

James Kakalios

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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.

103 papers	3,264 citations	26 h-index	56 g-index
107 ext. papers	3,406 ext. citations	4.6 avg, IF	4.74 L-index

#	Paper	IF	Citations
103	Stretched-exponential relaxation arising from dispersive diffusion of hydrogen in amorphous silicon. <i>Physical Review Letters</i> , 1987 , 59, 1037-1040	7.4	530
102	Thermal-equilibrium processes in amorphous silicon. <i>Physical Review B</i> , 1987 , 35, 1316-1333	3.3	309
101	Hydrogen diffusion in amorphous silicon. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1987 , 56, 305-320		265
100	Bulk Segregation in Rotated Granular Material Measured by Magnetic Resonance Imaging. <i>Physical Review Letters</i> , 1997 , 78, 50-53	7.4	173
99	Thermal equilibration in doped amorphous silicon. <i>Physical Review B</i> , 1986 , 34, 3030-3033	3.3	171
98	Persistent Photoconductivity in Doping-Modulated Amorphous Semiconductors. <i>Physical Review Letters</i> , 1984 , 53, 1602-1605	7.4	168
97	Reversible axial segregation of binary mixtures of granular materials. <i>Physical Review E</i> , 1994 , 49, R3610-R3613	2.4	124
96	Reversible axial segregation of rotating granular media. <i>Physical Review E</i> , 1995 , 52, 4393-4400	2.4	121
95	Evidence for hydrogen motion in annealing of light-induced metastable defects in hydrogenated amorphous silicon. <i>Physical Review B</i> , 1988 , 37, 1020-1023	3.3	121
94	Properties of amorphous semiconducting multilayer films. <i>Journal of Non-Crystalline Solids</i> , 1984 , 66, 339-344	3.9	111
93	Electronic transport in doped amorphous silicon. <i>Physical Review B</i> , 1986 , 34, 6014-6017	3.3	98
92	Axial segregation of granular media rotated in a drum mixer: Pattern evolution. <i>Physical Review E</i> , 1997 , 56, 4386-4393	2.4	74
91	Electron drift mobility in doped amorphous silicon. <i>Physical Review B</i> , 1988 , 38, 5603-5609	3.3	69
90	Random telegraph-switching noise in coplanar current measurements of amorphous silicon. <i>Physical Review B</i> , 1991 , 44, 8391-8394	3.3	58
89	Conductance fluctuations in doped hydrogenated amorphous silicon. <i>Physical Review B</i> , 1993 , 47, 12578-12589	3.3	57
88	Measuring fundamental frequencies in local field potentials. <i>Journal of Neuroscience Methods</i> , 2004 , 138, 97-105	3	56
87	Transient striatal gamma local field potentials signal movement initiation in rats. <i>NeuroReport</i> , 2005 , 16, 2021-4	1.7	56

86	Conductance-noise power fluctuations in hydrogenated amorphous silicon. <i>Physical Review Letters</i> , 1992 , 69, 1097-1100	7.4	43
85	Phase diagram for avalanche stratification of granular media. <i>Physical Review E</i> , 1998 , 58, R4104-R4107	2.4	42
84	Dynamical percolation model of conductance fluctuations in hydrogenated amorphous silicon. <i>Physical Review Letters</i> , 1995 , 75, 2192-2195	7.4	42
83	The role of dangling bonds in the transport and recombination of a-Si:Ge: H alloys. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1987 , 56, 289-303		40
82	Nonlinear 1/f noise in amorphous silicon. <i>Physical Review Letters</i> , 1991 , 67, 2529-2532	7.4	39
81	Light-induced changes of the non-Gaussian 1/f noise statistics in doped hydrogenated amorphous silicon. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1994 , 69, 595-608		36
80	Bias annealing of doped amorphous silicon. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1986 , 54, L21-L26		34
79	Excitation and temperature dependence of the photo-induced excess conductivity in doping-modulated amorphous silicon. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1986 , 54, 199-218		34
78	Structural and electronic properties of dual plasma codeposited mixed-phase amorphous/nanocrystalline thin films. <i>Journal of Applied Physics</i> , 2010 , 107, 043704	2.5	26
77	Temperature and doping dependence of non-Gaussian 1/f noise and noise statistics in hydrogenated amorphous silicon. <i>Physical Review B</i> , 1997 , 56, 1918-1927	3.3	26
76	Resource Letter GP-1: Granular physics or nonlinear dynamics in a sandbox. <i>American Journal of Physics</i> , 2005 , 73, 8-22	0.7	25
75	Influence of deposition conditions on long-range electronic disorder in n-type doped hydrogenated amorphous silicon. <i>Physical Review B</i> , 1999 , 60, 2449-2455	3.3	23
74	Thermopower and conductivity activation energies in hydrogenated amorphous silicon. <i>Physical Review B</i> , 1996 , 54, 7630-7633	3.3	20
73	Potential resolution to the doping puzzle in iron pyrite: Carrier type determination by Hall effect and thermopower. <i>Physical Review Materials</i> , 2017 , 1,	3.2	19
72	Experimental investigations into the formation of nanoparticles in aSi-Si:H thin films. <i>Journal of Applied Physics</i> , 2005 , 97, 034310	2.5	18
71	Temperature and excitation dependence of the photo-induced excess conductivity in doping modulated amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 1985 , 77-78, 1101-1104	3.9	18
70	Dynamical changes in neurons during seizures determine tonic to clonic shift. <i>Journal of Computational Neuroscience</i> , 2012 , 33, 41-51	1.4	17
69	Light-induced changes of the 1/f noise in hydrogenated amorphous silicon. <i>Physical Review B</i> , 1993 , 47, 10903-10906	3.3	15

