

# Charles W Teplin

## List of Publications by Year in descending order

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45  
papers

960  
citations

430874

18  
h-index

434195

31  
g-index

45  
all docs

45  
docs citations

45  
times ranked

962  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Remarkable Thermal Stability of Amorphous In <sub>z</sub> Zn <sub>1-x</sub> O Transparent Conductors. <i>Advanced Functional Materials</i> , 2008, 18, 3169-3178.	14.9	155
2	Optical surface second harmonic measurements of isotropic thin-film metals: Gold, silver, copper, aluminum, and tantalum. <i>Journal of Applied Physics</i> , 2004, 96, 3626-3634.	2.5	116
3	Material structure and metastability of hydrogenated nanocrystalline silicon solar cells. <i>Applied Physics Letters</i> , 2006, 88, 263507.	3.3	67
4	A new approach to thin film crystal silicon on glass: Biaxially-textured silicon on foreign template layers. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 984-988.	3.1	64
5	The electrical, optical and structural properties of In <sub>x</sub> Zn <sub>1-x</sub> O <sub>y</sub> (0 ≤ x ≤ 1) thin films by combinatorial techniques. <i>Measurement Science and Technology</i> , 2005, 16, 90-94.	2.6	57
6	Material quality requirements for efficient epitaxial film silicon solar cells. <i>Applied Physics Letters</i> , 2010, 96, 073502.	3.3	43
7	Heteroepitaxial film silicon solar cell grown on Ni-W foils. <i>Energy and Environmental Science</i> , 2012, 5, 6052.	30.8	40
8	Hot-wire chemical vapor deposition of epitaxial film crystal silicon for photovoltaics. <i>Thin Solid Films</i> , 2011, 519, 4545-4550.	1.8	38
9	Monitoring and modeling silicon homoepitaxy breakdown with real-time spectroscopic ellipsometry. <i>Journal of Applied Physics</i> , 2005, 97, 103536.	2.5	36
10	Heteroepitaxial film crystal silicon on Al <sub>2</sub> O <sub>3</sub> : new route to inexpensive crystal silicon photovoltaics. <i>Energy and Environmental Science</i> , 2011, 4, 3346.	30.8	33
11	Biaxially-textured photovoltaic film crystal silicon on ion beam assisted deposition CaF <sub>2</sub> seed layers on glass. <i>Energy and Environmental Science</i> , 2012, 5, 6905.	30.8	30
12	Significant improvement in silicon chemical vapor deposition epitaxy above the surface dehydrogenation temperature. <i>Journal of Applied Physics</i> , 2006, 100, 093520.	2.5	29
13	Low-temperature silicon homoepitaxy by hot-wire chemical vapor deposition with a Ta filament. <i>Journal of Crystal Growth</i> , 2006, 287, 414-418.	1.5	26
14	Mechanisms controlling the phase and dislocation density in epitaxial silicon films grown from silane below 800 °C. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	23
15	Doping of high-quality epitaxial silicon grown by hot-wire chemical vapor deposition near 700 °C. <i>Thin Solid Films</i> , 2009, 517, 3496-3498.	1.8	21
16	Pyramidal light trapping and hydrogen passivation for high-efficiency heteroepitaxial (100) crystal silicon solar cells. <i>Energy and Environmental Science</i> , 2012, 5, 8193.	30.8	21
17	Recent advances in hot-wire CVD R&D at NREL: From 18% silicon heterojunction cells to silicon epitaxy at glass-compatible temperatures. <i>Thin Solid Films</i> , 2008, 516, 743-746.	1.8	20
18	Breakdown physics of low-temperature silicon epitaxy grown from silane radicals. <i>Physical Review B</i> , 2006, 74, .	3.2	19

