

# CITATION REPORT

List of articles citing

## The Diffusivity and Solubility of Oxygen in Silicon

DOI: 10.1557/proc-59-19

Materials Research Society Symposia Proceedings,  
1985, 59, 19.

**Source:** <https://exaly.com/paper-pdf/17814734/citation-report.pdf>

**Version:** 2024-04-25

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

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

#	Paper	IF	Citations
139	Activation energy for thermal donor formation in silicon. <i>Applied Physics Letters</i> , <b>1987</b> , 51, 2197-2199	3.4	46
138	Uniaxial Stress Studies of Optical Centres in Silicon. <i>Materials Research Society Symposia Proceedings</i> , <b>1987</b> , 104, 65		1
137	High Temperature Annealing of Simox Layers Physical Mechanisms of Oxygen Segregation. <i>Materials Research Society Symposia Proceedings</i> , <b>1987</b> , 107, 17		25
136	Oxygen Precipitation Along Individual Ion Tracks During High Dose O+ Implantation into Silicon. <i>Materials Research Society Symposia Proceedings</i> , <b>1987</b> , 93, 143		7
135	Enhanced thermal donor formation in silicon exposed to a hydrogen plasma. <b>1988</b> , 3, 591-593		53
134	Temperature dependence of interstitial oxygen diffusion in antimony-doped Czochralski silicon. <i>Applied Physics Letters</i> , <b>1988</b> , 53, 2659-2660	3.4	11
133	Oxygen bubbles along individual ion tracks in O+ implanted silicon. <i>Journal of Applied Physics</i> , <b>1988</b> , 64, 123-128	2.5	29
132	Optical determination of oxygen outdiffusion in epitaxial silicon grown on n-type Czochralski substrates. <i>Applied Physics Letters</i> , <b>1990</b> , 57, 1511-1513	3.4	10
131	Source of 17O hyperfine broadening of the Pb resonance associated with the (111) Si-SiO <sub>2</sub> interface. <i>Physical Review B</i> , <b>1990</b> , 42, 11352-11354	3.3	
130	Interstitial oxygen determination near epitaxial silicon and Czochralski silicon interface. <i>Applied Physics Letters</i> , <b>1991</b> , 58, 370-372	3.4	6
129	Hydrogen diffusion and the catalysis of enhanced oxygen diffusion in silicon at temperatures below 500 °C. <i>Journal of Applied Physics</i> , <b>1991</b> , 70, 3061-3070	2.5	104
128	Enhanced oxygen precipitation in electron irradiated silicon. <i>Journal of Applied Physics</i> , <b>1992</b> , 72, 5130-5138	3.3	42
127	Infrared determination of interstitial oxygen behavior during epitaxial silicon growth on Czochralski substrates. <i>Journal of Applied Physics</i> , <b>1992</b> , 72, 4313-4320	2.5	4
126	Depth Profiles of Thermal Donors in Czochralski-Grown n-Type Silicon. <i>Materials Research Society Symposia Proceedings</i> , <b>1992</b> , 262, 75		2
125	Generation of thermal donors in silicon: oxygen aggregation controlled by self-interstitials. <b>1993</b> , 8, 2037-2047		21
124	Chapter 6 Some Atomic Configurations of Oxygen. <b>1994</b> , 42, 191-249		19
123	Oxygen Clusters in Quenched Czochralski-Si Studied by Infrared Spectroscopy and Positron Annihilation. <i>Japanese Journal of Applied Physics</i> , <b>1994</b> , 33, 1723-1727	1.4	8

