

Chris A Michaels

List of Publications by Year in descending order

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48
papers

1,202
citations

394421

19
h-index

361022

35
g-index

49
all docs

49
docs citations

49
times ranked

1028
citing authors

#	ARTICLE	IF	CITATIONS
1	In-situ Raman spectroscopic measurements of the deformation region in indented glasses. Journal of Non-Crystalline Solids, 2020, 530, 119828.	3.1	17
2	Stress Measurements in Alumina by Optical Fluorescence: Revisited. Journal of Research of the National Institute of Standards and Technology, 2019, 124, 1-15.	1.2	1
3	Residual stress in polycrystalline alumina: Comparison of two-dimensional maps and integrated scans in fluorescence-based measurements. Acta Materialia, 2018, 159, 309-319.	7.9	2
4	Two-dimensional strain-mapping by electron backscatter diffraction and confocal Raman spectroscopy. Journal of Applied Physics, 2017, 122, 205101.	2.5	5
5	Review: Coefficients for Stress, Temperature, and Composition Effects in Fluorescence Measurements of Alumina. Journal of Research of the National Institute of Standards and Technology, 2017, 122, 1-26.	1.2	12
6	Determination of residual stress distributions in polycrystalline alumina using fluorescence microscopy. Materials and Design, 2016, 107, 478-490.	7.0	14
7	In situ observations of Berkovich indentation induced phase transitions in crystalline silicon films. Scripta Materialia, 2016, 120, 19-22.	5.2	14
8	Quantitative mapping of stress heterogeneity in polycrystalline alumina using hyperspectral fluorescence microscopy. Acta Materialia, 2016, 106, 272-282.	7.9	15
9	<i>In situ</i> spectroscopic study of the plastic deformation of amorphous silicon under nonhydrostatic conditions induced by indentation. Physical Review B, 2015, 92, .	3.2	25
10	In situ observation of the spatial distribution of crystalline phases during pressure-induced transformations of indented silicon thin films. Journal of Materials Research, 2015, 30, 390-406.	2.6	21
11	Experimental and Applied Mechanics, Volume 6. Conference Proceedings of the Society for Experimental Mechanics, 2015, , .	0.5	0
12	Stress mapping of micromachined polycrystalline silicon devices via confocal Raman microscopy. Applied Physics Letters, 2014, 104, .	3.3	19
13	In situ Analysis of Materials Under Mechanical Stress: A Novel Instrument for Simultaneous Nanoindentation and Raman Spectroscopy. , 2013, , .		2
14	Indentation device for <i>in situ</i> Raman spectroscopic and optical studies. Review of Scientific Instruments, 2012, 83, 125106.	1.3	20
15	<i>In situ</i> observation of the indentation-induced phase transformation of silicon thin films. Physical Review B, 2012, 85, .	3.2	59
16	Surface plasmon polariton Raman microscopy. Vibrational Spectroscopy, 2012, 60, 85-91.	2.2	5
17	Coherent stokes scattering from gold nanorods: Critical dimensions and multicolor near-resonant plasmon excitation. Nanoscale, 2011, 3, 4290.	5.6	2
18	Comparison of the sensitivity and image contrast in spontaneous Raman and coherent Stokes Raman scattering microscopy of geometry-controlled samples. Journal of Biomedical Optics, 2011, 16, 021107.	2.6	7

