Charles Tu

List of Publications by Year in Descending Order

96 papers	2,591 citations	25 h-index	49 g-index
104 ext. papers	2,755 ext. citations	3.6 avg, IF	4.48 L-index

#	Paper	IF	Citations
96	Formation, electronic structure, and optical properties of self-assembled quantum-dot single-photon emitters in Ga(N,As,P) nanowires. *Physical Review Materials*, **2020**, 4,	3.2	3
95	Unintentional nitrogen incorporation in ZnO nanowires detected by electron paramagnetic resonance spectroscopy. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2016**, 13, 572-575		1
94	Silicon dopant passivation by nitrogen during molecular beam epitaxy of GaNAs. *Applied Physics A: Materials Science and Processing*, **2015**, 120, 635-639	2.6	1
93	Ultraviolet emission from a multi-layer graphene/MgZnO/ZnO light-emitting diode. *Applied Physics Letters*, **2014**, 104, 051120	3.4	17
92	Effect of thermal annealing on defects in post-growth hydrogenated GaNP. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2013**, 10, 561-563		1
91	GaNAsP: An intermediate band semiconductor grown by gas-source molecular beam epitaxy. *Applied Physics Letters*, **2013**, 102, 112105	3.4	32
90	Efficient room-temperature nuclear spin hyperpolarization of a defect atom in a semiconductor. *Nature Communications*, **2013**, 4, 1751	17.4	29
89	Feasibility of enhancing the thermoelectric power factor in GaNxAs1□. *Physical Review B*, **2012**, 86,	3.3	8
88	Effects of hydrogenation on non-radiative defects in GaNP and GaNAs alloys: An optically detected magnetic resonance study. *Journal of Applied Physics*, **2012**, 111, 023501	2.5	4
87	Mechanism for radiative recombination and defect properties of GaP/GaNP core/shell nanowires. *Applied Physics Letters*, **2012**, 101, 163106	3.4	27
86	Efficient room-temperature spin detector based on GaNAs. *Journal of Applied Physics*, **2012**, 111, 07C303	2.5	9
85	Temperature dependence of dynamic nuclear polarization and its effect on electron spin relaxation and dephasing in InAs/GaAs quantum dots. *Applied Physics Letters*, **2012**, 100, 143105	3.4	4
84	Room-temperature spin injection and spin loss across a GaNAs/GaAs interface. *Applied Physics Letters*, **2011**, 98, 012112	3.4	7
83	Room temperature spin filtering effect in GaNAs: Role of hydrogen. *Applied Physics Letters*, **2011**, 99, 152109	3.4	7
82	The influence of dopant type and carrier concentration on the effective mass and Seebeck coefficient of GaNxAs1□ thin films. *Applied Physics Letters*, **2011**, 99, 072114	3.4	9
81	Effect of postgrowth hydrogen treatment on defects in GaNP. *Applied Physics Letters*, **2011**, 98, 141920	3.4	7
80	Strong room-temperature optical and spin polarization in InAs/GaAs quantum dot structures. *Applied Physics Letters*, **2011**, 98, 203110	3.4	14

