# Suklyun Hong

List of Publications by Year
in descending order



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|---|---|---|---|
| 121 papers | 3,153 citations | 159585 30 h-index | 197818 49 g-index |
| 121 all docs | 121 docs citations | 121 times ranked | 5121 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Computational Study of Hydrogen Storage Characteristics of Covalent-Bonded Graphenes. Journal of the American Chemical Society, 2007, 129, 8999-9003. | 13.7 | 161 |
| 2 | Systematic study of electronic structure and band alignment of monolayer transition metal dichalcogenides in Van der Waals heterostructures. 2D Materials, 2017, 4, 015026. | 4.4 | 160 |
| 3 | Charge Mediated Reversible Metalâ€“Insulator Transition in Monolayer MoTe<sub>2</sub> and W<sub>x</sub>Mo<sub>1â€“x</sub>Te<sub>2</sub> Alloy. ACS Nano, 2016, 10, 7370-7375. | 14.6 | 133 |
| 4 | Nanocrystalline Graphite Growth on Sapphire by Carbon Molecular Beam Epitaxy. Journal of Physical Chemistry C, 2011, 115, 4491-4494. | 3.1 | 113 |
| 5 | Modification of Electrical Properties of Graphene by Substrate-Induced Nanomodulation. Nano Letters, 2013, 13, 3494-3500. | 9.1 | 94 |
| 6 | Phase stability and elastic moduli of Cr2Nb by first-principles calculations. Intermetallics, 1999, 7, 5-9. | 3.9 | 93 |
| 7 | In situ hybridization of carbon nanotubes with bacterial cellulose for three-dimensional hybrid bioscaffolds. Biomaterials, 2015, 58, 93-102. | 11.4 | 82 |
| 8 | Remote heteroepitaxy of GaN microrod heterostructures for deformable light-emitting diodes and wafer recycle. Science Advances, 2020, 6, eaaz5180. | 10.3 | 80 |
| 9 | Structure of the Ba-InducedSi(111)-(3Ã—2)Reconstruction. Physical Review Letters, 2001, 87, 056104. | 7.8 | 64 |
| 10 | Ab initio study of the effect of water adsorption on the carbon nanotube field-effect transistor. Applied Physics Letters, 2006, 89, 243110. | 3.3 | 63 |
| 11 | Atomic-scale dynamics of triangular hole growth in monolayer hexagonal boron nitride under electron irradiation. Nanoscale, 2015, 7, 10600-10605. | 5.6 | 63 |
| 12 | Formation of Highly Ordered Organic Monolayers by Dative Bonding:Â Pyridine on Ge(100). Journal of the American Chemical Society, 2003, 125, 7514-7515. | 13.7 | 61 |
| 13 | Temperature-Dependent and Gate-Tunable Rectification in a Black Phosphorus/WS<sub>2</sub> van der Waals Heterojunction Diode. ACS Applied Materials & Interfaces, 2018, 10, 13150-13157. | 8.0 | 61 |
| 14 | Effect of hydrogen on the surface-energy anisotropy of diamond and silicon. Physical Review B, 1998, 57, 6262-6265. | 3.2 | 56 |
| 15 | The presence of CH3NH2 neutral species in organometal halide perovskite films. Applied Physics Letters, 2016, 108, . | 3.3 | 50 |
| 16 | Controlled Electrochemical Intercalation of Graphene/h-BN van der Waals Heterostructures. Nano Letters, 2018, 18, 460-466. | 9.1 | 49 |
| 17 | Electronic Properties of Bilayer Graphene Strongly Coupled to Interlayer Stacking and an External Electric Field. Physical Review Letters, 2015, 115, 015502. | 7.8 | 47 |
