

Richard J Colton

List of Publications by Year in descending order

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60
papers

5,360
citations

159585

30
h-index

144013

57
g-index

62
all docs

62
docs citations

62
times ranked

4223
citing authors

#	ARTICLE	IF	CITATIONS
1	Trace explosives sensor testbed (TESTbed). Review of Scientific Instruments, 2017, 88, 034104.	1.3	14
2	Nanoscale measurements and manipulation. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 1609.	1.6	50
3	COUNTERTERRORISM: Making the World a Safer Place. Science, 2003, 299, 1324-1325.	12.6	63
4	A biosensor based on magnetoresistance technology. Biosensors and Bioelectronics, 1998, 13, 731-739.	10.1	757
5	Scanning probe microscopy. Current Opinion in Chemical Biology, 1997, 1, 370-377.	6.1	55
6	Forum on New Ideas in Tribology. Langmuir, 1996, 12, 4574-4582.	3.5	13
7	Chemically Specific Probes for the Atomic Force Microscope. Israel Journal of Chemistry, 1996, 36, 81-87.	2.3	28
8	Biosensor based on force microscope technology. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 789.	1.6	129
9	Investigation of the atomic-scale friction and energy dissipation in diamond using molecular dynamics. Thin Solid Films, 1995, 260, 205-211.	1.8	107
10	Effect of Overlayer Thickness on the Nanoindentation of SiO ₂ /Si. , 1995, , 85-90.		3
11	Measuring forces between biological macromolecules with the Atomic Force Microscope: characterization and applications. Proceedings Annual Meeting Electron Microscopy Society of America, 1995, 53, 718-719.	0.0	0
12	Sensing Discrete Streptavidin-Biotin Interactions with Atomic Force Microscopy. Langmuir, 1994, 10, 354-357.	3.5	688
13	Surface patterning by atomically-controlled chemical forces: molecular dynamics simulations. Surface Science, 1994, 316, L1055-L1060.	1.9	36
14	Growth of Rh on Au(111): surface intermixing of immiscible metals. Surface Science, 1994, 304, L400-L406.	1.9	71
15	Interaction of C ₆₀ with the Au(111) 23Å ⁻¹ reconstruction. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1994, 12, 1906.	1.6	32
16	Effect of PZT and PMN actuator hysteresis and creep on nanoindentation measurements using force microscopy. Review of Scientific Instruments, 1994, 65, 1561-1565.	1.3	63
17	Surface Science at the Nanoscale: Molecular Imaging and Surface Forces. , 1994, , 311-319.		2
18	Effect of atomic-scale surface roughness on friction: A molecular dynamics study of diamond surfaces. Wear, 1993, 168, 127-133.	3.1	98

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19	The interaction of C60 with noble metal surfaces. <i>Surface Science</i> , 1993, 295, 13-33.	1.9	196
20	Determination of the orientation of C60 adsorbed on Au(111) and Ag(111). <i>Physical Review B</i> , 1993, 48, 18244-18249.	3.2	243
21	Atomistic Simulations of Friction at Sliding Diamond Interfaces. <i>MRS Bulletin</i> , 1993, 18, 50-53.	3.5	49
22	Scanning Probe Microscopy of Thin Films. <i>MRS Bulletin</i> , 1993, 18, 41-49.	3.5	70
23	Nucleation, growth, and structure of fullerene films on Au(111). <i>Surface Science</i> , 1992, 279, 49-67.	1.9	288
24	The magnetostriction of CoFeNiMo metallic glasses measured with a tunneling transducer. <i>Journal of Magnetism and Magnetic Materials</i> , 1992, 103, 111-116.	2.3	5
25	Interpretation issues in force microscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1991, 9, 2548-2556.	2.1	140
26	Magnetostriction measurements using a tunneling-tip strain detector. <i>Journal of Magnetism and Magnetic Materials</i> , 1990, 88, 343-350.	2.3	25
27	Proximal probes: Techniques for measuring at the nanometer scale. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1990, 6, 77-85.	3.5	9
28	Probing the surface forces of monolayer films with an atomic-force microscope. <i>Physical Review Letters</i> , 1990, 64, 1931-1934.	7.8	320
29	A direct current plasma discharge cleaning method to eliminate background signals in secondary ion mass spectrometry. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1989, 7, 3126-3128.	2.1	4
30	A pulsed alkali-ion gun for time-of-flight secondary ion mass spectrometry. <i>Review of Scientific Instruments</i> , 1989, 60, 1239-1244.	1.3	3
31	High-pressure fast-atom bombardment mass spectrometry: Collisional stabilization and reactions of alkali halide cluster ions. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1989, 90, 9-38.	1.8	10
32	Determination of hydrogen in perfluorinated polyalkylethers using time-of-flight secondary ion mass spectrometry, infrared spectroscopy, and nuclear magnetic resonance spectrometry. <i>Applied Surface Science</i> , 1989, 35, 507-519.	6.1	14
33	A Tunneling-tip magnetometer. <i>Sensors and Actuators</i> , 1989, 20, 199-205.	1.7	14
34	Magnetic field sensing with magnetostrictive materials using a tunneling tip detector. <i>Sensors and Actuators</i> , 1989, 19, 211-225.	1.7	35
35	Results of a SIMS round robin sponsored by ASTM committee E-42 on surface analysis. <i>Surface and Interface Analysis</i> , 1989, 14, 101-108.	1.8	20
36	Measuring the nanomechanical properties and surface forces of materials using an atomic force microscope. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1989, 7, 2906-2913.	2.1	567

