

# Hiroyuki Yoshida

## List of Publications by Year in descending order

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80  
papers

2,700  
citations

186265

28  
h-index

182427

51  
g-index

82  
all docs

82  
docs citations

82  
times ranked

3337  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Implication of Fluorine Atom on Electronic Properties, Ordering Structures, and Photovoltaic Performance in Naphthobisthiadiazole-Based Semiconducting Polymers. <i>Journal of the American Chemical Society</i> , 2016, 138, 10265-10275.     | 13.7 | 319       |
| 2  | X-ray diffraction reciprocal space mapping study of the thin film phase of pentacene. <i>Applied Physics Letters</i> , 2007, 90, 181930.   | 3.3  | 155       |
| 3  | Near-ultraviolet inverse photoemission spectroscopy using ultra-low energy electrons. <i>Chemical Physics Letters</i> , 2012, 539-540, 180-185.  | 2.6  | 124       |
| 4  | Ground-state electron transfer in all-polymer donor-acceptor heterojunctions. <i>Nature Materials</i> , 2020, 19, 738-744.   | 27.5 | 111       |
| 5  | Crystallographic and electronic structures of three different polymorphs of pentacene. <i>Physical Review B</i> , 2008, 77, .  | 3.2  | 108       |
| 6  | Ultraviolet photoelectron spectroscopy and inverse photoemission spectroscopy of [6,6]-phenyl-C61-butyrac methyl ester in gas and solid phases. <i>Journal of Applied Physics</i> , 2008, 104, .   | 2.5  | 105       |
| 7  | Complete description of ionization energy and electron affinity in organic solids: Determining contributions from electronic polarization, energy band dispersion, and molecular orientation. <i>Physical Review B</i> , 2015, 92, .           | 3.2  | 101       |
| 8  | Anatomy of the energetic driving force for charge generation in organic solar cells. <i>Nature Communications</i> , 2019, 10, 2520.  | 12.8 | 95        |
| 9  | Low-Energy Inverse Photoemission Study on the Electron Affinities of Fullerene Derivatives for Organic Photovoltaic Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 24377-24382.  | 3.1  | 86        |
| 10 | Electron affinities of organic materials used for organic light-emitting diodes: A low-energy inverse photoemission study. <i>Organic Electronics</i> , 2015, 20, 24-30.   | 2.6  | 86        |
| 11 | Dithienylthienothiophenebisimide, a Versatile Electron-Deficient Unit for Semiconducting Polymers. <i>Advanced Materials</i> , 2016, 28, 6921-6925.  | 21.0 | 83        |
| 12 | Orientation-Dependent Electronic Structures and Charge Transport Mechanisms in Ultrathin Polymeric n-Channel Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 4417-4422.                                     | 8.0  | 74        |
| 13 | Principle and application of low energy inverse photoemission spectroscopy: A new method for measuring unoccupied states of organic semiconductors. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2015, 204, 116-124.        | 1.7  | 70        |
| 14 | Spin-polarized electronic structure of cobalt cluster anions studied by photoelectron spectroscopy. <i>Journal of Chemical Physics</i> , 1995, 102, 5960-5965.   | 3.0  | 63        |
| 15 | Electron affinity of pentacene thin film studied by radiation-damage free inverse photoemission spectroscopy. <i>Applied Physics Letters</i> , 2013, 103, .  | 3.3  | 61        |
| 16 | Grazing-incidence x-ray diffraction study of pentacene thin films with the bulk phase structure. <i>Applied Physics Letters</i> , 2006, 89, 101919.  | 3.3  | 56        |
| 17 | Electron Transport in Bathocuproine Interlayer in Organic Semiconductor Devices. <i>Journal of Physical Chemistry C</i> , 2015, 119, 24459-24464.  | 3.1  | 50        |
| 18 | Impact of the molecular quadrupole moment on ionization energy and electron affinity of organic thin films: Experimental determination of electrostatic potential and electronic polarization energies. <i>Physical Review B</i> , 2018, 97, . | 3.2  | 47        |

