

Maria Aboy

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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.

65
papers

562
citations

14
h-index

21
g-index

81
ext. papers

636
ext. citations

2.5
avg, IF

3.02
L-index

#	Paper	IF	Citations
65	Atomistic modeling of amorphization and recrystallization in silicon. <i>Applied Physics Letters</i> , 2003 , 82, 2038-2040	3.4	61
64	Microscopic description of the irradiation-induced amorphization in silicon. <i>Physical Review Letters</i> , 2003 , 91, 135504	7.4	58
63	Atomistic analysis of the evolution of boron activation during annealing in crystalline and preamorphized silicon. <i>Journal of Applied Physics</i> , 2005 , 97, 103520	2.5	29
62	Atomistic modeling of deactivation and reactivation mechanisms in high-concentration boron profiles. <i>Applied Physics Letters</i> , 2003 , 83, 4166-4168	3.4	28
61	Front-end process modeling in silicon. <i>European Physical Journal B</i> , 2009 , 72, 323-359	1.2	27
60	Atomistic analysis of defect evolution and transient enhanced diffusion in silicon. <i>Journal of Applied Physics</i> , 2003 , 94, 1013-1018	2.5	24
59	Liquid-Liquid Equilibria for Acetic Anhydride + Selected Alkanes. <i>Journal of Chemical & Engineering Data</i> , 2002 , 47, 950-953	2.8	21
58	The laser annealing induced phase transition in silicon: a molecular dynamics study. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2004 , 216, 57-61	1.2	19
57	Kinetics of large B clusters in crystalline and preamorphized silicon. <i>Journal of Applied Physics</i> , 2011 , 110, 073524	2.5	18
56	Recrystallization of atomically balanced amorphous pockets in Si: A source of point defects. <i>Physical Review B</i> , 2007 , 76,	3.3	18
55	Physical insight into boron activation and redistribution during annealing after low-temperature solid phase epitaxial regrowth. <i>Applied Physics Letters</i> , 2006 , 88, 191917	3.4	17
54	Atomistic modeling of dopant implantation and annealing in Si: damage evolution, dopant diffusion and activation. <i>Computational Materials Science</i> , 2005 , 33, 92-105	3.2	16
53	Molecular dynamics simulations of damage production by thermal spikes in Ge. <i>Journal of Applied Physics</i> , 2012 , 111, 033519	2.5	15
52	Role of silicon interstitials in boron cluster dissolution. <i>Applied Physics Letters</i> , 2005 , 86, 031908	3.4	15
51	Molecular dynamics characterization of as-implanted damage in silicon. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2005 , 124-125, 372-375	3.1	14
50	Kinetic Monte Carlo simulations of boron activation in implanted Si under laser thermal annealing. <i>Applied Physics Express</i> , 2014 , 7, 021301	2.4	13
49	Modeling of defects, dopant diffusion and clustering in silicon. <i>Journal of Computational Electronics</i> , 2014 , 13, 40-58	1.8	12

48	Structural transformations from point to extended defects in silicon: A molecular dynamics study. <i>Physical Review B</i> , 2008 , 78,	3.3	11
47	Boron pocket and channel deactivation in nMOS transistors with SPER junctions. <i>IEEE Transactions on Electron Devices</i> , 2006 , 53, 71-77	2.9	9
46	Boron activation and redistribution during thermal treatments after solid phase epitaxial regrowth. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2005 , 124-125, 205-209	3.1	9
45	Physical insight into ultra-shallow junction formation through atomistic modeling. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 253, 41-45	1.2	8
44	Atomistic simulations in Si processing: Bridging the gap between atoms and experiments. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2005 , 124-125, 72-80	3.1	8
43	Atomistic modeling of defect evolution in Si for amorphizing and subamorphizing implants. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004 , 114-115, 82-87	3.1	7
42	Molecular dynamics simulation of the early stages of self-interstitial clustering in silicon. <i>Materials Science in Semiconductor Processing</i> , 2016 , 42, 235-238	4.3	6
41	Modeling and experimental characterization of stepped and v-shaped {311} defects in silicon. <i>Journal of Applied Physics</i> , 2014 , 115, 143514	2.5	6
40	Atomistic process modeling based on Kinetic Monte Carlo and Molecular Dynamics for optimization of advanced devices 2009 ,		6
39	Evolution of boron-interstitial clusters in preamorphized silicon without the contribution of end-of-range defects. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008 , 154-155, 247-251	3.1	6
38	Monte Carlo modeling of amorphization resulting from ion implantation in Si. <i>Computational Materials Science</i> , 2003 , 27, 1-5	3.2	6
37	W and X Photoluminescence Centers in Crystalline Si: Chasing Candidates at Atomic Level Through Multiscale Simulations. <i>Journal of Electronic Materials</i> , 2018 , 47, 5045-5049	1.9	5
36	Ultrafast Generation of Unconventional {001} Loops in Si. <i>Physical Review Letters</i> , 2017 , 119, 205503	7.4	5
35	Atomistic modeling of dopant implantation, diffusion, and activation. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 2432		5
34	Atomistic modeling of impurity ion implantation in ultra-thin-body Si devices 2008 ,		4
33	A novel technique for the structural and energetic characterization of lattice defects in the molecular dynamics framework. <i>Computational Materials Science</i> , 2005 , 33, 112-117	3.2	4
32	The role of silicon interstitials in the deactivation and reactivation of high concentration boron profiles. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004 , 114-115, 193-197	3.1	4
31	The role of the bond defect on silicon amorphization: a molecular dynamics study. <i>Computational Materials Science</i> , 2003 , 27, 6-9	3.2	4

