

Publications and Presentations

Journal Publications	Title	Year
J.D. Adams, L. Manning, B. Rogers, M. Jones, and S.C. Minne, "Self-sensing tapping mode atomic force microscopy," <i>Sensors and Actuators A</i> 121 (2005) 262–266	Self-sensing tapping mode atomic force microscopy	2005
J.D. Adams, B. Rogers, L. Manning, M. Jones, T. Sulchek, K. Murray, B. Beneschott, Z. Hu, T. Thundat, H. Cavazos, and S.C. Minne, "Piezoelectric self-sensing of adsorption-induced microcantilever bending," <i>Sensors & Actuators: A. Physical</i> , Vol 121/2 pp 457-461 (2005)	Piezoelectric self-sensing of adsorption-induced microcantilever bending	2005
J.D. Adams, D. York, and N. Whisman, "Reduction of spurious resonance peaks in microcantilever tuning through substrate contact-surface reduction," <i>Review of Scientific Instruments</i> , 75, 9, pp. 2903-2905 (2004)	Reduction of spurious resonance peaks in microcantilever tuning through substrate contact-surface reduction	2004
B. Rogers, L. Manning, T. Sulchek and J.D. Adams, "Improving tapping mode atomic force microscopy with piezoelectric cantilevers," <i>Ultramicroscopy</i> , Volume 100, Issues 3-4, August 2004, Pages 267-276; also featured in an article: "Piezoelectric Cantilevers Improve Atomic Force Microscopy," <i>Biophotonics International</i> , October 2004, pg. 53-56; Erratum to: "Improving tapping mode atomic force microscopy with piezoelectric cantilevers," <i>Ultramicroscopy</i> , Vol 103/3 pp 251-252	Improving tapping mode atomic force microscopy with piezoelectric cantilevers	2004
J.D. Adams, B.S. Rogers, and L. J. Leifer, "Microtechnology, Nanotechnology, and the Scanning Probe Microscope: An Innovative Course," <i>IEEE Transactions on Education</i> , Vol. 47, No. 1, p. 51. (2004); also featured in <i>The Nano Advisor: Educational News and Events in Nanotechnology</i> , Fall 2004.	Microtechnology, Nanotechnology, and the Scanning Probe Microscope: An Innovative Course	2004
L. Manning, B. Rogers, M. Jones, J.D. Adams, J.L. Fuste and S.C. Minne, "Self-oscillating tapping mode atomic force microscopy," <i>Review of Scientific Instruments</i> , 74, 4220 (2003)	Self-oscillating tapping mode atomic force microscopy	2003
N. Whisman, D. York, L. Manning, J. Brant, R. Dyer, A. Childress, E.A. Marchand, J. D. Adams, "Probing microplatform for the study of biological adhesion forces," <i>Review of Scientific Instruments</i> , 74, 4491 (2003)	Probing microplatform for the study of biological adhesion forces	2003
L. A. Pinnaduwaage, A. Gehl, D. L. Hedden, G. Muralidharan, T. Thundat, R.T. Lareau, T. Sulchek, L. Manning, B. Rogers, M. Jones, J.D. Adams, "A microsensor for trinitrotoluene vapour," <i>Nature</i> , v 425, 474 (2003)	A microsensor for trinitrotoluene vapour	2003
J.D. Adams, G. Parrott, C. Bauer, T. Sant, L. Manning, M. Jones, B. Rogers, D. McCorkle and T. L. Ferrell, "Nanowatt chemical vapor detection with a self-sensing, piezoelectric microcantilever array," <i>Applied Physics Letters</i> , 83, 3428 (2003); also October 27, 2003 <i>Virtual Journal of Nanoscale Science & Technology</i>	Nanowatt chemical vapor detection with a self-sensing, piezoelectric microcantilever array	2003
B. Rogers, L. Manning, M. Jones, T. Sulchek, K. Murray, B. Beneschott, J.D. Adams, Z. Hu T. Thundat, H. Cavazos and S.C. Minne "Mercury vapor detection with a self-sensing, resonating piezoelectric cantilever," <i>Review of Scientific Instruments</i> , 74, 4899 (2003); also November 10, 2003 <i>Virtual Journal of Nanoscale Science & Technology</i>	Mercury vapor detection with a self-sensing, resonating piezoelectric cantilever	2003
