

Liverios Lymperakis

List of Publications by Year in descending order

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Version: 2024-02-01

52
papers

1,873
citations

304743

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254184

43
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54
docs citations

54
times ranked

2706
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Revealing the Design Principles of High-Performance Biological Composites Using Ab initio and Multiscale Simulations: The Example of Lobster Cuticle. <i>Advanced Materials</i> , 2010, 22, 519-526. | 21.0 | 285 |
| 2 | Large anisotropic adatom kinetics on nonpolar GaN surfaces: Consequences for surface morphologies and nanowire growth. <i>Physical Review B</i> , 2009, 79, . | 3.2 | 172 |
| 3 | Hydrogen-enhanced local plasticity at dilute bulk H concentrations: The role of H-H interactions and the formation of local hydrides. <i>Acta Materialia</i> , 2011, 59, 2969-2980. | 7.9 | 132 |
| 4 | Gallium adsorption on (0001) GaN surfaces. <i>Physical Review B</i> , 2003, 67, . | 3.2 | 131 |
| 5 | Strain Induced Deep Electronic States around Threading Dislocations in GaN. <i>Physical Review Letters</i> , 2004, 93, 196401. | 7.8 | 107 |
| 6 | Polarity in GaN and ZnO: Theory, measurement, growth, and devices. <i>Applied Physics Reviews</i> , 2016, 3, . | 11.3 | 105 |
| 7 | Robustness and optimal use of design principles of arthropod exoskeletons studied by ab initio-based multiscale simulations. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 129-145. | 3.1 | 91 |
| 8 | Blocking Growth by an Electrically Active Subsurface Layer: The Effect of Si as an Antisurfactant in the Growth of GaN. <i>Physical Review Letters</i> , 2013, 110, 036103. | 7.8 | 66 |
| 9 | Strain-Induced Asymmetric Line Segregation at Faceted Si Grain Boundaries. <i>Physical Review Letters</i> , 2018, 121, 015702. | 7.8 | 65 |
| 10 | Chemically ordered $\text{Al}_x\text{Ga}_{1-x}\text{N}$ alloys: Spontaneous formation of natural quantum wells. <i>Physical Review B</i> , 2005, 71, . | 3.2 | 53 |
| 11 | Understanding and controlling indium incorporation and surface segregation on InGaAs surfaces: An ab initio approach. <i>Physical Review B</i> , 2014, 89, . | 3.2 | 47 |
| 12 | Hidden surface states at non-polar GaN (10 $\bar{1}$ 0) facets: Intrinsic pinning of nanowires. <i>Applied Physics Letters</i> , 2013, 103, . | 3.3 | 45 |
| 13 | Ab initio study of thermodynamic, structural, and elastic properties of Mg-substituted crystalline calcite. <i>Acta Biomaterialia</i> , 2010, 6, 4506-4512. | 8.3 | 44 |
| 14 | A modified empirical potential for energetic calculations of planar defects in GaN. <i>Computational Materials Science</i> , 2003, 27, 43-49. | 3.0 | 42 |
| 15 | GaN(0001) surface states: Experimental and theoretical fingerprints to identify surface reconstructions. <i>Physical Review B</i> , 2013, 88, . | 3.2 | 37 |
| 16 | Elastically frustrated rehybridization: Origin of chemical order and compositional limits in InGaAs quantum wells. <i>Physical Review Materials</i> , 2018, 2, . | 2.4 | 36 |
| 17 | Morphology and surface reconstructions of GaN(11 $\bar{1}$,00) surfaces. <i>Applied Physics Letters</i> , 2003, 82, 1793-1795. | 3.3 | 35 |
| 18 | Ab initio study of single-crystalline and polycrystalline elastic properties of Mg-substituted calcite crystals. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 20, 296-304. | 3.1 | 32 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Selective-area growth of GaN nanowires on SiO ₂ -masked Si (111) substrates by molecular beam epitaxy. Journal of Applied Physics, 2016, 119, 224305. | 2.5 | 29 |
| 20 | Band offsets at zincblende-wurtzite GaAs nanowire sidewall surfaces. Applied Physics Letters, 2013, 103, . | 3.3 | 28 |
| 21 | Ab Initio Based conformational study of the crystalline α -chitin. Biopolymers, 2013, 99, 22-34. | 2.4 | 27 |
| 22 | Effect of edge threading dislocations on the electronic structure of InN. Applied Physics Letters, 2011, 98, . | 3.3 | 23 |
| 23 | Methodological challenges in combining quantum-mechanical and continuum approaches for materials science applications. European Physical Journal Plus, 2011, 126, 1. | 2.6 | 22 |
| 24 | Polar AlN/GaN interfaces: Structures and energetics. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1892-1897. | 1.8 | 20 |
| 25 | In situ scanning tunneling microscopy study of selective dissolution of Au ₃ Cu and Cu ₃ Au (001). Electrochimica Acta, 2011, 56, 1694-1700. | 5.2 | 19 |
