

Simona Binetti

List of Publications by Year in descending order

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citations

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all docs

106
docs citations

106
times ranked

1665
citing authors

#	ARTICLE	IF	CITATIONS
1	Band-Gap Tuning Induced by Germanium Introduction in Solution-Processed Kesterite Thin Films. ACS Omega, 2022, 7, 23445-23456.	3.5	4
2	Semi-transparent Cu ₂ ZnSnS ₄ solar cells by drop-casting of sol-gel ink. Solar Energy, 2021, 224, 134-141.	6.1	6
3	Two-Step Synthesis of Bismuth-Based Hybrid Halide Perovskite Thin-Films. Materials, 2021, 14, 7827.	2.9	3
4	Kesterite solar-cells by drop-casting of inorganic sol-gel inks. Solar Energy, 2020, 208, 532-538.	6.1	13
5	A European proficiency test on thin-film tandem photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2020, 28, 1258-1276.	8.1	0
6	Growth and Characterization of Cu ₂ Zn _{1-x} Fe _x SnS ₄ Thin Films for Photovoltaic Applications. Materials, 2020, 13, 1471.	2.9	10
7	New Earth-Abundant Thin Film Solar Cells Based on Chalcogenides. Frontiers in Chemistry, 2019, 7, 297.	3.6	77
8	Study of Precursor Inks Designed for High Quality Cu ₂ ZnSnS ₄ Films for Low-Cost PV Application. ChemistrySelect, 2019, 4, 4905-4912.	1.5	3
9	Annealing of Boron-Doped Hydrogenated Crystalline Silicon Grown at Low Temperature by PECVD. Materials, 2019, 12, 3795.	2.9	3
10	Effect of the Irradiation on Optical and Electrical Properties of Triple-Junction Flexible Thin Solar Cells for Space Applications. Frontiers in Physics, 2019, 7, .	2.1	8
11	CIGS thin films grown by hybrid sputtering-evaporation method: Properties and PV performance. Solar Energy, 2018, 175, 16-24.	6.1	13
12	Insights into Bulk Defects in n-type Monocrystalline Silicon Wafers via Temperature-Dependent Micro-Photoluminescence Spectroscopy. , 2018, , .		1
13	In-depth photoluminescence spectra of pure CIGS thin films. Applied Optics, 2018, 57, 1849.	1.8	12
14	Measurement of the limiting subcell in multijunction space solar devices by restricted-wavelength-range illumination. Progress in Photovoltaics: Research and Applications, 2018, 26, 942-948.	8.1	1
15	A chemical deposition process for low-cost CZTS solar cell on flexible substrates. Materials Technology, 2017, 32, 251-255.	3.0	11
16	Theoretical and experimental investigation of UV-Vis absorption spectrum in a Eu(3+) based complex for luminescent downshifting applications. Theoretical Chemistry Accounts, 2017, 136, 1.	1.4	1
17	Gallium In-Depth Profile in Bromine- Etched Copper-Indium-Galium (Di)selenide (CIGS) Thin Films Inspected Using Raman Spectroscopy. Applied Spectroscopy, 2017, 71, 1334-1339.	2.2	5
18	Comparison of MgCl ₂ and CdCl ₂ Activation Treatment for CDTE Solar Cells: Recrystallization and Defects. , 2017, , .		1

