

Dae-Hong Ko

List of Publications by Year in descending order

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1113
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| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | TEM Study on Volume Changes and Void Formation in Ge ₂ Sb ₂ Te ₅ Films, with Repeated Phase Changes. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, H284. | 2.2 | 58 |
| 2 | Improved thermal stability of Al ₂ O ₃ /HfO ₂ /Al ₂ O ₃ high-k gate dielectric stack on GaAs. <i>Applied Physics Letters</i> , 2010, 96, . | 3.3 | 55 |
| 3 | Phase change behavior in oxygen-incorporated Ge ₂ Sb ₂ Te ₅ films. <i>Applied Physics Letters</i> , 2009, 95, . | 3.3 | 52 |
| 4 | Interfacial reactions in the thin film Y ₂ O ₃ on chemically oxidized Si(100) substrate systems. <i>Thin Solid Films</i> , 1999, 353, 8-11. | 1.8 | 48 |
| 5 | Influence of annealing condition on the properties of sputtered hafnium oxide. <i>Journal of Non-Crystalline Solids</i> , 2002, 303, 139-143. | 3.1 | 48 |
| 6 | Reduction of RESET current in phase change memory devices by carbon doping in GeSbTe films. <i>Journal of Applied Physics</i> , 2015, 117, 115703. | 2.5 | 35 |
| 7 | Formation of a Ge-rich layer during the oxidation of strained Si _{1-x} Ge _x . <i>Journal of Applied Physics</i> , 2006, 100, 016102. | 2.5 | 32 |
| 8 | Effects of Phosphorus Doping and Postgrowth Laser Annealing on the Structural, Electrical, and Chemical Properties of Phosphorus-Doped Silicon Films. <i>ACS Applied Electronic Materials</i> , 2019, 1, 288-301. | 4.3 | 31 |
| 9 | Study of ZrO ₂ thin films for gate oxide applications. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001, 19, 1720-1724. | 2.1 | 25 |
| 10 | A study on the microstructure and electrical properties of CeO ₂ thin films for gate dielectric applications. <i>Microelectronic Engineering</i> , 2001, 56, 187-190. | 2.4 | 24 |
| 11 | Enhanced bipolar resistive switching of HfO ₂ with a Ti interlayer. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 102, 997-1001. | 2.3 | 24 |
| 12 | Phase separation and electronic structure of Hf-silicate film as a function of composition. <i>Applied Physics Letters</i> , 2005, 87, 242906. | 3.3 | 23 |
| 13 | Interfacial reaction of atomic-layer-deposited HfO ₂ film as a function of the surface state of an n-GaAs (100) substrate. <i>Applied Physics Letters</i> , 2008, 93, 192902. | 3.3 | 23 |
| 14 | Polarity control in a single transition metal dichalcogenide (TMD) transistor for homogeneous complementary logic circuits. <i>Nanoscale</i> , 2019, 11, 12871-12877. | 5.6 | 21 |
| 15 | Effect of In incorporated into SbTe on phase change characteristics resulting from changes in electronic structure. <i>Applied Physics Letters</i> , 2010, 96, 052112. | 3.3 | 19 |
| 16 | Chemical state analysis of heavily phosphorus-doped epitaxial silicon films grown on Si (1 0 0) by X-ray photoelectron spectroscopy. <i>Applied Surface Science</i> , 2018, 443, 131-137. | 6.1 | 19 |
| 17 | Suppression of phase separation in Hf-silicate films using NH ₃ annealing treatment. <i>Applied Physics Letters</i> , 2006, 88, 081903. | 3.3 | 18 |
| 18 | Filament Geometry Induced Bipolar, Complementary and Unipolar Resistive Switching under the Same Set Current Compliance in Pt/SiO _x /TiN. <i>Scientific Reports</i> , 2015, 5, 15374. | 3.3 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Behavior of strain at a thin Ge pile-up layer formed by dry oxidation of a Si _{0.7} Ge _{0.3} film. Thin Solid Films, 2010, 518, 2065-2069. | 1.8 | 16 |
| 20 | Probing lattice vibration and strain states in highly phosphorus-doped epitaxial Si films. Journal of Materials Chemistry C, 2017, 5, 9744-9752. | 5.5 | 15 |