122	Hydrogen introduction and hydrogen-enhanced thermal donor formation in silicon. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 3477-3484	2.5	51
121	Modelling oxygen defects in silicon crystals using an empirical interatomic potential. <b>1994</b> , 49, 2991-3000		12
120	Al-O interactions in ion-implanted crystalline silicon. <i>Journal of Applied Physics</i> , <b>1994</b> , 76, 2070-2077	2.5	14
119	Chapter 8 Diffusion of Oxygen in Silicon. <b>1994</b> , 42, 289-352		31
118	Study of Oxygen Diffusion and Clustering in Silicon Using an Empirical Interatomic Potential. <i>Materials Research Society Symposia Proceedings</i> , <b>1995</b> , 378, 89		
117	A model for oxygen precipitation in silicon including bulk stacking fault growth. <i>Journal of Applied Physics</i> , <b>1995</b> , 78, 6469-6476	2.5	24
116	Atomistic calculation of oxygen diffusivity in crystalline silicon. <b>1995</b> , 74, 2046-2049		44
115	Diffusion limited oxygen precipitation in silicon: Precipitate growth kinetics and phase formation. <i>Journal of Applied Physics</i> , <b>1995</b> , 78, 4297-4299	2.5	60
114	Growth law of silicon oxides by dry oxidation. <b>1996</b> , 11, 1059-1064		21
113	Oxygen Concentration in the Top Silicon Layer of Silicon-on-Insulator Materials Formed by Low-Dose Implantation of Oxygen. <i>Japanese Journal of Applied Physics</i> , <b>1996</b> , 35, L359-L361	1.4	1
112	Vacancy-type microdefect formation in Czochralski silicon. <b>1998</b> , 194, 76-88		174
111	The influence of oxygen on the lattice sites of rare earths in silicon. <b>1998</b> , 80, 303-307		9
110	Out Diffusion of Oxygen in Czochralski Silicon at Low Temperatures. <i>Materials Research Society Symposia Proceedings</i> , <b>1998</b> , 527, 389		
109	Dependence of Grown-in Defect Behavior on Oxygen Concentration in Czochralski Silicon Crystals. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, 5725-5730	1.4	15
108	The conversion of isolated oxygen atoms to a fast diffusing species in Czochralski silicon at low temperatures. <i>Journal of Applied Physics</i> , <b>1999</b> , 86, 1878-1887	2.5	25
107	Growth/dissolution model for oxygen precipitation based on the kinetics of phase transformations. <i>Journal of Applied Physics</i> , <b>1999</b> , 85, 2100-2107	2.5	15
106	Grown-in microdefects, residual vacancies and oxygen precipitation bands in Czochralski silicon. <b>1999</b> , 204, 462-474		134
105	Oxygen and Carbon Precipitation in Multicrystalline Solar Silicon. <b>1999</b> , 171, 175-189		59

104	Vibrations of the Interstitial Oxygen Pairs in Silicon. <b>1999</b> , 82, 4022-4025		34
103	A study of oxygen dislocation interactions in CZ-Si. <b>2000</b> , 73, 111-115		3
102	Ten questions on glassformers, and a real space 'excitations' model with some answers on fragility and phase transitions. <i>Journal of Physics Condensed Matter</i> , <b>2000</b> , 12, 6463-6475	1.8	97
101	'Strong' and 'superstrong' liquids, and an approach to the perfect glass state via phase transition. <b>2000</b> , 274, 319-331		65
100	Local vibrational modes of impurities in semiconductors. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 3593-3617	2.5	109
99	Inward diffusion of oxygen on a silicon surface. <b>2000</b> , 84, 4633-6		7
98	Diffusion-limited growth of single- and double-octahedral voids in silicon and the effect of surface oxygen monolayer. <b>2001</b> , 226, 192-202		11
97	On the locking of dislocations by oxygen in silicon. <b>2001</b> , 81, 759-775		37
96	Oxygen precipitation in nitrogen-doped Czochralski-grown silicon crystals. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 4301-4309	2.5	110
95	Heating rate dependence of melting of silicon: An in situ x-ray topography study. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 2247-2251	2.5	1
94	Onset of slip in silicon containing oxide precipitates. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 3219-3225	2.5	30
93	Thermodynamic properties of the SiSiO <sub>2</sub> system. <b>2002</b> , 117, 1843-1850		8
92	On the dislocation-oxygen interactions in Czochralski-grown Si: oxygen diffusion and binding at low temperatures. <i>Journal of Physics Condensed Matter</i> , <b>2002</b> , 14, 13141-13145	1.8	9
91	An integrated kinetic Monte Carlo molecular dynamics approach for film growth modeling and simulation: ZrO <sub>2</sub> deposition on Si(100) surface. <b>2002</b> , 24, 128-132		18
90	Shallow thermal donors in nitrogen-doped silicon single crystals. <b>2002</b> , 44, 727-731		1
89	Calculation of Size Distribution of Void Defects in CZ Silicon. <b>2003</b> , 150, G587		12
88	Computer Simulation for Morphology, Size, and Density of Oxide Precipitates in CZ Silicon. <b>2003</b> , 150, G469		24
87	Out- and in-diffusion of oxygen <sup>16</sup> O in silicon. <b>2004</b> , 19, 1311-1314		10

