

# Lloyd J Whitman

## List of Publications by Year in descending order

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53  
papers

6,099  
citations

94433

37  
h-index

206112

48  
g-index

53  
all docs

53  
docs citations

53  
times ranked

6193  
citing authors

#	ARTICLE	IF	CITATIONS
1	Detection Limits for Nanoscale Biosensors. <i>Nano Letters</i> , 2005, 5, 803-807.	9.1	612
2	Base-Dependent Competitive Adsorption of Single-Stranded DNA on Gold. <i>Journal of the American Chemical Society</i> , 2003, 125, 9014-9015.	13.7	437
3	The BARC biosensor applied to the detection of biological warfare agents. <i>Biosensors and Bioelectronics</i> , 2000, 14, 805-813.	10.1	418
4	Quantitative Analysis and Characterization of DNA Immobilized on Gold. <i>Journal of the American Chemical Society</i> , 2003, 125, 5219-5226.	13.7	377
5	Design and performance of GMR sensors for the detection of magnetic microbeads in biosensors. <i>Sensors and Actuators A: Physical</i> , 2003, 107, 209-218.	4.1	330
6	Manipulation of Adsorbed Atoms and Creation of New Structures on Room-Temperature Surfaces with a Scanning Tunneling Microscope. <i>Science</i> , 1991, 251, 1206-1210.	12.6	263
7	A DNA array sensor utilizing magnetic microbeads and magnetoelectronic detection. <i>Journal of Magnetism and Magnetic Materials</i> , 2001, 225, 138-144.	2.3	238
8	Independent control of grafting density and conformation of single-stranded DNA brushes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 9-14.	7.1	204
9	Geometric and electronic properties of Cs structures on III-V (110) surfaces: From 1D and 2D insulators to 3D metals. <i>Physical Review Letters</i> , 1991, 66, 1338-1341.	7.8	198
10	Influence of substrate surface reconstruction on the growth and magnetic properties of Fe on GaAs(001). <i>Physical Review B</i> , 1997, 56, 8163-8168.	3.2	187
11	Magnetic labeling, detection, and system integration. <i>Biosensors and Bioelectronics</i> , 2008, 24, 1-13.	10.1	187
12	Quantitative Characterization of DNA Films by X-ray Photoelectron Spectroscopy. <i>Langmuir</i> , 2004, 20, 429-440.	3.5	185
13	Thiol Diffusion and the Role of Humidity in Dip Pen Nanolithography. <i>Physical Review Letters</i> , 2002, 88, 156104.	7.8	178
14	The structure of silicon surfaces from (001) to (111). <i>Surface Science</i> , 1997, 392, 69-85.	1.9	177
15	Nanoscale deposition of solid inks via thermal dip pen nanolithography. <i>Applied Physics Letters</i> , 2004, 85, 1589-1591.	3.3	155
16	Nucleobase Orientation and Ordering in Films of Single-Stranded DNA on Gold. <i>Journal of the American Chemical Society</i> , 2006, 128, 2-3.	13.7	153
17	Engineering electron and hole tunneling with asymmetric InAs quantum dot molecules. <i>Applied Physics Letters</i> , 2006, 89, 233110.	3.3	144
18	The chemisorption of chlorosilanes and chlorine on Si(111)7 $\sqrt{3}\times\sqrt{3}$ . <i>Surface Science</i> , 1990, 232, 297-306.	1.9	142

