# C Heske

List of Publications by Year
in descending order

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| 117 | 4,308 | 94381 | 123376 |
|---|---|---|---|
| papers | citations | 37 h-index | 61 g-index |

| 117 | 117 | 117 | 4117 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Efficient passivation of n-type and p-type silicon surface defects by hydrogen sulfide gas reaction. Journal of Physics Condensed Matter, 2021, 33, 464002. | 0.7 | 2 |
| 2 | Intermixing at the In<sub>x</sub>S<sub>y</sub>/Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> Heterojunction and Its Impact on the Chemical and Electronic Interface Structure. ACS Applied Energy Materials, 2019, 2, 4098-4104. | 2.5 | 11 |
| 3 | Local electronic structure of the peptide bond probed by resonant inelastic soft X-ray scattering. Physical Chemistry Chemical Physics, 2019, 21, 13207-13214. | 1.3 | 10 |
| 4 | Site-specific electronic structure of imidazole and imidazolium in aqueous solutions. Physical Chemistry Chemical Physics, 2018, 20, 8302-8310. | 1.3 | 19 |
| 5 | The effect of NaCl on room-temperature-processed indium oxide nanoparticle thin films for printed electronics. Applied Surface Science, 2017, 396, 912-919. | 3.1 | 9 |
| 6 | Impact of a RbF Postdeposition Treatment on the Electronic Structure of the CdS/Cu(In,Ga)Se<sub>2</sub> Heterojunction in High-Efficiency Thin-Film Solar Cells. ACS Energy Letters, 2017, 2, 2383-2387. | 8.8 | 76 |
| 7 | X-ray Emission Spectroscopy of Proteinogenic Amino Acids at All Relevant Absorption Edges. Journal of Physical Chemistry B, 2017, 121, 6549-6556. | 1.2 | 14 |
| 8 | Isotope Effects in the Resonant Inelastic Soft X-ray Scattering Maps of Gas-Phase Methanol. Journal of Physical Chemistry A, 2016, 120, 2260-2267. | 1.1 | 16 |
| 9 | Investigation of the Ionic Hydration in Aqueous Salt Solutions by Soft X-ray Emission Spectroscopy. Journal of Physical Chemistry B, 2016, 120, 7687-7695. | 1.2 | 20 |
| 10 | Annealing-Induced Effects on the Chemical Structure of the In<sub>2</sub>S<sub>3</sub>/CuIn(S,Se)<sub>2</sub> Thin-Film Solar Cell Interface. Journal of Physical Chemistry C, 2015, 119, 10412-10416. | 1.5 | 17 |
| 11 | Probing hydrogen bonding orbitals: resonant inelastic soft X-ray scattering of aqueous NH<sub>3</sub>. Physical Chemistry Chemical Physics, 2015, 17, 27145-27153. | 1.3 | 49 |
| 12 | Setup for in situ investigation of gases and gas/solid interfaces by soft x-ray emission and absorption spectroscopy. Review of Scientific Instruments, 2014, 85, 015119. | 0.6 | 12 |
| 13 | â€œBuilding Block Pictureâ€•of the Electronic Structure of Aqueous Cysteine Derived from Resonant Inelastic Soft X-ray Scattering. Journal of Physical Chemistry B, 2014, 118, 13142-13150. | 1.2 | 24 |
| 14 | Impact of annealing on the chemical structure and morphology of the thin-film CdTe/ZnO interface. Journal of Applied Physics, 2014, 116, 024312. | 1.1 | 3 |
| 15 | Impact of environmental conditions on the chemical surface properties of Cu(In,Ga)(S,Se)2 thin-film solar cell absorbers. Journal of Applied Physics, 2014, 115, . | 1.1 | 16 |
| 16 | The heavily intermixed In<inf>2</inf>S<inf>3</inf>/Cu(In,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (Ga)Se<i<br>spectroscopy. , 2013, , . | | 3 |
