

2020

- Influence on Break-in Process of PEM Fuel Cell Materials and Hot Press Production Conditions
- Numerical analysis of a novel high-rate mode II fracture toughness test
- Thermal-Hydraulic and Acoustical Performance Evaluation of Evaporator-Fan Combinations for Heat Pump Applications
- Analysis of a Topology Optimized Heavy Rail
- Leaching of heavy metals from PV modules
- Electrochemical Modelling and Parametrization of the NMC-based Coin and Cylindrical Lithium-Ion Cells
- Untersuchungen zur hydrothermalen Stabilität von Sorptionsmaterialien
- Sustainability Assessment of Wind Power Generation Using Geographical Information on Land Use and Wind Resources
- Inkjet Printing of Organic Polysilazanes for Silicon Solar Cell
- Simulation of PVT Collectors as Heat Source for Heat Pumps in Multi Family Houses

# 2019

- Atomic Layer Deposition Application on the Front Contact of Perovskite Si Tandem Solar Cells
- Techno-Economical Analysis of Distributed Smart Battery Inverters for Overvoltage Prevention in a German Low Voltage Distribution Grid
- Forecast of Curtailments for Offshore Windfarms
- A Proposed Methodology to Evaluate Resilience of Power Grids against Natural Disasters
- The role of Irradiance Spectra for yield Analyses of Tandem Solar Cells
- Simulative Investigation and Evaluation of Measures to reduce the DC Link Capacitance an a Three-Phase Inverter
- An adaptive surrogate modeling approach to cup drawing using Gaussian Process Regression
- Electrochemical growth and characterization of polyaniline/gold composite
- Techno-Economic Assessment for Shingled Passivated Edge, Emitter, and Rear (pSPEER) Solar Cells and Modules
- Techo-Economic feasibility Assessment for Solar Thermal Integration and Heat Recovery Opportunities in Laundries
- Investigation of Oxide Precipitates in Commercial PV Silicon Wafers
- Quantification of Generic Flexibility in Distributed Energy Resources

- A Comprehensive Methodology for Sustainability Assessment of Energy System Scenarios
- Data-Driven Method for Stochastic Non-Residential Energy Demand Profiles
- Assessing the Energy Performance of Local Energy Systems in German Residential and Commercial Properties using Key Performance Indicators
- Commissioning and Characterization of a Membrane Based Acid Recovery System
- Diffusion Process Development for Atmospheric Pressure Dry Nanotextured Crystalline Silicon Solar Cells
- Modelling and Design of Rotor Kite Experimental Setup for Airborne Wind Energy
- Analysis of Heating System Variants for the Multifamily Houses in Two Urban Districts
- Trocknungs- und Härteverfahren für Sol-Gel-Materialien in der Nanoimprint Lithographie
- Signal Analysis of Underwater Laser Scanner
- Temperature Dependent Resistivity and Mobility Analysis of Silicon Wafers
- Comparison of SiC MOSFETs and GaN HEMTs for a Partial Load Optimized DC/DC Converter for Solar Battery Storage Systems
- Analysis of Local Mechanical Strength of Magnetic Pulse Welding Joints of Dissimilar Metals
- Entwicklung einer Methodik zur Bestimmung des technischen und wirtschaftlichen Photovoltaik-Potenzials von Städten am Beispiel Berlins

- Direct Tension Bar for testing Intermediate Strain Rate
- Efficient, Reproducible and Stable »in-situ« Perovskite Solar Cells Using The Molten Salt Approach
- Development of High Bandgap Absorbers via Compositional Engineering for 2-Terminal Perovskite/Silicon Tandem Cells
- Maskless Photolithography for High-Efficiency Silicon and III-V Solar Cells
- Accurate Measurement of Bifacial Solar Cells using Single and Double Sided Illumination Methods
- Development of Transparent Conducting Oxide Films for Passivating Contacts
- Optimization of the hybrid method (evaporation-spray/coating) for high performance Perovskite Solar Cells
- Influence of PV Waste Management on the Environmental Footprint of Electricity Production from Photovoltaic Systems
- Quantitative Probabilistic Safety Assessment of Autonomous Car functions with Markov Models

# 2018

- Environmental Assessment of Lithium Carbonate Production from Mica for Lithium-ion Batteries - Consideration of the Production Phase of Lithium Ion Battery Life Cycle
- Crystallization and Cell Structure Improvement of Graphite-based Perovskite Solar Cells Using Molten Salt Approach
- A concept study for a highly integrated and highly compact DC Charger for electromobility
- Metal failure under dynamic and multiaxial loading conditions
- Einfluss des UHI-Effekts auf den zukünftigen Heiz- und Kühlenergiebedarf im urbanen Kontext und das daraus resultierende Energieversorgungssystem - Untersuchungen anhand des Stadtgebiets von Freiburg-