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|----|--|------|-----------|
| 19 | Electronic structure of vanadium cluster anions as studied by photoelectron spectroscopy. Journal of Chemical Physics, 1997, 106, 2182-2187.   | 3.0  | 45        |
| 20 | Crystallization-Induced Energy Level Change of [6,6]-Phenyl-C <sub>61</sub> -Butyric Acid Methyl Ester (PCBM) Film: Impact of Electronic Polarization Energy. Journal of Physical Chemistry C, 2015, 119, 23-28.   | 3.1  | 44        |
| 21 | Measuring the electron affinity of organic solids: an indispensable new tool for organic electronics. Analytical and Bioanalytical Chemistry, 2014, 406, 2231-2237.  | 3.7  | 43        |
| 22 | Amorphous oxide alloys as interfacial layers with broadly tunable electronic structures for organic photovoltaic cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7897-7902.                                 | 7.1  | 41        |
| 23 | Unoccupied electronic states of 3d-transition metal phthalocyanines (MPc: M=Mn, Fe, Co, Ni, Cu and) Phenomena, 2001, 121, 83-91.   | 1.7  | 40        |
| 24 | Note: Low energy inverse photoemission spectroscopy apparatus. Review of Scientific Instruments, 2014, 85, 016101.   | 1.3  | 40        |
| 25 | Alternative Face-on Thin Film Structure of Pentacene. Scientific Reports, 2019, 9, 579.  | 3.3  | 40        |
| 26 | Impact of Noncovalent Sulfur-Fluorine Interaction Position on Properties, Structures, and Photovoltaic Performance in Naphthobisthiadiazole-Based Semiconducting Polymers. Advanced Energy Materials, 2020, 10, 1903278.                                       | 19.5 | 39        |
| 27 | Valence-Tautomeric Ionic Liquid Composed of a Cobalt Bis(dioxolene) Complex Dianion. Inorganic Chemistry, 2009, 48, 9989-9991.   | 4.0  | 37        |
| 28 | Molecular orientation analysis of organic thin films by polarization Raman microscope. Journal of Raman Spectroscopy, 2012, 43, 2029-2034.   | 2.5  | 30        |
| 29 | Surface Termination of Solution-Processed CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Film Examined using Electron Spectroscopies. Advanced Materials, 2021, 33, e2004981.   | 21.0 | 27        |
| 30 | Unoccupied electronic structure in organic thin films studied by inverse photoemission spectroscopy. Journal of Materials Chemistry, 1999, 10, 85-89.  | 6.7  | 25        |
| 31 | Effect of end group of amorphous perfluoro-polymer electrets on electron trapping. Science and Technology of Advanced Materials, 2018, 19, 486-494.  | 6.1  | 25        |
| 32 | Aluminum diffusion and reaction in thin films of perylene-3,4,9,10-tetracarboxylic dianhydride: Depth profiles and time-dependent diffusion coefficients. Applied Physics Letters, 2007, 91, 141915.   | 3.3  | 23        |
| 33 | Low-energy inverse photoemission spectroscopy using a high-resolution grating spectrometer in the near ultraviolet range. Review of Scientific Instruments, 2013, 84, 103901.  | 1.3  | 23        |
| 34 | Electron-donor function of methanofullerenes in donor-acceptor bulk heterojunction systems. Chemical Communications, 2014, 50, 4123-4125.  | 4.1  | 22        |
| 35 | Effects of end-on oriented polymer chains at the donor/acceptor interface in organic solar cells. Journal of Materials Chemistry A, 2018, 6, 22889-22898.  | 10.3 | 22        |
| 36 | Three-dimensional $\pi$ -conjugated compounds as non-fullerene acceptors in organic photovoltaics: the influence of acceptor unit orientation at phase interfaces on photocurrent generation efficiency. Journal of Materials Chemistry A, 2017, 5, 3932-3938. | 10.3 | 21        |