| 21 | Changes in the structure of an atomic-layer-deposited HfO ₂ film on a GaAs (100) substrate as a function of postannealing temperature. Applied Physics Letters, 2009, 95, 042903. | 3.3 | 14 |
| 22 | Effect of amorphization on the structural stability and reversibility of Ge ₂ Sb ₂ Te ₅ and oxygen incorporated Ge ₂ Sb ₂ Te ₅ films. Journal of Materials Chemistry, 2012, 22, 16527. | 6.7 | 13 |
| 23 | Physical and electrical characteristics of Ge _x Sb _{100-x} films for use as phase-change materials. Thin Solid Films, 2018, 659, 1-6. | 1.8 | 13 |
| 24 | Defect states in epitaxial HfO ₂ films induced by atomic transport from n-GaAs (100) substrate. Journal of Applied Physics, 2011, 109, 114112. | 2.5 | 12 |
| 25 | The Phase Change Effect of Oxygen-Incorporation in GeSbTe Films. Journal of the Electrochemical Society, 2011, 158, H471. | 2.9 | 12 |
| 26 | Plasma-enhanced atomic layer deposition of low temperature silicon dioxide films using di-isopropylaminosilane as a precursor. Thin Solid Films, 2018, 660, 572-577. | 1.8 | 12 |
| 27 | Achievement of a high channel strain via dry oxidation of recessed source/drain Si _{1-x} Ge _x structures. Applied Physics Letters, 2011, 98, 133121. | 3.3 | 11 |
| 28 | Strain evolution during the growth of epitaxial Ge layers between narrow oxide trenches. Journal of Crystal Growth, 2014, 401, 308-313. | 1.5 | 11 |
| 29 | Crystallization Behaviors of Laser Induced Ge ₂ Sb ₂ Te ₅ in Different Amorphous States. Journal of the Electrochemical Society, 2010, 157, H264. | 2.9 | 10 |
| 30 | Characterization of channel strain evolution upon the silicidation of recessed source/drain Si _{1-x} Ge _x structures. Applied Physics Letters, 2011, 99, 133107. | 3.3 | 10 |
| 31 | Chemical bonding states and dopant redistribution of heavily phosphorus-doped epitaxial silicon films: Effects of millisecond laser annealing and doping concentration. Applied Surface Science, 2020, 504, 144447. | 6.1 | 10 |
| 32 | YSi _{2-x} formation in the presence of interfacial SiO ₂ layer. Journal of Applied Physics, 2002, 92, 5555-5559. | 2.5 | 9 |
| 33 | Strain characterization of fin-shaped field effect transistors with SiGe stressors using nanobeam electron diffraction. Applied Physics Letters, 2014, 105, 083104. | 3.3 | 9 |
| 34 | Selective epitaxial growth of stepwise SiGe:B at the recessed sources and drains: A growth kinetics and strain distribution study. AIP Advances, 2016, 6, . | 1.3 | 9 |
| 35 | Effect of selenium doping on the crystallization behaviors of GeSb for phase-change memory applications. Thin Solid Films, 2018, 653, 173-178. | 1.8 | 9 |
| 36 | Structural and stoichiometric change in nitrided HfO ₂ grown on Ge(100) by atomic layer deposition. Applied Physics Letters, 2006, 88, 111913. | 3.3 | 8 |

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|----|---|-----|-----------|
| 37 | Selective epitaxial growth of compressively strained Ge layers on Si in 40-nm trench arrays. <i>Thin Solid Films</i> , 2014, 557, 55-60. | 1.8 | 8 |
| 38 | Phase change memory employing a Ti diffusion barrier for reducing reset current. <i>Thin Solid Films</i> , 2016, 612, 135-140. | 1.8 | 8 |
| 39 | Dopant Activation of In Situ Phosphorus-doped Silicon Using Multi-pulse Nanosecond Laser Annealing. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 1900988. | 1.8 | 8 |
| 40 | Epitaxial Growth of Si and SiGe Using High-Order Silanes without a Carrier Gas at Low Temperatures via UHVCVD and LPCVD. <i>Coatings</i> , 2021, 11, 568. | 2.6 | 8 |