86	Degradation of boron-doped Czochralski-grown silicon solar cells. <b>2004</b> , 93, 055504		73
85	A systems-based approach for generating quantitative models of microstructural evolution in silicon materials processing. <b>2005</b> , 29, 713-730		10
84	The influence of oxygen on the formation of donor centers in silicon layers implanted with erbium and oxygen ions. <b>2005</b> , 39, 742-747		1
83	Oxygen and Nitrogen Transport in Silicon Investigated by Dislocation Locking Experiments. <b>2005</b> , 152, G460		22
82	General Model of Diffusion of Interstitial Oxygen in Silicon and Germanium Crystals. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 864, 9201		1
81	General Model of Diffusion of Interstitial Oxygen in Silicon, Germanium and Silicon - Germanium Crystals. <b>2005</b> , 108-109, 413-418		5
80	Electrical activity of Er and Er-O centers in silicon. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	8
79	The lower boundary of the hydrogen concentration required for enhancing oxygen diffusion and thermal donor formation in Czochralski silicon. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 033511	2.5	7
78	Oxygen Precipitation in Nitrogen Doped CZ Silicon. <b>2005</b> , 108-109, 17-24		8
77	Unified model of diffusion of interstitial oxygen in silicon and germanium crystals. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, S2285-S2291	1.8	14
76	Enhanced oxygen diffusion in highly doped p-type Czochralski silicon. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 103531	2.5	19
75	Combination of optical measurement and precipitation theory to overcome the obstacles of detection limits. <b>2006</b> , 9, 236-240		6
74	Ab initio studies of intrinsic point defects, interstitial oxygen and vacancy or oxygen clustering in germanium crystals. <b>2006</b> , 9, 494-497		28
73	Oxygen transport in Czochralski silicon investigated by dislocation locking experiments. <b>2006</b> , 134, 176-184		9
72	Influence of Oxygen Partial Pressure on Thickness Change of Buried Oxide in Silicon-on-Insulator Structure during High-Temperature Oxidation Processes. <b>2006</b> , 153, G1078		3
71	Low temperature diffusion of impurities in hydrogen implanted silicon. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 083529	2.5	5
70	Two Paths of Oxide Precipitate Nucleation in Silicon. <b>2007</b> , 131-133, 293-302		9
69	An electro spray technique for hyperquenched glass calorimetry studies: Propylene glycol and di-n-butyl phthalate. <b>2007</b> , 353, 3829-3837		25

68	Analytical Modeling of the Interaction of Vacancies and Oxygen for Oxide Precipitation in RTA Treated Silicon Wafers. <b>2007</b> , 154, H454		43
67	Brother Silicon, Sister Germanium. <b>2007</b> , 154, H572		81
66	Enhanced oxygen diffusion in Czochralski silicon at 450-500 °C. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2008</b> , 205, 1148-1151	1.6	3
65	Oxide Precipitation Via Coherent Seed-Oxide Phases. <b>2008</b> , 155, H448		11
64	Formation Mechanisms of Divacancy-Oxygen Complex in Silicon. <b>2008</b> , 155, H160		
63	Rate Equation Modeling, Ab Initio Calculation, and High Sensitive FTIR Investigations of the Early Stages of Oxide Precipitation in Vacancy-Rich CZ Silicon. <b>2009</b> , 156-158, 211-216		4
62	Properties of Fast-Diffusing Oxygen Species in Silicon Deduced from the Generation Kinetics of Thermal Donors. <b>2009</b> , 156-158, 115-122		6
61	Anomalous Out-Diffusion Profiles of Nitrogen in Silicon. <b>2009</b> , 156-158, 149-154		
60	Oxygen in Silicon. <b>2010</b> , 59-69		2
59	Latent complexes of interstitial boron and oxygen dimers as a reason for degradation of silicon-based solar cells. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 053509	2.5	122
58	Kinetic Monte Carlo simulation for the striation distribution of void defects in Czochralski silicon growth. <b>2010</b> , 36, 663-669		1
57	Solar Grade Silicon Feedstock. <b>2011</b> , 169-217		9
56	Effect of Thermal History on Iron Precipitation in Crystalline Silicon. <b>2011</b> , 8, 355-359		4
55	The effect of impurity-induced lattice strain and Fermi level position on low temperature oxygen diffusion in silicon. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 063532	2.5	20
54	Experimental study of iron redistribution between bulk defects and boron doped layer in silicon wafers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2011</b> , 208, 2430-2436	1.6	2
53	Modeling the Early Stages of Oxygen Agglomeration. <b>2011</b> , 158, H343		10
52	The annealing mechanism of the radiation-induced vacancy-oxygen defect in silicon. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 113530	2.5	8
51	Silicon-in-silica spheres via axial thermal gradient in-fibre capillary instabilities. <b>2013</b> , 4, 2216		75

