

# Greg Hughes

## List of Publications by Year in descending order

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76  
papers

1,950  
citations

361296

20  
h-index

254106

43  
g-index

76  
all docs

76  
docs citations

76  
times ranked

2323  
citing authors

#	ARTICLE	IF	CITATIONS
1	GaAs interfacial self-cleaning by atomic layer deposition. Applied Physics Letters, 2008, 92, .	1.5	354
2	Detection of Ga suboxides and their impact on III-V passivation and Fermi-level pinning. Applied Physics Letters, 2009, 94, .	1.5	250
3	Air sensitivity of MoS <sub>2</sub> , MoSe <sub>2</sub> , MoTe <sub>2</sub> , HfS <sub>2</sub> , and HfSe <sub>2</sub> . Journal of Applied Physics, 2016, 120, .	1.1	134
4	An X-ray photoelectron spectroscopy study of the HF etching of native oxides on Ge(111) and Ge(100) surfaces. Applied Surface Science, 1998, 123-124, 66-70.	3.1	104
5	Frequency dispersion reduction and bond conversion on n-type GaAs by in situ surface oxide removal and passivation. Applied Physics Letters, 2007, 91, 163512.	1.5	88
6	Roughening Transition of a Stepped Cu(113) Surface: A Synchrotron X-Ray-Scattering Study. Physical Review Letters, 1987, 59, 2447-2450.	2.9	83
7	Indium stability on InGaAs during atomic H surface cleaning. Applied Physics Letters, 2008, 92, .	1.5	62
8	Metal-GaSe and metal-InP interfaces: Schottky barrier formation and interfacial reactions. Journal of Vacuum Science and Technology, 1982, 21, 594-598.	1.9	55
9	Metal-gallium selenide interfaces-observation of the true Schottky limit. Journal of Physics C: Solid State Physics, 1982, 15, L159-L164.	1.5	51
10	Long-term stability of mechanically exfoliated MoS <sub>2</sub> flakes. MRS Communications, 2017, 7, 813-818.	0.8	50
11	Neutron reflectivity study of block copolymers adsorbed from solution. Macromolecules, 1990, 23, 3860-3864.	2.2	49
12	Core level photoemission and scanning tunneling microscopy study of the interaction of pentacene with the Si(100) surface. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 1620.	1.6	44
13	Metal contacts on semiconductors: The adsorption of Sb, Sn, and Ga on InP(110) cleaved surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1984, 2, 561.	1.6	39
14	Spin coating of hydrophilic polymeric films for enhanced centrifugal flow control by serial siphoning. Microfluidics and Nanofluidics, 2014, 16, 691-699.	1.0	39
15	Synchrotron radiation photoemission study of in situ manganese silicate formation on SiO <sub>2</sub> for barrier layer applications. Applied Physics Letters, 2011, 98, 113508.	1.5	33
16	In Situ XPS Chemical Analysis of MnSiO <sub>3</sub> Copper Diffusion Barrier Layer Formation and Simultaneous Fabrication of Metal Oxide Semiconductor Electrical Test MOS Structures. ACS Applied Materials & Interfaces, 2016, 8, 2470-2477.	4.0	32
17	UPS investigation of poorly crystallized MoS <sub>2</sub> . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1984, 2, 991-994.	0.9	29
18	Aluminium overlayers on (110) indium phosphide: microscopic aspects of interface formation. Journal of Physics C: Solid State Physics, 1982, 15, 7049-7063.	1.5	26

