A List of MicroFab Publications (PDF)

Publications by MicroFab's Customers & Collaborators (PDF)

MicroFab Patents (PDF)

Current Publications Online: (Links to items below)

MEMS, MOEMS, & Nano

Biomedical

Micro-Optics, Photonics & Displays

Electronics Manufacturing

Ink-Jet Printing, Vapor Generation, & Other

MEMS Moems & Nano (All items are PDFs)

- A Method for Improved VCSEL Packaging Using MEMS and Ink-Jet Technologies , A. Nallani, T.Chen, D. Hayes, WS. Che, and JB. Lee, J. of Lightwave Technology, Vol. 24, No. 3, March 2006.

- Ink-Jet Deposition of Materials for MEMS Fabrication D. Wallace, D. Hayes, T. Chen, V. Shah, D. Radulescu, P. Cooley, K. Wachtler, and A. Nallani, *Proceedings, SMTA's Pan Pacific Microelectronics Symposium* , Hawaii, January 17-19, 2006.

- THINK ADDITIVE:Ink-Jet Deposition of Materials for MEMS Packaging D. Wallace, D. Hayes, T. Chen, V. Shah, D. Radulescu, P. Cooley, K. Wachtler, and A. Nallani, 6th Topical Workshop on Packaging of MEMS and Related Micro-Nano-Bio Integrated Systems, Long Beach, CA, Nov. 18-20, 2004.

- Metallic MEMS structures for assembly of optoelectronic components A.C. Nallani, T. Chen, J.B. Lee, D.J. Hayes, and D.B. Wallace, IMAPS Advanced Technology Workshop on Optoelectronics Device Packaging, Bethlehem PA, October 11-14, 2004.

- Micro-Printing System for MEMS Packaging Using Nano-Structured Materials D.B. Wallace and D.J. Hayes, *Proceedings, NanoEngineering World Forum*, Marlborough, MA June 23-25, 2003..

- Printing System for MEMS Packaging D.J. Hayes, W.R. Cox, and D.B. Wallace, *Proceedings, SPIE Micromachining & Microfabrication Conference* , San Francisco CA, October 22-25, 2001.

- Low -Cost Fiber Collimation for MOEMS Switches by Ink-Jet Printing W.R. Cox, T. Chen, D.J. Hayes, and M.E. Grove, *Proceedings, SPIE MOEMS & Miniaturized Systems* , San Francisco CA, October 22-25, 2001.

Biomedical (All items are PDFs)

- Ink-Jet as a Manufacturing Method for Drug Delivery Applications
  Antohe B.V. and Wallace D.B., *Proceedings of the 2008 International Manufacturing Science and Engineering Conference* , Evanston, IL October 2008.

- A microdispenser for LC separation and MALDI MS analysis
  Cooley PW, Chen T, Wallace DB, Hopwood F, Gooley A, Svec F. (2007) *American Lab* . 39:27-29.

- In situ Synthesis of Peptide Microarrays using Ink-Jet
  Antohe, B.V. and Cooley, W.P., Microarrays Vol. 1 Synthesis Methods, pp. 299-312, in the *Methods in Molecular Biology* Series, Ed. J.B. Rampal, Humana Press, 2007.

- The Application of Ink-Jet Technology for the Coating and Loading of Drug-Eluting Stents
  Tarcha, P., Verlee, D., Hui, H., Setesak, J., Antohe, B., Radulescu, D. and Wallace, D., *Annals of Biomedical Engineering* , vol. 35, pp.1791-9, 2007.

- A Digital Olfactometer for Smell Threshold Measurements for Neurodegenerative Disease Diagnostics
  Hayes D.J., Wallace D.B., Taylor D., Antohe B.V., Achiriloaie I., and Comparini N., *Proceed. IEEE Eng. and Med. in Bio. Workshop* , Dallas, TX, November 11-12, 2007.

- An InkJet Printing Station for Neuroregenerative Tissue Engineering
  David S. Silva, David B. Wallace, Patrick W. Cooley, Delia Radulescu, and Donald J. Hayes, *Proceed. IEEE Eng. and Med. in Bio. Workshop*, Dallas, TX, November 11-12, 2007.

- Determination of the olfactory threshold using a piezoelectric microdispenser for neurodegenerative disease diagnostics
  D.B. Wallace, D. Taylor, B.V. Antohe, I. Achiriloaie, N.Comparini, R.M. Stewart and M.K. Sanghera, *2006 Meas. Sci. Technol.* 17 3102-3109.