B. Rogers, T. Sulchek, K. Murray, D. York, M. Jones, L. Manning, S. Malekos, B. Beneschott, J.D. Adams, H. Cavazos, and S.C. Minne, "High speed tapping mode atomic force microscopy in liquid using an insulated piezoelectric cantilever," <i>Review of Scientific Instruments</i> , 74, 4683 (2003); also November 10, 2003 <i>Virtual Journal of Nanoscale Science & Technology</i> ; also November 1, 2003 <i>Virtual Journal of Biological Physics Research</i>	High speed tapping mode atomic force microscopy in liquid using an insulated piezoelectric cantilever	2003
B. Rogers, D. York, N. Whisman, M. Jones, K. Murray, J.D. Adams, T. Sulchek, and S.C. Minne, "Tapping mode atomic force microscopy in liquid with an insulated piezoelectric micro-actuator," <i>Review of Scientific Instruments</i> , 73, 3242 (2002)	Tapping mode atomic force microscopy in liquid with an insulated piezoelectric micro-actuator	2002
Conference Proceedings		
B. Rogers, R. Whitten, and J. D. Adams, "Self-Sensing Array (SSA) Technology for Homeland Security Applications" <i>Proceedings of SPIE, Volume 6201, Sensors, and Command, Control, Communications, and Intelligence (C3I) Technologies for Homeland Security and Homeland Defense V</i> , Edward M. Carapezza, Editor, 62010G (May 10, 2006)	Self-Sensing Array (SSA) Technology for Homeland Security Applications	2006
B. Rogers, R. Whitten, J.D. Adams, "The microcantilever array: a low-power, compact and sensitive unattended sensor technology," <i>Unattended Ground Sensor Technologies and Applications VII</i> , Edward M. Carapezza, Editor, May 2005, pp. 255-266	The microcantilever array: a low-power, compact and sensitive unattended sensor technology	2005

J. D. Adams, B. Rogers, and R. Whitten, "The Microcantilever Array: A Low Power, Compact and Sensitive Unattended Ground Sensor," Proceedings of SPIE, Unattended Ground Sensor Technologies and Applications VII, Editor: Edward M. Carapezza, Volume 5796	The Microcantilever Array: A Low Power, Compact and Sensitive Unattended Ground Sensor	2005
J.D. Adams and B. Rogers, "A Unified Approach to Nanotechnology Education," Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition 2004; 3566: Materials, MEMS, and Nano	A Unified Approach to Nanotechnology Education	2004
J. Davis, M. Bronikowski, D. Choi, L. Epp, M. Hoenk, D. Hoppe, B. Hunt, B. Kowalczyk, J. Adams, B. Rogers, F. Noca, E. Wong, B. Chang, M. Jouzi, M. Tzolov, A. Yin, J. Xu, D. Adam, R. Young, "High-Q Mechanical Resonator Arrays Based on Carbon Nanotubes," IEEE Conference on Nanotechnology, 2003. IEEE-NANO, Vol. 2, p. 635 – 638	High-Q Mechanical Resonator Arrays Based on Carbon Nanotubes	2003
B. Rogers, C.A. Bauer and J.D. Adams, "Comparison of self-sensing techniques for mercury vapor detection using piezoelectric microcantilevers," Proceedings of IMECE 2003 ASME Internat. Mech. Eng. Congress & Exposition; paper #IMECE2003-55024. November, 2003.	Comparison of self-sensing techniques for mercury vapor detection using piezoelectric microcantilevers	2003
Conference Presentations/ Presented Papers		