#	ARTICLE	IF	CITATIONS
19	Investigation of plasma etching mechanisms using beams of reactive gas ions. Journal of Vacuum Science and Technology, 1981, 18, 349-352.	1.9	118
20	A Stable High-Index Surface of Silicon: Si(5 5 12). Science, 1995, 269, 1556-1560.	12.6	116
21	Chemical and electronic properties of sulfur-passivated InAs surfaces. Surface Science, 2003, 523, 231-240.	1.9	116
22	Alkanethiols on Platinum: Multicomponent Self-Assembled Monolayers. Langmuir, 2006, 22, 2578-2587.	3.5	113
23	Controlled and Efficient Hybridization Achieved with DNA Probes Immobilized Solely through Preferential DNA-Substrate Interactions. Analytical Chemistry, 2010, 82, 2803-2810.	6.5	101
24	Structure and Stability of Si(111)-(2 $\times$ 1). Physical Review Letters, 1996, 77, 687-690.	7.8	86
25	Structure of III-Sb(001) Growth Surfaces: The Role of Heterodimers. Physical Review Letters, 2000, 84, 4649-4652.	7.8	67
26	The effects of surface geometry and island formation on alkali-promoted surfaces: The coadsorption of CO and K on Ni(110). Journal of Chemical Physics, 1985, 83, 4808-4816.	3.0	66
27	Direct Writing of a Conducting Polymer with Molecular-Level Control of Physical Dimensions and Orientation. Journal of the American Chemical Society, 2006, 128, 6774-6775.	13.7	64
28	A new mechanism for K promotion of surface reactions: N <sub>2</sub> on K-precovered Fe(111). Journal of Chemical Physics, 1986, 85, 3688-3698.	3.0	63
29	Incorporating fluorescent dyes and quantum dots into magnetic microbeads for immunoassays. BioTechniques, 2004, 36, 602-609.	1.8	57
30	Nucleation and growth of Fe on GaAs(001)-(2 $\times$ 4) studied by scanning tunneling microscopy. Physical Review B, 1996, 53, R10481-R10484.	3.2	56
31	Thermal conductivity of AlAs <sub>0.07</sub> Sb <sub>0.93</sub> and Al <sub>0.9</sub> Ga <sub>0.1</sub> As <sub>0.07</sub> Sb <sub>0.93</sub> alloys and (AlAs) <sub>1</sub> /(AlSb) <sub>11</sub> digital-alloy superlattices. Journal of Applied Physics, 2002, 92, 4994-4998.	2.5	56
32	Frenkel-Kontorova Model of Vacancy-Line Interactions on Ga/Si(112). Physical Review Letters, 1999, 83, 1818-1821.	7.8	50
33	Patterning of Narrow Au Nanocluster Lines Using V <sub>2</sub> O <sub>5</sub> Nanowire Masks and Ion-Beam Milling. Nano Letters, 2003, 3, 135-138.	9.1	49
34	Cross-sectional scanning tunneling microscopy of Mn-doped GaAs: Theory and experiment. Physical Review B, 2003, 68, .	3.2	43
35	Structure of Ge(113): Origin and Stability of Surface Self-Interstitials. Physical Review Letters, 1998, 81, 5177-5180.	7.8	41
36	Formation of Primary Amines on Silicon Nitride Surfaces: A Direct, Plasma-Based Pathway to Functionalization. Langmuir, 2007, 23, 4400-4404.	3.5	40

#	ARTICLE	IF	CITATIONS
37	Effects of As <sub>2</sub> versus As <sub>4</sub> on InAs/GaSb heterostructures: As-for-Sb exchange and film stability. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 1626.	1.6	38
38	Self-Assembled Monolayers of Alkanethiols on InAs. Langmuir, 2009, 25, 12185-12194.	3.5	32
39	The nanopatterning of a stimulus-responsive polymer by thermal dip-pen nanolithography. Soft Matter, 2008, 4, 1844.	2.7	30
40	W-structured type-II superlattice-based long- and very long wavelength infrared photodiodes. , 2005, , .		26
41	Nonsilicon, Non-von Neumann Computing Part I [Scanning the Issue]. Proceedings of the IEEE, 2019, 107, 11-18.	21.3	14
42	Engineered heterostructures of 6.1-Angstrom III-V semiconductors for advanced electronic and optoelectronic applications. , 1999, 3790, 13.		13
43	Passivation of W-structured type-II superlattice long-wave infrared photodiodes. , 2007, 6542, 51.		10
44	Particle Tracking Single Protein-Functionalized Quantum Dot Diffusion and Binding at Silica Surfaces. Langmuir, 2009, 25, 3509-3518.	3.5	9
45	Reusable, compression-sealed fluid cells for surface mounting to planar substrates. Lab on A Chip, 2009, 9, 1468.	6.0	9
46	Controlling interfacial disorder and strain of W-structured type-II superlattices using As <sub>2</sub> flux. Journal of Crystal Growth, 2007, 303, 515-519.	1.5	7
47	Direct-write polymer nanolithography in ultra-high vacuum. Beilstein Journal of Nanotechnology, 2012, 3, 52-56.	2.8	7
48	Summary Abstract: The kinetics of CO dissociation on Fe(111). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 538-539.	2.1	6
49	Initial stages of Sb <sub>2</sub> deposition on InAs(001). Surface Science, 2001, 478, 1-8.	1.9	6
50	Characterization and Controlled Properties of DNA Immobilized on Gold Surfaces. Kobunshi Ronbunshu, 2008, 65, 46-57.	0.2	3
51	Nonsilicon, Non-von Neumann Computing Part II. Proceedings of the IEEE, 2020, 108, 1211-1218.	21.3	2
52	Nanoscale Inking, Melting, and Soldering With a Heated Atomic Force Microscope Cantilever Tip. , 2004, , 509.		0
53	Detection of mitochondrial DNA with the compact bead array sensor system (cBASS). Proceedings of SPIE, 2009, , .	0.8	0