#	ARTICLE	IF	CITATIONS
19	On the nature of striations in n-type silicon solar cells. Applied Physics Letters, 2016, 109, .	3.3	21
20	CZTS absorber layer for thin film solar cells from electrodeposited metallic stacked precursors (Zn/Cu-Sn). Applied Surface Science, 2016, 379, 91-97.	6.1	49
21	Chapter 1 Purity Requirements for Silicon in Photovoltaic Applications. , 2016, , 1-48.		0
22	Integration of InGaP/GaAs/Ge triple-junction solar cells on deeply patterned silicon substrates. Progress in Photovoltaics: Research and Applications, 2016, 24, 1368-1377.	8.1	7
23	Picosecond laser texturization of mc-silicon for photovoltaics: A comparison between 1064 nm, 532 nm and 355 nm radiation wavelengths. Applied Surface Science, 2016, 371, 196-202.	6.1	15
24	Effects of CdS Buffer Layers on Photoluminescence Properties of Cu ₂ ZnSnS ₄ Solar Cells. International Journal of Photoenergy, 2015, 2015, 1-8.	2.5	17
25	Silicon samples grown under reduced melt convection. Journal of Crystal Growth, 2015, 417, 9-15.	1.5	1
26	Cu ₂ ZnSnSe ₄ device obtained by formate chemistry for metallic precursor layer fabrication. Solar Energy, 2015, 116, 287-292.	6.1	2
27	Comparative study on structural, morphological and optical properties of Zn ₂ SnO ₄ thin films prepared by r.f. sputtering using Zn and Sn metal targets and ZnO-SnO ₂ ceramic target. Journal of Alloys and Compounds, 2015, 626, 112-117.	5.5	31
28	Random Surface Texturing of mc-Silicon for Solar Cells with Picosecond Lasers; a Comparison between 1064 nm, 532 nm and 355 nm Laser Emission Wavelengths. , 2015, , .		0
29	Optical and electrical studies of transparent conductive AZO and ITO sputtered thin films for CIGS photovoltaics. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1464-1467.	0.8	26
30	Concentration quenching and photostability in Eu(dbm) ₃ phen embedded in mesoporous silica nanoparticles. Journal of Luminescence, 2014, 146, 178-185.	3.1	30
31	ZnO:Al/i-ZnO bi-layers deposited on large substrates by pulsed D.C. magnetron sputtering for chalcogenide photovoltaics. Ceramics International, 2014, 40, 14595-14599.	4.8	3
32	Si ¹³ C (x%~0.2) crystal growth in the absence of a crucible. Journal of Crystal Growth, 2014, 401, 762-766.	1.5	6
33	Photoluminescence and infrared spectroscopy for the study of defects in silicon for photovoltaic applications. Solar Energy Materials and Solar Cells, 2014, 130, 696-703.	6.2	32
34	Structural and photoconductivity properties of silicon carbon thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1669-1673.	0.8	0
35	Temperature-dependent Hall effect measurements of p-type multicrystalline compensated solar grade silicon. Progress in Photovoltaics: Research and Applications, 2013, 21, 1469-1477.	8.1	16
36	Cu ₂ ZnSnS ₄ solar cells grown by sulphurisation of sputtered metal precursors. Thin Solid Films, 2013, 542, 114-118.	1.8	43

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37	Optimized luminescence properties of Mn doped ZnS nanoparticles for photovoltaic applications. Journal of Applied Physics, 2013, 113, .	2.5	44
38	Key Success Factors and Future Perspective of Silicon-Based Solar Cells. International Journal of Photoenergy, 2013, 2013, 1-6.	2.5	20
39	Silicon-Based Photovoltaics. Series in Optics and Optoelectronics, 2013, , 749-812.	0.0	0
40	State of the Art and Perspectives of Inorganic Photovoltaics. , 2013, 2013, 1-8.		6
41	Light-Induced degradation in compensated mc-Si p-type solar cells. , 2012, , .		4
42	Cu(In,Ga)Se ₂ hybrid sputtering/evaporation deposition for thin film solar cells application. , 2012, , .		2
43	Donor-acceptor pair luminescence in compensated Si for solar cells. Journal of Applied Physics, 2011, 110, 043506.	2.5	25
44	Assessment of the composition of Silicon-Rich Oxide films for photovoltaic applications by optical techniques. Energy Procedia, 2011, 10, 28-32.	1.8	1
45	Hybrid sputtering/evaporation deposition of Cu(In,Ga)Se ₂ thin film solar cells. Energy Procedia, 2011, 10, 138-143.	1.8	13
46	Enhancement of silicon solar cell performances due to light trapping by colloidal metal nanoparticles. Journal of Physics and Chemistry of Solids, 2011, 73, 143-143.	4.0	2
47	Oxygen distribution on a multicrystalline silicon ingot grown from upgraded metallurgical silicon. Solar Energy Materials and Solar Cells, 2011, 95, 529-533.	6.2	26
48	Role of carbon content in tuning the physical quantities of a-Si _{1-x} C _x :H alloys deposited by PECVD. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 800-803.	0.8	1
49	Development of a hybrid sputtering/evaporation process for Cu(In,Ga)Se ₂ thin film solar cells. Crystal Research and Technology, 2011, 46, 871-876.	1.3	12
50	Rare earth organic complexes as down-shifters to improve Si-based solar cell efficiency. Optical Materials, 2011, 33, 1012-1014.	3.6	42
51	Effects of low-temperature annealing on polycrystalline silicon for solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 559-563.	6.2	9
52	Nanostructured Silicon-Based Films for Photovoltaics: Recent Progresses and Perspectives. Science of Advanced Materials, 2011, 3, 388-400.	0.7	6
53	Fine Structure Due to Donor-Acceptor Pair Luminescence in Compensated Si. Applied Physics Express, 2010, 3, 071301.	2.4	10
54	Optical and electrical characterization of AlGaInP solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 2002-2006.	6.2	10

