Jochen Rentsch

List of Publications by Year
in descending order

39 papers	1,117 citations	567281 15 h-index	454955 30 g-index
39 all docs	39 docs citations	39 times ranked	1045 citing authors

#	Article	IF	Citations
1	Atmospheric Pressure Dry Etching of Polysilicon Layers for Highly Reverse Biasâ€Stable TOPCon Solar Cells. Solar Rrl, 2022, 6, 2100481.	5.8	9
2	Optimizing Emitter Diffusion Process for Atmospheric Pressure Dry Nanotextured Monocrystalline PERC. IEEE Journal of Photovoltaics, 2022, 12, 244-250.	2.5	3
3	Improved passivation for SHJ utilizing dual intrinsic a-Si:H layers on an inline PECVD tool. AIP Conference Proceedings, 2019, , .	0.4	2
4	Impact of vacuum grippers utilized for automated wafer handling prior a-Si passivation for silicon heterojunction solar cells. AIP Conference Proceedings, 2019, , .	0.4	2
5	Implementing transparent conducting oxides by DC sputtering on ultrathin SiOx / poly-Si passivating contacts. Solar Energy Materials and Solar Cells, 2019, 200, 109960.	6.2	39
6	Development of an ozone-based inline cleaning and conditioning concept. AIP Conference Proceedings, 2018, , .	0.4	1
7	Inline PECVD Deposition of Polyâ€Siâ€Based Tunnel Oxide Passivating Contacts. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800449.	1.8	13
8	Integrating transparent conductive oxides to improve the infrared response of silicon solar cells with passivating rear contacts. AIP Conference Proceedings, 2018, , .	0.4	16
9	On the Nature of Emitter Diffusion and Screen-Printing Contact Formation on Nanostructured Silicon Surfaces. IEEE Journal of Photovoltaics, 2017, 7, 136-143.	2.5	11
10	Rear passivated mc-Si solar cells textured by atmospheric pressure dry etching. Energy Procedia, 2017, 124, 260-266.	1.8	3
11	Recent developments in the industrial silicon heterojunction process chain enabling efficiencies up to 22.7%. Energy Procedia, 2017, 124, 357-364.	1.8	7
12	Notice of Removal: On the nature of emitter diffusion and screen-printing contact formation on nanostructured silicon surfaces. , 2017, , .		0
13	On the emitter formation in nanotextured silicon solar cells to achieve improved electrical performances. Solar Energy Materials and Solar Cells, 2016, 152, 94-102.	6.2	32
14	Honeycomb Structure on Multi-crystalline Silicon Al-BSF Solar Cell With 17.8% Efficiency. IEEE Journal of Photovoltaics, 2015, 5, 1027-1033.	2.5	27
15	Tunnel oxide passivated carrier-selective contacts based on ultra-thin SiO2 layers grown by photo-oxidation or wet-chemical oxidation in ozonized water. , 2015, , .		20
16	Tunnel oxide passivated carrier-selective contacts based on ultra-thin SiO 2 layers. Solar Energy Materials and Solar Cells, 2015, 142, 123-127.	6.2	199
17	Nanostructuring of c-Si surface by F2-based atmospheric pressure dry texturing process. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 307-311.	1.8	17
18	High-resolution structural investigation of passivated interfaces of silicon solar cells. Solar Energy Materials and Solar Cells, 2015, 142, 128-133.	6.2	25

#	Article	IF	Citations
19	Simple Cleaning and Conditioning of Silicon Surfaces with UV/Ozone Sources. Energy Procedia, 2014, 55, 834-844.	1.8	78
20	Optical modelling of the front surface for honeycomb-textured silicon solar cells. , 2014, , .		2
21	Characterization of the rear surface roughness of wet chemical polished industrial-type solar cells. , 2014, , .		2
22	Investigations on the Passivation Mechanism of AlN:H and AlN:H-SiN:H Stacks. Energy Procedia, 2014, 55, 797-804.	1.8	10
23	Study of hydrogenated AlN as an antiâ€reflective coating and for the effective surface passivation of silicon. Physica Status Solidi - Rapid Research Letters, 2013, 7, 457-460.	2.4	20
24	Multifunctional PECVD Layers: Dopant Source, Passivation, and Optics. IEEE Journal of Photovoltaics, 2013, 3, 224-229.	2.5	3
25	Effects of high-temperature treatment on the hydrogen distribution in silicon oxynitride/silicon nitride stacks for crystalline silicon surface passivation. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2399-2403.	1.8	6
26	PECVD Al₂ O₃ /a-Si:B as a dopant source and surface passivation. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1593-1599.	1.8	6
27	Multifunctional PECVD layers: Dopant source, passivation, and optics. , 2013, , .		0
28	Very low surface recombination velocity of boron doped emitter passivated with plasma-enhanced chemical-vapor-deposited AlOx layers. Thin Solid Films, 2012, 522, 336-339.	1.8	30
29	Multifunctional PECVD layers: Dopant source, passivation, and optics. , 2012, , .		0
30	High-temperature stability of c-Si surface passivation by thick PECVD Al2O3 with and without hydrogenated capping layers. Applied Surface Science, 2012, 258, 8371-8376.	6.1	40
31	Formation of a honeycomb texture for multicrystalline silicon solar cells using an inkjetted mask. Physica Status Solidi - Rapid Research Letters, 2012, 6, 7-9.	2.4	13
32	Variation of the layer thickness to study the electrical property of PECVD Al2O3 / c-Si interface. Energy Procedia, 2011, 8, 642-647.	1.8	38
33	Charge carrier trapping at passivated silicon surfaces. Journal of Applied Physics, 2011, 109, 064505.	2.5	7
34	Surface passivation of crystalline silicon by plasma-enhanced chemical vapor deposition double layers of silicon-rich silicon oxynitride and silicon nitride. Journal of Applied Physics, 2011, 109, .	2.5	54
35	Influence of trench structures induced by texturization on the breakdown voltage of multicrystalline silicon solar cells. , 2011, , .		2
36	High-Efficiency c-Si Solar Cells Passivated With ALD and PECVD Aluminum Oxide. IEEE Electron Device Letters, 2010, 31, 695-697.	3.9	132

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37	Very low surface recombination velocity on p-type c-Si by high-rate plasma-deposited aluminum oxide. Applied Physics Letters, 2009, 95, .	3.3	226
38	All-screen-printed 120-ÂµM-thin large-area silicon solar cells applying dielectric rear passivation and laser-fired contacts reaching 18% efficiency. , 2009, , .		10
39	Thermal oxidation as a key technology for high efficiency screen printed industrial silicon solar cells. , 2009, , .		12