Halvard Haug

List of Publications by Year
in descending order

47	554	567281 15	677142 22
papers	citations	h-index	g-index

47	47	47	582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	PC1Dmod 6.2 â€“ Improved Simulation of c-Si Devices with Updates on Device Physics and User Interface. Energy Procedia, 2016, 92, 60-68.	1.8	50
2	Precise parameterization of the recombination velocity at passivated phosphorus doped surfaces. Journal of Applied Physics, 2016, 119, .	2.5	35
3	Implementation of Fermiâ€“Dirac statistics and advanced models in PC1D for precise simulations of silicon solar cells. Solar Energy Materials and Solar Cells, 2014, 131, 30-36.	6.2	33
4	Studying Light-Induced Degradation by Lifetime Decay Analysis: Excellent Fit to Solution of Simple Second-Order Rate Equation. IEEE Journal of Photovoltaics, 2013, 3, 1265-1270.	2.5	28
5	Impurity control in high performance multicrystalline silicon. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700319.	1.8	27
6	SiOyNx/SiNx Stack Anti-reflection Coating with PID-resistance for Crystalline Silicon Solar Cells. Energy Procedia, 2015, 77, 434-439.	1.8	26
7	PC1Dmod 6.1Ââ€“ state-of-the-art models in a well-known interface for improved simulation of Si solar cells. Solar Energy Materials and Solar Cells, 2015, 142, 47-53.	6.2	25
8	Endogenous Soiling Rate Determination and Detection of Cleaning Events in Utility-Scale PV Plants. IEEE Journal of Photovoltaics, 2019, 9, 858-863.	2.5	22
9	On the recombination centers of iron-gallium pairs in Ga-doped silicon. Journal of Applied Physics, 2017, 122, .	2.5	20
10	A Graphical User Interface for Multivariable Analysis of Silicon Solar Cells Using Scripted PC1D Simulations. Energy Procedia, 2013, 38, 72-79.	1.8	19
11	Modulating the field-effect passivation at the SiO2/c-Si interface: Analysis and verification of the photoluminescence imaging under applied bias method. Journal of Applied Physics, 2013, 114, .	2.5	18
12	How much power is lost in a hot-spot? A case study quantifying the effect of thermal anomalies in two utility scale PV power plants. Solar Energy, 2020, 211, 1255-1262.	6.1	18
13	Hydrogen-related defects measured by infrared spectroscopy in multicrystalline silicon wafers throughout an illuminated annealing process. Journal of Applied Physics, 2020, 127, .	2.5	18
14	Double Perovskite Cobaltites Integrated in a Monolithic and Noble Metal-Free Photoelectrochemical Device for Efficient Water Splitting. ACS Applied Materials & Interfaces, 2021, 13, 20313-20325.	8.0	17
15	Thermal stability of the OHâ€“Li complex in hydrothermally grown single crystalline ZnO. Applied Physics Letters, 2010, 97, .	3.3	16
16	Temperature dependent photoluminescence imaging calibrated by photoconductance measurements. Energy Procedia, 2017, 124, 47-52.	1.8	15
17	Photoluminescence imaging under applied bias for characterization of Si surface passivation layers. Solar Energy Materials and Solar Cells, 2012, 106, 60-65.	6.2	13
18	The Effect of Phosphorus Diffusion Gettering on Recombination at Grain Boundaries in HPMC-Silicon Wafers. Energy Procedia, 2016, 92, 886-895.	1.8	12