| 41 | Relaxation of misfit strain in silicon-germanium ($\text{Si}_{1-x}\text{Ge}_x$) films during dry oxidation. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, 1298-1303. | 1.2 | 7 |
| 42 | Synthesis of self-ordered Sb_2Te_2 films with atomically aligned Te layers and the effect of phonon scattering modulation. <i>Journal of Materials Chemistry C</i> , 2013, 1, 7043. | 5.5 | 7 |
| 43 | Selective chemical wet etching of $\text{Si}_{1-x}\text{Ge}_x$ versus Si in single-layer and multi-layer with HNO_3/HF mixtures. <i>Thin Solid Films</i> , 2020, 709, 138230. | 1.8 | 7 |
| 44 | Change in phase separation and electronic structure of nitrided Hf-silicate films as a function of composition and post-nitridation anneal. <i>Applied Physics Letters</i> , 2006, 89, 142908. | 3.3 | 6 |
| 45 | Channel Strain Measurement of $\text{Si}_{1-x}\text{C}_x$ Structures: Effects of Gate Length, Source/Drain Length, and Source/Drain Elevation. <i>Applied Physics Express</i> , 2013, 6, 066601. | 2.4 | 5 |
| 46 | Structural deformation and void formation driven by phase transformation in the $\text{Ge}_2\text{Sb}_2\text{Te}_5$ film. <i>Journal of Materials Chemistry C</i> , 2014, 2, 2001. | 5.5 | 5 |
| 47 | Use of NH_3 etchant for voids suppression to enhance set cycles in CGeSbTe -based phase change memory devices. <i>Thin Solid Films</i> , 2016, 616, 502-506. | 1.8 | 5 |
| 48 | Growth behavior and film properties of titanium dioxide by plasma-enhanced atomic layer deposition with discrete feeding method. <i>AIP Advances</i> , 2019, 9, 035333. | 1.3 | 5 |
| 49 | High performance InGaAs channel MOSFETs on highly resistive InAlAs buffer layers. <i>Solid-State Electronics</i> , 2021, 176, 107940. | 1.4 | 5 |
| 50 | Strain Behaviors of $\text{Si}_{1-x}\text{Ge}_x$ Grown on Oxidized and Etched $\text{Si}_{1-x}\text{Ge}_x$. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, H96. | 2.2 | 4 |
| 51 | Effect of Al doping on resistive switching behavior of NiO_x films for nonvolatile memory application. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, 1143-1147. | 1.2 | 4 |
| 52 | Change in crystalline structure and band alignment in atomic-layer-deposited HfO_2 on InP using an annealing treatment. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 1612-1617. | 1.8 | 4 |
| 53 | Selective epitaxial growth properties and strain characterization of $\text{Si}_{1-x}\text{Ge}_x$ in SiO_2 trench arrays. <i>Journal of the Korean Physical Society</i> , 2017, 70, 714-719. | 0.7 | 4 |
| 54 | Demonstration of Solar Cell on a Graphite Sheet with Carbon Diffusion Barrier Evaluation. <i>Molecules</i> , 2020, 25, 785. | 3.8 | 4 |

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|----|---|-----|-----------|
| 55 | Recrystallization and activation of ultra-high-dose phosphorus-implanted silicon using multi-pulse nanosecond laser annealing. Japanese Journal of Applied Physics, 2020, 59, SGGK09. | 1.5 | 4 |
| 56 | Comparison of high-order silanes and island formation phenomena during SiGe epitaxy at 500Å°C. Journal of the Korean Physical Society, 2021, 78, 712-718. | 0.7 | 4 |
| 57 | Improvement of contact resistivity of titanium silicide on P-doped epitaxial Si using a Se interlayer. Applied Physics Express, 2020, 13, 111004. | 2.4 | 4 |
| 58 | Effect of Surface Iron on Gate Oxide Integrity and its Removal from Silicon Surfaces. Materials Research Society Symposia Proceedings, 1993, 315, 353-358. | 0.1 | 3 |
| 59 | Effect of chemical bonding states in TaOx base layers on rectifying bipolar resistive switching characteristics. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, 032206. | 1.2 | 3 |
| 60 | In-Situ P Doped Epitaxial SiC Growth Under UHV-CVD. Journal of Nanoscience and Nanotechnology, 2014, 14, 7641-7647. | 0.9 | 3 |