| 17 | Soft X-rays shedding light on thin-film solar cell surfaces and interfaces. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 47-53. | 0.8 | 7 |
| 18 | RIXS investigations of liquids, solutions, and liquid/solid interfaces. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 111-120. | 0.8 | 42 |

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| 19 | Soft X-ray and electron spectroscopy to determine the electronic structure of materials for photoelectrochemical hydrogen production. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 106-112. | 0.8 | 9 |
| 20 | Surface Off-Stoichiometry of CuInS$_{2}$ Thin-Film Solar Cell Absorbers. IEEE Journal of Photovoltaics, 2013, 3, 828-832. | 1.5 | 2 |
| 21 | The Be K-edge in beryllium oxide and chalcogenides: soft x-ray absorption spectra from first-principles theory and experiment. Journal of Physics Condensed Matter, 2013, 25, 315501. | 0.7 | 13 |
| 22 | Non-equivalent carbon atoms in the resonant inelastic soft X-ray scattering map of cysteine. Journal of Chemical Physics, 2013, 138, 034306. | 1.2 | 10 |
| 23 | X-ray spectroscopic analysis of the growth of CBD-CdS buffers on flexible Cu(In,Ga)Se<inf>2</inf> thin-film solar cell structures. , 2012, , . | | 0 |
| 24 | Cu<sub>2</sub>ZnSnS<sub>4</sub> thin-film solar cell absorbers illuminated by soft x-rays. Journal of Materials Research, 2012, 27, 1097-1104. | 1.2 | 14 |
| 25 | Ultrafast Proton Dynamics in Aqueous Amino Acid Solutions Studied by Resonant Inelastic Soft X-ray Scattering. Journal of Physical Chemistry B, 2012, 116, 13757-13764. | 1.2 | 37 |
| 26 | Microstructure of vanadium-based contacts on n-type GaN. Journal Physics D: Applied Physics, 2012, 45, 105401. | 1.3 | 5 |
| 27 | Electronic and chemical properties of non-vacuum deposited chalcopyrite solar cells. , 2011, , . | | 2 |
| 28 | Cliff-like conduction band offset and KCN-induced recombination barrier enhancement at the CdS/Cu2ZnSnS4 thin-film solar cell heterojunction. Applied Physics Letters, 2011, 99, . | 1.5 | 181 |
| 29 | Impact of KCN etching on the chemical and electronic surface structure of Cu2ZnSnS4 thin-film solar cell absorbers. Applied Physics Letters, 2011, 99, . | 1.5 | 69 |
| 30 | Native oxidation and Cu-poor surface structure of thin film Cu2ZnSnS4 solar cell absorbers. Applied Physics Letters, 2011, 99, . | 1.5 | 48 |
| 31 | Identification of Impurity Phases in Cu2ZnSnS4 Thin-film Solar Cell Absorber Material by Soft X-ray Absorption Spectroscopy. Materials Research Society Symposia Proceedings, 2011, 1324, 91. | 0.1 | 0 |
| 32 | Electron-hole correlation effects in core-level spectroscopy probed by the resonant inelastic soft x-ray scattering map of C60. Journal of Chemical Physics, 2011, 135, 104705. | 1.2 | 10 |
| 33 | Electronic structure of Cu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>ZnSnS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:msub></mml:math> probed by soft x-ray emission and absorption spectroscopy. Physical Review B, 2011, 84, . | 1.1 | 31 |
| 34 | Nuclear dynamics in the core-excited state of aqueous ammonia probed by resonant inelastic soft x-ray scattering. Physical Review B, 2011, 84, . | 1.1 | 37 |
| 35 | Resonant X-ray emission spectroscopy of liquid water: Novel instrumentation, high resolution, and the â€œmapâ€•approach. Journal of Electron Spectroscopy and Related Phenomena, 2010, 177, 206-211. | 0.8 | 38 |