50	A novel constitutive model for semiconductors: The case of silicon. <b>2013</b> , 61, 2402-2432		11
49	A reduced moment-based model for oxygen precipitation in silicon. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 243508	2.5	7
48	Depth profiles of oxygen precipitates in nitride-coated silicon wafers subjected to rapid thermal annealing. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 043520	2.5	8
47	First Principle Study of the Diffusion of Oxygen and Oxygen Complexes in Si, SiGe Solid Solutions and Si Nanocrystals. <b>2013</b> , 205-206, 171-180		2
46	Oxygen diffusivity in silicon derived from dynamical X-ray diffraction. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 073508	2.5	8
45	Impact of Rapid Thermal Oxidation at Ultrahigh-Temperatures on Oxygen Precipitation Behavior in Czochralski-Silicon Crystals. <i>ECS Journal of Solid State Science and Technology</i> , <b>2013</b> , 2, P66-P70	2	10
44	Diffusion-driven precipitate growth and ripening of oxygen precipitates in boron doped silicon by dynamical x-ray diffraction. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 123505	2.5	9
43	Dislocation behavior of surface-oxygen-concentration controlled Si wafers. <b>2014</b> , 557, 106-109		0
42	Minimum energy path and atomistic mechanism of the elementary step in oxygen diffusion in silicon: A density-functional study. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	11
41	Near-interfacial thermal donor generation during processing of (100)Si/low-Bi-oxycarbide insulator structures revealed by electron spin resonance. <b>2014</b> , 29, 095008		
40	Dynamics of SiO <sub>2</sub> Buried Layer Removal from Si-SiO <sub>2</sub> -Si and Si-SiO <sub>2</sub> -SiC Bonded Substrates by Annealing in Ar. <b>2014</b> , 43, 541-547		4
39	Radial oxygen precipitation of a 12̄CZ silicon crystal studied in-situ with high energy X-ray diffraction. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2014</b> , 211, 2450-2454	1.6	3
38	Oxygen Precipitation in Silicon. <i>Lecture Notes in Physics</i> , <b>2015</b> , 273-341	0.8	7
37	Identification of a fast diffusing oxygen species in silicon based on the generation rate of thermal donors. <i>Physica Status Solidi (B): Basic Research</i> , <b>2015</b> , 252, 816-820	1.3	3
36	Czochralski Growth of Silicon Crystals. <b>2015</b> , 45-104		15
35	The impact of oxygen precipitation on dislocation generation at small angle grain boundaries during seed-assisted directional solidification of silicon. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 122-126	1.6	5
34	Diffusion of interstitial oxygen in silicon and germanium: a hybrid functional study. <i>Journal of Physics Condensed Matter</i> , <b>2016</b> , 28, 495801	1.8	4
33	Oxygen precipitates distributed around random grain boundaries in a cast-grown multicrystalline silicon crystal. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 041302	1.4	1