| 18 | Surface Instability of Sn-Based Hybrid Perovskite Thin Film, CH<sub>3</sub>NH<sub>3</sub>SnI<sub>3</sub>: The Origin of Its Material Instability. Journal of Physical Chemistry Letters, 2018, 9, 2293-2297. | 4.6 | 45 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Van der Waals density functional theory study for bulk solids with BCC, FCC, and diamond structures. Current Applied Physics, 2015, 15, 885-891. | 2.4 | 43 |
| 20 | Crystal Shape of a Nickel Particle Related to Carbon Nanotube Growth. Japanese Journal of Applied Physics, 2002, 41, 6142-6144. | 1.5 | 41 |
| 21 | Double Dative Bond Configuration:Â Pyrimidine on Ge(100). Journal of Physical Chemistry B, 2005, 109, 348-351. | 2.6 | 40 |
| 22 | Indirect-direct band gap transition through electric tuning in bilayer MoS2. Journal of Chemical Physics, 2014, 140, 174707. | 3.0 | 40 |
| 23 | Reduction of Fermi level pinning at Auâ€“MoS <sub>2</sub> interfaces by atomic passivation on Au surface. 2D Materials, 2017, 4, 015019. | 4.4 | 40 |
| 24 | Electronic structure calculations of metal-nanotube contacts with or without oxygen adsorption. Physical Review B, 2005, 72, . | 3.2 | 39 |
| 25 | Theoretical study of hydrogen-covered diamond (100) surfaces: A chemical-potential analysis. Physical Review B, 1997, 55, 9975-9982. | 3.2 | 38 |
| 26 | Dissociative Chemisorption of Methanol on Ge(100). Journal of Physical Chemistry C, 2007, 111, 15013-15019. | 3.1 | 37 |
| 27 | One-dimensional hexagonal boron nitride conducting channel. Science Advances, 2020, 6, eaay4958. | 10.3 | 37 |
| 28 | Effect of Annealing in Ar/H<sub>2</sub> Environment on Chemical Vapor Deposition-Grown Graphene Transferred With Poly (Methyl Methacrylate). IEEE Nanotechnology Magazine, 2015, 14, 70-74. | 2.0 | 34 |
| 29 | Band Alignment at Au/MoS<sub>2</sub> Contacts: Thickness Dependence of Exfoliated Flakes. Journal of Physical Chemistry C, 2017, 121, 22517-22522. | 3.1 | 34 |
| 30 | Remote homoepitaxy of ZnO microrods across graphene layers. Nanoscale, 2018, 10, 22970-22980. | 5.6 | 33 |
| 31 | High-throughput screening of metal-porphyrin-like graphenes for selective capture of carbon dioxide. Scientific Reports, 2016, 6, 21788. | 3.3 | 31 |
| 32 | Black Phosphorus-IGZO van der Waals Diode with Low-Resistivity Metal Contacts. ACS Applied Materials & Interfaces, 2019, 11, 10959-10966. | 8.0 | 31 |
| 33 | Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions. Nano Letters, 2020, 20, 2443-2451. | 9.1 | 31 |
| 34 | Atomic and Electronic Structure of Pyridine on Ge(100). Journal of Physical Chemistry B, 2004, 108, 15229-15232. | 2.6 | 30 |
| 35 | Remote heteroepitaxy across graphene: Hydrothermal growth of vertical ZnO microrods on graphene-coated GaN substrate. Applied Physics Letters, 2018, 113, . | 3.3 | 30 |
| 36 | Phase stability of transition metal dichalcogenide by competing ligand field stabilization and charge density wave. 2D Materials, 2015, 2, 035019. | 4.4 | 29 |

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|---|---|---|---|
| 37 | Ferromagnetic contact between Ni and MoX <sub>2</sub> (Xâ€‰â€‰=â€‰â€‰S, Se, or Te) with Fermi-level pinning. 2D Materials, 2017, 4, 024006. | 4.4 | 28 |