| 61 | Improvement of reliability and speed of phase change memory devices with N7.9(Ge46.9Bi7.2Te45.9) films. AIP Advances, 2015, 5, 087119. | 1.3 | 3 |
| 62 | Characterization of residual strain in epitaxial Ge layers grown in sub-100 nm width SiO2 trench arrays. Thin Solid Films, 2015, 580, 45-51. | 1.8 | 3 |
| 63 | Microstructural properties of Ni-silicide films formed on epitaxially grown strained Si:P layer. Microelectronic Engineering, 2016, 165, 1-5. | 2.4 | 3 |
| 64 | Se-doped Ge10Sb90 for highly reliable phase-change memory with low operation power. Journal of Materials Research, 2017, 32, 2449-2455. | 2.6 | 3 |
| 65 | Influence of Si precursor type on the surface roughening of SiGe epitaxial layers deposited by ultrahigh vacuum chemical vapor deposition method. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, . | 2.1 | 3 |
| 66 | Facet evolution of selectively grown epitaxial SiGe fin layers in sub-100Ånm trench arrays. Journal of Crystal Growth, 2020, 532, 125429. | 1.5 | 3 |
| 67 | Defect Generation Mechanism of Epitaxially Grown In Situ Phosphorus-Doped Silicon on Silicon (111) Substrate. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900990. | 1.8 | 3 |
| 68 | Defect reduction and dopant activation of in situ phosphorus-doped silicon on a (111) silicon substrate using nanosecond laser annealing. Applied Physics Express, 2021, 14, 021001. | 2.4 | 3 |
| 69 | Theoretical and experimental analysis of the source resistance components in In0.7Ga0.3As quantum-well high-electron-mobility transistors. Journal of the Korean Physical Society, 2021, 78, 516-522. | 0.7 | 3 |
| 70 | Thermodynamic Stability of Ptal Thin Films on GaAs. Materials Research Society Symposia Proceedings, 1990, 181, 333. | 0.1 | 2 |
| 71 | Physical and electrical degradation of ZrO2 thin films with aluminum electrodes. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 102, 108-112. | 3.5 | 2 |
| 72 | Strain behavior of epitaxial SiCx films on silicon substrates during dry oxidation. Thin Solid Films, 2013, 546, 226-230. | 1.8 | 2 |

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|----|--|-----|-----------|
| 73 | Effect of (HfO ₂) _x (Al ₂ O ₃) _{1-x} /SiO ₂ double-layered blocking oxide on program and erase speed in charge trapping memory devices. Applied Physics A: Materials Science and Processing, 2016, 122, 1. | 2.3 | 2 |
| 74 | Formation of a Ge-rich Si _{1-x} Ge _x (x > 0.9) fin epitaxial layer condensed by dry oxidation. Semiconductor Science and Technology, 2017, 32, 114001. | 2.0 | 2 |
| 75 | Characterization of strain relaxation behavior in Si _{1-x} Ge _x epitaxial layers by dry oxidation. Journal of the Korean Physical Society, 2017, 71, 701-706. | 0.7 | 2 |
| 76 | Effect of thermal annealing on the strain and microstructures of in-situ phosphorus-doped Si _{1-x} Ge _x films grown on blanket and patterned silicon wafer. Journal of Alloys and Compounds, 2019, 790, 799-808. | 2.5 | 1 |
| 77 | Phase-change characteristics of carbon-doped GeSbSe thin films for PRAM applications. Journal of Materials Science: Materials in Electronics, 2019, 30, 20751-20757. | 2.2 | 2 |
| 78 | Effect of plasma and heat treatment on silicon dioxide films by plasma-enhanced atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, . | 2.1 | 2 |
| 79 | Quasicrystalline phase-change memory. Scientific Reports, 2020, 10, 13673. | 3.3 | 2 |
| 80 | Comparison of the Crystallization Behaviors in As-Deposited and Melt-Quenched N-Doped Ge ₂ Sb ₂ Te ₅ Thin Films. Journal of the Electrochemical Society, 2011, 158, H347. | 2.9 | 1 |