| 26 | Origin of the unusually strong luminescence of a -type screw dislocations in GaN. Physical Review B, 2014, 90, . | 3.2 | 19 |
| 27 | Electronic structure of $1/6$ partial dislocations in wurtzite GaN. Journal of Applied Physics, 2011, 109, . | 2.5 | 16 |
| 28 | Ab initio based bulk and surface thermodynamics of InGaN alloys: Investigating the effects of strain and surface polarity. Physica Status Solidi (B): Basic Research, 2015, 252, 855-865. | 1.5 | 16 |
| 29 | Adsorption and desorption of hydrogen at nonpolar GaN surfaces: Kinetics and impact on surface vibrational and electronic properties. Physical Review B, 2017, 95, . | 3.2 | 15 |
| 30 | Mechanism leading to semi-insulating property of carbon-doped GaN: Analysis of donor acceptor ratio and method for its determination. Journal of Applied Physics, 2021, 130, . | 2.5 | 11 |
| 31 | Separating strain from composition in unit cell parameter maps obtained from aberration corrected high resolution transmission electron microscopy imaging. Journal of Applied Physics, 2014, 115, 033113. | 2.5 | 10 |
| 32 | Ab-initio study of boron incorporation and compositional limits at GaN and AlN (0001) surfaces. AIP Advances, 2018, 8, . | 1.3 | 10 |
| 33 | Atomistic calculations on interfaces: Bridging the length and time scales. European Physical Journal: Special Topics, 2009, 177, 41-57. | 2.6 | 9 |
| 34 | Influence of strain on the indium incorporation in (0001) GaN. Physical Review Materials, 2020, 4, . | 2.4 | 9 |
| 35 | Substitutional synthesis of sub-nanometer InGaN/GaN quantum wells with high indium content. Scientific Reports, 2021, 11, 20606. | 3.3 | 9 |
| 36 | Atomic-scale models of interactions between inversion domain boundaries and intrinsic basal stacking faults in GaN. Diamond and Related Materials, 2002, 11, 905-909. | 3.9 | 8 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Development of semipolar (11-22) LEDs on GaN templates. Proceedings of SPIE, 2016, , . | 0.8 | 8 |
| 38 | Reconstructions and electronic structure of (112 $\bar{2}$) and (112 $\bar{2}\bar{2}$) semipolar AlN surfaces. Journal of Applied Physics, 2012, 112, 033510. | 2.5 | 7 |
| 39 | Role of hole confinement in the recombination properties of InGaN quantum structures. Scientific Reports, 2019, 9, 9047. | 3.3 | 6 |
| 40 | Fermi-level pinning and intrinsic surface states of Al $\bar{1}\bar{1}$ xInxN(101 $\bar{1}$) surfaces. Applied Physics Letters, 2017, 110, . | 3.3 | 5 |
| 41 | Al $\bar{5}\bar{1}\bar{5}$ Si $\bar{5}\bar{1}$ N $\bar{1}\bar{2}$, a new Nitride compound. Scientific Reports, 2019, 9, 15907. | 3.3 | 4 |
| 42 | Theoretical modeling of growth processes, extended defects, and electronic properties of III $\bar{1}$ nitride semiconductor nanostructures. Physica Status Solidi (B): Basic Research, 2011, 248, 1837-1852. | 1.5 | 3 |
| 43 | Atomic scale morphology, growth behaviour and electronic properties of semipolar $\{1\bar{0}\bar{1}\bar{1}\}$ GaN surfaces. Journal of Physics Condensed Matter, 2013, 25, 045008. | 1.8 | 3 |
| 44 | Morphology and surface reconstructions of m-plane GaN. Materials Research Society Symposia Proceedings, 2002, 743, L4.1.1. | 0.1 | 2 |
| 45 | CHAPTER 9. Multi $\bar{1}$ scale Modelling of a Biological Material: The Arthropod Exoskeleton. RSC Smart Materials, 2013, , 197-218. | 0.1 | 2 |
| 46 | Quantum-Mechanical Study of Single-Crystalline and Polycrystalline Elastic Properties of Mg-Substituted Calcite Crystals. Key Engineering Materials, 0, 592-593, 335-341. | 0.4 | 2 |
| 47 | MEAM interatomic potentials of Ni, Re, and Ni $\bar{1}$ Re $\bar{1}$ Alloys for atomistic fracture simulations. Modelling and Simulation in Materials Science and Engineering, 2022, 30, 015002. | 2.0 | 2 |
| 48 | Phase Transitions on Gan Surfaces. Materials Research Society Symposia Proceedings, 2002, 743, L3.9.1. | 0.1 | 1 |
| 49 | Strain-induced effects on the electronic structure and N K-edge ELNES of wurtzite AlN and Al $\bar{1}$ Ga $\bar{1}$ xN. Journal of Physics: Conference Series, 2011, 326, 012016. | 0.4 | 1 |
| 50 | Phase diagram of grain boundary facet and line junctions in silicon. Physical Review Materials, 2020, 4, . | 2.4 | 1 |
| 51 | Efficient electronic passivation scheme for computing low-symmetry compound semiconductor surfaces in density-functional theory slab calculations. Physical Review Materials, 2021, 5, . | 2.4 | 0 |
| 52 | Scalable semipolar gallium nitride templates for high-speed LEDs. SPIE Newsroom, 0, , . | 0.1 | 0 |