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|----|---|------|-----------|
| 37 | The Evolution of Intermolecular Energy Bands of Occupied and Unoccupied Molecular States in Organic Thin Films. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12090-12097.  | 3.1  | 19        |
| 38 | Structure-Dependent Electron Affinities of Perylene Diimide-Based Acceptors. <i>Journal of Physical Chemistry C</i> , 2020, 124, 9765-9773.   | 3.1  | 18        |
| 39 | Significantly Sensitized Ternary Blend Polymer Solar Cells with a Very Small Content of the Narrow-Band Gap Third Component That Utilizes Optical Interference. <i>Macromolecules</i> , 2020, 53, 10623-10635.                    | 4.8  | 17        |
| 40 | Conduction band structure of high-mobility organic semiconductors and partially dressed polaron formation. <i>Nature Materials</i> , 2022, 21, 910-916.   | 27.5 | 17        |
| 41 | Photoelectron spectroscopy of $(\text{CO}_2)_n\text{H}_2\text{O}^{2-}$ ( $2 \leq n \leq 8$ ) clusters. <i>Chemical Physics Letters</i> , 1992, 199, 205-210.  |      | 16        |
| 42 | Unoccupied electronic states in a hexatriacontane thin film studied by inverse photoemission spectroscopy. <i>Chemical Physics Letters</i> , 2002, 361, 367-373.  | 2.6  | 16        |
| 43 | An Accurate Calculation of Electronic Contribution to Static Permittivity Tensor for Organic Molecular Crystals on the Basis of the Charge Response Kernel Theory. <i>Journal of Physical Chemistry A</i> , 2009, 113, 9207-9212. | 2.5  | 14        |
| 44 | A Precise Analysis of the Core-Level Energy Difference between the Surface and Bulk Region of Organic Semiconductor Thin Films. <i>Journal of Physical Chemistry C</i> , 2012, 116, 10033-10038.                                  | 3.1  | 13        |
| 45 | New Experimental Method to Precisely Examine the LUMO Levels of Organic Semiconductors and Application to the Fullerene Derivatives. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1493, 295-301.                | 0.1  | 13        |
| 46 | Charge transfer states appear in the $\pi$ -conjugated pure hydrocarbon molecule on Cu(111). <i>Applied Physics Express</i> , 2016, 9, 045201.  | 2.4  | 10        |
| 47 | High sensitivity detection of the frontier electronic states of $\text{CH}_3\text{NH}_3\text{PbI}_3$ single crystals by low energy excitation. <i>Applied Physics Express</i> , 2019, 12, 051009.                                 | 2.4  | 10        |
| 48 | Hybridization vs decoupling: influence of an h-BN interlayer on the physical properties of a ladder-type molecule on Ni(111). <i>Beilstein Journal of Nanotechnology</i> , 2020, 11, 1168-1177.                                   | 2.8  | 10        |
| 49 | Electronic structure of disjoint diradical 4,4'-bis(1,2,3,5-dithiadiazolyl) thin films. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 11432.   | 2.8  | 9         |
| 50 | The depth profile of core energy levels: Electronic structure of buried organic/metal interfaces examined by X-ray photoemission and target factor analysis. <i>Chemical Physics Letters</i> , 2011, 511, 146-150.                | 2.6  | 9         |
| 51 | Temperature-dependent band structure evolution determined by surface geometry in organic halide perovskite single crystals. <i>Physical Review B</i> , 2020, 102, .   | 3.2  | 9         |
| 52 | Metal screening effect on energy levels at metal/organic interface: Precise determination of screening energy using photoelectron and inverse-photoelectron spectroscopies. <i>Physical Review B</i> , 2021, 104, .               | 3.2  | 9         |
| 53 | Effects of Molecular Orientation of a Fullerene Derivative at the Donor/Acceptor Interface on the Device Performance of Organic Photovoltaics. <i>Chemistry of Materials</i> , 2018, 30, 8233-8243.                               | 6.7  | 8         |
| 54 | Electronic structures of unoccupied states in lithium phthalocyanine thin films of different polymorphs studied by IPES. <i>Applied Surface Science</i> , 2003, 212-213, 438-440.   | 6.1  | 7         |

