sail
Research output: Scientific - peer-review › Article

On the Provision of Frequency Regulation in Low Inertia AC Grids Using HVDC Systems
Research output: Scientific - peer-review › Article

Optical properties and thermionic emission in solar cells with InAs quantum dots embedded within GaNAs and GaInNAs
Research output: Scientific - peer-review › Article

Principles of designing for situation awareness
Haapanen, J. 2015 Tampere: Maanpuolustuskorkeakoulu Sotatekniikan laitos, p. 29-46 (Situational awareness for critical infrastructure protection; vol. 3, no. 1)
Research output: Professional › Working paper

Simulated and Experimental Performance of High Efficiency GainNASb Solar Cells
Research output: Professional › Conference contribution

Simulation of ash-forming compounds in the kraft recovery boiler
Research output: Scientific - peer-review › Conference contribution

Single-source multi-battery solar charger: Analysis and stability issues
Research output: Scientific - peer-review › Article

Smart Grids with Large-Scale Implementation of Automatic Meter Reading: Experiences from Finland
Research output: Scientific - peer-review › Chapter

Stabilization of fine fraction from landfill mining in anaerobic and aerobic laboratory leach bed reactors
Research output: Scientific - peer-review › Article
Deep levels in 1 eV bandgap dilute nitride antimonide solar cells
Research output: Scientific - peer-review › Conference contribution

Dynamics of time-resolved photoluminescence in GaInNAs and GaNAsSb solar cells
Research output: Scientific - peer-review › Article

Effect of plasma treated Ag/indium tin oxide anode modification on stability of polymer solar cells
Research output: Scientific - peer-review › Article

Effect of Temperature on Fume Formation and Deposition in Kraft Recovery Boilers - a Modeling Approach
Research output: Scientific - peer-review › Conference contribution

Influence of powder composition and manufacturing method on electrical and chromium barrier properties of atmospheric plasma sprayed spinel coatings prepared from MnCo2O4 and Mn2CoO4 + Co powders on Crofer 22 APU interconnectors
Research output: Scientific - peer-review › Article

Influence of temperature and pretreatments on the anaerobic digestion of wastewater grown microalgae in a laboratory-scale accumulating-volume reactor
Research output: Scientific - peer-review › Article

Long-term thermophilic mono-digestion of rendering wastes and co-digestion with potato pulp
Research output: Scientific - peer-review › Article

Mesophilic and thermophilic anaerobic laboratory-scale digestion of Nannochloropsis microalgae residues
Research output: Scientific - peer-review › Article

Metabolic engineering of Acinetobacter baylyi ADP1 for improved growth on gluconate and glucose
Research output: Scientific - peer-review › Article

Modelling fume deposit growth in recovery boilers: effect of flue gas and deposit temperature
Research output: Scientific - peer-review › Article
Novel design of a multitube microbial fuel cell (UM2FC) for energy recovery and treatment of membrane concentrates
Research output: Scientific - peer-review › Article

Post-mortem evaluation of oxidized atmospheric plasma sprayed Mn-Co-Fe oxide spinel coatings on SOFC interconnectors
Research output: Scientific - peer-review › Article

Stabilization of fine fraction from landfill mining in leach bed reactor
Research output: Scientific - peer-review › Conference contribution

Surface Modifications and Analysis Methods at Molecular Level
Research output: Scientific - peer-review › Conference contribution

The effect of torrefaction on the chlorine content and heating value of eight woody biomass samples
Research output: Scientific - peer-review › Article

Upgrading landfill gas using a high pressure water absorption process
Research output: Scientific - peer-review › Article

Non-sterile process for biohydrogen and 1,3-propanediol production from raw glycerol
Research output: Scientific - peer-review › Article

MO Surge Arresters Stresses and Test Procedures: CIGRE Technical Broshure, WG A3.17
Research output: Professional › Commissioned report

Organic silicon compounds in biogases produced from grass silage, grass and maize in laboratory batch assays
Research output: Scientific - peer-review › Article

Biogas upgrading and compression
Research output: Scientific - peer-review › Chapter

Bioenergy consumption and biogas potential in Cambodian households
Research output: Scientific - peer-review › Article
CFD-modeling of fume formation in kraft recovery boilers
Research output: Scientific - peer-review › Article

CO2 capture from biogas: absorbent selection
Research output: Scientific - peer-review › Article

Conjugated donor-acceptor (D-A) copolymers in inverted organic solar cells - a combined experimental and modelling study
Research output: Scientific - peer-review › Article

Dipyrrolidinyl-substituted perylene diimide as additive for poly(3-hexylthiophene): [6,6]-Phenyl C61 butyric acid methylester bulk-heterojunction blends
Research output: Scientific - peer-review › Article

Electricity generation from young landfill leachate in a microbial fuel cell with a new electrode material
Özkaya, B., Cetinkaya, A. Y., Cakmakci, M., Karadag, D. & Sahinkaya, E. 2013 In : Bioprocess and Biosystems Engineering. 36, 4, p. 399-405
Research output: Scientific - peer-review › Article

Excited-state interaction of red and green perylene diimides with luminescent Ru(II) polypyridine complex
Research output: Scientific - peer-review › Article

Fast pyrolysis of coal, peat, and torrefied wood: Mass loss study with a drop-tube reactor, particle geometry analysis, and kinetics modeling
Research output: Scientific - peer-review › Article

Generation of heat and power from biogas for stationary applications: boilers, gas engines and turbines, combined heat and power (CHP) plants and fuel cells
Research output: Scientific - peer-review › Chapter

In Situ XPS Studies of Electrochemically Negatively Polarized Molybdenum Carbide Derived Carbon Double Layer Capacitor Electrode
Research output: Scientific - peer-review › Article

Optimization of interfacial oxidation properties of FeCr SOFC interconnect alloy
Research output: Scientific - peer-review › Chapter

Plasma-assisted chemical vapor deposition of Fe3TiO2 films for photoelectrochemical hydrogen production
Testing activity-based costing to large-scale combined heat and power plant using bioenergy
Research output: Scientific - peer-review › Article

Triarylamine-substituted imidazole- and quinoxaline-fused push-pull porphyrins for dye-sensitized solar cells
Research output: Scientific - peer-review › Article

CFD-Modeling of Fume Formation in Kraft Recovery Boilers
Research output: Scientific - peer-review › Conference contribution

CFD Based Modelling for Predicting Fouling and Corrosion in Kraft Recovery Boilers
Research output: Scientific - peer-review › Conference contribution

Modeling of Fine Particles and Alkali Metal Compounds in Kraft Recovery Boiler Furnace
Research output: Scientific - peer-review › Conference contribution

Study of Aerosols of Black Liquor Combustion
Research output: Scientific - peer-review › Conference contribution