#	Article	IF	Citations
19	Li and OH-Li Complexes in Hydrothermally Grown Single-Crystalline ZnO. Journal of Electronic Materials, 2011, 40, 429-432.	2.2	11
20	Photovoltaic system monitoring for high latitude locations. Solar Energy, 2020, 207, 1045-1054.	6.1	11
21	Thermal stability of hydrogenated amorphous silicon passivation for pâ€type crystalline silicon. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 91-95.	1.8	10
22	Simulating the Effect of Lifetime Non-uniformity on Solar Cell Performance Using cmd-PC1D 6 and Griddler 2. Energy Procedia, 2016, 92, 69-74.	1.8	9
23	Surface Recombination Velocity Measurements of Metallized Surfaces by Photoluminescence Imaging. Energy Procedia, 2013, 43, 18-26.	1.8	8
24	Modeling of recombination strength at grain boundaries after phosphorus diffusion gettering and the effect of hydrogen passivation. Energy Procedia, 2017, 124, 215-224.	1.8	8
25	Modulating the fixed charge density in silicon nitride films while monitoring the surface recombination velocity by photoluminescence imaging. Applied Physics Letters, 2015, 106, 143505.	3.3	7
26	Electronic Properties of a-SiO<inline-formula> <tex-math notation="LaTeX">${}_{x}$</tex-math> </inline-formula>N<inline-formula> <tex-math notation="LaTeX">${}_{y}$</tex-math> </inline-formula>:H/SiN<inline-formula> <tex-math notation="LaTeX">${}_{x}$</tex-math> </inline-formula> Stacks for Surface Passivation of P-Type Crystalline Si Wafers. IEEE Journal of Photovoltaics, 2016, 6, 1103-1108.	2.5	7
27	SiO_yN_x/SiN_x stack: a promising surface passivation layer for highâ€efficiency and potentialâ€induced degradation resistant mcâ€silicon solar cells. Progress in Photovoltaics: Research and Applications, 2017, 25, 23-32.	8.1	7
28	Resistivity profiles in multicrystalline silicon ingots featuring gallium co-doping. AIP Conference Proceedings, 2018, , .	0.4	7
29	A high-accuracy calibration method for temperature dependent photoluminescence imaging. AIP Conference Proceedings, 2019, , .	0.4	7
30	Application and comparison of band gap narrowing models for passivated phosphorus doped silicon surfaces. Journal of Applied Physics, 2016, 119, .	2.5	6
31	Evolution of defect densities with height in a HPMC-Si ingot. AIP Conference Proceedings, 2019, , .	0.4	6
32	Degradation Analysis of Utility-Scale PV Plants in Different Climate Zones. IEEE Journal of Photovoltaics, 2021, 11, 513-518.	2.5	6
33	Thermal stability of photovoltaic a-Si:H determined by neutron reflectometry. Applied Physics Letters, 2014, 105, .	3.3	5
34	Simulated and measured temperature coefficients in compensated silicon wafers and solar cells. Solar Energy Materials and Solar Cells, 2019, 200, 109921.	6.2	5
35	Double Layers of Ultrathin a-Si:H and SiNx for Surface Passivation of n-type Crystalline Si Wafers. Energy Procedia, 2016, 92, 347-352.	1.8	4
36	Investigation of Carrier Recombination at the SiO$_{2}$/c-Si Interface by Photoluminescence Imaging Under Applied Bias. IEEE Journal of Photovoltaics, 2014, 4, 374-379.	2.5	3

#	Article	IF	Citations
37	Enhanced surface passivation of predictable quantum efficient detectors by silicon nitride and silicon oxynitride/silicon nitride stack. Journal of Applied Physics, 2018, 124, .	2.5	3
38	Lifetime spectroscopy with high spatial resolution based on temperature- and injection dependent photoluminescence imaging. Solar Energy Materials and Solar Cells, 2019, 200, 109994.	6.2	3
39	Correlation of Defect Luminescence and Recombination in Multicrystalline Silicon. IEEE Journal of Photovoltaics, 2019, 9, 55-63.	2.5	3
40	Temporal stability of a-Si:H and a-SiNx:H on crystalline silicon wafers. Energy Procedia, 2017, 124, 275-281.	1.8	2
41	Neutron and x-ray Reflectometry Investigations of Amorphous Silicon-based Surface Passivation Layers. Energy Procedia, 2014, 55, 813-817.	1.8	1
42	Temperature coefficients in compensated silicon solar cells investigated by temperature dependent lifetime measurements and numerical device simulation. AIP Conference Proceedings, 2018, , .	0.4	1
43	Evaluation of diffused phosphorus emitters using Griddler-PC1D. , 2018, , .		1
44	Identifying recombination parameters by injection-dependent lifetime spectroscopy on mc-silicon based on photoluminescence imaging. AIP Conference Proceedings, 2018, , .	0.4	1
45	The impact of the FeGa complex on directionally solidified, mono-crystalline, Ga-doped silicon. , 2016, , .		0
46	Correction to â€œSurface Passivation Properties of HfO2 Thin Film on n-Type Crystalline Siâ€•[Mar 17 479-485]. IEEE Journal of Photovoltaics, 2017, 7, 1165-1165.	2.5	0
47	Hydrogen Concentration in Photovoltaic a-Si:H Annealed at Different Temperatures Measured by Neutron Reflectometry. IEEE Journal of Photovoltaics, 2018, 8, 1098-1101.	2.5	0