Gilles Patriarche

List of Publications by Citations

593 papers	12,685 citations	55 h-index	87 g-index
657 ext. papers	14,136 ext. citations	4.1 avg, IF	6.31 L-index

#	Paper	IF	Citations
593	Why does wurtzite form in nanowires of III-V zinc blende semiconductors?. *Physical Review Letters*, **2007**, 99, 146101	7.4	615
592	Core/shell colloidal semiconductor nanoplatelets. *Journal of the American Chemical Society*, **2012**, 134, 18591-8	16.4	285
591	Analysis of vapor-liquid-solid mechanism in Au-assisted GaAs nanowire growth. *Applied Physics Letters*, **2005**, 87, 203101	3.4	231
590	Band Alignment and Minigaps in Monolayer MoS2-Graphene van der Waals Heterostructures. *Nano Letters*, **2016**, 16, 4054-61	11.5	230
589	Crystal phase quantum dots. *Nano Letters*, **2010**, 10, 1198-201	11.5	207
588	Efficient exciton concentrators built from colloidal core/crown CdSe/CdS semiconductor nanoplatelets. *Nano Letters*, **2014**, 14, 207-13	11.5	185
587	Predictive modeling of self-catalyzed III-V nanowire growth. *Physical Review B*, **2013**, 88,	3.3	142
586	Height dispersion control of InAs/InP quantum dots emitting at 1.55 Îm. *Applied Physics Letters*, **2001**, 78, 1751-1753	3.4	139
585	From excitonic to photonic polariton condensate in a ZnO-based microcavity. *Physical Review Letters*, **2013**, 110, 196406	7.4	136
584	Silicon nanowires coated with silver nanostructures as ultrasensitive interfaces for surface-enhanced Raman spectroscopy. *ACS Applied Materials & Interfaces*, **2009**, 1, 1396-403	9.5	125
583	Type-II CdSe/CdTe core/crown semiconductor nanoplatelets. *Journal of the American Chemical Society*, **2014**, 136, 16430-8	16.4	124
582	Au-assisted molecular beam epitaxy of InAs nanowires: Growth and theoretical analysis. *Journal of Applied Physics*, **2007**, 102, 094313	2.5	123
581	Infrared Photodetection Based on Colloidal Quantum-Dot Films with High Mobility and Optical Absorption up to THz. *Nano Letters*, **2016**, 16, 1282-6	11.5	119
580	Arsenic Pathways in Self-Catalyzed Growth of GaAs Nanowires. *Crystal Growth and Design*, **2013**, 13, 91-96	3.5	119
579	Gradient CdSe/CdS Quantum Dots with Room Temperature Biexciton Unity Quantum Yield. *Nano Letters*, **2015**, 15, 3953-8	11.5	115
578	van der Waals Epitaxy of GaSe/Graphene Heterostructure: Electronic and Interfacial Properties. *ACS Nano*, **2016**, 10, 9679-9686	16.7	113
577	Synthesis and optical characterizations of undoped and rare-earth-doped CaF2 nanoparticles. *Journal of Solid State Chemistry*, **2006**, 179, 2636-2644	3.3	104

