Publications:

**Analysing impact of oxygen and water exposure on roll-coated organic solar cell performance using impedance spectroscopy**
Publication: Research - peer-review › Journal article – Annual report year: 2018

**High stability of benzotriazole and benzodithiophene containing medium band-gap polymer solar cell**
Publication: Research - peer-review › Journal article – Annual report year: 2018

**Mechanical stability of roll-to-roll printed solar cells under cyclic bending and torsion**
Publication: Research - peer-review › Journal article – Annual report year: 2018

**METHOD AND APPARATUS FOR CHARACTERIZATION OF A SOLAR CELL**
Krebs, F. C. 16 Mar 2017
Publication: Research › Patent – Annual report year: 2017

**Analysis of electrical and thermal stress effects on PCBM:P3HT solar cells by photocurrent and impedance spectroscopy modeling**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

**A Novel Algorithm for Lifetime Extrapolation, Prediction, and Estimation of Emerging PV Technologies**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Application of Photocurrent Model on Polymer Solar Cells Under Forward Bias Stress**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Carbazole-based copolymers via direct arylation polymerization (DArP) for Suzuki-convergent polymer solar cell performance**
Gobalasingham, N. S., Ekiz, S., Pankow, R. M., Livi, F., Bundgaard, E. & Thompson, B. C. 2017 In : Polymer Chemistry. 8, 30, p. 4393-4402
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Conjugated Polymers Via Direct Arylation Polymerization in Continuous Flow: Minimizing the Cost and Batch-to-Batch Variations for High-Throughput Energy Conversion**
Gobalasingham, N. S., Carlé, J. E., Krebs, F. C., Thompson, B. C., Bundgaard, E. & Helgesen, M. 2017 In : Macromolecular Rapid Communications. 38, 22, 7 p., 1700526
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Cost-competitiveness of organic photovoltaics for electricity self-consumption at residential buildings: A comparative study of Denmark and Greece under real market conditions**
In-line, roll-to-roll morphology analysis of organic solar cell active layers
In: Energy & Environmental Science. November, 11, p. 2411-2419
Publication: Research - peer-review › Journal article – Annual report year: 2017

Inside or Outside? Linking Outdoor and Indoor Lifetime Tests of ITO-Free Organic Photovoltaic Devices for Greenhouse Applications
In: Energy Technology. 5, 2, p. 338-344
Publication: Research - peer-review › Journal article – Annual report year: 2016

Life-Cycle Assessment of Solar Charger with Integrated Organic Photovoltaics
Benatto, G. A. D. R., Espinosa Martínez, N. & Krebs, F. C. 2017
In: Advanced Engineering Materials. 19, 8, p. 1700124
Publication: Research - peer-review › Journal article – Annual report year: 2017

Luminescence Imaging Strategies for Drone-Based PV Array Inspection
Proceedings of 33rd European Photovoltaic Solar Energy Conference and Exhibition. 5 p.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Model of Organic Solar Cell Photocurrent Including the Effect of Charge Accumulation at Interfaces and Non-Uniform Carrier Generation
Publication: Research - peer-review › Journal article – Annual report year: 2017

Overcoming the Scaling Lag for Polymer Solar Cells
In: Joule. 1, 2, p. 274-289
Publication: Research - peer-review › Journal article – Annual report year: 2017

Printed organic smart devices characterized by nonlinear optical
Pastorelli, F., Accanto, N., Jørgensen, M. & van Hulst, N. F. 2017
PLASMONICA 2017: Book of Abstracts. p. 38 T19
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

SUN HUB – ENERGY HUB FOR OUTDOOR TABLES
Publication: Research - peer-review › Journal article – Annual report year: 2017
Synthesis of conjugated polymers with complex architecture for photovoltaic applications
Publication: Research - peer-review › Book chapter – Annual report year: 2017

Toward a drone-based EL and PL inspection tool for PV power plants
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Using ISOS consensus test protocols for development of quantitative life test models in ageing of organic solar cells
Publication: Research - peer-review › Journal article – Annual report year: 2017

Voltage and Thermally Driven Roll-to-Roll Organic Printed Transistor Made in Ambient Air Conditions
Pastorelli, F. 2017
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