| 36 | X-ray photoelectron spectroscopy study of the chemical interaction at the Pd/SiC interface. Journal of Applied Physics, 2010, 108, . | 1.1 | 8 |

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| 37 | Chemical structure of vanadium-based contact formation on n-AlN. Journal of Applied Physics, 2010, 108, 024906. | 1.1 | 7 |
| 38 | Mo incorporation in WO3 thin film photoanodes: Tailoring the electronic structure for photoelectrochemical hydrogen production. Applied Physics Letters, 2010, 96, 032107. | 1.5 | 24 |
| 39 | CdS/Cu(In,Ga)Se2 interface formation in high-efficiency thin film solar cells. Applied Physics Letters, 2010, 97, 074101. | 1.5 | 22 |
| 40 | Sulfur gradient-driven Se diffusion at the CdS/CuIn(S,Se)2 solar cell interface. Applied Physics Letters, 2010, 96, . | 1.5 | 22 |
| 41 | Nondestructive depth-resolved spectroscopic investigation of the heavily intermixed In2S3/Cu(In,Ga)Se2 interface. Applied Physics Letters, 2010, 96, 184101. | 1.5 | 24 |
| 42 | Effects of postdeposition treatments on surfaces of CdTe/CdS solar cells. Applied Physics Letters, 2010, 97, 172109. | 1.5 | 22 |
| 43 | Chemical structure of buried interfaces in CdTe thin film solar cells. , 2010, , . | | 8 |
| 44 | Resonant inelastic soft x-ray scattering of CdS: A two-dimensional electronic structure map approach. Physical Review B, 2009, 79, . | 1.1 | 44 |
| 45 | Three-dimensional structure of the buffer/absorber interface in CdS/CuGaSe2 based thin film solar cells. Applied Physics Letters, 2009, 95, 173502. | 1.5 | 25 |
| 46 | Spectroscopic analysis of the chemical structure at the CdS/Cu(In,Ga)Se<inf>2</inf> interface in high-efficiency solar cell devices. , 2009, , . | | 0 |
| 47 | Surface Modification of Tungsten Oxide-Based Photoanodes for Solar-Powered Hydrogen Production. Materials Research Society Symposia Proceedings, 2009, 1171, 1. | 0.1 | 0 |
| 48 | Morphology of perylene thin films on SiOx/Si(100) and SiO2/Si(100): A spectroscopic and microscopic study of the influence of the preparation parameters. Chemical Physics Letters, 2009, 479, 76-80. | 1.2 | 10 |
| 49 | Solid and liquid spectroscopic analysis (SALSA)â€“a soft x-ray spectroscopy endstation with a novel flow-through liquid cell. Review of Scientific Instruments, 2009, 80, 123102. | 0.6 | 77 |
| 50 | High-resolution, high-transmission soft x-ray spectrometer for the study of biological samples. Review of Scientific Instruments, 2009, 80, 063103. | 0.6 | 79 |
| 51 | Chemical and electronic surface structure of 20%-efficient Cu(In,Ga)Se2 thin film solar cell absorbers. Applied Physics Letters, 2009, 95, . | 1.5 | 66 |
| 52 | Impact of air exposure on the chemical and electronic structure of ZnO:Zn3N2 thin films. Applied Physics Letters, 2009, 94, 012110. | 1.5 | 16 |
| 53 | Isotope and Temperature Effects in Liquid Water Probed by X-Ray Absorption and Resonant X-Ray Emission Spectroscopy. Physical Review Letters, 2008, 100, 027801. | 2.9 | 163 |
| 54 | Depth-resolved band gap in Cu(In,Ga)(S,Se)2 thin films. Applied Physics Letters, 2008, 93, . | 1.5 | 72 |

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| 55 | Electronic Surface Level Positions of WO<sub>3</sub> Thin Films for Photoelectrochemical Hydrogen Production. Journal of Physical Chemistry C, 2008, 112, 3078-3082. | 1.5 | 176 |