32	Diffusion and aggregation process of oxygen embedded around an amorphous/crystal interface of Si(001) studied by molecular dynamics simulation. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 185302	2.5	
31	Investigation of the Composition of the Si/SiO <sub>2</sub> Interface in Oxide Precipitates and Oxide Layers on Silicon by STEM/EELS. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, N54-N63	2	12
30	Oxygen migration enthalpy likely limits oxide precipitate dissolution during tabula rasa. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 132102	3.4	5
29	About the influence of deposited nitride layers on oxide precipitation after RTA pre-treatment. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2017</b> , 214, 1700236	1.6	5
28	Oxygen in silicon: Switch in the diffusion-mediated mechanism. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	1
27	Enhanced diffusion of boron by oxygen precipitation in heavily boron-doped silicon. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 215103	2.5	6
26	Effect of electron injection on defect reactions in irradiated silicon containing boron, carbon, and oxygen. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 161576	2.5	7
25	Stability of Excess Oxygen Atoms near Oxide Precipitate and Oxygen Solubility in Silicon Crystal. <i>ECS Journal of Solid State Science and Technology</i> , <b>2018</b> , 7, P102-P108	2	3
24	VOn Complexes in RTA Treated Czochralski Silicon Wafers Investigated by FTIR Spectroscopy. <i>ECS Journal of Solid State Science and Technology</i> , <b>2018</b> , 7, P707-P710	2	3
23	Basic Properties of Transition Metals in Semiconductors. <i>Springer Series in Materials Science</i> , <b>2018</b> , 9-35	0.9	
22	Stretchable Seal. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 27333-27343	9.5	24
21	Ultrahigh sensitivity SIMS analysis of oxygen in silicon. <i>Surface and Interface Analysis</i> , <b>2018</b> , 50, 729-733	1.5	8
20	Near-Surface Defect Control by Vacancy Injecting/Out-Diffusing Rapid Thermal Annealing. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2019</b> , 216, 1900325	1.6	1
19	On the Impact of Strained PECVD Nitride Layers on Oxide Precipitate Nucleation in Silicon. <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, N125-N133	2	1
18	Data-assisted physical modeling of oxygen precipitation in silicon wafers. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 165705	2.5	1
17	Development of the ReaxFF Reactive Force Field for Inherent Point Defects in the Si/Silica System. <i>Journal of Physical Chemistry A</i> , <b>2019</b> , 123, 4303-4313	2.8	10
16	Kinetics and Thermodynamics of Iron Sulfide, Precipitation, Deposition and Control. <b>2019</b> ,		0
15	Oxygen Impurity in Crystalline Silicon. <b>2019</b> , 399-436		0



14	Editors' Choice Precipitation of Suboxides in Silicon, their Role in Gettering of Copper Impurities and Carrier Recombination. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 064002	2	1
13	Prediction of O Aggregation in Straight Line at High Temperature in Si Crystals: Thermal Donors Attaching to an Oxide Precipitate Surface. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 054003	2	1
12	Novel Description of Oxidizing Reactions in SiO <sub>2</sub> /Si (100) Interface and Framework for Estimating Interface State Density. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 024013	2	0
11	Ring-Like Defect Formation in N-Type Czochralski-Grown Silicon Wafers during Thermal Donor Formation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2021</b> , 218, 2000587	1.6	4
10	High-Temperature Properties of Transition Elements in Silicon.		1
9	The Initial Stages of Oxygen Aggregation in Silicon: Dimers, Hydrogen and Self-Interstitials. <b>1996</b> , 19-39		6
8	Origins and Atomic Properties of H-Like Centres. <i>Springer Series in Solid-state Sciences</i> , <b>2009</b> , 21-44	0.4	
7	Introduction. <i>Springer Series in Solid-state Sciences</i> , <b>2013</b> , 1-41	0.4	
6	Oxygen Impurity in Crystalline Silicon. <b>2019</b> , 1-38		
5	Silicon, solubility data of impurities: group VIA. 1-15		
4	Origin of carrier lifetime degradation in floating-zone silicon during a high-temperature process for insulated gate bipolar transistor. <i>Japanese Journal of Applied Physics</i> , <b>2020</b> , 59, 115503	1.4	
3	Formation behavior of oxygen precipitates in silicon wafers subjected to ultra-high-temperature rapid thermal process. <i>Journal of Applied Physics</i> , <b>2022</b> , 131, 055704	2.5	1
2	Impurity analysis of the effect of partial replacement of retort with an insulation material on mc-silicon grown in directional solidification furnace: Computational modeling. <b>2022</b> , 599, 126892		0
1	Process Simulation. <b>2023</b> , 1259-1302		0