79	Electron spin filtering by thin GaNAs/GaAs multiquantum wells. *Applied Physics Letters*, **2010**, 96, 052104	3.4	25
78	Dominant recombination centers in Ga(In)NAs alloys: Ga interstitials. *Applied Physics Letters*, **2009**, 95, 241904	3.4	54
77	Evidence of type-II band alignment at the ordered GaInNP to GaAs heterointerface. *Physica Status Solidi (A) Applications and Materials Science*, **2009**, 206, 803-807	1.6	
76	Room-temperature defect-engineered spin filter based on a non-magnetic semiconductor. *Nature Materials*, **2009**, 8, 198-202	27	78
75	Electrical and deep-level characterization of GaP1−xNx grown by gas-source molecular beam epitaxy. *Journal of Applied Physics*, **2007**, 101, 103707	2.5	9
74	Hydrogen passivation of nitrogen in GaNAs and GaNP alloys: How many H atoms are required for each N atom?. *Applied Physics Letters*, **2007**, 90, 021920	3.4	6
73	Amber GaNP-based light-emitting diodes directly grown on GaP(100) substrates. *Journal of Vacuum Science & Technology B*, **2006**, 24, 2202		8
72	Growth and fabrication of InGaNP-based yellow-red light emitting diodes. *Applied Physics Letters*, **2006**, 89, 191107	3.4	16
71	Optical properties of InGaNP quantum wells grown on GaP (100) substrates by gas-source molecular beam epitaxy. *Applied Physics Letters*, **2006**, 89, 111922	3.4	5
70	Photoluminescence upconversion in GaInNP□GaAs heterostructures grown by gas source molecular beam epitaxy. *Journal of Applied Physics*, **2006**, 99, 073515	2.5	13
69	Growth and characterization of AlGaNP on GaP(100) substrates. *Applied Physics Letters*, **2006**, 88, 071907	3.4	2
68	Radiative recombination of GaInNP alloys lattice matched to GaAs. *Applied Physics Letters*, **2006**, 88, 011919	3.4	8
67	Modeling of band gap properties of GaInNP alloys lattice matched to GaAs. *Applied Physics Letters*, **2006**, 88, 031907	3.4	12
66	Photoluminescence of nitrogen-doped ZnO. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2006**, 3, 611-613		8
65	Effects of weak ordering of InGaPN. *Applied Physics Letters*, **2005**, 86, 211914	3.4	8
64	Studies of band alignment and two-dimensional electron gas in InGaPN□GaAs heterostructures. *Applied Physics Letters*, **2005**, 86, 061103	3.4	15
63	Magnetic resonance signatures of grown-in defects in GaInNP alloys grown on a GaAs substrate. *Applied Physics Letters*, **2005**, 86, 222110	3.4	6
62	Band alignment in GaInNP□GaAs heterostructures grown by gas-source molecular-beam epitaxy. *Applied Physics Letters*, **2005**, 86, 261904	3.4	8

61	Formation of Ga interstitials in (Al,In)yGa1−yNxP1−x alloys and their role in carrier recombination. *Applied Physics Letters*, **2004**, 85, 2827-2829	3.4	14
60	The effect of nitrogen on self-assembled GaInNAs quantum dots grown on GaAs. *Physica Status Solidi (B): Basic Research*, **2003**, 240, 310-313	1.3	8
59	Hydrogen-induced improvements in optical quality of GaNAs alloys. *Applied Physics Letters*, **2003**, 82, 3662-3664	3.4	45
58	Temperature dependence of the GaNxP1−x band gap and effect of band crossover. *Applied Physics Letters*, **2002**, 81, 3984-3986	3.4	31
57	Time-resolved studies of photoluminescence in GaNxP1−x alloys: Evidence for indirect-direct band gap crossover. *Applied Physics Letters*, **2002**, 81, 52-54	3.4	77
56	Radiative recombination mechanism in GaNxP1−x alloys. *Applied Physics Letters*, **2002**, 80, 1740-1742	3.4	59
55	Band anticrossing in GaP1−xNx alloys. *Physical Review B*, **2002**, 65,	3.3	62
54	On the Origin of Light Emission in GaNxP1-x. *Materials Research Society Symposia Proceedings*, **2002**, 722, 421		
53	Structural properties of a GaNxP1−x alloy: Raman studies. *Applied Physics Letters*, **2001**, 78, 3959-3961	3.4	23
52	Formation of nonradiative defects in molecular beam epitaxial GaNxAs1−x studied by optically detected magnetic resonance. *Applied Physics Letters*, **2001**, 79, 3089-3091	3.4	59
51	Effect of band anticrossing on the optical transitions in GaAs1−xNx/GaAs multiple quantum wells. *Physical Review B*, **2001**, 64,	3.3	80
50	Nature and Formation of Non-Radiative Defects in GaNAs And InGaAsN. *Materials Research Society Symposia Proceedings*, **2001**, 692, 1		7
49	Raman Studies of GaNP Alloy. *Materials Research Society Symposia Proceedings*, **2001**, 693, 567		1
48	Gas-Source Molecular Beam Epitaxy Growth and Characterization of GaNP/GaP Structures. *Materials Research Society Symposia Proceedings*, **2000**, 618, 279		
47	Direct determination of electron effective mass in GaNAs/GaAs quantum wells. *Applied Physics Letters*, **2000**, 77, 1843	3.4	156
46	Photoluminescence properties of GaNP/GaP multiple quantum wells grown by gas source molecular beam epitaxy. *Applied Physics Letters*, **2000**, 77, 2180-2182	3.4	18
45	A study of Ar+ laser-assisted Si doping of GaAs by chemical beam epitaxy. *Applied Physics Letters*, **2000**, 76, 1716-1718	3.4	
44	Mechanism for rapid thermal annealing improvements in undoped GaNxAs1−x/GaAs structures grown by molecular beam epitaxy. *Applied Physics Letters*, **2000**, 77, 2325-2327	3.4	87

