

### **Estimation of the largest expected photovoltaic power ramp rates**

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**Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched GaInNAsSb solar junctions grown by molecular beam epitaxy on GaAs**

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**Cost-optimal energy performance measures in a new daycare building in cold climate**

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**Guest editorial joint special section on power conversion & control in photovoltaic power plants**

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**Identification of three-phase grid impedance in the presence of parallel converters**

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### **How and why does willow biochar increase a clay soil water retention capacity?**

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### **Peruskoulut ja energiatohokkuus: Tilallisista ja toiminnallisista suunnitteluperiaatteista**

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### **Creating value in the circular economy: A structured multiple-case analysis of business models**

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### **A comparative analysis of global datasets and initiatives for urban health and sustainability**

Taylor, J., Haines, A., Milner, J., Davies, M., Wilkinson, P., Sehgal, M., Singh, K. N., Barreto, M., Vianna, N. & Teles, C., 11 Oct 2018, In : *Sustainability (Switzerland)*. 10, 10, 3636.  
Research output: Contribution to journal › Article › Scientific › peer-review

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### **Automatic Meter Infrastructure (AMI) as a part of flexibility market**

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### **Comparison of innovation policies for electric vehicle business ecosystems**

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

### **Effects of electric vehicles and heat pumps on long-term electricity consumption scenarios for rural areas in the nordic environment**

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

### **Microgrids as part of electrical energy system - Pricing scheme for network tariff of DSO**

Lummi, K., Rautiainen, A., Peltonen, L., Repo, S., Järventausta, P. & Rintala, J., 20 Sep 2018, *15th International Conference on the European Energy Market, EEM 2018*. IEEE COMPUTER SOCIETY PRESS, Vol. 2018-June. 5 p. 8469965. (International Conference on the European Energy Market).

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

### **Use case description of real-time control of microgrid flexibility**

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### **Alternative Power-Based Pricing Schemes for Distribution Network Tariff of Small Customers**

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### **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**

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### **A distributed automation architecture for distribution networks, from design to implementation**

Angioni, A., Lu, S., Hooshyar, H., Cairo, I., Repo, S., Ponci, F., Della Giustina, D., Kulmala, A., Dedè, A., Monti, A., Del Rosario, G., Vanfretti, L. & Garcia, C. C., Sep 2018, In : *Sustainable Energy, Grids and Networks*. 15, p. 3-13

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### **Dilute nitride triple junction solar cells for space applications: Progress towards highest AMO efficiency**

Aho, A., Isoaho, R., Tukiainen, A., Gori, G., Campesato, R. & Guina, M., Sep 2018, In : *Progress in Photovoltaics: Research and Applications*. 26, 19, p. 740-744 5 p.

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

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Ruusala, A., Laukkarinen, A. & Vinha, J., 1 Aug 2018, In : *Energy Policy*. 119, p. 183-195 13 p.

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**

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### **Design aspects of all atomic layer deposited TiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> scaffold-absorber photoanodes for water splitting**

Hiltunen, A., Ruoko, T-P., Iivonen, T., Lahtonen, K., Ali-Löytty, H., Sarlin, E., Valden, M., Leskelä, M. & Tkachenko, N., 31 Jul 2018, In : *Sustainable Energy & Fuels*. 2, 9, p. 2124-2130

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### **Mechanical stress analysis during a quench in CLIQ protected 16 T dipole magnets designed for the future circular collider**

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**Effects of wastewater constituents and operational conditions on the composition and dynamics of anodic microbial communities in bioelectrochemical systems**

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

**Role of Oxide Defects in ALD grown TiO<sub>2</sub> Coatings on Performance as Photoanode Protection Layer**

Saari, J., Ali-Löytty, H. & Valden, M., 29 May 2018.  
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**Inoculum pretreatment differentially affects the active microbial community performing mesophilic and thermophilic dark fermentation of xylose**

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

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

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

**A new method to assess the contribution of VSC-HVDC connected wind farms to the primary frequency control of power networks**

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**Improved Light Trapping in Quantum Dot Solar Cells Using Double-sided Nanostructuring**

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**Light-trapping enhanced thin-film III-V quantum dot solar cells fabricated by epitaxial lift-off**

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

**Techno-economic evaluation of integrating torrefaction with anaerobic digestion**

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

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

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**Koulujen ja päiväkotien laskettu ja toteutunut energiankulutus**

Ruusala, A. & Vinha, J., 24 Oct 2017, *Rakennusfysiikka 2017. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut: 24.-26.10.2017, Tampere*. Vinha, J. & Kivioja, H. (eds.). Tampere: Tampereen teknillinen yliopisto, Rakennustekniikka, Rakennusfysiikka, Vol. 1. p. 267-274 8 p. (Tampereen teknillinen yliopisto. Rakennustekniikka. Rakennusfysiikka.).

