T Y Tan

List of Publications by Year in Descending Order

99 papers	4,272 citations	33 h-index	65 g-index
103 ext. papers	4,479 ext. citations	2.9 avg, IF	4.83 L-index

#	Paper	IF	Citations
99	Metallic precipitate contribution to carrier generation in metal□oxide□semiconductor capacitors due to the Schottky effect. *Journal of Applied Physics*, **2004**, 95, 191-198	2.5	1
98	Silicon nanowhiskers grown on <111>Si substrates by molecular-beam epitaxy. *Applied Physics Letters*, **2004**, 84, 4968-4970	3.4	278
97	Metallic precipitate contribution to generation and recombination currents in p-n junction devices due to the Schottky effect. *Journal of Applied Physics*, **2003**, 94, 5064	2.5	18
96	Recent Progresses in Understanding Gettering in Silicon. *Materials Research Society Symposia Proceedings*, **2002**, 719, 411		
95	Modeling Growth Directional Features of Silicon Nanowires Obtained Using SiO. *Materials Research Society Symposia Proceedings*, **2002**, 719, 8381		
94	Effect of Al-induced gettering and back surface field on the efficiency of Si solar cells. *Journal of Applied Physics*, **2001**, 90, 5388-5394	2.5	17
93	Schottky effect model of electrical activity of metallic precipitates in silicon. *Applied Physics Letters*, **2000**, 76, 3777-3779	3.4	53
92	The contribution of vacancies to carbon out-diffusion in silicon. *Applied Physics Letters*, **1999**, 74, 392-394	3.4	69
91	Modeling of gettering of precipitated impurities from Si for carrier lifetime improvement in solar cell applications. *Journal of Applied Physics*, **1999**, 86, 2453-2458	2.5	76
90	Experimental and computer simulation studies of diffusion mechanisms on the arsenic sublattice of gallium arsenide. *Journal of Applied Physics*, **1998**, 83, 5295-5301	2.5	28
89	Mass transport equations unifying descriptions of isothermal diffusion, thermomigration, segregation, and position-dependent diffusivity. *Applied Physics Letters*, **1998**, 73, 2678-2680	3.4	18
88	Modeling of nucleation and growth of voids in silicon. *Journal of Applied Physics*, **1998**, 84, 718-726	2.5	12
87	Carbon-induced undersaturation of silicon self-interstitials. *Applied Physics Letters*, **1998**, 72, 200-202	3.4	83
86	A □smarter-cut□approach to low temperature silicon layer transfer. *Applied Physics Letters*, **1998**, 72, 49-51	3.4	90
85	Fermi-Level Effect, Electric Field Effect, and Diffusion Mechanisms in GaAs Based III-V Compound Semiconductors. *Materials Research Society Symposia Proceedings*, **1998**, 527, 321		1
84	Nucleation barrier of voids and dislocation loops in silicon. *Applied Physics Letters*, **1997**, 70, 1715-1717	3.4	18
83	Oxide precipitation at silicon grain boundaries. *Applied Physics Letters*, **1997**, 70, 327-329	3.4	11