#	ARTICLE	IF	CITATIONS
19	Combinatorial Growth and Analysis of the Transparent Conducting Oxide ZnO/In(IZO). Macromolecular Rapid Communications, 2004, 25, 344-347.	3.9	17
20	High rate hot-wire chemical vapor deposition of silicon thin films using a stable TaC covered graphite filament. Thin Solid Films, 2011, 519, 4585-4588.	1.8	14
21	Experimental example of isotropic surface second-harmonic generation: dc-sputtered air-exposed aluminum thin films. Physical Review B, 2002, 65, .	3.2	12
22	Physics and chemistry of hot-wire chemical vapor deposition from silane: Measuring and modeling the silicon epitaxy deposition rate. Journal of Applied Physics, 2010, 107, 054906.	2.5	12
23	Comparison of thin epitaxial film silicon photovoltaics fabricated on monocrystalline and polycrystalline seed layers on glass. Progress in Photovoltaics: Research and Applications, 2015, 23, 909-917.	8.1	9
24	Epitaxial crystal silicon absorber layers and solar cells grown at 1.8 microns per minute. , 2011, , .		8
25	Device Physics of Heteroepitaxial Film c-Si Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 230-235.	2.5	8
26	Dislocation-limited open circuit voltage in film crystal silicon solar cells. Applied Physics Letters, 2012, 101, 123510.	3.3	6
27	Measurement of electric-field induced second harmonic generation in hydrogenated amorphous silicon. Applied Physics Letters, 2012, 101, 161604.	3.3	6
28	Silicon homoepitaxy using tantalum-filament hot-wire chemical vapor deposition. Materials Research Society Symposia Proceedings, 2005, 862, 231.	0.1	5
29	Hot-Wire Chemical Vapor Deposition Epitaxy on Polycrystalline Silicon Seeds on Glass. Materials Research Society Symposia Proceedings, 2007, 989, 16.	0.1	5
30	600 mV epitaxial crystal silicon solar cells grown on seeded glass. , 2013, , .		4
31	Junction transport in epitaxial film silicon heterojunction solar cells. , 2011, , .		3
32	Towards Low-cost >15% Efficient Film c-Si Solar Cells: Progress & Challenges. , 2012, , .		3
33	Physics of Solid-Phase Epitaxy of Hydrogenated Amorphous Silicon for Thin Film Si Photovoltaics. Materials Research Society Symposia Proceedings, 2006, 910, 5.	0.1	2
34	Roughness, impurities and strain in low-temperature epitaxial silicon films grown by tantalum filament hot-wire chemical vapor deposition. Materials Research Society Symposia Proceedings, 2006, 910, 1.	0.1	2
35	Simultaneous measurement of the surface and bulk magnetization in thin magnetic films. Journal of Applied Physics, 2001, 89, 7168-7170.	2.5	1
36	Phase evolution in nanocrystalline silicon films: Hydrogen dilution and the cone kinetics model. Philosophical Magazine, 2009, 89, 2461-2468.	1.6	1

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37	Photovoltaic device characterization with optical second harmonic generation. , 2010, , .		1
38	Device physics of heteroepitaxial film c-Si heterojunction solar cells. , 2012, , .		1
39	Hydrogenation of dislocation-limited heteroepitaxial silicon solar cells. , 2012, , .		1
40	Improved 750 &#x00B0;C epitaxial crystal silicon solar cells through impurity reduction. , 2013, , .		1
41	Comparative Study of Hot-Wire Chemical Vapor Deposition onto (100) Si Near 600Å°C: Epitaxial and Polycrystalline Silicon Films. Materials Research Society Symposia Proceedings, 2007, 989, 12.	0.1	0
42	Cone Kinetics Model: Insights into the Morphologies of Mixed-phase Silicon Film Growth. Materials Research Society Symposia Proceedings, 2008, 1066, 1.	0.1	0
43	Photovoltaic-quality silicon epitaxy by hot-wire CVD at glasscompatible temperatures. , 2009, , .		0
44	Epitaxial film silicon solar cells fabricated by hot wire chemical vapor deposition below 750&#x00B0;C. , 2009, , .		0
45	Device physics of heteroepitaxial film c-Si heterojunction solar cells. , 2013, , .		0