| 38 | Realistic adsorption geometries and binding affinities of metal nanoparticles onto the surface of carbon nanotubes. Applied Physics Letters, 2009, 94, . | 3.3 | 27 |
| 39 | First-principles study of carbon atoms adsorbed on MgO(100) related to graphene growth. Current Applied Physics, 2013, 13, 327-330. | 2.4 | 27 |
| 40 | Elastic properties and stacking fault energies of Cr2Ta. Intermetallics, 1999, 7, 1169-1172. | 3.9 | 26 |
| 41 | Surface energy anisotropy of iron surfaces by carbon adsorption. Current Applied Physics, 2003, 3, 457-460. | 2.4 | 26 |
| 42 | Ab initio study of adsorption properties of hazardous organic molecules on graphene: Phenol, phenyl azide, and phenylnitrene. Chemical Physics Letters, 2015, 618, 57-62. | 2.6 | 26 |
| 43 | Significant THz absorption in CH3NH2 molecular defect-incorporated organic-inorganic hybrid perovskite thin film. Scientific Reports, 2019, 9, 5811. | 3.3 | 26 |
| 44 | ThicknessâEĐependent, GateâEŤunable Rectification and Highly Sensitive Photovoltaic Behavior of Heterostructured GeSe/WS<sub>2</sub> pâ€“n Diode. Advanced Materials Interfaces, 2020, 7, 2000893. | 3.7 | 25 |
| 45 | Selective-Area Remote Epitaxy of ZnO Microrods Using Multilayerâ€“Monolayer-Patterned Graphene for Transferable and Flexible Device Fabrications. ACS Applied Nano Materials, 2020, 3, 8920-8930. | 5.0 | 25 |
| 46 | Theoretical study on cracking behavior in two-phase alloys Crâ€“Cr2X (X=Hf, Nb, Ta, Zr). Intermetallics, 2001, 9, 799-805. | 3.9 | 24 |
| 47 | Study of Adsorption and Decomposition of H2O on Ge(100). Journal of Physical Chemistry B, 2005, 109, 24445-24449. | 2.6 | 24 |
| 48 | Bidentate Structures of Acetic Acid on Ge(100):â€‰ The Role of Carboxyl Oxygen. Journal of Physical Chemistry C, 2007, 111, 5941-5945. | 3.1 | 23 |
| 49 | Graphitic Carbon Growth on MgO(100) by Molecular Beam Epitaxy. Journal of Physical Chemistry C, 2012, 116, 7380-7385. | 3.1 | 23 |
| 50 | Investigations of Vacancy Structures Related to Their Growth in h-BN Sheet. Nanoscale Research Letters, 2017, 12, 445. | 5.7 | 23 |
| 51 | Tailoring Surface Properties via Functionalized Hydrofluorinated Graphene Compounds. Advanced Materials, 2019, 31, e1903424. | 21.0 | 23 |
| 52 | Rapid synthesis of graphene by chemical vapor deposition using liquefied petroleum gas as precursor. Carbon, 2019, 145, 462-469. | 10.3 | 23 |
| 53 | Carbon diffusion around the edge region of nickel nanoparticles. Applied Physics Letters, 2008, 92, 043103. | 3.3 | 22 |
| 54 | Atomic and electronic structure of methanol on Ge(100). Surface Science, 2010, 604, 129-135. | 1.9 | 22 |

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|---|---|---|---|
| 55 | Van der Waals heterojunction diode composed of WS<sub>2</sub>flake placed on p-type Si substrate. Nanotechnology, 2018, 29, 045201. | 2.6 | 21 |
| 56 | In-Depth Structural Characterization of 1T-VSe<sub>2</sub> Single Crystals Grown by Chemical Vapor Transport. Crystal Growth and Design, 2020, 20, 2860-2865. | 3.0 | 21 |
| 57 | Role of hydrogen inSiH2adsorption on Si(100). Physical Review B, 1998, 58, R13363-R13366. | 3.2 | 20 |
| 58 | Hydrogen adsorption on hexagonal silicon nanotubes. Solid State Communications, 2008, 148, 469-471. | 1.9 | 20 |