| 56 | Influence of the preparation conditions on the morphology of perylene thin films on Si(111) and Si(100). Journal of Chemical Physics, 2008, 129, 244708. | 1.2 | 18 |
| 57 | Intermixing and chemical structure at the interface between n-GaN and V-based contacts. Applied Physics Letters, 2008, 93, . | 1.5 | 14 |
| 58 | Electronic level alignment at the deeply buried absorber/Mo interface in chalcopyrite-based thin film solar cells. Applied Physics Letters, 2008, 93, 042110. | 1.5 | 49 |
| 59 | Chemical structures of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Cu</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mtext>In</mml:mtext> xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml. Physical Review B, 2008, 78, . | 1.1 | 30 |
| 60 | FuchsetÂal.Reply:. Physical Review Letters, 2008, 100, . | 2.9 | 48 |
| 61 | Chemical properties of the Cu(In,Ga)Se2/Mo/glass interfaces in thin film solar cells. Thin Solid Films, 2007, 515, 6119-6122. | 0.8 | 32 |
| 62 | Angle-resolved photoemission on ZnSe(001): determination of conduction band quasiparticle shifts. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 3204-3209. | 0.8 | 1 |
| 63 | Resonant inelastic soft x-ray scattering, x-ray absorption spectroscopy, and density functional theory calculations of the electronic bulk band structure of CdS. Physical Review B, 2007, 75, . | 1.1 | 24 |
| 64 | Spectroscopic investigation of the deeply buried Cu(In,Ga)(S,Se)2âˆ•Mo interface in thin-film solar cells. Journal of Chemical Physics, 2006, 124, 074705. | 1.2 | 26 |
| 65 | Surface modifications of Cu(In,Ga)S2 thin film solar cell absorbers by KCN and H2O2âˆ•H2SO4 treatments. Journal of Applied Physics, 2006, 100, 024907. | 1.1 | 33 |
| 66 | The electronic structure of the [Zn(S,O)/ZnS]/CuInS2 heterointerface â€“ Impact of post-annealing. Chemical Physics Letters, 2006, 433, 71-74. | 1.2 | 32 |
| 67 | Chemical insights into the Cd2+/NH3 treatmentâ€”An approach to explain the formation of Cd-compounds on Cu(In,Ga)(S,Se)2 absorbers. Solar Energy Materials and Solar Cells, 2006, 90, 3151-3157. | 3.0 | 12 |
| 68 | Chemical Bath Deposition of CdS Thin Films on Cuins2 and Si Substrates - A Comparative X-Ray Emission Study. , 2006, , . | | 1 |
| 69 | Comparison of Band Alignments at Various CdS/Cu(In,Ga)(S,Se)2 Inter-Faces in Thin Film Solar Cells. , 2006, , . | | 4 |
| 70 | Resonant inelastic soft x-ray scattering of Be chalcogenides. Physical Review B, 2006, 73, . | 1.1 | 29 |
| 71 | Twofold symmetry in the surface electronic structure of ZnSe(001)-c(2Ã—2): Theory and experiment. Surface Science, 2005, 585, 95-100. | 0.8 | 5 |
| 72 | Band alignment at the CdSâˆ•Cu(In,Ga)S2 interface in thin-film solar cells. Applied Physics Letters, 2005, 86, 062109. | 1.5 | 85 |

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| 73 | Cd2+âˆ•NH3 treatment-induced formation of a CdSe surface layer on CuGaSe2 thin-film solar cell absorbers. Applied Physics Letters, 2005, 86, 222107. | 1.5 | 19 |
| 74 | Inducing and monitoring photoelectrochemical reactions at surfaces and buried interfaces in Cu(In,Ga)(S,Se)2 thin-film solar cells. Applied Physics Letters, 2005, 86, 172102. | 1.5 | 25 |
| 75 | Zn(O,OH) layers in chalcopyrite thin-film solar cells: Valence-band maximum versus composition. Journal of Applied Physics, 2005, 98, 053702. | 1.1 | 34 |