576	Growth and characterization of wurtzite GaAs nanowires with defect-free zinc blende GaAsSb inserts. *Nano Letters*, **2008**, 8, 4459-63	11.5	103
575	Growth of GaN free-standing nanowires by plasma-assisted molecular beam epitaxy: structural and optical characterization. *Nanotechnology*, **2007**, 18, 385306	3.4	103
574	Growth and characterization of InP nanowires with InAsP insertions. *Nano Letters*, **2007**, 7, 1500-4	11.5	102
573	Temperature conditions for GaAs nanowire formation by Au-assisted molecular beam epitaxy. *Nanotechnology*, **2006**, 17, 4025-30	3.4	101
572	Protein transport through a narrow solid-state nanopore at high voltage: experiments and theory. *ACS Nano*, **2012**, 6, 6236-43	16.7	100
571	Synthesis and optical characterizations of Yb-doped CaF2 ceramics. *Optical Materials*, **2009**, 31, 750-753	3.3	100
570	New progresses in transparent rare-earth doped glass-ceramics. *Optical Materials*, **2001**, 16, 255-267	3.3	100
569	Sub-5nm FIB direct patterning of nanodevices. *Microelectronic Engineering*, **2007**, 84, 779-783	2.5	96
568	Er3+-doped PbF2: Comparison between nanocrystals in glass-ceramics and bulk single crystals. *Journal of Solid State Chemistry*, **2006**, 179, 1995-2003	3.3	96
567	Nucleation antibunching in catalyst-assisted nanowire growth. *Physical Review Letters*, **2010**, 104, 135501	7.4	95
566	Colloidal CdSe/CdS dot-in-plate nanocrystals with 2D-polarized emission. *ACS Nano*, **2012**, 6, 6741-50	16.7	93
565	Metal organic vapor phase epitaxy growth of GaAsN on GaAs using dimethylhydrazine and tertiarybutylarsine. *Applied Physics Letters*, **1997**, 70, 2861-2863	3.4	90
564	Incorporation and redistribution of impurities into silicon nanowires during metal-particle-assisted growth. *Nature Communications*, **2014**, 5, 4134	17.4	83
563	Origin of light scattering in ytterbium doped calcium fluoride transparent ceramic for high power lasers. *Journal of the European Ceramic Society*, **2011**, 31, 1619-1630	6	83
562	Role of nonlinear effects in nanowire growth and crystal phase. *Physical Review B*, **2009**, 80,	3.3	83
561	Composition profiling of InAs□GaAs quantum dots. *Applied Physics Letters*, **2004**, 85, 3717-3719	3.4	82
560	Atomic Step Flow on a Nanofacet. *Physical Review Letters*, **2018**, 121, 166101	7.4	82
559	Ultra-low-threshold continuous-wave and pulsed lasing in tensile-strained GeSn alloys. *Nature Photonics*, **2020**, 14, 375-382	33.9	81

558	Large-Area Two-Dimensional Layered Hexagonal Boron Nitride Grown on Sapphire by Metalorganic Vapor Phase Epitaxy. *Crystal Growth and Design*, **2016**, 16, 3409-3415	3.5	81
557	Dynamics of colloids in single solid-state nanopores. *Journal of Physical Chemistry B*, **2011**, 115, 2890-8	3.4	80
556	Growth kinetics of a single InP1□Asx nanowire. *Physical Review B*, **2010**, 81,	3.3	78
555	Rare-earth doped oxyfluoride glass-ceramics and fluoride ceramics: Synthesis and optical properties. *Optical Materials*, **2007**, 29, 1263-1270	3.3	76
554	In situ generation of indium catalysts to grow crystalline silicon nanowires at low temperature on ITO. *Journal of Materials Chemistry*, **2008**, 18, 5187		75
553	Mechanistic Insight and Optimization of InP Nanocrystals Synthesized with Aminophosphines. *Chemistry of Materials*, **2016**, 28, 5925-5934	9.6	74
552	Effect of CeF3Addition on the Nucleation and Up-Conversion Luminescence in Transparent Oxyfluoride Glass□eramics. *Chemistry of Materials*, **2005**, 17, 2216-2222	9.6	71
551	Synthesis of Zinc and Lead Chalcogenide Core and Core/Shell Nanoplatelets Using Sequential Cation Exchange Reactions. *Chemistry of Materials*, **2014**, 26, 3002-3008	9.6	70
550	GaInAs/GaAs quantum-well growth assisted by Sb surfactant: Toward 1.3 □m emission. *Applied Physics Letters*, **2004**, 84, 3981-3983	3.4	70
549	Evidence for Flat Bands near the Fermi Level in Epitaxial Rhombohedral Multilayer Graphene. *ACS Nano*, **2015**, 9, 5432-9	16.7	69
548	Subpicosecond pulse generation at 134GHz using a quantum-dash-based Fabry-Perot laser emitting at 1.56□m. *Applied Physics Letters*, **2006**, 88, 241105	3.4	68
547	Carbon nanotube translocation to distant organs after pulmonary exposure: insights from in situ (14)C-radiolabeling and tissue radioimaging. *ACS Nano*, **2014**, 8, 5715-24	16.7	66
546	Structural properties of epitaxial SrTiO3 thin films grown by molecular beam epitaxy on Si(001). *Journal of Applied Physics*, **2006**, 100, 124109	2.5	66
545	Synthesis of silicon nanocrystals in silane plasmas for nanoelectronics and large area electronic devices. *Journal Physics D: Applied Physics*, **2007**, 40, 2258-2266	3	65
544	GaAs nanowires formed by Au-assisted molecular beam epitaxy: Effect of growth temperature. *Journal of Crystal Growth*, **2007**, 301-302, 853-856	1.6	61
543	Wurtzite to zinc blende phase transition in GaAs nanowires induced by epitaxial burying. *Nano Letters*, **2008**, 8, 1638-43	11.5	60
542	Electrolyte-gated field effect transistor to probe the surface defects and morphology in films of thick CdSe colloidal nanoplatelets. *ACS Nano*, **2014**, 8, 3813-20	16.7	57
541	Structure of the GaAs/InP interface obtained by direct wafer bonding optimised for surface emitting optical devices. *Journal of Applied Physics*, **1997**, 82, 4892-4903	2.5	57