| 59 | First-principles study of substitutional carbon pair and Stoneâ€“Wales defect complexes in boron nitride nanotubes. Chemical Physics Letters, 2012, 522, 79-82. | 2.6 | 20 |
| 60 | Atomic and electronic structure of acetic acid on Ge(100). Surface Science, 2006, 600, 3629-3632. | 1.9 | 19 |
| 61 | Energy Bandgap and Edge States in an Epitaxially Grown Graphene/h-BN Heterostructure. Scientific Reports, 2016, 6, 31160. | 3.3 | 19 |
| 62 | Ab initio study of adsorption behaviors of molecular adsorbates on the surface and at the edge of MoS 2. Current Applied Physics, 2018, 18, 1013-1019. | 2.4 | 18 |
| 63 | Ab initio Calculations with van der Waals Corrections: Benzene-benzene Intermolecular Case and Graphite. Journal of the Korean Physical Society, 2011, 59, 196-199. | 0.7 | 18 |
| 64 | Atomic and Electronic Structure of Pyrrole on Ge(100). Journal of Physical Chemistry C, 2008, 112, 7412-7419. | 3.1 | 17 |
| 65 | Ab-initio Study of Interactions of Gold Atoms with Hydroxylated MgO(001) Surfaces. Journal of the Physical Society of Japan, 2012, 81, 054601. | 1.6 | 17 |
| 66 | Adsorption and Surface Diffusion of Pt Atoms on Hydroxylated MgO(001) Surfaces. Journal of the Physical Society of Japan, 2013, 82, 034603. | 1.6 | 16 |
| 67 | Hydrogen-Bonded Amino Acid Network of Histidine on Ge(100). Journal of Physical Chemistry C, 2011, 115, 4636-4641. | 3.1 | 15 |
| 68 | Metallization of the semiconducting carbon nanotube by encapsulated bromine molecules. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 693-697. | 2.7 | 14 |
| 69 | Van der Waals Density Functional Theory Study of Molecular Adsorbates on MoX2(X = S, Se or Te). Journal of the Korean Physical Society, 2018, 73, 100-104. | 0.7 | 14 |
| 70 | 3D graphene-cellulose nanofiber hybrid scaffolds for cortical reconstruction in brain injuries. 2D Materials, 2019, 6, 045043. | 4.4 | 14 |
| 71 | First-principles calculation of stacking fault and twin boundary energies of Cr2Nb. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 871-880. | 0.6 | 13 |
| 72 | Chemical Reactions and Adsorption Geometries of Pyrrole on Ge(100). Journal of Physical Chemistry B, 2006, 110, 7938-7943. | 2.6 | 13 |

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|---|---|---|---|
| 73 | Polar oxide substrates for graphene growth: A first-principles investigation of graphene on MgO(111). Current Applied Physics, 2013, 13, 803-807. | 2.4 | 13 |
| 74 | Conserving approximations: Electron gas with exchange effects. Physical Review B, 1994, 50, 8182-8188. | 3.2 | 12 |
| 75 | Adsorption Structure and Reaction Mechanism of Purine on Ge(100) Studied by Scanning Tunneling Microscopy and Theoretical Calculations. Journal of Physical Chemistry C, 2012, 116, 6953-6959. | 3.1 | 12 |
| 76 | Point defects in turbostratic stacked bilayer graphene. Nanoscale, 2017, 9, 13725-13730. | 5.6 | 12 |
| 77 | Investigation of atomic and electronic properties of 2D-MoS<sub>2</sub>/3D-GaN mixed-dimensional heterostructures. Nanotechnology, 2019, 30, 404002. | 2.6 | 12 |
| 78 | Enhanced binding strength between metal nanoclusters and carbon nanotubes with an atomic nickel defect. Nanotechnology, 2012, 23, 205204. | 2.6 | 11 |