82	Interdiffusion studies in GaAsP/GaAs and GaAsSb/GaAs superlattices under various arsenic vapor pressures. *Journal of Applied Physics*, **1997**, 81, 6056-6061	2.5	27
81	Point Defects, Diffusion and Gettering in Silicon. *Materials Research Society Symposia Proceedings*, **1997**, 469, 13		3
80	Nucleation and Growth of Voids in Silicon. *Materials Research Society Symposia Proceedings*, **1997**, 490, 77		1
79	Grain Enhancement of Thin Silicon Layers Using Optical Processing. *Materials Research Society Symposia Proceedings*, **1997**, 470, 419		2
78	Grain Enhancement of Polycrystalline Silicon Films Aided by Optical Excitation. *Materials Research Society Symposia Proceedings*, **1997**, 485, 95		1
77	Fermi-Level Effect on Group III Atom Interdiffusion in III-V Compounds: Bandgap Heterogeneity and Low Silicon-Doping. *Materials Research Society Symposia Proceedings*, **1997**, 490, 105		
76	Simulation of Under- and Supersaturation of Gallium Vacancies in Gallium Arsenide During Silicon in- and Outdiffusion. *Materials Research Society Symposia Proceedings*, **1997**, 490, 99		
75	Low-Temperature Diffusion and Agglomeration of Oxygen in Silicon **1996**, 243-261		2
74	Coprecipitation of oxygen and carbon in Czochralski silicon: A growth kinetic approach. *Journal of Applied Physics*, **1995**, 78, 5926-5935	2.5	15
73	Model of partitioning of point defect species during precipitation of a misfitting compound in Czochralski silicon. *Journal of Applied Physics*, **1995**, 77, 5563-5571	2.5	17
72	On the validity of the amphoteric-defect model in gallium arsenide and a criterion for Fermi-level pinning by defects. *Applied Physics A: Materials Science and Processing*, **1995**, 61, 397-405	2.6	7
71	Phosphorus and Aluminum Gettering of Gold in Silicon: Simulation and Optimization Considerations. *Materials Research Society Symposia Proceedings*, **1995**, 378, 297		3
70	Carbon precipitation in silicon: Why is it so difficult?. *Applied Physics Letters*, **1993**, 62, 3336-3338	3.4	53
69	Diffusion of Fe in InP via the kick-out mechanism. *Applied Physics Letters*, **1993**, 62, 75-77	3.4	15
68	Al□a interdiffusion, carbon acceptor diffusion, and hole reduction in carbon-doped Al0.4Ga0.6As/GaAs superlattices: The As4 pressure effect. *Journal of Applied Physics*, **1993**, 74, 2450-2460	2.5	25
67	Modeling of zinc-indiffusion-induced disordering of GaAs/AlAs superlattices. *Journal of Applied Physics*, **1993**, 73, 150-157	2.5	15
66	Formation of void/Ga-precipitate pairs during Zn diffusion into GaAs: The competition of two thermodynamic driving forces. *Journal of Applied Physics*, **1993**, 74, 4409-4422	2.5	39
65	Diffusion-Segregation Equation for Simulation in Heterostructures. *Materials Research Society Symposia Proceedings*, **1993**, 318, 31		

64	CoSi and CoSi2 Phase Formation on Bulk and Soi Si Substrates. *Materials Research Society Symposia Proceedings*, **1993**, 320, 373		3
63	Arsenic Diffusion and Segregation Behavior at the Interface of Epitaxial CoSi2 Film and Si Substrate. *Materials Research Society Symposia Proceedings*, **1993**, 320, 409		
62	Layer Disordering and Carrier Concentration in Heavily Carbon-Doped AlGaAs/GaAs Superlattices. *Materials Research Society Symposia Proceedings*, **1993**, 300, 409		
61	Thermal equilibrium concentrations and effects of negatively charged Ga vacancies in n-type GaAs. *Applied Physics A: Materials Science and Processing*, **1993**, 56, 249-258	2.6	77
60	Epitaxial CoSi2 Formation on (001) Si Using Sequentially Deposited Ti-Co Bilayers **1993**, 523-526		
59	Disordering in 69GaAs/71GaAs isotope superlattice structures. *Journal of Applied Physics*, **1992**, 72, 5206-5212	2.5	42
58	A Consistent Model for Disordering of GaAs/AlAs-Superlattices During Zinc Diffusion. *Materials Research Society Symposia Proceedings*, **1992**, 262, 861		
57	Disordering and Characterization Studies of 69GaAs/71GaAs Isotope Superlattice Structures: The Effect of Outdiffusion of the Substrate Dopant Si. *Materials Research Society Symposia Proceedings*, **1992**, 262, 873		
56	Resistance and structural stabilities of epitaxial CoSi2 films on (001) Si substrates. *Journal of Applied Physics*, **1992**, 72, 1864-1873	2.5	91
55	SiO2 precipitate strain relief in Czochralski Si: Self-interstitial emission versus prismatic dislocation loop punching. *Journal of Applied Physics*, **1992**, 72, 2192-2196	2.5	19
54	Determination of Ga Self-Diffusion Coefficient in GaAs. *Materials Research Society Symposia Proceedings*, **1991**, 240, 739		
53	Mechanism of Cr Diffusion in GaAs. *Materials Research Society Symposia Proceedings*, **1991**, 240, 747		
52	Atomistic mechanisms of dopant-induced multiple quantum well mixing and related phenomena. *Optical and Quantum Electronics*, **1991**, 23, S863-S881	2.4	6
51	Determination of vacancy and self-interstitial contributions to gallium self-diffusion in GaAs. *Journal of Applied Physics*, **1991**, 70, 4823-4826	2.5	33
50	Formation of epitaxial CoSi2 films on (001) silicon using Ti-Co alloy and bimetal source materials. *Journal of Applied Physics*, **1991**, 70, 7579-7587	2.5	108
49	Diffusion mechanism of zinc and beryllium in gallium arsenide. *Journal of Applied Physics*, **1991**, 69, 3547-3565	2.5	143
48	Distribution mechanism of voids in Si-implanted GaAs. *Journal of Applied Physics*, **1991**, 70, 656-660	2.5	11
47	Diffusion mechanism of chromium in GaAs. *Journal of Applied Physics*, **1991**, 70, 4827-4836	2.5	35

