

# Toru Akiyama

## List of Publications by Year in descending order

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32  
papers

123  
citations

1307594

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h-index

1474206

9  
g-index

33  
all docs

33  
docs citations

33  
times ranked

138  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Structural analysis of polarity inversion boundary in sputtered AlN films annealed under high temperatures. Japanese Journal of Applied Physics, 2019, 58, SCCB30.                                     | 1.5 | 13        |
| 2  | Structures and Polarity of III-V Nitrides: Phase Diagram Calculations Using Absolute Surface and Interface Energies. Physica Status Solidi (B): Basic Research, 2018, 255, 1700329.                    | 1.5 | 10        |
| 3  | Absolute surface energies of semipolar planes of AlN during metalorganic vapor phase epitaxy growth. Journal of Crystal Growth, 2019, 510, 7-12.   | 1.5 | 9         |
| 4  | Ab initio study for adsorption and desorption behavior at step edges of AlN(0001) and GaN(0001) surfaces. Japanese Journal of Applied Physics, 2020, 59, SGGK03.                                       | 1.5 | 9         |
| 5  | Effect of Step Edges on Adsorption Behavior for GaN(0001) Surfaces during Metalorganic Vapor Phase Epitaxy: An <i>Ab Initio</i> Study. Crystal Growth and Design, 2020, 20, 4358-4365.                 | 3.0 | 8         |
| 6  | Effects of lattice constraint on structures and electronic properties of BAlN and BGaN alloys: A first-principles study. Applied Physics Express, 2018, 11, 025501.                                    | 2.4 | 7         |
| 7  | Reaction mechanisms at 4H-SiC/SiO <sub>2</sub> interface during wet SiC oxidation. Japanese Journal of Applied Physics, 2018, 57, 04FR08.  | 1.5 | 7         |
| 8  | Bandgap engineering of $\text{In}_{\pm}\text{-Ga}_2\text{O}_3$ by hydrostatic, uniaxial, and equibiaxial strain. Japanese Journal of Applied Physics, 2022, 61, 021005.                                | 1.5 | 7         |
| 9  | Recent Progress in Computational Materials Science for Semiconductor Epitaxial Growth. Crystals, 2017, 7, 46.  | 2.2 | 6         |
| 10 | Effects of surface and twinning energies on twinning-superlattice formation in group III-V semiconductor nanowires: a first-principles study. Nanotechnology, 2019, 30, 234002.                        | 2.6 | 6         |
| 11 | Ab initio calculations for the effect of wet oxidation condition on the reaction mechanism at 4H-SiC/SiO <sub>2</sub> interface. Japanese Journal of Applied Physics, 2020, 59, SMMD01.                | 1.5 | 6         |
| 12 | Systematic Theoretical Investigations for Crystal Structure Deformation in Group III Nitrides: A First-Principles Study. Physica Status Solidi (B): Basic Research, 2018, 255, 1700446.                | 1.5 | 5         |
| 13 | An ab initio approach to polarity inversion of AlN and GaN films on AlN(0001) substrate with Al overlayers: an insight from interface energies. Japanese Journal of Applied Physics, 2018, 57, 09R001. | 1.5 | 4         |
| 14 | Realization of honeycomb structures in octet AlN-B <sub>8</sub> N binary compounds under two-dimensional limit. Applied Physics Express, 2019, 12, 125501.   | 2.4 | 4         |
| 15 | Computational discovery of stable phases of graphene and h-BN van der Waals heterostructures composed of group III-V binary compounds. Applied Physics Letters, 2021, 118, .                           | 3.3 | 4         |
| 16 | Theoretical investigations on the growth mode of GaN thin films on an AlN(0001) substrate. Japanese Journal of Applied Physics, 2019, 58, SC1009.  | 1.5 | 2         |
| 17 | Reaction of NO molecule at 4H-SiC/SiO <sub>2</sub> interface: an ab initio study for the effect of NO annealing after dry oxidation. Japanese Journal of Applied Physics, 2021, 60, SBBD10.            | 1.5 | 2         |
| 18 | A Simple Approach to Growth Mode of InN and InGaN Thin Films on GaN(0001) Substrate. ECS Transactions, 2020, 98, 155-164.  | 0.5 | 2         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Thermodynamic analysis for nonpolar III-nitride surfaces under metalorganic vapor-phase epitaxy conditions. Japanese Journal of Applied Physics, 2020, 59, 028003.                                    | 1.5 | 2         |
| 20 | Ab initio-based approach for the oxidation mechanisms at $\text{SiO}_2/\text{4H-SiC}$ interface: Interplay of dry and wet oxidants during interfacial reaction. Physical Review Materials, 2021, 5, . | 2.4 | 2         |
| 21 | Ab initio study for orientation dependence of nitrogen incorporation at $\text{4H-SiC/SiO}_2$ interfaces. Japanese Journal of Applied Physics, 2022, 61, SH1002.                                      | 1.5 | 2         |
| 22 | Roles of growth kinetics on GaN non-planar facets under metalorganic vapor phase epitaxy condition. Applied Physics Express, 2020, 13, 065505.  | 2.4 | 1         |
| 23 | Effect of Film Thickness on Structural Stability for BAlN and BGaN Alloys: Bond Order Interatomic Potential Calculations. Physica Status Solidi (B): Basic Research, 2020, 257, 2000205.              | 1.5 | 1         |
| 24 | Effects of Wet Ambient on Dry Oxidation Processes at $\text{4H-SiC/SiO}_2$ Interface: An Ab Initio Study. ECS Transactions, 2020, 98, 37-46.  | 0.5 | 1         |
| 25 | An ab initio-based approach for the formation of pyramidal inversion domain boundaries in highly Mg-doped GaN. Japanese Journal of Applied Physics, 0, , .  | 1.5 | 1         |
| 26 | Influence of oxygen-related defects on the electronic structure of GaN. Japanese Journal of Applied Physics, 2022, 61, 061004.  | 1.5 | 1         |
| 27 | Effective approach for calculating individual energy of step edges on polar AlN(0001) and GaN(0001) surfaces. Japanese Journal of Applied Physics, 2021, 60, 080701.                                  | 1.5 | 0         |
| 28 | Effects of Wet Ambient on Dry Oxidation Processes at $\text{4H-SiC/SiO}_2$ Interface: An Ab Initio Study. ECS Meeting Abstracts, 2020, MA2020-02, 1354-1354.  | 0.0 | 0         |
| 29 | A Simple Approach to Growth Mode of InN and InGaN Thin Films on GaN(0001) Substrate. ECS Meeting Abstracts, 2020, MA2020-02, 1831-1831.   | 0.0 | 0         |
| 30 | Computational Prediction for Stable Structures of Graphene Van Der Waals Heterostructures Composed of Group-III-V Compounds. ECS Meeting Abstracts, 2020, MA2020-02, 1120-1120.                       | 0.0 | 0         |
| 31 | Structures and stability of $\text{GaN/Ga}_2\text{O}_3$ interfaces: a first-principles study. Japanese Journal of Applied Physics, 0, , .   | 1.5 | 0         |
| 32 | Reaction of nitrous oxide and ammonia molecules at $\text{4H-SiC/SiO}_2$ interface: An ab initio study. Surface Science, 2022, 723, 122102.   | 1.9 | 0         |