

Wolfhard Beyer

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67 papers	2,278 citations	23 h-index	47 g-index
70 ext. papers	2,407 ext. citations	3.1 avg, IF	4.87 L-index

#	Paper	IF	Citations
67	Investigation of Thermal Stability Effects of Thick Hydrogenated Amorphous Silicon Precursor Layers for Liquid-Phase Crystallized Silicon. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021 , 218, 2000435	1.6	
66	Impact of Laser Treatment on Hydrogenated Amorphous Silicon Properties. <i>Advanced Engineering Materials</i> , 2020 , 22, 1901437	3.5	1
65	Raman spectroscopic analysis of the effect of annealing on hydrogen concentration and microstructure of thick hot wire grown a-Si:H films aimed as precursor layers for crystallized thin film silicon. <i>Thin Solid Films</i> , 2020 , 714, 138353	2.2	
64	Silicon surface passivation by transparent conductive zinc oxide. <i>Journal of Applied Physics</i> , 2019 , 125, 105305	2.5	17
63	Application of Raman spectroscopy for depth-dependent evaluation of the hydrogen concentration of amorphous silicon. <i>Thin Solid Films</i> , 2018 , 653, 223-228	2.2	7
62	Temperature and hydrogen diffusion length in hydrogenated amorphous silicon films on glass while scanning with a continuous wave laser at 532 nm wavelength. <i>Journal of Applied Physics</i> , 2018 , 124, 153103	2.5	4
61	Atomic layer deposition of high-mobility hydrogen-doped zinc oxide. <i>Solar Energy Materials and Solar Cells</i> , 2017 , 173, 111-119	6.4	34
60	Hydrogen Effusion Experiments 2016 , 569-595		6
59	Hydrogen incorporation, stability, and release effects in thin film silicon. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 1661-1674	1.6	12
58	Comparison of Laser and Oven Annealing Effects on Hydrogen and Microstructure in Thin Film Silicon. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1770, 1-6		2
57	Influence of hydrogen concentration on void-related microstructure in low hydrogen amorphous and crystalline silicon materials. <i>Canadian Journal of Physics</i> , 2014 , 92, 700-704	1.1	4
56	Effect of Annealing on Microstructure in (Doped and Undoped) Hydrogenated Amorphous Silicon Films. <i>Materials Research Society Symposia Proceedings</i> , 2014 , 1666, 36		6
55	a-Si:H/ μ -Si:H solar cells prepared by the single-chamber processes minimization of phosphorus and boron cross contamination. <i>Thin Solid Films</i> , 2013 , 540, 251-255	2.2	7
54	Microstructure Characterization of Amorphous Silicon Films by Effusion Measurements of Implanted Helium. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1536, 175-180		3
53	Voids in hydrogenated amorphous silicon materials. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2023-2036	3.9	20
52	Impurities in thin-film silicon: Influence on material properties and solar cell performance. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2171-2178	3.9	10
51	Cross-contamination in single-chamber processes for thin-film silicon solar cells. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2183-2186	3.9	8

50	Influence of annealing and Al ₂ O ₃ properties on the hydrogen-induced passivation of the Si/SiO ₂ interface. <i>Journal of Applied Physics</i> , 2012 , 111, 093713	2.5	112
49	Isolated Voids in Amorphous Silicon and Related Materials Measured by Effusion of Implanted Helium. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1426, 341-346		2
48	Hydrogen Effusion Experiments 2011 , 449-475		8
47	Annealing Effects of Microstructure in Thin-film Silicon Solar Cell Materials Measured by Effusion of Implanted Rare Gas Atoms. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1321, 135		7
46	Hydrogen induced passivation of Si interfaces by Al ₂ O ₃ films and SiO ₂ /Al ₂ O ₃ stacks. <i>Applied Physics Letters</i> , 2010 , 97, 152106	3-4	143
45	Microstructure Effects in Amorphous and Microcrystalline Ge:H Films. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1245, 1		1
44	Oxygen and nitrogen impurities in microcrystalline silicon deposited under optimized conditions: Influence on material properties and solar cell performance. <i>Journal of Applied Physics</i> , 2009 , 105, 074509	3-5	37
43	Hydrogen diffusion in zinc oxide thin films. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1165, 1		15
42	Microstructure Effects in Hot-wire Deposited Undoped Microcrystalline Silicon Films. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1		1
41	Influence of base pressure and atmospheric contaminants on a-Si:H solar cell properties. <i>Journal of Applied Physics</i> , 2008 , 104, 094507	2.5	21
40	Influence of contaminations on the performance of thin-film silicon solar cells prepared after in situ reactor plasma cleaning. <i>Thin Solid Films</i> , 2008 , 516, 4639-4644	2.2	11
39	Transparent conducting oxide films for thin film silicon photovoltaics. <i>Thin Solid Films</i> , 2007 , 516, 147-154	4.2	201
38	Post-deposition thermal annealing studies of hydrogenated microcrystalline silicon deposited at 40 °C. <i>Thin Solid Films</i> , 2007 , 515, 7495-7498	2.2	5
37	Microstructure Characterization of Amorphous Silicon-Nitride Films by Effusion Measurements. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 910, 5		7
36	Microstructure characterization of SiCl ₄ -based microcrystalline silicon films by effusion of implanted helium. <i>Journal of Non-Crystalline Solids</i> , 2006 , 352, 1402-1405	3-9	3
35	Adjustable hydrogen atom incorporation into sputter deposited a-SiC. <i>Thin Solid Films</i> , 2006 , 515, 464-467	2	3
34	Doping Dependence of Chlorine Incorporation in SiCl ₄ -based Microcrystalline Silicon Films. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 862, 2441		2
33	Structural and Electronic Properties of SiCl ₄ -based Microcrystalline Silicon Films. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 808, 497		3