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55	Electrical and structural properties of <i>p</i> -type nanocrystalline silicon grown by LEPECVD for photovoltaic applications. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 712-715.	0.8	1
56	Silicon based solar cells: Research progress and future perspectives. , 2010, , .		3
57	Crystallinity and microstructure in Si films grown by plasma-enhanced chemical vapor deposition: A simple atomic-scale model validated by experiments. <i>Applied Physics Letters</i> , 2009, 94, 051904.	3.3	16
58	Tuning by means of laser annealing of electronic and structural properties of nc-Si/a-Si:H. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 159-160, 31-33.	3.5	3
59	Encapsulating Eu ³⁺ complex doped layers to improve Si-based solar cell efficiency. <i>Progress in Photovoltaics: Research and Applications</i> , 2009, 17, 519-525.	8.1	75
60	Study of defects and impurities in multicrystalline silicon grown from metallurgical silicon feedstock. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 159-160, 274-277.	3.5	23
61	Advances in Structural Characterization of Thin Film Nanocrystalline Silicon for Photovoltaic Applications. <i>Solid State Phenomena</i> , 2008, 131-133, 33-38.	0.3	1
62	Structural characterization of nc-Si films grown by low-energy PECVD on different substrates. <i>Applied Surface Science</i> , 2008, 254, 2804-2808.	6.1	25
63	Optical spectroscopy study of type 1 natural and synthetic sapphires. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 125228.	1.8	13
64	Effect of compensation and of metallic impurities on the electrical properties of Cz-grown solar grade silicon. <i>Journal of Applied Physics</i> , 2008, 104, 104507.	2.5	56
65	EBIC, EBSD and TEM study of grain boundaries in multicrystalline silicon cast from metallurgical feedstock. <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , 2008, , .	0.0	5
66	Structural Homogeneity of nc-Si Films Grown by Low-Energy PECVD. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, P5.	2.2	10
67	Subband gap photoresponse of nanocrystalline silicon in a metal-oxide-semiconductor device. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	24
68	Impact of Extended Defects on the Electrical Properties of Solar Grade Multicrystalline Silicon for Solar Cell Application. <i>Solid State Phenomena</i> , 2007, 131-133, 419-424.	0.3	2
69	Effect of P-induced gettering on extended defects in n-type multicrystalline silicon. <i>Progress in Photovoltaics: Research and Applications</i> , 2007, 15, 375-386.	8.1	20
70	Optical properties of shuffle dislocations in silicon. <i>Applied Physics Letters</i> , 2006, 88, 211910.	3.3	12
71	Diffusion length and junction spectroscopy analysis of low-temperature annealing of electron irradiation-induced deep levels in 4H-SiC. <i>Journal of Applied Physics</i> , 2006, 99, 033701.	2.5	5
72	Photovoltaic quantum efficiency enhancement by light harvesting of organo-lanthanide complexes. <i>Journal of Luminescence</i> , 2006, 118, 325-329.	3.1	65