| 76 | Structure determination of CdS and ZnS nanoparticles: Direct modeling of synchrotron-radiation diffraction data. Journal of Chemical Physics, 2005, 123, 224707. | 1.2 | 50 |
| 77 | Valence-band electronic structure of ZnSe(001) thin films:â€ƒTheory and experiment. Physical Review B, 2004, 70, . | 1.1 | 13 |
| 78 | Spectroscopic investigation of buried interfaces and liquids with soft X-rays. Applied Physics A: Materials Science and Processing, 2004, 78, 829-835. | 1.1 | 10 |
| 79 | The valence electronic structure of zinc oxide powders as determined by X-ray emission spectroscopy: variation of electronic structure with particle size. Journal of Electron Spectroscopy and Related Phenomena, 2004, 134, 183-189. | 0.8 | 15 |
| 80 | Bonding and Structure of Glycine on Ordered Al2O3Film Surfaces. Langmuir, 2004, 20, 10551-10559. | 1.6 | 50 |
| 81 | Band alignment at the i-ZnO/CdS interface in Cu(In,Ga)(S,Se)2 thin-film solar cells. Applied Physics Letters, 2004, 84, 3175-3177. | 1.5 | 65 |
| 82 | Synthesis, structure and spectroscopic characterization of water-soluble CdS nanoparticles. Chemical Physics Letters, 2003, 379, 443-451. | 1.2 | 57 |
| 83 | Impact of Cd2+-treatment on the band alignment at the ILGAR-ZnO/CuIn(S,Se)2 heterojunction. Thin Solid Films, 2003, 431-432, 272-276. | 0.8 | 29 |
| 84 | Formation of the ZnSe/(Te/)GaAs() heterojunction. Surface Science, 2003, 531, 77-85. | 0.8 | 37 |
| 85 | Growth of H2O layers on an ultra-thin Al2O3 film: from monomeric species to ice. Surface Science, 2003, 543, 131-140. | 0.8 | 40 |
| 86 | Surface and bulk properties of CuGaSe2 thin films. Journal of Physics and Chemistry of Solids, 2003, 64, 1553-1557. | 1.9 | 41 |
| 87 | Enhancement of photoluminescence in manganese-doped ZnS nanoparticles due to a silica shell. Journal of Chemical Physics, 2003, 118, 8945-8953. | 1.2 | 78 |
| 88 | Monitoring chemical reactions at a liquidâ€“solid interface: Water on CuIn(S,Se)2 thin film solar cell absorbers. Journal of Chemical Physics, 2003, 119, 10467-10470. | 1.2 | 33 |
| 89 | Influence of As passivation on the electronic level alignment at BeTe/Si(111) interfaces. Physical Review B, 2003, 67, . | 1.1 | 8 |
| 90 | Studying the local chemical environment of sulfur atoms at buried interfaces in CdS/ZnSe superlattices. Applied Physics Letters, 2003, 83, 2360-2362. | 1.5 | 14 |

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| 91 | CdS and Cd(OH)2 formation during Cd treatments of Cu(In,Ga)(S,Se)2 thin-film solar cell absorbers. Applied Physics Letters, 2003, 82, 571-573. | 1.5 | 76 |
| 92 | Analysis of Zinc Compound Buffer Layers in Cu(In, Ga)(S, Se)2 Thin Film Solar Cells by Synchrotron-Based Soft X-Ray Spectroscopy. Materials Research Society Symposia Proceedings, 2003, 763, 451. | 0.1 | 16 |
| 93 | Damp-heat induced sulfate formation in Cu(In,Ga)(S,Se)2-based thin film solar cells. Applied Physics Letters, 2002, 81, 4550-4552. | 1.5 | 27 |
| 94 | Spectroscopic probing of local hydrogen-bonding structures in liquid water. Journal of Physics Condensed Matter, 2002, 14, L213-L219. | 0.7 | 262 |
| 95 | Energy level alignment at zinc blende Cd(Mn)Se/ZnTe/InAs(100) interfaces. Applied Physics Letters, 2002, 81, 3813-3815. | 1.5 | 12 |