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**Kustannusoptimaaliset energiakorjaus- ja uusiutuvan energian tuotannon ratkaisut kunnallisissa palvelurakennuksissa**

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

Tampio, E., Lehtonen, E., Kinnunen, V., Mönkäre, T., Ervasti, S., Kettunen, R., Rasi, S. & Rintala, J., 15 Oct 2017, In : Journal of Cleaner Production. 164, p. 19-29 11 p.

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**Atomikerroskasvatusmenetelmällä kasvatetun titaanidioksidikalvon ominaisuudet valosähkökemiallisessa veden hajottamisessa**

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**Real-time hardware- and software-in-the-loop simulation of decentralised distribution network control architecture**

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**Exhaust emissions of non-road mobile machine: Real-world and laboratory studies with diesel and HVO fuels**

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

**Electropolymerized polyazulene as active material in flexible supercapacitors**

Suominen, M., Lehtimäki, S., Yewale, R., Damlin, P., Tuukkanen, S. & Kvarnström, C., 15 Jul 2017, In : Journal of Power Sources. 356, p. 181-190 10 p.

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

#### **Aspects of advancement of distribution tariffs for small consumers in Finland**

Lummi, K., Rautiainen, A., Järventausta, P., Huhta, K., Talus, K. & Kojo, M., 14 Jul 2017, *2017 14th International Conference on the European Energy Market, EEM 2017*. IEEE

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#### **Attractiveness of demand response in the Nordic electricity market - Present state and future prospects**

Rautiainen, A., Koskela, J., Vilppo, O., Supponen, A., Kojo, M., Toivanen, P., Rinne, E. & Järventausta, P., 14 Jul 2017, *2017 14th International Conference on the European Energy Market, EEM 2017*. IEEE

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#### **Development options for distribution tariff structures in Finland**

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

#### **Understanding consumers' renewable energy behaviour beyond 'homo economicus': An exploratory survey in four European countries**

Kotilainen, K., Valta, J., Mäkinen, S. J. & Järventausta, P., 14 Jul 2017, *2017 14th International Conference on the European Energy Market, EEM 2017*. IEEE

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

#### **Hafnium oxide thin films as a barrier against copper diffusion in solar absorbers**

Kotilainen, M., Krumpolec, R., Franta, D., Souček, P., Homola, T., Cameron, D. C. & Vuoristo, P., 1 Jul 2017, In : *Solar Energy Materials and Solar Cells*. 166, p. 140-146 7 p.

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

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

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

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#### **Catalytic Activity of AuCu Clusters on MgO(100): Effect of Alloy Composition for CO Oxidation**

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

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Kramb, J., Gómez-Barea, A., DeMartini, N., Romar, H., Doddapaneni, T. R. K. C. & Konttinen, J., 15 May 2017, In : *Fuel*. 196, p. 398-407 10 p.

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

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

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

### **The IDE4L Project: Defining, Designing, and Demonstrating the Ideal Grid for All**

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### **On the Efficient Calculation of the Periodic Steady-State Response of Grid-Connected Wind Parks - Part I**

Garcia, N. & Acha, E., 1 Apr 2017, In : IEEE Transactions on Sustainable Energy. 8, 2, p. 458-467 10 p.

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### **A New Miniaturized Sensor for Ultra-Fast On-Board Soot Concentration Measurements**

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### **Cavitation erosion, slurry erosion and solid particle erosion performance of metal matrix composite (MMC) coatings sprayed with modern high velocity thermal spray processes**

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

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### **Controlling emissions of natural gas engines**

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### **Design of a 25 MWe Solar Thermal Power Plant in Iran with Using Parabolic Trough Collectors and a Two-Tank Molten Salt Storage System**

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

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

**Photophysical properties of porphyrin dimer-single-walled carbon nanotube linked systems**

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

**Rakennusfysiikka 2017. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut: 24.-26.10.2017, Tampere.**

**Seminaarijulkaisu 5 - Osa 1**

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Research output: Book/Report > Anthology > Professional

**Rakennusfysiikka 2017. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut: 24.-26.10.2017, Tampere.**

**Seminaarijulkaisu 5 - Osa 2**

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Research output: Book/Report > Anthology > Professional

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

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

**Multicriteria selection in concept design of a divertor remote maintenance port in the EU DEMO reactor using an AHP participative approach**

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

**A Unified Modeling Approach of Multi-Terminal VSC-HVDC Links for Dynamic Simulations of Large-Scale Power Systems**

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