Lachlan Black

List of Publications by Year
in descending order

28 papers	1,038 citations	516710 16 h-index	526287 27 g-index
28 all docs	28 docs citations	28 times ranked	1362 citing authors

#	ARTICLE	IF	CITATIONS
1	On the quantification of Auger recombination in crystalline silicon. Solar Energy Materials and Solar Cells, 2022, 234, 111428.	6.2	16
2	Above 23% Efficiency by Binary Surface Passivation of Perovskite Solar Cells Using Guanidinium and Octylammonium Spacer Cations. Solar Rrl, 2022, 6, .	5.8	22
3	Excellent Passivation of n â€Type Silicon Surfaces Enabled by Pulsedâ€Flow Plasmaâ€Enhanced Chemical Vapor Deposition of Phosphorus Oxide Capped by Aluminum Oxide. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000399.	2.4	7
4	Passivation of InP solar cells using large area hexagonal-BN layers. Npj 2D Materials and Applications, 2021, 5, .	7.9	9
5	PO_{<i>x</i>}/Al₂O₃ Stacks for c-Si Surface Passivation: Material and Interface Properties. ACS Applied Electronic Materials, 2021, 3, 4337-4347.	4.3	6
6	Excellent surface passivation of germanium by a-Si:H/Al2O3 stacks. Journal of Applied Physics, 2021, 130, .	2.5	14
7	A Correlative Study of Film Lifetime, Hydrogen Content, and Surface Passivation Quality of Amorphous Silicon Films on Silicon Wafers. IEEE Journal of Photovoltaics, 2020, 10, 1307-1312.	2.5	2
8	Self-aligned local contact opening and n+ diffusion by single-step laser doping from POx/Al2O3 passivation stacks. Solar Energy Materials and Solar Cells, 2020, 217, 110717.	6.2	6
9	Dependence of coil sensitivity on sample thickness in inductively coupled photoconductance measurements. AIP Conference Proceedings, 2019, , .	0.4	3
10	Accounting for the Dependence of Coil Sensitivity on Sample Thickness and Lift-Off in Inductively Coupled Photoconductance Measurements. IEEE Journal of Photovoltaics, 2019, 9, 1563-1574.	2.5	21
11	Passivating Contacts for Crystalline Silicon Solar Cells: From Concepts and Materials to Prospects. IEEE Journal of Photovoltaics, 2018, 8, 373-388.	2.5	285
12	Surface Fluorination of ALD TiO₂ Electron Transport LayerÂfor Efficient Planar Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1701456.	3.7	27
13	PO<i>x</i>/Al2O3 stacks: Highly effective surface passivation of crystalline silicon with a large positive fixed charge. Applied Physics Letters, 2018, 112, .	3.3	16
14	Investigation of crystalline silicon surface passivation by positively charged POx/Al2O3 stacks. Solar Energy Materials and Solar Cells, 2018, 185, 385-391.	6.2	18
15	Low-Temperature Plasma-Assisted Atomic-Layer-Deposited SnO₂ as an Electron Transport Layer in Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 30367-30378.	8.0	88
16	Effective passivation of silicon surfaces by ultrathin atomic-layer deposited niobium oxide. Applied Physics Letters, 2018, 112, .	3.3	21
17	Ultralow Surface Recombination Velocity in Passivated InGaAs/InP Nanopillars. Nano Letters, 2017, 17, 2627-2633.	9.1	56
18	Degeneracy and bandgap narrowing in the semiconductor electron-hole product. Journal of Applied Physics, 2017, 121, 105701.	2.5	3

#	Article	IF	Citations
19	Effective Surface Passivation of InP Nanowires by Atomic-Layer-Deposited Al₂O₃ with PO_{<i>x</i>} Interlayer. Nano Letters, 2017, 17, 6287-6294.	9.1	68
20	New Perspectives on Surface Passivation: Understanding the Si-Al2O3 Interface. Springer Theses, 2016, , .	0.1	22
21	Improved Silicon Surface Passivation of APCVD Al2O3 by Rapid Thermal Annealing. Energy Procedia, 2016, 92, 317-325.	1.8	7
22	On effective surface recombination parameters. Journal of Applied Physics, 2014, 116, .	2.5	135
23	Effect of boron concentration on recombination at the <i>p</i>-Siâ€"Al2O3 interface. Journal of Applied Physics, 2014, 115, .	2.5	43
24	Thermal stability of silicon surface passivation by APCVD Al2O3. Solar Energy Materials and Solar Cells, 2014, 120, 339-345.	6.2	25
25	Modeling Recombination at the Siâ€"Al$_{2}$O $_{3}$ Interface. IEEE Journal of Photovoltaics, 2013, 3, 936-943.	2.5	27
26	Surface passivation of c-Si by atmospheric pressure chemical vapor deposition of Al2O3. Applied Physics Letters, 2012, 100, .	3.3	70
27	Modeling recombination at the Si-Al<inf>2</inf>O<inf>3</inf> interface. , 2012, , .		0
28	Defect Generation at Charge-Passivated $hbox{Si}$â€"$hbox{SiO}_{2}$ Interfaces by Ultraviolet Light. IEEE Transactions on Electron Devices, 2010, 57, 1996-2004.	3.0	21