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19	Atomically clean semiconductor surfaces prepared by laser irradiation. <i>Journal Physics D: Applied Physics</i> , 1980, 13, L193-L197.	1.3	21
20	Atomic resolved material displacement on graphite surfaces by scanning tunnelling microscopy. <i>Applied Physics Letters</i> , 1992, 60, 2338-2340.	1.5	20
21	Electronic structure of thin film silicon oxynitrides measured using soft x-ray emission and absorption. <i>Journal of Applied Physics</i> , 2003, 94, 3919-3922.	1.1	20
22	Electronic structure of the organic semiconductor copper tetraphenylporphyrin (CuTPP). <i>Applied Surface Science</i> , 2009, 256, 720-725.	3.1	20
23	Low voltage stress-induced leakage current in 1.4–2.1 nm SiON and HfSiON gate dielectric layers. <i>Semiconductor Science and Technology</i> , 2005, 20, 668-672.	1.0	17
24	A combined hard x-ray photoelectron spectroscopy and electrical characterisation study of metal/SiO <sub>2</sub> /Si(100) metal-oxide-semiconductor structures. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	16
25	Reliability of HfSiON gate dielectrics. <i>Semiconductor Science and Technology</i> , 2005, 20, 68-71.	1.0	15
26	Structural study of the Cu{1 0 0}–p(2 Å– 2)-Sb surface alloy using low energy electron diffraction. <i>Surface Science</i> , 2004, 566-568, 52-57.	0.8	14
27	Interfacial analysis of InP surface preparation using atomic hydrogen cleaning and Si interfacial control layers prior to MgO deposition. <i>Applied Surface Science</i> , 2010, 256, 7530-7534.	3.1	14
28	Photoemission study of the SiO <sub>2</sub> conversion mechanism to magnesium silicate. <i>Journal of Applied Physics</i> , 2010, 107, 074107.	1.1	14
29	Electronic structures of cluster compounds of molybdenum sulfide (MoS <sub>4</sub> <sup>2-</sup> , Mo <sub>3</sub> S <sub>9</sub> <sup>2-</sup> ) and nickel molybdenum sulfide (Ni(MoS <sub>4</sub> ) <sub>2</sub> <sup>2-</sup> ) by XPS studies. <i>Inorganic Chemistry</i> , 1987, 26, 1422-1425.	1.9	13
30	Density of ultrathin amorphous silicon and germanium sublayers in periodic amorphous multilayers. <i>Physical Review B</i> , 1991, 44, 11381-11385.	1.1	13
31	Low-angle misorientation dependence of the optical properties of InGaAs/InAlAs quantum wells. <i>Journal of Crystal Growth</i> , 2010, 312, 1546-1550.	0.7	13
32	Degradation and breakdown characteristics of thin MgO dielectric layers. <i>Journal of Applied Physics</i> , 2010, 107, 024501.	1.1	13
33	Chemical and structural investigations of the interactions of Cu with MnSiO <sub>3</sub> diffusion barrier layers. <i>Journal of Applied Physics</i> , 2012, 112, 064507.	1.1	13
34	Nickel and copper on cleaved indium phosphide: structure, metallurgy and electronic properties. <i>Journal of Physics C: Solid State Physics</i> , 1983, 16, 2391-2405.	1.5	12
35	Weibull slope and voltage acceleration of ultra-thin (1.1–1.45 nm EOT) oxynitrides. <i>Microelectronic Engineering</i> , 2004, 72, 61-65.	1.1	11
36	Photoemission studies of the initial interface formation of ultrathin MgO dielectric layers on the Si(111) surface. <i>Thin Solid Films</i> , 2010, 518, 1980-1984.	0.8	11

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37	Growth of isotopically enriched ZnO nanorods of excellent optical quality. Journal of Crystal Growth, 2015, 429, 6-12.	0.7	11
38	Hard x-ray photoelectron spectroscopy and electrical characterization study of the surface potential in metal/Al <sub>2</sub> O <sub>3</sub> /GaAs(100) metal-oxide-semiconductor structures. Physical Review Applied, 2014, 2, .	1.1	10
39	Time-Dependent Dielectric Breakdown and Stress-Induced Leakage Current Characteristics of 0.7-nm-EOT HfO <sub>2</sub> pFETs. IEEE Transactions on Device and Materials Reliability, 2011, 11, 290-294.	1.5	9
40	Ni-(In,Ga)As Alloy Formation Investigated by Hard-X-Ray Photoelectron Spectroscopy and X-Ray Absorption Spectroscopy. Physical Review Applied, 2014, 2, .	1.5	9
41	Soft x-ray photoemission study of the thermal stability of the Al <sub>2</sub> O <sub>3</sub> /Ge (100) interface as a function of surface preparation. Journal of Applied Physics, 2013, 114, 084312.	1.1	8
42	In Situ Investigations into the Mechanism of Oxygen Catalysis on Ruthenium/Manganese Surfaces and the Thermodynamic Stability of Ru/Mn-Based Copper Diffusion Barrier Layers. Journal of Physical Chemistry C, 2013, 117, 16136-16143.	1.5	7
43	Surface characterization of poly-2-vinylpyridine A polymer for area selective deposition techniques. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 050601.	0.9	7
44	Progressive breakdown in ultrathin SiON dielectrics and its effect on transistor performance. Microelectronics Reliability, 2005, 45, 869-874.	0.9	6
45	(NH <sub>4</sub> ) <sub>2</sub> S Passivation of High-k/In <sub>0.53</sub> Ga <sub>0.47</sub> As Interfaces: A Systematic Study of (NH <sub>4</sub> ) <sub>2</sub> S Concentration. ECS Transactions, 2010, 28, 231-238.	0.3	6
46	Time dependent dielectric breakdown and stress induced leakage current characteristics of 8Å... EOT HfO <sub>2</sub> N-MOSFETS. , 2010, , .		6
47	High resolution synchrotron radiation based photoemission study of the in situ deposition of molecular sulphur on the atomically clean InGaAs surface. Journal of Applied Physics, 2012, 111, 114512.	1.1	6
48	Synchrotron radiation photoemission study of the thermal annealing and atomic hydrogen cleaning of native oxide covered InAs(100) surfaces. Applied Surface Science, 2013, 276, 609-612.	3.1	6
49	Charge trapping in MOSFETs with HfSiON dielectrics during electrical stressing. Microelectronic Engineering, 2005, 77, 302-309.	1.1	5
50	Reliability of thin ZrO <sub>2</sub> gate dielectric layers. Microelectronics Reliability, 2011, 51, 1118-1122.	0.9	5
51	High resolution photoemission study of the formation and thermal stability of Mg silicide on silicon. Thin Solid Films, 2011, 519, 1861-1865.	0.8	5
52	High temperature thermal stability of the HfO <sub>2</sub> /Ge (100) interface as a function of surface preparation studied by synchrotron radiation core level photoemission. Applied Surface Science, 2014, 292, 345-349.	3.1	5
53	Obtaining and processing data from laboratory instruments. TrAC - Trends in Analytical Chemistry, 1993, 12, 1-3.	5.8	4
54	Sulphur overlayers on the Au(110) surface: LEED and TPD study. Surface Science, 2007, 601, 3506-3511.	0.8	4