46	Point defects, diffusion mechanisms, and superlattice disordering in gallium arsenide-based materials. *Critical Reviews in Solid State and Materials Sciences*, **1991**, 17, 47-106	10.1	135
45	Oxygen precipitation in silicon: The role of strain and self-interstitials. *Applied Physics Letters*, **1991**, 59, 2007-2009	3.4	21
44	On the Distribution Mechanism of Voids in Si-Implanted GaAs. *Materials Research Society Symposia Proceedings*, **1990**, 209, 421		
43	Growth, shrinkage, and stability of interfacial oxide layers between directly bonded silicon wafers. *Applied Physics A: Solids and Surfaces*, **1990**, 50, 85-94		32
42	Void Formation and Its Effect on Dopant Diffusion and Carrier Activation in Si-Implanted GaAs. *Japanese Journal of Applied Physics*, **1990**, 29, L1950-L1953	1.4	8
41	Void formation, electrical activation, and layer intermixing in Si-implanted GaAs/AlGaAs superlattices. *Applied Physics Letters*, **1990**, 57, 389-391	3.4	10
40	Stability of interfacial oxide layers during silicon wafer bonding. *Journal of Applied Physics*, **1989**, 65, 561-563	2.5	30
39	Transition metal silicide precipitation in silicon induced by rapid thermal processing and free-surface gettering. *Applied Physics Letters*, **1989**, 55, 2108-2110	3.4	21
38	Influence of dislocations on diffusion-induced nonequilibrium point defects in III-V compounds. *Applied Physics Letters*, **1989**, 54, 849-851	3.4	17
37	Void formation and inhibition of layer intermixing in ion-implanted GaAs/AlGaAs superlattices. *Applied Physics Letters*, **1989**, 55, 1194-1196	3.4	17
36	Do oxygen molecules contribute to oxygen diffusion and thermal donor formation in silicon?. *Applied Physics A: Solids and Surfaces*, **1989**, 48, 219-228		42
35	The diffusivity of silicon self-interstitials. *Radiation Effects and Defects in Solids*, **1989**, 111-112, 131-150	0.9	28
34	Diffusion in Gallium Arsenide and GaAs-Based Layered Structures. *Materials Research Society Symposia Proceedings*, **1989**, 163, 715		1
33	Correlation of Void Formation with the Reduction of Carrier Activation and Anomalous Dopant Diffusion in Si-Implanted GaAs. *Materials Research Society Symposia Proceedings*, **1989**, 163, 983		1
32	Mechanisms of doping-enhanced superlattice disordering and of gallium self-diffusion in GaAs. *Applied Physics Letters*, **1988**, 52, 1240-1242	3.4	154
31	Mechanisms of Self-Diffusion and of Doping-Enhancement of Superlattice Disordering in GaAs and AlAs Compounds. *Materials Research Society Symposia Proceedings*, **1988**, 144, 221		3
30	Destruction mechanism of III-V compound quantum well structures due to impurity diffusion. *Journal of Applied Physics*, **1987**, 61, 1841-1845	2.5	96
29	Mechanisms of Doping-Enhanced Superlattice Disordering and of Gallium Self-Diffusion in GaAs. *Materials Research Society Symposia Proceedings*, **1987**, 104, 605		1