32	Characterization of microstructure in amorphous and microcrystalline Si and related alloys by effusion of implanted helium. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004 , 1, 1144-1153		22
31	Infrared absorption in a-SiC:H alloy prepared by d.c. sputtering. <i>Thin Solid Films</i> , 2003 , 426, 117-123	2.2	36
30	Diffusion and evolution of hydrogen in hydrogenated amorphous and microcrystalline silicon. <i>Solar Energy Materials and Solar Cells</i> , 2003 , 78, 235-267	6.4	104
29	Helium effusion, diffusion and precipitation as a probe of microstructure in hydrogenated amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 2002 , 299-302, 254-258	3.9	7
28	Microstructure Characterization of a-Si Based Alloys by Effusion of Implanted Helium. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 715, 511		5
27	Diffusion and Solubility of Hydrogen in Amorphous and Microcrystalline Si:H Films. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 664, 1311		2
26	Microstructure Characterization of Hydrogenated Amorphous Silicon Films by Rare Gas Effusion Studies. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 664, 921		9
25	Comparative study of hydrogen stability in hydrogenated amorphous and crystalline silicon. <i>Journal of Non-Crystalline Solids</i> , 2000 , 266-269, 206-210	3.9	17
24	Infrared absorption and hydrogen effusion of hydrogenated amorphous silicon-oxide films. <i>Journal of Non-Crystalline Solids</i> , 2000 , 266-269, 845-849	3.9	22
23	Microstructure Characterization of Amorphous Silicon Based Alloys by Inert Gas Effusion Studies. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 609, 2341		6
22	Hydrogen Phenomena in Hydrogenated Amorphous Silicon. <i>Semiconductors and Semimetals</i> , 1999 , 165-238		32
21	Solubility and diffusion of hydrogen in hydrogenated crystalline and amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 1998 , 227-230, 880-884	3.9	24
20	Absorption Strengths of Si-H Vibrational Modes in Hydrogenated Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 507, 601		42
19	Concentration Dependence of Hydrogen Diffusion in Hydrogenated Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 507, 679		8
18	Diffusion and Effusion of Hydrogen in Microcrystalline Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 467, 343		21
17	Interfaces in a-Si: H solar cell structures. <i>Solar Energy Materials and Solar Cells</i> , 1997 , 48, 351-363	6.4	43
16	New Insights into Processes of Hydrogen Incorporation and Hydrogen Diffusion in Hydrogenated Amorphous Silicon. <i>Physica Status Solidi A</i> , 1997 , 159, 53-63		18
15	Incorporation and thermal stability of hydrogen in amorphous silicon and germanium. <i>Journal of Non-Crystalline Solids</i> , 1996 , 198-200, 40-45	3.9	52

14	Plasma Post-Hydrogenation of Hydrogenated Amorphous Silicon and Germanium. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 420, 497		22
13	Hydrogen Diffusion and Solubility in A-Si:H. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 336, 323		10
12	Hydrogen stability in amorphous germanium films. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1991 , 63, 269-279		61
11	Hydrogen effusion: a probe for surface desorption and diffusion. <i>Physica B: Condensed Matter</i> , 1991 , 170, 105-114	2.8	120
10	Long-term stability of hydrogenated amorphous germanium measured by infrared absorption. <i>Journal of Applied Physics</i> , 1991 , 70, 4540-4543	2.5	12
9	Kinetic model for desorption of hydrogen from amorphous hydrogenated silicon. <i>Physical Review B</i> , 1990 , 42, 9000-9008	3.3	43
8	Fermi energy dependence of surface desorption and diffusion of hydrogen in a-Si:H. <i>Journal of Non-Crystalline Solids</i> , 1989 , 114, 217-219	3.9	65
7	Structural and electrical properties of silicon-based amorphous alloys. <i>Journal of Non-Crystalline Solids</i> , 1987 , 97-98, 1027-1034	3.9	62
6	Direct Experimental Evidence for Molecular Hydrogen in Amorphous Si: H. <i>Physical Review Letters</i> , 1984 , 52, 549-552	7.4	52
5	Reinterpretation of the silicon-hydrogen stretch frequencies in amorphous silicon. <i>Solid State Communications</i> , 1983 , 48, 585-587	1.6	183
4	The role of hydrogen in a-Si:H [Results of evolution and annealing studies. <i>Journal of Non-Crystalline Solids</i> , 1983 , 59-60, 161-168	3.9	165
3	Determination of the hydrogen diffusion coefficient in hydrogenated amorphous silicon from hydrogen effusion experiments. <i>Journal of Applied Physics</i> , 1982 , 53, 8745-8750	2.5	191
2	Effect of boron-doping on the hydrogen evolution from a-Si:H films. <i>Solid State Communications</i> , 1981 , 39, 375-379	1.6	64
1	Influence of ion implantation on electrical properties of amorphous Ge and Si. <i>Physica Status Solidi A</i> , 1975 , 30, 231-240		35