68	Electronic transport in doped mixed-phase hydrogenated amorphous/nanocrystalline silicon thin films. <i>Applied Physics Letters</i> , 2012 , 100, 072105	3.4	14
67	Chapter 12 Hydrogen Diffusion in Amorphous Silicon. <i>Semiconductors and Semimetals</i> , 1991 , 34, 381-445	0.6	14
66	Thermal equilibrium processes in doped amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 1987 , 97-98, 767-774	3.9	11
65	THERMAL EQUILIBRIUM EFFECTS IN DOPED HYDROGENATED AMORPHOUS SILICON	1989 , 165-205	11
64	Conduction mechanisms in doped mixed-phase hydrogenated amorphous/nanocrystalline silicon thin films. <i>Journal of Applied Physics</i> , 2013 , 113, 233707	2.5	10
63	A physical interpretation of the Hall effect in amorphous semiconductors. <i>Journal of Non-Crystalline Solids</i> , 1989 , 114, 372-374	3.9	10
62	Computer simulations of conductance noise in a dynamical percolation resistor network. <i>Physical Review E</i> , 1994 , 50, 3431-3435	2.4	8
61	The non-radiative efficiency in hydrogenated amorphous silicon. <i>Philosophical Magazine Letters</i> , 1991 , 64, 235-240	1	8
60	Quantum confinement in mixed phase silicon thin films grown by co-deposition plasma processing. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 129, 7-12	6.4	7
59	The origin of persistent photoconductivity in amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 1989 , 114, 714-716	3.9	7
58	Comment on "Structure and electronic states in disordered systems". <i>Physical Review Letters</i> , 1987 , 58, 2504	7.4	7
57	The Thermal Equilibration Model for Persistent Photoconductivity in Doping Modulated Amorphous Silicon	1987 , 529-539	7
56	Conductance fluctuations in doped hydrogenated amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 1993 , 164-166, 469-472	3.9	6
55	1/f Noise and Thermal Equilibration Effects in Hot Wire Deposited Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 420, 641		5
54	Non-Arrhenius anomalous hopping electronic transport in hydrogenated amorphous silicon and composite amorphous/nanocrystalline thin films. <i>Journal of Applied Physics</i> , 2015 , 118, 215103	2.5	4
53	Optical absorption spectrum of hydrogenated amorphous silicon using photo-pyroelectric spectroscopy. <i>Journal of Applied Physics</i> , 1993 , 74, 1799-1804	2.5	4
52	Sub-Bandgap Optical Absorption in Amorphous Silicon using Photo-Pyroelectric Spectroscopy. <i>Materials Research Society Symposia Proceedings</i> , 1991 , 219, 545		4
51	Test of the thermal equilibration model for persistent photoconductivity in doping-modulated amorphous silicon. <i>Physical Review B</i> , 1991 , 43, 6820-6823	3.3	4

50	Microscopic mobility in hydrogenated amorphous silicon. <i>Philosophical Magazine Letters</i> , 1987 , 55, 129-134	4
49	The Influence of Thermophoresis Effects During Deposition of Hydrogenated Amorphous Silicon Thin Films with Nanocrystalline Silicon Inclusions. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 910, 7	3
48	Non-Gaussian 1/f noise as a probe of long-range structural and electronic disorder in amorphous silicon 2003 , 5112, 67	3
47	Thermopower and 1/f Noise Measurements in Amorphous Silicon-Carbon Alloys. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 377, 577	3
46	Thermopower of nanocrystalline germanium/hydrogenated amorphous silicon composite thin films. <i>Journal of Applied Physics</i> , 2013 , 114, 193705	2.5 2
45	Optical Absorption in Co-Deposited Mixed-Phase Hydrogenated Amorphous/Nanocrystalline Silicon Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1245, 1	2
44	Influence of Deposition Conditions on the 1/f Noise in Hydrogenated Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 467, 215	2
43	Long-range disorder and the Staebler-Wronski effect in N-type amorphous silicon. <i>Physical Review B</i> , 2002 , 66,	3.3 2
42	Long-range disorder and metastability in amorphous silicon. <i>Journal of Non-Crystalline Solids</i> , 2000 , 266-269, 397-400	3.9 2
41	Non-Gaussian Noise Statistics in Undoped Hydrogenated Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 336, 395	2
40	Telegraph Noise as A Probe of Microscopic Hydrogen Motion in Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 377, 401	2
39	Search for reversible light-induced changes in the Si-H absorption bands of a-Si:H. <i>AIP Conference Proceedings</i> , 1984 ,	0 2
38	Photo-Induced Excess Conductivity in Doping Modulated Amorphous Semiconductors. <i>Materials Research Society Symposia Proceedings</i> , 1985 , 49, 127	2
37	Hydrogenated Amorphous Silicon Thin Films with Nanocrystalline Silicon Inclusions. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 762, 1441	2
36	Composite Nanocrystalline/Amorphous Thin Films for Particle Detector Applications. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1770, 49-54	1
35	The Materials Science of Marvel® The Avengers® Some Assembly Required. <i>ACS Symposium Series</i> , 2013 , 215-227	0.4 1
34	Charge transport in nanocrystalline germanium/hydrogenated amorphous silicon mixed-phase thin films. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1536, 195-200	1
33	Persistent Photoconductivity, the Staebler-Wronski Effect, and Long-Range Disorder in a-Si:H. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 467, 73	1