A stability study of polymer solar cells using conjugated polymers with different donor or acceptor side chain patterns
Publication: Research - peer-review › Journal article – Annual report year: 2016

Baselines for Lifetime of Organic Solar Cells
Publication: Research - peer-review › Journal article – Annual report year: 2016

Characterization and modeling of organic (P3HT:PCBM) solar cells as a function of bias and illumination
Publication: Research - peer-review › Journal article – Annual report year: 2016

Comparison of ultramicrotomy and focused-ion-beam for the preparation of TEM and STEM cross section of organic solar cells
Publication: Research - peer-review › Journal article – Annual report year: 2016

Effects of current stress and thermal storage on polymeric heterojunction P3HT:PCBM solar cell
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

eGOPV introduction and Printed solar cells
Krebs, F. C. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016

Flow synthesis - the answer to reproducible high-performance conjugated polymers on the scale that R2R processing demands
Helgesen, M. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016
High Current Printed Transistor
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

High Current Printed Transistor: Roll-to-Roll Manufacture and Thermal Behavior
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

High Current Temperature Sensitive Roll-to-Roll Printed Transistor
Pastorelli, F. 2016
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

In situ X-ray scattering of perovskite solar cell active layers roll-to-roll coated on flexible substrates
Publication: Research - peer-review › Journal article – Annual report year: 2016

Laser beam induced current mapping (LBIG) of solar cells
Jørgensen, M. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016

Lifetime of organic photovoltaics: Status and predictions
Gevorgyan, S. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016

Manufacture, installation and decommissioning of organic solar cell parks
Søndergaard, R. R. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016

Playing with Light in Organic Thin-Film Solar Cells
Pastorelli, F. 2016
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Polymer materials for roll coated solar cells: strategies to improve performance and stability
Publication: Research › Ph.D. thesis – Annual report year: 2017

Roll-to-Roll Printed Electronics for Standalone Smart Windows
Pastorelli, F. 2016
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Screening of materials for OPV - finding the perfect candidate(s)
Bundgaard, E. 2016
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2016

Self-Assembled Plasmonic Nanoparticles for Organic Photovoltaics
Pastorelli, F. 2016
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016
Voltage and Thermally Driven High Current Roll-to-Roll Printed Transistors
Pastorelli, F. 2016
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Projects:

**DronEL**
01/01/2017 → 31/12/2019
Project

**Cost and energy effective all-black solar cell panel | Black Si BIPV | Phase 2**
Poulsen, P. B., Thorsteinsson, S., Davidsen, R. S., Iandolo, B., Hansen, O., Riedel, N. & Benatto, G. A. D. R.
01/10/2016 → 30/09/2018
Project

**High Current All Printed Transistors**
Pastorelli, F.
01/05/2015 → …
Project

Activities:

**Advanced Concepts in Photovoltaics**
Poulsen, P. B. (Organizer), Benatto, G. A. D. R. (Organizer), Schou, J. (Organizer)
10 Oct 2017 → 13 Oct 2017
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

**Progress in Photovoltaic Research in Denmark 2017**
Poulsen, P. B. (Organizer), Benatto, G. A. D. R. (Organizer)
9 Oct 2017
Activity: Attending an event › Participating in or organising a conference

**IN SITU SMALL ANGLE STUDIES OF ROLL-TO-ROLL COATED PEROVSKITE SOLAR CELLS**
Rossander, L. H. (Speaker)
14 Sep 2015
Activity: Talks and presentations › Conference presentations

**In situ GISAXS/GIWAXS studies of roll-to-roll coated perovskite solar cells**
Rossander, L. H. (Speaker)
10 Sep 2015
Activity: Talks and presentations › Conference presentations

Prizes:

**Best Poster Award at the Sustain 2017**
Gisele Alves dos Reis Benatto (Recipient), Nicholas Riedel (Recipient), Claire Mantel (Recipient), Sune Thorsteinsson (Recipient), Peter Behrens dorff Poulsen (Recipient), Søren Forchhammer (Recipient), Kenn H. B. Frederiksen (Recipient), Jan Vedde (Recipient), Harsh Parikh (Recipient), Sergiu Spataru (Recipient) & Dezso Sera (Recipient), 6 Dec 2017
Prize: Prizes, scholarships, distinctions