| 81 | Change of resistive-switching in TiO ₂ films with additional HfO ₂ thin layer. Journal of the Korean Physical Society, 2012, 60, 1313-1316. | 0.7 | 1 |
| 82 | Process to Form V-Grooved Trenches on Patterned Si (001) Substrates Using In Situ Selective Area Etching in a MOCVD Reactor. ECS Journal of Solid State Science and Technology, 2016, 5, P409-P411. | 1.8 | 1 |
| 83 | Electrical Activation of Phosphorus in Highly P-Doped Epitaxial Silicon Thin Films. Journal of Nanoscience and Nanotechnology, 2017, 17, 3365-3369. | 0.9 | 1 |
| 84 | Epitaxial growth of a silicon capping layer to mitigate roughness after the selective chemical etching of Si _{1-x} Ge _x . Thin Solid Films, 2020, 707, 138048. | 1.8 | 1 |
| 85 | Effects of dopant concentration on microstructure and strain states of in-situ phosphorus-doped epitaxial silicon films during dry oxidation. Thin Solid Films, 2020, 709, 138208. | 1.8 | 1 |
| 86 | Quantification of point and line defects in Si _{0.6} Ge _{0.4} alloys with thickness variation via optical pump-THz probe measurement. Applied Surface Science, 2020, 513, 145815. | 6.1 | 1 |
| 87 | Structural, bonding, and elastic properties of Si ₂ X (X = B, Al, and Ga): a theoretical study. Semiconductor Science and Technology, 2020, 35, 065004. | 2.0 | 1 |
| 88 | Comparison of Strain Characteristics and Contact Resistances of Heavily Phosphorus-Doped Si Formed by Phosphorus Implantation and In Situ Phosphorus-Doped Si Epitaxial Growth. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900989. | 1.8 | 1 |
| 89 | Vertical growth characterization of InAs nanowires grown by selective area growth on patterned InP(1 1 1)B substrate by a MOCVD method. Solid-State Electronics, 2021, 175, 107939. | 1.4 | 1 |
| 90 | Effect of Ge Concentration on the On-Current Boosting of Logic P-Type MOSFET with Sigma-Shaped Source/Drain. Coatings, 2021, 11, 654. | 2.6 | 1 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 91 | Effect of N-type doping and vacancy formation on the thermodynamic, electrical, structural, and bonding properties of Si: X. (X = P, As, and Sb): a theoretical study. Semiconductor Science and Technology, 2020, 35, 125005. | 2.0 | 1 |
| 92 | Study of Multi-twin Defects Generated in GaAs and InP Films on Nanopatterned Si via Transmission Electron Microscopy. Journal of the Korean Physical Society, 2020, 77, 592-597. | 0.7 | 1 |
| 93 | The Effect of Ge Condensation on Channel Strain during the Post Annealing Process of Recessed Source/Drain Si _{1-x} Ge _x . , 2012, , . | | 0 |
| 94 | The Effect of Gate Length on Channel Strain of Recessed Source/Drain Si _{1-x} C _x . , 2012, , . | | 0 |
| 95 | Observation of in situ B-doped Epitaxial Ge layer growth on Si(111) by ultra-high vacuum chemical vapor deposition. , 2014, , . | | 0 |
| 96 | Selective Epitaxial Growth of GaAs on a Si (001) Surface Formed by an In Situ Bake in a Metal-Organic Chemical Vapor Deposition Reactor. Journal of Nanoscience and Nanotechnology, 2017, 17, 3242-3246. | 0.9 | 0 |
| 97 | SiGe surface morphogenesis during dry cleaning with NF ₃ /H ₂ O plasma. , 2019, , . | | 0 |
| 98 | Effect of P Concentration on Ti Silicide Formation in In ⁺ Situ P Doped Epitaxial Si Films. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800620. | 1.8 | 0 |
| 99 | Analysis of anisotropic in-plane strain behavior in condensed Si _{1-x} Ge _x fin epitaxial layer using X-ray reciprocal space mapping. Japanese Journal of Applied Physics, 2019, 58, 036502. | 1.5 | 0 |
| 100 | Method for contact resistivity measurements on highly phosphorus-doped silicon using a multiline transmission line model. Journal of the Korean Physical Society, 2021, 78, 290-296. | 0.7 | 0 |