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37	A mechanism of ion production in secondary ion mass spectrometry. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1987, 78, 315-328.	1.8	20
38	Secondary ion mass spectrometry: Polyatomic and molecular ion emission. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1986, 13, 259-277.	1.4	12
39	Selective detection of aldehydes and ketones by derivatization/secondary ion mass spectrometry. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1985, 63, 141-148.	1.8	25
40	Molecular secondary ion mass spectrometry: New dimensions in chemical characterization. <i>Applications of Surface Science</i> , 1985, 21, 168-198.	1.0	20
41	Enhanced detection of drugs in complex mixtures by derivatization/secondary ion mass spectrometry. <i>Biological Mass Spectrometry</i> , 1985, 12, 254-260.	0.5	15
42	Secondary Ion Mass Spectrometry: A Multidimensional Technique. <i>ACS Symposium Series</i> , 1985, , 160-193.	0.5	1
43	Summary Abstract: SIMS quantification of group III-V semiconductor materials. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1985, 3, 1356-1358.	2.1	2
44	Sequencing of peptides by secondary ion mass spectrometry. <i>Journal of the American Chemical Society</i> , 1984, 106, 2219-2220.	13.7	48
45	Surface analysis: x-ray photoelectron spectroscopy, Auger electron spectroscopy and secondary ion mass spectrometry. <i>Analytical Chemistry</i> , 1984, 56, 373-416.	6.5	51
46	Ultra-High Mass Spectrometry. <i>Applied Spectroscopy</i> , 1984, 38, 430-432.	2.2	31
47	Secondary ion mass spectrometry: High-mass molecular and cluster ions. <i>Nuclear Instruments & Methods in Physics Research</i> , 1983, 218, 276-286.	0.9	13
48	Fast-atom molecular secondary-ion mass spectrometry. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1983, 54, 237-247.	1.8	21
49	Liquid metal substrate for dynamic secondary ion mass spectrometry. <i>Analytical Chemistry</i> , 1983, 55, 1170-1171.	6.5	13
50	Carbon as a sample substrate in secondary ion mass spectrometry. <i>Analytical Chemistry</i> , 1983, 55, 150-153.	6.5	24
51	Summary Abstract: Secondary ion mass spectrometry of organic adsorbates on carbon particles and liquid metal surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1983, 1, 441-442.	2.1	6
52	Secondary ion mass spectrometry of metal halides. 3. Ionic radii effects in alkali halide clusters. <i>The Journal of Physical Chemistry</i> , 1983, 87, 3441-3445.	2.9	55
53	Surface analysis: x-ray photoelectron spectroscopy, Auger electron spectroscopy, and secondary ion mass spectrometry. <i>Analytical Chemistry</i> , 1982, 54, 293-322.	6.5	37
54	SIMS molecular cluster intensities of inorganic salts containing sulfur and nitrogen oxyanions. <i>International Journal of Mass Spectrometry and Ion Physics</i> , 1981, 37, 49-65.	1.3	19

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55	Electrochromism in some thin-film transition-metal oxides characterized by x-ray electron spectroscopy. <i>Journal of Applied Physics</i> , 1978, 49, 409-416.	2.5	353
56	Electronic structure to tungsten and some of its borides, carbides, nitrides, and oxides by x-ray electron spectroscopy. <i>Inorganic Chemistry</i> , 1976, 15, 236-238.	4.0	174
57	Electronic structure of N,N-dimethylnitramine and N,N-dimethylnitrosamine from X-ray and UV electron spectroscopy. <i>Chemical Physics</i> , 1975, 8, 391-398.	1.9	29
58	Mechanical grinding device for an electron spectrometer. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1975, 7, 359-363.	1.7	4
59	Electronic structure of hydrazoic acid and the azide ion from x-ray and ultraviolet electron spectroscopy. <i>Journal of the American Chemical Society</i> , 1975, 97, 4845-4851.	13.7	60
60	Trapped electrons in substoichiometric MoO ₃ observed by X-ray electron spectroscopy. <i>Chemical Physics Letters</i> , 1974, 29, 131-133.	2.6	106