43	Microstructures of GaN1−xPx layers grown on (0001) GaN substrates by gas source molecular beam epitaxy. *Journal of Applied Physics*, **1999**, 85, 3192-3197	2.5	18
42	Thermal stability and doping efficiency of intrinsic modulation doping in InP-based structures. *Applied Physics Letters*, **1999**, 75, 1733-1735	3.4	1
41	Mechanism for low-temperature photoluminescence in GaNAs/GaAs structures grown by molecular-beam epitaxy. *Applied Physics Letters*, **1999**, 75, 501-503	3.4	227
40	A kinetic model for tris(dimethylamino) arsine decomposition on GaAs(100) surfaces. *Journal of Electronic Materials*, **1999**, 28, 43-49	1.9	11
39	Effect of growth temperature on photoluminescence of GaNAs/GaAs quantum well structures. *Applied Physics Letters*, **1999**, 75, 3781-3783	3.4	55
38	Chemical Beam Epitaxy of InP with Ar + Laser Irradiation. *Journal of the Electrochemical Society*, **1999**, 146, 2679-2682	3.9	
37	Localized Doping Enhancement by Photon-Assisted Chemical Beam Epitaxy. *Materials Research Society Symposia Proceedings*, **1999**, 570, 291		
36	GaInNAs/GaAs multiple quantum wells grown by gas-source molecular beam epitaxy. *Applied Physics Letters*, **1998**, 72, 2442-2444	3.4	184
35	Atomic-scale compositional structure of InAsP/InP and InNAsP/InP heterostructures grown by molecular-beam epitaxy. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1998**, 16, 2395		7
34	Effects of arsenic in gas-source molecular beam epitaxy. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1998**, 16, 1297		26
33	Growth and characterization of InNxAsyP1−x−y/InP strained quantum well structures. *Applied Physics Letters*, **1998**, 72, 1161-1163	3.4	20
32	A scanning tunneling microscopy study of atomic-scale clustering in InAsP/InP heterostructures. *Applied Physics Letters*, **1998**, 72, 2135-2137	3.4	11
31	Bowing parameter of the band-gap energy of GaNxAs1−x. *Applied Physics Letters*, **1997**, 70, 1608-1610	3.4	352
30	Gas-source molecular beam epitaxial growth and characterization of InNxP1−x on InP. *Journal of Electronic Materials*, **1997**, 26, 252-256	1.9	8
29	Study on interface abruptness of InxGa1−xAs/InyGa1−yAszP1−z heterostructures grown by gas-source molecular beam epitaxy. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1996**, 14, 2918		
28	Tensile strain relaxation in GaNxP1−x (x≈0.1) grown by chemical beam epitaxy. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1996**, 14, 2952		11
27	Material optimization for a polarized electron source from strained GaAs:Be grown on an InGaP pseudosubstrate. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1996**, 14, 2282		1
26	N incorporation in GaP and band gap bowing of GaNxP1−x. *Applied Physics Letters*, **1996**, 69, 3710-3712	3.4	90