M. J. Bronikowski, D. S. Choi; M. E. Hoenk; B. D. Hunt, R. S. Kowalczyk, E. W. Wong, A. M. Fisher, B. Rogers, J. D. Adams, J. Xu, J. F. Davis, L. W. Epp, D. J. Hoppe, "Carbon Nanotubes for Molecular Sensors and Electronic Circuit Elements," AVS 50 th International Symposium 2003	Carbon Nanotubes for Molecular Sensors and Electronic Circuit Elements	2003
J.D. Adams, "Low-Power Piezoelectric Self-Sensing Microcantilevers," IMECE 2003 ASME Internat. Mech. Eng. Congress & Exposition	Low-Power Piezoelectric Self-Sensing Microcantilevers	2003
B. Rogers, L. Manning, and J.D. Adams, "Toward faster, simpler tapping mode atomic force microscopy using piezoelectric cantilevers," Veeco "Seeing at the Nanoscale," Conference 2003.	Toward faster, simpler tapping mode atomic force microscopy using piezoelectric cantilevers	2003
D. Choi, M. Bronikowski, J. Davis, L. Epp, M. Hoenk, D. Hoppe, B. Hunt, R. Kowalczyk, F. Noca, E. Wong, B. Chang, A. Yin, J. Xu, J. Adams, B. Rogers, "Engineered carbon nanotube materials for high-Q nanomechanical resonators," Nanotube 2003, Seoul Korea, (P#162)	Engineered carbon nanotube materials for high-Q nanomechanical resonators	2003
Conference Poster Presentations		
B. Rogers, C.A. Bauer and J.D. Adams, "Comparison of self-sensing techniques for mercury vapor detection using piezoelectric microcantilevers," Proceedings of IMECE 2003 ASME Internat. Mech. Eng. Congress & Exposition	Comparison of self-sensing techniques for mercury vapor detection using piezoelectric microcantilevers	2003
J. Adams, G. Barrett, A. Childress, J. Cline, J. Kerr, J. LaCombe G. Larios, S. Miller, K. Murray, and G Parrot, "A Novel Piezoelectric Microcantilever Based Sensing Platform for Vapor Analysis," Gordon Conference 2003	A Novel Piezoelectric Microcantilever Based Sensing Platform for Vapor Analysis	2003
G. Barrett, M. Jones, J. Kerr, L. Manning, S. Miller, K. Murray, and J.D. Adams, "Detection of Benzene and Toluene Vapor: the development of a microsensor array for monitoring of landfill gases," American Chemical Society Conference, Long Beach, CA (2003)	Detection of Benzene and Toluene Vapor: the development of a microsensor array for monitoring of landfill gases	2003
G. Barrett, M. Jones, J. Kerr, J. Leland, L. Manning, S. Miller, K. Murray, J. Adams, "A Breath Sensor For The Detection Of Acetylaldehyde As An Indicator For Alcohol Induced Liver Disease," American Chemical Society Conference, Long Beach, CA, (2003)	A Breath Sensor For The Detection Of Acetylaldehyde As An Indicator For Alcohol Induced Liver Disease	2003
Invited Talks		
Jesse Adams, "Piezoelectric Self-Sensing Microcantilevers for Chemical Detection and AFM Imaging," SPM 2003, Oxford, UK, May 2003	Piezoelectric Self-Sensing Microcantilevers for Chemical Detection and AFM Imaging	2003
Jesse Adams, "Piezoelectric Self-Sensing Microcantilevers for Chemical Detection and AFM Imaging," IMT Neauchatel, SW, May 2003	Piezoelectric Self-Sensing Microcantilevers for Chemical Detection and AFM Imaging	2003
B. Rogers, D. Burns, and J. Adams, "Piezoelectric self-sensing microcantilevers for chemical detection and AFM imaging," Lawrence Livermore National Laboratory, Nov 2003	Piezoelectric self-sensing microcantilevers for chemical detection and AFM imaging	2003
Jesse Adams, "Microtechnology and Nanotechnology Cantilever Design and Chemical Sensing," Jet Propulsion Laboratory	Microtechnology and Nanotechnology Cantilever Design and Chemical Sensing	2003
Jesse Adams, "Microtechnology and Nanotechnology," ASME Comstock Section, Feb, 2003.	Microtechnology and Nanotechnology	2003