Chris A Michaels

List of Publications by Year
in descending order

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	Correlation of tryptophan fluorescence intensity decay parameters with proton NMR-determined rotamer conformations: [tryptophan2]oxytocin. Biochemistry, 1992, 31, 1585-1594.	2.5	103
2	Molecular supercollisions: Evidence for large energy transfer in the collisional relaxation of highly vibrationally excited pyrazine by CO2. Journal of Chemical Physics, 1995, 102, 6032-6045.	3.0	95
3	Horizontal growth and in situ assembly of oriented zinc oxide nanowires. Applied Physics Letters, 2004, 85, 3244-3246.	3.3	91
4	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
5	Depth profiling using C60+ SIMSâ€"Deposition and topography development during bombardment of silicon. Applied Surface Science, 2006, 252, 6521-6525.	6.1	78
6	Translational and rotational excitation of the CO2(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
7	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
8	Longâ€•and shortâ€rrange interactions in the temperature dependent collisional excitation of the antisymmetric stretching CO2(0001) level by highly vibrationally excited pyrazine. Journal of Chemical Physics, 1995, 102, 6682-6695.	3.0	61
9	In situobservation of the indentation-induced phase transformation of silicon thin films. Physical Review B, 2012, 85, .	3.2	59
10	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
11	Scanning near-field infrared microscopy and spectroscopy with a broadband laser source. Journal of Applied Physics, 2000, 88, 4832.	2.5	43
12	Surface and interfacial properties of PVDF/acrylic copolymer blends before and after UV exposure. Applied Surface Science, 2006, 252, 5168-5181.	6.1	43
13	Probing photodegradation beneath the surface: a depth profiling study of UV-degraded polymeric coatings with microchemical imaging and nanoindentation. Journal of Coatings Technology Research, 2007, 4, 389-399.	2.5	36
14	Fourier Transform Spectrometry with a Near-Infrared Supercontinuum Source. Applied Spectroscopy, 2009, 63, 538-543.	2.2	26
15	In situspectroscopic study of the plastic deformation of amorphous silicon under nonhydrostatic conditions induced by indentation. Physical Review B, 2015, 92, .	3.2	25
16	Supercollisions, photofragmentation and energy transfer in mixtures of pyrazine and carbon dioxide. Faraday Discussions, 1995, 102, 405.	3.2	22
17	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
18	Near-Field Infrared Imaging and Spectroscopy of a Thin Film Polystyrene/Poly(Ethyl Acrylate) Blend. Applied Spectroscopy, 2004, 58, 257-263.	2.2	20

#	Article	IF	Citations
19	Indentation device for in situ Raman spectroscopic and optical studies. Review of Scientific Instruments, 2012, 83, 125106.	1.3	20
20	Stress mapping of micromachined polycrystalline silicon devices via confocal Raman microscopy. Applied Physics Letters, 2014, 104, .	3.3	19
21	Competition between photochemistry and energy transfer in ultraviolet-excited diazabenzenes. II. Identifying the dominant energy donor for â€œsupercollisionsâ€. Journal of Chemical Physics, 2000, 112, 5844-5851.	3.0	17
22	Mid-infrared imaging with a solid immersion lens and broadband laser source. Applied Physics Letters, 2007, 90, 121131.	3.3	17
23	Modulus and Chemical Mapping of Multilayer Coatings. ACS Applied Materials & Interfaces, 2009, 1, 597-603.	8.0	17
24	In-situ Raman spectroscopic measurements of the deformation region in indented glasses. Journal of Non-Crystalline Solids, 2020, 530, 119828.	3.1	17
25	Quantitative mapping of stress heterogeneity in polycrystalline alumina using hyperspectral fluorescence microscopy. Acta Materialia, 2016, 106, 272-282.	7.9	15
26	Collapse and Self-Reconstruction of Mesoscopic Architectures of Supramolecular J Aggregates in Solution: From Strings to Tubular Rods. Letters in Organic Chemistry, 2004, 1, 280-287.	0.5	15
27	Determination of residual stress distributions in polycrystalline alumina using fluorescence microscopy. Materials and Design, 2016, 107, 478-490.	7.0	14
28	In situ observations of Berkovich indentation induced phase transitions in crystalline silicon films. Scripta Materialia, 2016, 120, 19-22.	5.2	14
29	Surfaceâ€sensitive Raman microscopy with total internal reflection illumination. Journal of Raman Spectroscopy, 2010, 41, 1670-1677.	2.5	13
30	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
31	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
32	Surface plasmon polariton Raman microscopy. Vibrational Spectroscopy, 2012, 60, 85-91.	2.2	5
33	Two-dimensional strain-mapping by electron backscatter diffraction and confocal Raman spectroscopy. Journal of Applied Physics, 2017, 122, 205101.	2.5	5
34	Midinfrared molecular gas lasers optically pumped by a continuously tunable infrared optical parametric oscillator. Applied Physics Letters, 1997, 70, 2215-2217.	3.3	4
35	Infrared Laser Snapshots. ACS Symposium Series, 1997, , 134-149.	0.5	2
36	Chemical imaging with scanning near-field infrared microscopy and spectroscopy. , 2000, , .		2

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37	Coherent stokes scattering from gold nanorods: Critical dimensions and multicolor near-resonant plasmon excitation. Nanoscale, 2011, 3, 4290.	5.6	2
38	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
39	In situ Analysis of Materials Under Mechanical Stress: A Novel Instrument for Simultaneous Nanoindentation and Raman Spectroscopy. , 2013, , .		2
40	Assessment of sensitivity advances in near-field Raman spectroscopy. , 2000, , .		1
41	Chemical Imaging of Heterogeneous Polymeric Materials with Near-Field IR Mircroscopy. ACS Symposium Series, 2005, , 38-50.	0.5	1
42	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
43	Spectral Imaging with Near-Field Infrared Spectroscopy and Microscopy. Microscopy and Microanalysis, 2002, 8, 1530-1531.	0.4	0
44	Interfacial Characterization of Multiple Layer Coatings on Thermoplastic Olefins (TPO). Materials Research Society Symposia Proceedings, 2007, 1049, 1.	0.1	0
45	Scratch Damage and Recovery of Controlled Epoxy Networks. Materials Research Society Symposia Proceedings, 2010, 1269, 51301.	0.1	0
46	Surface Selective Raman Microscopy With Total Internal Reflection Illumination. , 2010, , .		0
47	Experimental and Applied Mechanics, Volume 6. Conference Proceedings of the Society for Experimental Mechanics, 2015, , .	0.5	0
48	Fourier Transform Spectrometry with a Near Infrared Supercontinuum Source. , 2009, , .		0