25	N incorporation in InP and band gap bowing of InNxP1□. *Journal of Applied Physics*, **1996**, 80, 1934-1936	2.5	93
24	A Study of Low-Temperature Grown GaP by Gas-Source Molecular Beam Epitaxy. *Materials Research Society Symposia Proceedings*, **1996**, 421, 293		
23	In-Situ Etch to Improve Chemical Beam Epitaxy Regrown AlgaAs/GaAs Interfaces for HBT Applications. *Materials Research Society Symposia Proceedings*, **1996**, 448, 87		
22	Gas-Source molecular beam epitaxy and characterization of inGaAs/lnGaAsP quantum well structures on InP. *Journal of Electronic Materials*, **1996**, 25, 1049-1053	1.9	
21	A Study of Mixed Group-V Nitrides Grown by Gas-Source Molecular Beam Epitaxy Using a Nitrogen Radical Beam Source. *Materials Research Society Symposia Proceedings*, **1996**, 449, 203		5
20	Optical detection of quantum oscillations in InP/InGaAs quantum structures. *Applied Physics Letters*, **1996**, 69, 809-811	3.4	9
19	Strain-compensated InAsP/GaInP multiple quantum wells for 1.3 □m waveguide modulators. *Applied Physics Letters*, **1996**, 68, 90-92	3.4	23
18	High resolution x-ray diffraction studies of AlGaP grown by gas-source molecular-beam epitaxy. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1995**, 13, 754		17
17	Impact ionization coefficients in (100) GaInP. *Applied Physics Letters*, **1995**, 66, 3507-3509	3.4	25
16	Optimization and characterization of interfaces of InGaAs/InGaAsP quantum well structures grown by gas-source molecular beam epitaxy. *Journal of Applied Physics*, **1995**, 78, 2889-2891	2.5	4
15	Strain-Compensation in InAsP/GaInP Multiple Quantum Wells for 1.3 □m Wavelength. *Materials Research Society Symposia Proceedings*, **1995**, 379, 291		
14	Photoelastic Waveguides Using Strain-Compensated InAsP/InGaP Multi-Quantum-Wells. *Materials Research Society Symposia Proceedings*, **1995**, 379, 303		1
13	A New type of Graded Buffer Layer for Gas-Source Molecular Beam Epitaxial Growth of Highly Strained INxGA1□P/GAP Multiple Quantum Wells on Gap. *Materials Research Society Symposia Proceedings*, **1995**, 379, 67		
12	Enhanced Photoluminescence from Erbium-Doped Gap Microdisk Resonator. *Materials Research Society Symposia Proceedings*, **1995**, 392, 229		
11	Planarized growth of AlGaAs/GaAs heterostructures on patterned substrates by molecular beam epitaxy. *Journal of Applied Physics*, **1993**, 74, 2128-2130	2.5	1
10	Heteroepitaxial growth of InP/In0.52Ga0.48As structures on GaAs (100) by gas-source molecular beam epitaxy. *Applied Physics Letters*, **1993**, 62, 2708-2710	3.4	7
9	Multiple dislocation loops in linearly graded InxGa1□As (0□□0.53) on GaAs and InxGa1□P (0□□0.32) on GaP. *Applied Physics Letters*, **1993**, 63, 500-502	3.4	24
8	Electronic properties of low-temperature InP. *Journal of Electronic Materials*, **1993**, 22, 1487-1490	1.9	15

7	Optically detected magnetic resonance studies of low-temperature InP. *Journal of Electronic Materials*, **1993**, 22, 1491-1494	1.9	15
6	Growth and Characterization of InxGa1s-xP(x0.38) on GaP(1OO) with a Linearly Graded Buffer Layer by Gas-Source Molecular Beam Epitaxy. *Materials Research Society Symposia Proceedings*, **1992**, 281, 227		
5	Deep center photoluminescence study of low-temperature InP grown by molecular beam epitaxy. *Applied Physics Letters*, **1992**, 61, 2443-2445	3.4	20
4	Low-Temperature Growth and Characterization of InP Grown by Gas-Source Molecular-Beam Epitaxy. *Materials Research Society Symposia Proceedings*, **1991**, 241, 283		5
3	Determination of V/III ratios on phosphide surfaces during gas source molecular beam epitaxy. *Applied Physics Letters*, **1991**, 58, 254-256	3.4	37
2	High-resolution x-ray diffraction of InAlAs/InP superlattices grown by gas source molecular beam epitaxy. *Applied Physics Letters*, **1991**, 58, 1530-1532	3.4	16
1	Highly carbon-doped p-type Ga0.5In0.5As and Ga0.5In0.5P by carbon tetrachloride in gas-source molecular beam epitaxy. *Applied Physics Letters*, **1991**, 59, 2865-2867	3.4	64