32	Doping Effects in Co-deposited Mixed Phase Films of Hydrogenated Amorphous Silicon Containing Nanocrystalline Inclusions. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1		1
31	Medium Range Order and 1/f Noise in Hydrogenated Silicon Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 715, 251		1
30	The Staebler-Wronski Effect and 1/f Noise in Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 664, 1451		1
29	Pattern Evolution of Granular Media Rotated in a Drum Mixer. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 463, 227		1
28	Relaxation Measurements of the Persistent Photoconductivity in Sulfur-Doped a-Si:H. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 420, 611		1
27	Origin of the spectral dependence of the nonradiative efficiency in hydrogenated amorphous silicon. <i>Physical Review B</i> , 1993 , 47, 9989-9992	3.3	1
26	1/f Noise Measurements of Hydrogenated Amorphous Silicon-Carbon Alloys. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 336, 631		1
25	Carrier Separation Effects in Doping Modulated Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1986 , 70, 435		1
24	Photo-induced enhancement of the dark conductivity in nanocrystalline germanium/amorphous silicon composite thin films. <i>Journal of Applied Physics</i> , 2018 , 124, 165102	2.5	0
23	Thermoelectric properties of doped and undoped mixed phase hydrogenated amorphous/nanocrystalline silicon thin films. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1245, 1		
22	Hopping transport in doped co-deposited mixed-phase hydrogenated amorphous/nanocrystalline silicon thin films. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1321, 285		
21	Opto-electronic properties of co-deposited mixed-phase hydrogenated amorphous/nanocrystalline silicon thin films. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1321, 337		
20	Electronic Transport in Co-deposited Hydrogenated Amorphous/Nanocrystalline Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1		
19	Dual-Chamber Plasma Co-Deposition of Nanoparticles in Amorphous Silicon Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 910, 2		
18	Conductance Fluctuations in Amorphous Silicon Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 862, 411		
17	Experimental Study of Silane Plasma Nanoparticle Formation in Amorphous Silicon Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 862, 811		
16	Current Noise Measurements of Surface Defect States in Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 557, 415		
15	Fractals: More than just a pretty picture. <i>Complexity</i> , 1996 , 1, 38-39		1.6

- 14 Avalanche Segregation of Binary Mixtures of Granular Media. *Materials Research Society Symposia Proceedings*, **1996**, 463, 319
- 13 Thermopower and Conductivity Activation Energies in Hydrogenated Amorphous Silicon. *Materials Research Society Symposia Proceedings*, **1996**, 420, 735
- 12 Light Induced Changes in the Non-Gaussian Noise Statistics in Doped Hydrogenated Amorphous Silicon. *Materials Research Society Symposia Proceedings*, **1993**, 297, 661
- 11 1 / f Noise Measurements of Interacting Current Filaments in Hydrogenated Amorphous Silicon. *Materials Research Society Symposia Proceedings*, **1993**, 297, 309
- 10 Reversible Axial Segregation in Rotating Granular Media. *Materials Research Society Symposia Proceedings*, **1994**, 367, 507
- 9 Improved Light Soaking Stability of R.F. Sputter Deposited Amorphous Silicon. *Materials Research Society Symposia Proceedings*, **1991**, 219, 105
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- 6 The Spectral Dependence of the Non-Radiative Efficiency in Hydrogenated Amorphous Silicon. *Materials Research Society Symposia Proceedings*, **1992**, 258, 789
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- 4 Metastable Electronic Effects in Amorphous Semiconductor Superlattices. *Materials Research Society Symposia Proceedings*, **1989**, 160, 559
- 3 Avalanche Stratification [Experimental Tests of the Metastable Wedge and Continuous Flow] Models. *Materials Research Society Symposia Proceedings*, **2000**, 627, 1
- 2 HYDROGEN GLASS BEHAVIOR IN AMORPHOUS SEMICONDUCTORS **1990**, 441-456
- 1 Conductance fluctuations in hydrogenated amorphous germanium. *Journal of Applied Physics*, **2021**, 130, 105107 2.5