540	Magnetic properties and domain structure of (Ga,Mn)As films with perpendicular anisotropy. *Physical Review B*, **2006**, 73,	3.3	57
539	Morphology of self-catalyzed GaN nanowires and chronology of their formation by molecular beam epitaxy. *Nanotechnology*, **2011**, 22, 245606	3.4	55
538	Growth and optical characterizations of InAs quantum dots on InP substrate: towards a 1.55μm quantum dot laser. *Journal of Crystal Growth*, **2003**, 251, 230-235	1.6	55
537	Selective CO2 methanation on Ru/TiO2 catalysts: unravelling the decisive role of the TiO2 support crystal structure. *Catalysis Science and Technology*, **2016**, 6, 8117-8128	5.5	54
536	Silicon-Microtube Scaffold Decorated with Anatase TiO2 as a Negative Electrode for a 3D Litium-Ion Microbattery. *Advanced Energy Materials*, **2014**, 4, 1301612	21.8	53
535	Novel heterostructured Ge nanowires based on polytype transformation. *Nano Letters*, **2014**, 14, 4828-36	11.5	52
534	Monolithic integration of InP based heterostructures on silicon using crystalline Gd2O3 buffers. *Applied Physics Letters*, **2007**, 91, 241912	3.4	52
533	Atomically Sharp Interface in an h-BN-epitaxial graphene van der Waals Heterostructure. *Scientific Reports*, **2015**, 5, 16465	4.9	50
532	Focused ion beam sculpted membranes for nanoscience tooling. *Microelectronic Engineering*, **2006**, 83, 1474-1477	2.5	50
531	Phase Selection in Self-catalyzed GaAs Nanowires. *Nano Letters*, **2020**, 20, 1669-1675	11.5	49
530	Morphology and composition of highly strained InGaAs and InGaAsN layers grown on GaAs substrate. *Applied Physics Letters*, **2004**, 84, 203-205	3.4	49
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528	Nucleation efficiency of erbium and ytterbium fluorides in transparent oxyfluoride glass-ceramics. *Journal of Materials Research*, **2005**, 20, 472-481	2.5	47
527	Zinc blende GaAsSb nanowires grown by molecular beam epitaxy. *Nanotechnology*, **2008**, 19, 275605	3.4	46
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525	Type II heterostructures formed by zinc-blende inclusions in InP and GaAs wurtzite nanowires. *Applied Physics Letters*, **2010**, 97, 041910	3.4	45
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522	Vapor-liquid-solid mechanisms: Challenges for nanosized quantum cluster/dot/wire materials. *Journal of Applied Physics*, **2006**, 100, 044315	2.5	44
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519	Determination of the local concentrations of Mn interstitials and antisite defects in GaMnAs. *Physical Review Letters*, **2004**, 93, 086107	7.4	43
518	Abrupt GaP/GaAs Interfaces in Self-Catalyzed Nanowires. *Nano Letters*, **2015**, 15, 6036-41	11.5	42
517	Structural and compositional characterization of MOVPE GaN thin films transferred from sapphire to glass substrates using chemical lift-off and room temperature direct wafer bonding and GaN wafer scale MOVPE growth on ZnO-buffered sapphire. *Journal of Crystal Growth*, **2013**, 370, 63-67	1.6	42
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515	Transmission electron microscopy observations of low-load indents in GaAs. *Philosophical Magazine Letters*, **1999**, 79, 805-812	1	42
514	Sharpening the Interfaces of Axial Heterostructures in Self-Catalyzed AlGaAs Nanowires: Experiment and Theory. *Nano Letters*, **2016**, 16, 1917-24	11.5	41
513	Quantum cascade lasers grown on silicon. *Scientific Reports*, **2018**, 8, 7206	4.9	41
512	Gas sensors boosted by two-dimensional h-BN enabled transfer on thin substrate foils: towards wearable and portable applications. *Scientific Reports*, **2017**, 7, 15212	4.9	41
511	Semibulk InGaN: A novel approach for thick, single phase, epitaxial InGaN layers grown by MOVPE. *Journal of Crystal Growth*, **2013**, 370, 57-62	1.6	41
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505	Plastic deformation of III$\mathbb{V}$ semiconductorsunder concentrated load. *Progress in Crystal Growth and Characterization of Materials*, **2003**, 47, 1-43	3.5	39