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19	Surface-sensitive Raman microscopy with total internal reflection illumination. <i>Journal of Raman Spectroscopy</i> , 2010, 41, 1670-1677.	2.5	13
20	Scratch Damage and Recovery of Controlled Epoxy Networks. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1269, 51301.	0.1	0
21	Surface Selective Raman Microscopy With Total Internal Reflection Illumination. , 2010, , .		0
22	Modulus and Chemical Mapping of Multilayer Coatings. <i>ACS Applied Materials & Interfaces</i> , 2009, 1, 597-603.	8.0	17
23	Fourier Transform Spectrometry with a Near-Infrared Supercontinuum Source. <i>Applied Spectroscopy</i> , 2009, 63, 538-543.	2.2	26
24	Fourier Transform Spectrometry with a Near Infrared Supercontinuum Source. , 2009, , .		0
25	Mid-infrared imaging with a solid immersion lens and broadband laser source. <i>Applied Physics Letters</i> , 2007, 90, 121131.	3.3	17
26	Interfacial Characterization of Multiple Layer Coatings on Thermoplastic Olefins (TPO). <i>Materials Research Society Symposia Proceedings</i> , 2007, 1049, 1.	0.1	0
27	Probing photodegradation beneath the surface: a depth profiling study of UV-degraded polymeric coatings with microchemical imaging and nanoindentation. <i>Journal of Coatings Technology Research</i> , 2007, 4, 389-399.	2.5	36
28	Surface and interfacial properties of PVDF/acrylic copolymer blends before and after UV exposure. <i>Applied Surface Science</i> , 2006, 252, 5168-5181.	6.1	43
29	Depth profiling using C60+ SIMS—Deposition and topography development during bombardment of silicon. <i>Applied Surface Science</i> , 2006, 252, 6521-6525.	6.1	78
30	Chemical Imaging of Heterogeneous Polymeric Materials with Near-Field IR Microscopy. <i>ACS Symposium Series</i> , 2005, , 38-50.	0.5	1
31	Horizontal growth and in situ assembly of oriented zinc oxide nanowires. <i>Applied Physics Letters</i> , 2004, 85, 3244-3246.	3.3	91
32	Near-Field Infrared Imaging and Spectroscopy of a Thin Film Polystyrene/Poly(Ethyl Acrylate) Blend. <i>Applied Spectroscopy</i> , 2004, 58, 257-263.	2.2	20
33	Collapse and Self-Reconstruction of Mesoscopic Architectures of Supramolecular J Aggregates in Solution: From Strings to Tubular Rods. <i>Letters in Organic Chemistry</i> , 2004, 1, 280-287.	0.5	15
34	Spectral Imaging with Near-Field Infrared Spectroscopy and Microscopy. <i>Microscopy and Microanalysis</i> , 2002, 8, 1530-1531.	0.4	0
35	Assessment of sensitivity advances in near-field Raman spectroscopy. , 2000, , .		1
36	Chemical imaging with scanning near-field infrared microscopy and spectroscopy. , 2000, , .		2

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37	Competition between photochemistry and energy transfer in ultraviolet-excited diazabenzenes. II. Identifying the dominant energy donor for "supercollisions" Journal of Chemical Physics, 2000, 112, 5844-5851.	3.0	17
38	Scanning near-field infrared microscopy and spectroscopy with a broadband laser source. Journal of Applied Physics, 2000, 88, 4832.	2.5	43
39	Carbon nanotube tipped atomic force microscopy for measurement of <100 nm etch morphology on semiconductors. Applied Physics Letters, 1998, 73, 529-531.	3.3	78
40	The collisional deactivation of highly vibrationally excited pyrazine by a bath of carbon dioxide: Excitation of the infrared inactive (1000), (0200), and (0220) bath vibrational modes. Journal of Chemical Physics, 1998, 108, 2744-2755.	3.0	46
41	Translational and rotational excitation of the CO ₂ (0000) vibrationless state in the collisional quenching of highly vibrationally excited perfluorobenzene: Evidence for impulsive collisions accompanied by large energy transfers. Journal of Chemical Physics, 1997, 106, 7055-7071.	3.0	67
42	Midinfrared molecular gas lasers optically pumped by a continuously tunable infrared optical parametric oscillator. Applied Physics Letters, 1997, 70, 2215-2217.	3.3	4
43	Connecting quantum state resolved scattering data directly to chemical kinetics: Energy transfer distribution functions for the collisional relaxation of highly vibrationally excited molecules from state resolved probes of the bath. Journal of Chemical Physics, 1997, 106, 3558-3566.	3.0	64
44	Infrared Laser Snapshots. ACS Symposium Series, 1997, , 134-149.	0.5	2
45	Molecular supercollisions: Evidence for large energy transfer in the collisional relaxation of highly vibrationally excited pyrazine by CO ₂ . Journal of Chemical Physics, 1995, 102, 6032-6045.	3.0	95
46	Long- and short-range interactions in the temperature dependent collisional excitation of the antisymmetric stretching CO ₂ (0001) level by highly vibrationally excited pyrazine. Journal of Chemical Physics, 1995, 102, 6682-6695.	3.0	61
47	Supercollisions, photofragmentation and energy transfer in mixtures of pyrazine and carbon dioxide. Faraday Discussions, 1995, 102, 405.	3.2	22
48	Correlation of tryptophan fluorescence intensity decay parameters with proton NMR-determined rotamer conformations: [tryptophan ²]oxytocin. Biochemistry, 1992, 31, 1585-1594.	2.5	103