28	Oxygen precipitation retardation and recovery phenomena in Czochralski silicon: Experimental observations, nuclei dissolution model, and relevancy with nucleation issues. *Journal of Applied Physics*, **1986**, 59, 917-931	2.5	69
27	Exigent-Accommodation-Volume of Precipitation and Formation of Oxygen Precipitates in Silicon. *Materials Research Society Symposia Proceedings*, **1985**, 59, 269		9
26	In depth generation lifetime profiling of heat-treated czochralski silicon. *Physica Status Solidi A*, **1985**, 92, 327-335		3
25	Point defects, diffusion processes, and swirl defect formation in silicon. *Applied Physics A: Solids and Surfaces*, **1985**, 37, 1-17		398
24	Observation of a doping-dependent orientation effect of the depletion of silicon self-interstitials during oxidation. *Journal of Applied Physics*, **1985**, 57, 1812-1815	2.5	0
23	Chemical reaction and Schottky-barrier formation at V/Si interfaces. *Physical Review B*, **1984**, 29, 1540-1550	3.3	40
22	Chemical and structural aspects of reaction at the Ti/Si interface. *Physical Review B*, **1984**, 30, 5421-5429	3.3	93
21	The Influence of Point Defects on Diffusion and Gettering in Silicon. *Materials Research Society Symposia Proceedings*, **1984**, 36, 105		15
20	On the Interaction of Intrinsic and Extrinsic Gettering Schemes in Silicon. *Materials Research Society Symposia Proceedings*, **1984**, 36, 223		3
19	On the nature of point defects and the effect of oxidation on substitutional dopant diffusion in silicon. *Applied Physics A: Solids and Surfaces*, **1983**, 31, 97-108		49
18	Observation of oxidation-enhanced and oxidation-retarded diffusion of antimony in silicon. *Applied Physics Letters*, **1983**, 42, 448-450	3.4	29
17	Intrinsic Point Defects and Diffusion Processes in Silicon. *Materials Research Society Symposia Proceedings*, **1983**, 31, 127		2
16	Kinetics of silicon stacking fault growth/shrinkage in an oxidizing ambient containing a chlorine compound. *Journal of Applied Physics*, **1982**, 53, 4767-4778	2.5	29
15	Oxidation-enhanced or retarded diffusion and the growth or shrinkage of oxidation-induced stacking faults in silicon. *Applied Physics Letters*, **1982**, 40, 616-619	3.4	104
14	Observation of Oxidation-Enhanced and -Retarded Diffusion of Antimony in Silicon: The Behavior of (111) Wafers. *Materials Research Society Symposia Proceedings*, **1982**, 14, 141		2
13	The Nature of Point Defects and their Influence on Diffusion Processes in Silicon at High Temperatures. *Materials Research Society Symposia Proceedings*, **1982**, 14, 45		15
12	Oxygen diffusion and thermal donor formation in silicon. *Applied Physics A: Solids and Surfaces*, **1982**, 28, 79-92		255
11	Atomic modelling of homogeneous nucleation of dislocations from condensation of point defects in silicon. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1981**, 44, 101-125		94

10	Growth kinetics of oxidation-induced stacking faults in silicon: A new concept. *Applied Physics Letters*, **1981**, 39, 86-88	3.4	70
9	On the diamond-cubic to hexagonal phase transformation in silicon. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1981**, 44, 127-140		92
8	Precipitation of Oxygen and Intrinsic Gettering in Silicon. *Materials Research Society Symposia Proceedings*, **1980**, 2, 367		11
7	Intrinsic gettering by oxide precipitate induced dislocations in Czochralski Si. *Applied Physics Letters* , **1977**, 30, 175-176	3.4	340
6	Oxygen precipitation and the generation of dislocations in silicon. *Philosophical Magazine and Journal*, **1976**, 34, 615-631		157
5	Nucleation of stacking faults at oxide precipitate-dislocation complexes in silicon. *Applied Physics Letters*, **1976**, 29, 765-767	3.4	19
4	Nucleation of CuSi precipitate colonies in oxygen-rich silicon. *Applied Physics Letters*, **1976**, 28, 564-565	3.4	92
3	WAVE INTERACTIONS IN SATURABLE ABSORBERS. *Applied Physics Letters*, **1967**, 10, 4-7	3.4	96
2	Point Defects, Diffusion, and Precipitation231-290		1
1	Point Defects, Diffusion, and Precipitation231-290		