| 96 | Flat conduction-band alignment at the CdS/CuInSe2 thin-film solar-cell heterojunction. Applied Physics Letters, 2001, 79, 4482-4484. | 1.5 | 225 |
| 97 | X-Ray Emission Spectroscopy of Cu(In,Ga)(S,Se)2-Based Thin Film Solar Cells: Electronic Structure, Surface Oxidation, and Buried Interfaces. Physica Status Solidi A, 2001, 187, 13-24. | 1.7 | 34 |
| 98 | Reduction of the ZnSe/GaAs(100) valence band offset by a Te interlayer. Applied Physics Letters, 2001, 78, 1867-1869. | 1.5 | 18 |
| 99 | Interchannel coupling in the photoionization of theMshell of Kr well above threshold: Experiment and theory. Physical Review A, 2001, 63, . | 1.0 | 24 |
| 100 | Semi-quantitative and non-destructive analysis of impurities at a buried interface: Na and the CdS/Cu(In,Ga)Se2 heterojunction. Surface and Interface Analysis, 2000, 30, 459-463. | 0.8 | 12 |
| 101 | Self-limitation of Na content at the CdS/Cu(In,Ga)Se 2 solar cell heterojunction. Thin Solid Films, 2000, 361-362, 360-363. | 0.8 | 10 |
| 102 | Lateral inhomogeneities of Cu(In,Ga)Se 2 absorber films. Thin Solid Films, 2000, 361-362, 258-262. | 0.8 | 41 |
| 103 | Improved band alignment for hole injection by an interfacial layer in organic light emitting devices. Applied Physics Letters, 2000, 77, 1093-1095. | 1.5 | 39 |
| 104 | Work function of ITO substrates and band-offsets at the TPD/ITO interface determined by photoelectron spectroscopy. Synthetic Metals, 2000, 111-112, 315-319. | 2.1 | 78 |
| 105 | Localization of Na impurities at the buried CdS/Cu(In,â€ŠGa)Se2 heterojunction. Applied Physics Letters, 1999, 75, 2082-2084. | 1.5 | 34 |
| 106 | Band widening in graphite. Physical Review B, 1999, 59, 4680-4684. | 1.1 | 58 |
| 107 | X-ray photoemission and photoabsorption of organic electroluminescent materials. Journal of Applied Physics, 1999, 86, 88-93. | 1.1 | 37 |
| 108 | Validity of the independent-particle approximation in x-ray photoemission: The exception, not the rule. Physical Review A, 1999, 60, R2641-R2644. | 1.0 | 51 |

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| 109 | Observation of intermixing at the buried CdS/Cu(In,â€ŠGa)Se2 thin film solar cell heterojunction. Applied Physics Letters, 1999, 74, 1451-1453. | 1.5 | 131 |
| 110 | Atom-resolved electronic spectra for Alq3 from theory and experiment. Applied Physics Letters, 1998, 72, 1575-1577. | 1.5 | 166 |
| 111 | An Improved Microprobe Using Direct Undulator Radiation. , 1998, , 231-240. | | 0 |
| 112 | Influence of Na and H2O on the surface properties of Cu(In,Ga)Se2 thin films. Journal of Applied Physics, 1997, 82, 2411-2420. | 1.1 | 43 |
| 113 | Surface core-level shifts of the polar semiconductor Cd(Zn)Te(100). Physical Review B, 1997, 56, 2070-2078. | 1.1 | 12 |
| 114 | Formation of the Zn/CdTe(100) interface: Interdiffusion, segregation, and Cd-Zn exchange studied by photoemission. Physical Review B, 1997, 56, 13335-13345. | 1.1 | 3 |
| 115 | Segregation and interdiffusion effects during the formation of the Mn/Cd(Zn)Te(100) interface. Physical Review B, 1997, 56, 2085-2093. | 1.1 | 4 |
| 116 | Preparation and termination of well-defined CdTe(100) and Cd(Zn)Te(100) surfaces. Applied Physics Letters, 1997, 70, 1022-1024. | 1.5 | 29 |
| 117 | Naâ€induced effects on the electronic structure and composition of Cu(In,Ga)Se2 thinâ€film surfaces. Applied Physics Letters, 1996, 68, 3431-3433. | 1.5 | 84 |