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|----|--|-----|-----------|
| 55 | Core level energy differences between the surface and bulk of organic semiconductor films: The effect of electrostatic polarization energy. <i>Synthetic Metals</i> , 2012, 161, 2549-2553.  | 3.9 | 7         |
| 56 | Effects of the ambient exposure on the electronic states of the clean surface of the pentacene single crystal. <i>Molecular Crystals and Liquid Crystals</i> , 2017, 648, 216-222.   | 0.9 | 7         |
| 57 | Accessing the Conduction Band Dispersion in $\text{CH}_3\text{NH}_3\text{PbI}_3$ Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 3773-3778.  | 4.6 | 7         |
| 58 | Reduction of Electric Current Loss by Aggregation-Induced Molecular Alignment of a Non-Fullerene Acceptor in Organic Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 60299-60305.   | 8.0 | 7         |
| 59 | Electron affinities of small-molecule organic semiconductors: Comparison among cyclic voltammetry, conventional inverse photoelectron spectroscopy, and low-energy inverse photoelectron spectroscopy. <i>Organic Electronics</i> , 2022, 108, 106551. | 2.6 | 7         |
| 60 | Deposition of Acrylonitrile Cluster Ions on Solid Substrates: A Thin Film Formation by Intracuster Polymerization Products. <i>Journal of Physical Chemistry B</i> , 2006, 110, 4232-4239.   | 2.6 | 6         |
| 61 | Quantitative analysis of the electrostatic and electronic polarization energies in molecularly mixed films of organic semiconductors. <i>Physical Review B</i> , 2020, 102, .  | 3.2 | 6         |
| 62 | Structure control of a zinc tetraphenylporphyrin thin film by vapor annealing using fluorine containing solvent. <i>Thin Solid Films</i> , 2018, 665, 85-90.   | 1.8 | 5         |
| 63 | Enhancement of Signal Intensity for Inverse Photoelectron Spectroscopy by Surface Plasmon Resonance of Ag Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2019, 123, 28789-28794.  | 3.1 | 5         |
| 64 | Spontaneous buildup of surface potential with a thin film of a zwitterionic molecule giving noncentrosymmetric crystal structure. <i>Applied Physics Letters</i> , 2009, 95, 182901.   | 3.3 | 4         |
| 65 | Effects of gas cluster ion beam sputtering on the molecular orientation of organic semiconductor films: Ultraviolet photoelectron spectroscopy study of [6]phenacene. <i>Applied Physics Letters</i> , 2019, 114, .                                    | 3.3 | 4         |
| 66 | Substrate-Independent Control of Polymorphs in Tetraphenylporphyrin Thin Films by Varying the Solvent Evaporation Time Using a Simple Spin-Coating Technique. <i>Crystal Growth and Design</i> , 2021, 21, 5116-5125.                                  | 3.0 | 4         |
| 67 | PHOTOELECTRON SPECTROSCOPY OF $\text{mCo}_n$ AND PRODUCT ANIONS OF $\text{mCo}_n$ WITH $\text{O}_2$ AND $\text{N}_2$ . <i>Surface Review and Letters</i> , 1996, 03, 667-670.  | 1.1 | 3         |
| 68 | Molecular Orbital Calculations of Nonlinear Optical Parameters for Test Molecules of a Highly Amphoteric and Polar Molecule (HAPM). <i>Molecular Crystals and Liquid Crystals</i> , 2001, 355, 319-329.  | 0.3 | 3         |
| 69 | Electronic structure of 1,3,5-trithia-2,4,6-triazapentalenyl on gold. <i>Chemical Physics Letters</i> , 2008, 451, 58-62.  | 2.6 | 3         |
| 70 | Solvent-Dependent Structural and Electronic Behaviors of a Push-Pull Molecule: {4-[4,5-Bis(methylsulfanyl)-1,3-dithiol-2-ylidene]cyclohexa-2,5-dien-1-ylidene}malononitrile. <i>Journal of Physical Chemistry A</i> , 2009, 113, 9174-9179.            | 2.5 | 3         |
| 71 | Determination of Both Tilting and In-Plane Molecular Rotational Angles for Dinaphtho[2,3-b:1':2'-d]thieno[3,2-b]thiophene Using Near-Edge X-ray Absorption Fine Structure. <i>Journal of Physical Chemistry C</i> , 2020, 124, 14195-14201.            | 3.1 | 3         |
| 72 | Electronic structure of frontier states in an evaporated thin film of a highly amphoteric and polar molecule. <i>Synthetic Metals</i> , 2008, 158, 934-938.  | 3.9 | 2         |

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|----|--|-----|-----------|
| 73 | A noncentrosymmetric crystal structure of a zwitterionic compound, pyridinium 5,7-dihydro-5,7-dioxo-6H-cyclopenta[b]pyridin-6-ylide, realized by weak hydrogen bonds. <i>Journal of Molecular Structure</i> , 2009, 920, 52-60.  | 3.6 | 2         |
| 74 | Photoelectron Spectroscopy of Molecular Anion of Alq3: An Estimation of Reorganization Energy for Electron Transport in the Bulk. <i>ACS Omega</i> , 2018, 3, 15200-15204.   | 3.5 | 2         |
| 75 | Monitoring of Crystallization Process in Solution-Processed Pentacene Thin Films by Chemical Conversion Reactions. <i>Journal of Physical Chemistry C</i> , 2021, 125, 2437-2445.  | 3.1 | 2         |
| 76 | Electronic structure of bis(benzo)pentathienoacene in gas and solid phase: ultraviolet photoemission spectroscopy and energy band calculation. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 95, 185-191.   | 2.3 | 1         |
| 77 | Reversible polymorphic crystalline transition of a push-pull-type molecule: {4-[4,5-bis(methylsulfanyl)-1,3-dithiol-2-ylidene]cyclohexa-2,5-dien-1-ylidene}malononitrile (BMDCM). <i>Journal of Molecular Structure</i> , 2009, 922, 30-34.  | 3.6 | 1         |
| 78 | Electronic Structure of the Buried Interface Between an Organic Semiconductor, $\langle 1 \rangle N, N \langle / \rangle$ -Bis(3-methylphenyl)- $\langle 1 \rangle N, N \langle / \rangle$ -Diphenylbenzidine (TPD), and Metal Surfaces. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 494-498. | 0.9 | 1         |
| 79 | Decay Mechanism of Spontaneously Built-up Surface Potential in a Thin Film of a Zwitterionic Molecule Having Noncentrosymmetric Crystal Structure. <i>Journal of Physical Chemistry C</i> , 2011, 115, 2356-2359.  | 3.1 | 0         |
| 80 | Surface structure of quasi-2D perovskite $PEA_{2m}MA_{n-2m}Pb_{n-3n}I_{3n}$ ( $n \gg m$ ). <i>Applied Physics Express</i> , 2021, 14, 031006.  |     | 0         |