

# Ivan Santos

## 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.

47  
papers

312  
citations

11  
h-index

15  
g-index

66  
ext. papers

354  
ext. citations

2.5  
avg, IF

2.79  
L-index

#	Paper	IF	Citations
47	Extending defect models for Si processing: The role of energy barriers for defect transformation, entropy and coalescence mechanism. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2022</b> , 512, 54-59	1.2	1
46	Atomistic simulations of acceptor removal in p-type Si irradiated with neutrons. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2022</b> , 512, 42-48	1.2	0
45	Atomistic modeling of laser-related phenomena <b>2021</b> , 79-136		
44	{001} loops in silicon unraveled. <i>Acta Materialia</i> , <b>2019</b> , 166, 192-201	8.4	2
43	On the anomalous generation of {0 0 1} loops during laser annealing of ion-implanted silicon. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2019</b> , 458, 179-183	1.2	3
42	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> , <b>2019</b> , 503-504, 20-27	3.9	3
41	Identification of Extended Defect Atomic Configurations in Silicon Through Transmission Electron Microscopy Image Simulation. <i>Journal of Electronic Materials</i> , <b>2018</b> , 47, 4955-4958	1.9	1
40	W and X Photoluminescence Centers in Crystalline Si: Chasing Candidates at Atomic Level Through Multiscale Simulations. <i>Journal of Electronic Materials</i> , <b>2018</b> , 47, 5045-5049	1.9	5
39	Ultrafast Generation of Unconventional {001} Loops in Si. <i>Physical Review Letters</i> , <b>2017</b> , 119, 205503	7.4	5
38	Improved physical models for advanced silicon device processing. <i>Materials Science in Semiconductor Processing</i> , <b>2017</b> , 62, 62-79	4.3	3
37	Molecular dynamics simulation of the early stages of self-interstitial clustering in silicon. <i>Materials Science in Semiconductor Processing</i> , <b>2016</b> , 42, 235-238	4.3	6
36	Insights on the atomistic origin of X and W photoluminescence lines in c-Si from ab initio simulations. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 075109	3	4
35	Atomistic modeling of ion implantation technologies in silicon. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2015</b> , 352, 148-151	1.2	1
34	A detailed approach for the classification and statistical analysis of irradiation induced defects. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2015</b> , 352, 156-159	1.2	3
33	Modeling of defects, dopant diffusion and clustering in silicon. <i>Journal of Computational Electronics</i> , <b>2014</b> , 13, 40-58	1.8	12
32	Atomistic study of the structural and electronic properties of a-Si:H/c-Si interfaces. <i>Journal of Physics Condensed Matter</i> , <b>2014</b> , 26, 095001	1.8	7
31	Molecular dynamics simulations of damage production by thermal spikes in Ge. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 033519	2.5	15

30	Molecular dynamics simulation of the regrowth of nanometric multigate Si devices. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 034302	2.5	9
29	Modeling of advanced ion implantation technologies in semiconductors <b>2011</b> ,		1
28	Elucidating the atomistic mechanisms driving self-diffusion of amorphous Si during annealing. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	13
27	Simulation study of ion implanted defects associated to luminescence centers in silicon <b>2011</b> ,		1
26	Molecular implants and cold implants: Two new strategies for junction formation of future Si devices <b>2011</b> ,		1
25	Self-trapping in B-doped amorphous Si: Intrinsic origin of low acceptor efficiency. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	8
24	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> , <b>2010</b> , 28, C1A1-C1A6	1.3	3
23	Improved atomistic damage generation model for binary collision simulations. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 083530	2.5	21
22	Front-end process modeling in silicon. <i>European Physical Journal B</i> , <b>2009</b> , 72, 323-359	1.2	27
21	Atomistic process modeling based on Kinetic Monte Carlo and Molecular Dynamics for optimization of advanced devices <b>2009</b> ,		6
20	Structural transformations from point to extended defects in silicon: A molecular dynamics study. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	11
19	Atomistic Simulation Techniques in Front-End Processing. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1070, 1		
18	Physics Mechanisms Involved in the Formation and Recrystallization of Amorphous Regions in Si through Ion Irradiation. <i>Solid State Phenomena</i> , <b>2008</b> , 139, 71-76	0.4	1
17	First Principles Study of Boron in Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1070, 1		
16	Atomistic modeling of impurity ion implantation in ultra-thin-body Si devices <b>2008</b> ,		4
15	Recrystallization of atomically balanced amorphous pockets in Si: A source of point defects. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	18
14	Multiscale modeling of radiation damage and annealing in Si. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2007</b> , 255, 95-100	1.2	2
13	Molecular dynamics study of B18H22 cluster implantation into silicon. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2007</b> , 255, 242-246	1.2	1

12	Molecular dynamics study of amorphous pocket formation in Si at low energies and its application to improve binary collision models. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2007</b> , 255, 110-113	1.3	6
11	Atomistic analysis of the annealing behavior of amorphous regions in silicon. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 093518	2.5	12
10	Molecular dynamics study of damage generation mechanisms in silicon at the low energy regime <b>2007</b> ,		4
9	Molecular Dynamics Modeling of Octadecaborane Implantation into Si <b>2007</b> , 17-20		
8	Modeling of damage generation mechanisms in silicon at energies below the displacement threshold. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	32
7	Characterization of octadecaborane implantation into Si using molecular dynamics. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	21
6	Physical insight into ultra-shallow junction formation through atomistic modeling. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2006</b> , 253, 41-45	1.2	8
5	Molecular dynamics characterization of as-implanted damage in silicon. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2005</b> , 124-125, 372-375	3.1	14
4	Atomistic modeling of ion beam induced amorphization in silicon. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2005</b> , 241, 501-505	1.2	2
3	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> , <b>2005</b> , 124-125, 72-80	3.1	8
2	Atomistic Modeling of Ion Beam Induced Defects in Si: From Point Defects to Continuous Amorphous Layers.. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 810, 422		
1	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> , <b>2004</b> , 114-115, 82-87	3.1	7