30	Insights on the atomistic origin of X and W photoluminescence lines in Si from ab initio simulations. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 075109	3	4
29	A detailed approach for the classification and statistical analysis of irradiation induced defects. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015 , 352, 156-159	1.2	3
28	Improved physical models for advanced silicon device processing. <i>Materials Science in Semiconductor Processing</i> , 2017 , 62, 62-79	4.3	3
27	Simulation of p-n junctions: Present and future challenges for technologies beyond 32 nm. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, C1A1-C1A6	1.3	3
26	Boron diffusion and activation in SOI and bulk Si: The role of the buried interface. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007 , 257, 152-156	1.2	3
25	Atomistic modeling of ion beam induced amorphization in silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2004 , 216, 41-45	1.2	3
24	On the anomalous generation of {0 0 1} loops during laser annealing of ion-implanted silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2019 , 458, 179-183	1.2	3
23	Generation of amorphous Si structurally compatible with experimental samples through the quenching process: A systematic molecular dynamics simulation study. <i>Journal of Non-Crystalline Solids</i> , 2019 , 503-504, 20-27	3.9	3
22	Multiscale modeling of radiation damage and annealing in Si. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007 , 255, 95-100	1.2	2
21	Modeling of Dopant and Defect Interactions in Si Process Simulators. <i>Defect and Diffusion Forum</i> , 2003 , 221-223, 31-40	0.7	2
20	Atomistic modeling of ion beam induced amorphization in silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 241, 501-505	1.2	2
19	{001} loops in silicon unraveled. <i>Acta Materialia</i> , 2019 , 166, 192-201	8.4	2
18	Atomistic modeling of ion implantation technologies in silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015 , 352, 148-151	1.2	1
17	Identification of Extended Defect Atomic Configurations in Silicon Through Transmission Electron Microscopy Image Simulation. <i>Journal of Electronic Materials</i> , 2018 , 47, 4955-4958	1.9	1
16	Modeling of advanced ion implantation technologies in semiconductors 2011 ,		1
15	Simulation study of ion implanted defects associated to luminescence centers in silicon 2011 ,		1
14	Molecular implants and cold implants: Two new strategies for junction formation of future Si devices 2011 ,		1
13	Carrier mobility degradation in highly B-doped junctions 2009 ,		1

12	Physics Mechanisms Involved in the Formation and Recrystallization of Amorphous Regions in Si through Ion Irradiation. <i>Solid State Phenomena</i> , 2008 , 139, 71-76	0.4	1
11	Atomistic modeling of FnVm complexes in pre-amorphized Si. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008 , 154-155, 207-210	3.1	1
10	Atomistic Analysis of the Role of Silicon Interstitials in Boron Cluster Dissolution. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 810, 334		1
9	Atomistic modeling of B activation and deactivation for ultra-shallow junction formation 2003 ,		1
8	Extending defect models for Si processing: The role of energy barriers for defect transformation, entropy and coalescence mechanism. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2022 , 512, 54-59	1.2	1
7	Atomistic simulations of acceptor removal in p-type Si irradiated with neutrons. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2022 , 512, 42-48	1.2	0
6	Atomistic analysis of B clustering and mobility degradation in highly B-doped junctions. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2009 , 23, 266-284		1
5	Atomistic Simulation Techniques in Front-End Processing. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1070, 1		
4	Atomistic Modeling of Ion Beam Induced Defects in Si: From Point Defects to Continuous Amorphous Layers.. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 810, 422		
3	Atomistic analysis of the ion beam induced defect evolution. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2004 , 216, 100-104	1.2	
2	Molecular Dynamics Modeling of Octadecaborane Implantation into Si 2007 , 17-20		
1	Atomistic modeling of laser-related phenomena 2021 , 79-136		