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503	Preparation and up-conversion luminescence of 8 nm rare-earth doped fluoride nanoparticles. *Optics Express*, **2008**, 16, 14544-9	3.3	37
502	Flexible metal-semiconductor-metal device prototype on wafer-scale thick boron nitride layers grown by MOVPE. *Scientific Reports*, **2017**, 7, 786	4.9	35
501	Measuring and Modeling the Growth Dynamics of Self-Catalyzed GaP Nanowire Arrays. *Nano Letters*, **2018**, 18, 701-708	11.5	35
500	Multilayered InGaN/GaN structure vs. single InGaN layer for solar cell applications: A comparative study. *Acta Materialia*, **2013**, 61, 6587-6596	8.4	35
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495	Polarization dependence study of electroluminescence and absorption from InAs□GaAs columnar quantum dots. *Applied Physics Letters*, **2007**, 91, 191123	3.4	35
494	Sidewall passivation assisted by a silicon coverplate during Cl2□H2 and HBr inductively coupled plasma etching of InP for photonic devices. *Journal of Vacuum Science & Technology B*, **2008**, 26, 666		34
493	Functionalized Solid-State Nanopore Integrated in a Reusable Microfluidic Device for a Better Stability and Nanoparticle Detection. *ACS Applied Materials & Interfaces*, **2017**, 9, 41634-41640	9.5	33
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487	Pseudomorphic molecular beam epitaxy growth of □Al2O3(001) on Si(001) and evidence for spontaneous lattice reorientation during epitaxy. *Applied Physics Letters*, **2006**, 89, 232907	3.4	32

486	Comparison of light- and heavy-ion-irradiated quantum-wells for use as ultrafast saturable absorbers. *Applied Physics Letters*, **2001**, 79, 2722-2724	3.4	32
485	Strain and composition of capped Ge/Si self-assembled quantum dots grown by chemical vapor deposition. *Applied Physics Letters*, **2000**, 77, 370-372	3.4	32
484	Composition-dependent interfacial abruptness in Au-catalyzed Si(1-x)Ge(x)/Si/Si(1-x)Ge(x) nanowire heterostructures. *Nano Letters*, **2014**, 14, 5140-7	11.5	31
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481	BAlN thin layers for deep UV applications. *Physica Status Solidi (A) Applications and Materials Science* , **2015**, 212, 745-750	1.6	30
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479	Metamorphic approach to single quantum dot emission at 1.55□m on GaAs substrate. *Journal of Applied Physics*, **2008**, 103, 103533	2.5	30
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470	Oxide glass used as inorganic template for fluorescent fluoride nanoparticles synthesis. *Optical Materials*, **2006**, 28, 1401-1404	3.3	28
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466	Biomimetic Nanotubes Based on Cyclodextrins for Ion-Channel Applications. *Nano Letters*, **2015**, 15, 7748-54	11.5	27
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464	Band offsets at zincblende-wurtzite GaAs nanowire sidewall surfaces. *Applied Physics Letters*, **2013**, 103, 122104	3.4	27
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462	Structural effects of the thermal treatment on a GaInNAs/GaAs superlattice. *Applied Physics Letters*, **2001**, 79, 1795-1797	3.4	27
461	Ultrafast saturable absorption at 1.55 □m in heavy-ion-irradiated quantum-well vertical cavity. *Applied Physics Letters*, **2000**, 76, 1371-1373	3.4	27
460	AlGaN-based MQWs grown on a thick relaxed AlGaN buffer on AlN templates emitting at 285 nm. *Optical Materials Express*, **2015**, 5, 380	2.6	26
459	Metallic Functionalization of CdSe 2D Nanoplatelets and Its Impact on Electronic Transport. *Journal of Physical Chemistry C*, **2016**, 120, 12351-12361	3.8	26
458	Atomic-plane-thick reconstruction across the interface during heteroepitaxial bonding of InP-clad quantum wells on silicon. *Applied Physics Letters*, **2013**, 102, 212101	3.4	26
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440	FIB patterning of dielectric, metallized and graphene membranes: A comparative study. *Microelectronic Engineering*, **2014**, 121, 87-91	2.5	22
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437	Growth temperature dependence of exciton lifetime in wurtzite InP nanowires grown on silicon substrates. *Applied Physics Letters*, **2012**, 100, 011906	3.4	22
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