| 79 | In Situ Atomic Level Dynamics of Heterogeneous Nucleation and Growth of Graphene from Inorganic Nanoparticle Seeds. ACS Nano, 2016, 10, 9397-9410. | 14.6 | 11 |
| 80 | Discrimination of Chiral Adsorption Configurations: Styrene on Germanium(100). Journal of Physical Chemistry C, 2009, 113, 1426-1432. | 3.1 | 10 |
| 81 | Thermally Induced Desulfurization: Structural Transformation of Thiophene on the Si(100) Surface. Journal of Physical Chemistry C, 2013, 117, 11731-11737. | 3.1 | 9 |
| 82 | Theoretical Demonstration of the Ionic Barristor. Nano Letters, 2016, 16, 2090-2095. | 9.1 | 9 |
| 83 | Understanding filamentary growth and rupture by Ag ion migration through single-crystalline 2D layered CrPS4. NPG Asia Materials, 2020, 12, . | 7.9 | 9 |
| 84 | Temperature dependence of the Hartree-Fock approximation. Physical Review B, 1994, 50, 7284-7290. | 3.2 | 8 |
| 85 | Thermodynamic design of a high temperature chemical vapor deposition process to synthesize Î±-SiC in Si-C-H and Si-C-H-Cl systems. Journal of Crystal Growth, 2018, 485, 78-85. | 1.5 | 8 |
| 86 | Substrate effect on doping and degradation of graphene. Carbon, 2021, 184, 651-658. | 10.3 | 8 |
| 87 | Temperature dependence of the Hartree-Fock approximation in two dimensions. Physical Review B, 1995, 52, 7860-7863. | 3.2 | 7 |
| 88 | Energetics of the dihydride phases on the diamond (100) surface. Physical Review B, 2002, 65, . | 3.2 | 7 |
| 89 | Theoretical STM images of alkaline-earth metal adsorbed Si(111)3Ã—2 surfaces. Surface Science, 2006, 600, 3606-3609. | 1.9 | 7 |
| 90 | Graphene oxide catalyzed cis-trans isomerization of azobenzene. APL Materials, 2014, 2, . | 5.1 | 7 |

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|---|---|---|---|
| 91 | Mixed-dimensional 2D/3D heterojunctions between MoS<sub>2</sub> and Si(100). Physical Chemistry Chemical Physics, 2018, 20, 25240-25245. | 2.8 | 7 |
| 92 | First-Principles Study of Atomic and Electronic Structure of Ba/Si(111). Journal of the Physical Society of Japan, 2002, 71, 2761-2764. | 1.6 | 6 |
| 93 | Effect of Hydrogen on Carbon Diffusion on Ni(111). Japanese Journal of Applied Physics, 2004, 43, 773-774. | 1.5 | 6 |
| 94 | Origins of dihydrogen binding to metal-inserted porphyrins: Electric polarization and Kubas interaction. Journal of Chemical Physics, 2011, 134, 234701. | 3.0 | 6 |
| 95 | Doping effect in graphene on oxide substrates: MgO(111) and SiO2(0001). Current Applied Physics, 2015, 15, S103-S107. | 2.4 | 6 |
| 96 | Rapid chemical vapor deposition of graphene using methanol as a precursor. Carbon Letters, 2021, 31, 307-313. | 5.9 | 6 |
| 97 | Ab initio study of hydrogen binding on Ca-inserted porphyrin. Vacuum, 2009, 84, 537-539. | 3.5 | 5 |
| 98 | Effect of charge-transfer complex on the energy level alignment between graphene and organic molecules. Applied Physics Letters, 2012, 100, 183102. | 3.3 | 5 |
| 99 | Strain-induced non-linear optical characteristics of pyroelectric PbVO_3 epitaxial thin films. Optical Materials Express, 2017, 7, 62. | 3.0 | 5 |