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73	Nanocrystalline silicon films as multifunctional material for optoelectronic and photovoltaic applications. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2006, 134, 118-124.	3.5	32
74	Defect studies on silicon and silicon-germanium for PV and optoelectronic applications. <i>Materials Science in Semiconductor Processing</i> , 2006, 9, 66-73.	4.0	4
75	Processing step-related upgrading of silicon-based solar cells detected by photoluminescence spectroscopy. <i>Solar Energy Materials and Solar Cells</i> , 2005, 86, 11-18.	6.2	12
76	Nanocrystalline silicon film grown by LEPECVD for photovoltaic applications. <i>Solar Energy Materials and Solar Cells</i> , 2005, 87, 11-24.	6.2	23
77	Nanocrystalline silicon films grown by Low Energy Plasma Enhanced Chemical Vapor Deposition for optoelectronic applications. <i>Thin Solid Films</i> , 2005, 487, 19-25.	1.8	37
78	Rod-like defects in CZ-Si investigated by spin resonance and photoluminescence spectroscopies. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 1807-1811.	0.8	2
79	From electronic grade to solar grade silicon: chances and challenges in photovoltaics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005, 202, 2928-2942.	1.8	55
80	Silicon Carbide for Alpha, Beta, Ion and Soft X-Ray High Performance Detectors. <i>Materials Science Forum</i> , 2005, 483-485, 1015-1020.	0.3	7
81	Electrical and optical characterization of electron-irradiated 4H-SiC epitaxial layers annealed at low temperature. <i>Diamond and Related Materials</i> , 2005, 14, 1150-1153.	3.9	11
82	Electric-dipole spin-resonance signals related to extended interstitial agglomerates in silicon. <i>Journal of Applied Physics</i> , 2005, 98, 043507.	2.5	4
83	Electronic transitions at defect states in Cz p-type silicon. <i>Applied Physics Letters</i> , 2005, 86, 162109.	3.3	14
84	Luminescence of Dislocations and Oxide Precipitates in Si. <i>Solid State Phenomena</i> , 2004, 95-96, 273-282.	0.3	22
85	Photoluminescence of Dislocations in Nitrogen Doped Czochralski Silicon. <i>Chinese Physics Letters</i> , 2004, 21, 2242-2244.	3.3	4
86	The Origin of Photoluminescence from Oxygen Precipitates Nucleated at Low Temperature in Semiconductor Silicon. <i>Journal of the Electrochemical Society</i> , 2004, 151, G866.	2.9	13
87	Electrical and Optical Characterization of Electron Irradiated X Rays Detectors Based on 4H-SiC Epitaxial Layers. <i>Materials Science Forum</i> , 2004, 457-460, 1503-1506.	0.3	1
88	Electrical characterization of electron irradiated X-rays detectors based on 4H-SiC epitaxial layers. <i>Diamond and Related Materials</i> , 2004, 13, 414-418.	3.9	13
89	Dislocation luminescence in plastically deformed silicon crystals: effect of dislocation intersection and oxygen decoration. <i>EPJ Applied Physics</i> , 2004, 27, 123-127.	0.7	21
90	Effect of heat treatment on the optical and electrical properties of nitrogen-doped silicon samples. <i>Microelectronic Engineering</i> , 2003, 66, 297-304.	2.4	4

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91	Electrical and Optical Properties of Dislocations Generated under Pure Conditions. Solid State Phenomena, 2003, 95-96, 453-458.	0.3	7
92	Analysis of Extended Defects in 6H-SiC Using Photoluminescence and Light Beam Induced Current Spectroscopy. Materials Science Forum, 2003, 433-436, 317-320.	0.3	0
93	Surface Contaminant Detection in Semiconductors Using Noncontacting Techniques. Journal of the Electrochemical Society, 2003, 150, G456.	2.9	5
94	Effect of high pressure isostatic annealing on oxygen segregation in Czochralski silicon. Journal of Applied Physics, 2003, 94, 7476.	2.5	8
95	Optical Properties of Oxygen Agglomerates in Silicon. Solid State Phenomena, 2002, 82-84, 75-80.	0.3	7
96	Dislocation luminescence in nitrogen-doped Czochralski and float zone silicon. Journal of Physics Condensed Matter, 2002, 14, 13247-13254.	1.8	20
97	Study of the correlation between radiative and non-radiative recombination channels in silicon. Journal of Physics Condensed Matter, 2002, 14, 13223-13230.	1.8	3
98	Optical properties of oxygen precipitates and dislocations in silicon. Journal of Applied Physics, 2002, 92, 2437-2445.	2.5	85
99	Fast LBIC in-line characterization for process quality control in the photovoltaic industry. Solar Energy Materials and Solar Cells, 2002, 72, 417-424.	6.2	27
100	Beam Injection Studies of Dislocations and Oxygen Precipitates in Semiconductor Silicon. Solid State Phenomena, 2001, 78-79, 57-64.	0.3	5
101	Influence of the Host Composition on the Equilibrium Structure of Er-Centers in Silicon. Solid State Phenomena, 1997, 54, 86-93.	0.3	5
102	Erbium in Silicon: Problems and Challenges. Solid State Phenomena, 1997, 57-58, 197-206.	0.3	15
103	About a Novel Gettering Procedure for Multicrystalline Silicon Samples. Solid State Phenomena, 1996, 51-52, 485-490.	0.3	1
104	Effect of Local Inhomogeneities on the Electrical Properties of Polycrystalline Silicon. Solid State Phenomena, 1994, 37-38, 219-224.	0.3	0
105	Quasi-Zero Dimensional Halide Perovskite Derivates: Synthesis, Status, and Opportunity. Frontiers in Electronics, 0, 2, .	3.2	4