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55	High resolution photoemission study of SiO <sub>x</sub> /Si(111) interface disruption following in situ HfO <sub>2</sub> deposition. Applied Physics Letters, 2009, 95, 072903.	1.5	4
56	Growth and characterization of thin manganese oxide corrosion barrier layers for silicon photoanode protection during water oxidation. Solar Energy Materials and Solar Cells, 2015, 136, 64-69.	3.0	4
57	Investigation of the thermal stability of Mo-In <sub>0.45</sub> Ga <sub>0.47</sub> As for applications as source/drain contacts. Journal of Applied Physics, 2016, 120, .	1.1	4
58	Nitrogen reactive ion etch processes for the selective removal of poly-(4-vinylpyridine) in block copolymer films. Nanotechnology, 2018, 29, 355302.	1.3	4
59	Obtaining and processing data from laboratory instruments. TrAC - Trends in Analytical Chemistry, 1993, 12, 37-40.	5.8	3
60	High temperature thermal stability investigations of ammonium sulphide passivated InGaAs and interface formation with Al <sub>2</sub> O <sub>3</sub> studied by synchrotron radiation based photoemission. Applied Surface Science, 2014, 317, 696-700.	3.1	3
61	Temperature-accelerated breakdown in ultra-thin SiON dielectrics. Semiconductor Science and Technology, 2004, 19, 1254-1258.	1.0	2
62	Atomic hydrogen cleaning of In <sub>0.53</sub> Ga <sub>0.47</sub> As studied using synchrotron radiation photoelectron spectroscopy. Physica Status Solidi - Rapid Research Letters, 2013, 7, 989-992.	1.2	2
63	High-resolution photoemission comparison study of interface formation between MgO and the atomically clean and Se-passivated Ge(100) surfaces. Physica Status Solidi - Rapid Research Letters, 2013, 7, 590-592.	1.2	2
64	Thermal stability studies on atomically clean and sulphur passivated InGaAs surfaces. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 519-522.	0.8	2
65	A combined capacitance-voltage and hard x-ray photoelectron spectroscopy characterisation of metal/Al <sub>2</sub> O <sub>3</sub> /In <sub>0.53</sub> Ga <sub>0.47</sub> As capacitor structures. Journal of Applied Physics, 2014, 116, 024104.	1.1	2
66	Summary Abstract: The step roughening transition of a Cu(113) surface studied by surface x-ray scattering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 654-655.	0.9	1
67	The effect of a post processing thermal anneal on pre-existing and stress induced electrically active defects in ultra-thin SiON dielectric layers. Microelectronics Reliability, 2011, 51, 524-528.	0.9	1
68	High resolution photoemission study of interface formation between MgO and the selenium passivated InAs (100) surface. Applied Surface Science, 2013, 285, 153-156.	3.1	1
69	High-temperature thermal stability study of 1 nm Al <sub>2</sub> O <sub>3</sub> deposited on InAs surfaces investigated by synchrotron radiation based photoemission spectroscopy. Journal Physics D: Applied Physics, 2014, 47, 055107.	1.3	1
70	A spectroscopic method for the evaluation of surface passivation treatments on metal-oxide-semiconductor structures. Applied Surface Science, 2014, 301, 40-45.	3.1	1
71	A photoemission study of the effectiveness of nickel, manganese, and cobalt based corrosion barriers for silicon photo-anodes during water oxidation. Journal of Applied Physics, 2016, 119, 195301.	1.1	1
72	Rapid area deactivation for blocking atomic layer deposition processes using polystyrene brush layers. Journal of Materials Chemistry C, 2022, 10, 7476-7484.	2.7	1

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73	Synchrotron radiation photoemission study of interface formation between MgO and the atomically clean In <sub>0.53</sub> Ga <sub>0.47</sub> As surface. Physica Status Solidi - Rapid Research Letters, 2014, 8, 167-171.	1.2	0
74	Native oxides formation on MOVPE grown binary III-V materials &#x2014; Impact on surface wettability. , 2014, , .		0
75	High temperature thermal stability studies of ultrathin Al <sub>2</sub> O <sub>3</sub> layers deposited on native oxide and sulphur passivated InGaAs surfaces. Microelectronic Engineering, 2015, 147, 249-253.	1.1	0
76	Synchrotron radiation study of metallic titanium deposited on dielectric substrates. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	0.6	0