| 100 | Effect of atomic passivation at Ni-MoS2 interfaces on contact behaviors. Current Applied Physics, 2020, 20, 132-136. | 2.4 | 5 |
| 101 | Transport gaps in ideal zigzag-edge graphene nanoribbons with chemical edge disorder. Applied Surface Science, 2020, 512, 144714. | 6.1 | 5 |
| 102 | Electronic structure of graphene/Y2C heterostructure and related doping effect. Current Applied Physics, 2021, 28, 13-18. | 2.4 | 5 |
| 103 | Correlation energy and its temperature dependence. Physical Review B, 1996, 53, 1215-1224. | 3.2 | 4 |
| 104 | Monovacancy and substitutional defects in hexagonal silicon nanotubes. Solid State Communications, 2009, 149, 408-411. | 1.9 | 4 |
| 105 | Enhanced Deseleniumization of Selenophene Molecules Adsorbed on Si(100)-2 Ã— 1 Surface. Journal of Physical Chemistry C, 2011, 115, 17856-17860. | 3.1 | 4 |
| 106 | A first-principles study on the adsorption of ethylenediamine on Ge(100). Physical Chemistry Chemical Physics, 2017, 19, 16881-16887. | 2.8 | 4 |
| 107 | Spin-polarized Hartree-Fock approximation at nonzero temperatures. Physical Review B, 1995, 51, 17417-17430. | 3.2 | 3 |
| 108 | Atomic and electronic structure of styrene on Ge(100). Surface Science, 2011, 605, 1438-1444. | 1.9 | 3 |

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| 109 | Observation of graphene grain boundaries through selective adsorption of rhodamine B using fluorescence microscopy. Carbon, 2016, 108, 72-78. | 10.3 | 3 |
| 110 | Adsorption of Acetonitrile on Si(111)-(7 Ã— 7). ACS Omega, 2020, 5, 24179-24185. | 3.5 | 3 |
| 111 | Contact properties of 2D/3D GaSe/Si(1ÂÎ1) heterostructure. Applied Surface Science, 2020, 516, 145969. | 6.1 | 3 |
| 112 | Structure of Pyrrole on Ge(100). Japanese Journal of Applied Physics, 2006, 45, 2148-2150. | 1.5 | 2 |
| 113 | Structure of Glycine on Ge(100): Ab Initio Study of Its Scanning Tunneling Microscopy Images. Journal of Physical Chemistry C, 2012, 116, 13890-13895. | 3.1 | 2 |
| 114 | Ab initio Investigations of Carbon Atoms Adsorbed on Î±-Al2O3 Surfaces in Relation to Graphene Growth. Journal of the Physical Society of Japan, 2013, 82, 114709. | 1.6 | 2 |
| 115 | Edge-functionalization of armchair graphene nanoribbons with pentagonal-hexagonal edge structures. Journal of Physics Condensed Matter, 2017, 29, 245301. | 1.8 | 2 |
| 116 | Functionalization of Ge(1â€¯0â€¯0) surface by adsorption of phenylthiol. Applied Surface Science, 2018, 456, 908-914. | 6.1 | 2 |
| 117 | Effects of intercalated atoms on electronic structure of graphene nanoribbon/hexagonal boron nitride stacked layer. Scientific Reports, 2019, 9, 3623. | 3.3 | 2 |
| 118 | Layer dependent electrical transport in exfoliated graphene FETs under UV illumination. Applied Surface Science, 2019, 479, 863-873. | 6.1 | 2 |
| 119 | Effect of Point Defects on Electronic Structure of Monolayer GeS. Nanomaterials, 2021, 11, 2960. | 4.1 | 2 |
| 120 | Spatial variation in the electronic structures of carpetlike graphene nanoribbons and sheets. Current Applied Physics, 2014, 14, 1687-1691. | 2.4 | 1 |
| 121 | Indium-contacted van der Waals gap tunneling spectroscopy for van der Waals layered materials. Scientific Reports, 2021, 11, 17790. | 3.3 | 1 |