- 3D Printing of Biological Materials for Drug Delivery and Tissue Engineering Applications ,
  D. Radulescu, H.J. Trost, D. Taylor, B. Antohe, N. Schwade, P. Tarcha, D. Silva, S. Dhar and G. Evans, *Proc., IS&T's DF05, the International Conference on Digital Fabrication Technologies* , Baltimore, 2005.

- Drug Loading of Stents with Ink-Jet Technology
  P.J. Tarcha, D. VerLee, H.-W. Hui, J. Setesak, K. Andelin, A. Shows, D.B. Wallace, D. Radulescu, and B.V. Antohe, *Proc., BioInterface '04*, October, 2004.

- Miniature chemical and biomolecular sensors enabled by direct-write microdispensing technology ,
  D.J. Hayes, P. Cooley, D.B. Wallace, *Proc., SPIE Defense and Security Symposium*, Orlando FL, April 2004.

- Uniform Paclitaxel-Loaded Biodegradable Microspheres Manufactured by Ink-Jet Technology
  D. Radulescu, D. Wawro, and N.D. Schwade,, *Proc., the Winter Symposium and 11th International Symposium on Recent Advances in Drug Delivery Systems* , Salt-lake City, UT, March 2003.

- Application of Ink-jet Printing Technology to BioMEMS and Microfluidic Systems
  P.W. Cooley, D.B. Wallace, and B.V. Antohe, *Proceedings, SPIE Microfluidics and BioMEMS Conference* , San Francisco CA, October 22-25, 2001.

- Parallel Production of Oligonucleotide Arrays Using Membranes and Reagent Jet Printing
  D.I. Stimpson, P.W. Cooley, S.M. Knepper, D.B. Wallace, *BioTechniques*, Vol. 25, no. 5, pp. 886-890, November, 1998.

Micro-Optics, Photonics & Displays (All items are PDFs)

- Digital Printing of Optical Components
  Donald J. Hayes, Ting Chen and David Wallace, *Proc., IS&T's DF06, the International Conference on Digital Fabrication Technologies* , Denver, September 17 21, 2006.

- Opto-electronic Packaging Enabled by Direct Write Micro-printing Technology
  D.J. Hayes and T. Chen, *Proceedings OFC 2005*, Anaheim CA, March 6-11, 2005.

- Next Generation Optoelectronic Components Enabled By Direct Write Microprinting Technology
  D.J. Hayes and T. Chen, *Proc., SPIE Defense and Security Symposium*, Orlando FL, April 2004.

- Micro-optics Fabrication by Ink-jet Printing
  W.R. Cox and T. Chen, *Optics & Photonics News*, Vol. 12, no. 6, pp. 32-35, June 2001.

- Using Drop-on-demand Technology for Manufacturing Grin Lenses
  H.-J. Trost, S. Ayers, T. Chen, W.R. Cox, M.E. Grove, and R. Hoenigman, Proc., Am. Soc. Prec. Eng. ASPE 2001, 16th Annual Meeting, Arlington, V, November 10-15, 2001.

- Microjet Printing of Micro-optical Interconnects
  W. Royall Cox, Chi Guan, Donald J. Hayes and David B. Wallace, *Proceedings, The International Conference and Exhibition on High Density Interconnect and Systems Packaging*, Denver, CO, April 2000. (best session paper); also *Int. J. of Microcircuits & Elect. Packaging*, Vol. 23, No.3, pp.346-351, 3rd Quarter 2000.

- Microjet Printing of Micro-optical Interconnects and Sensors
  W. Royall Cox, Chi Guan and Donald J. Hayes, *Proceedings, SPIE Photonics West 2000*, Vol.3852, San Jose, CA, January 2000.

- Color Flat Panel Manufacturing Using Ink Jet Technology
  M. Grove, D. Hayes, R. Cox, D. Wallace, J. Caruso, M. Hampden-Smith, T. Kodas, K. Kunze, A. Ludviksson, S. Pennino and D. Skamser, *Proceedings, Display Works '99*, San Jose, Feb., 1999.

- Low-Cost Display Assembly and Interconnect Using Ink-Jet Printing Technology
  D.J. Hayes, W.R. Cox and M.E. Grove, *Proceedings, Display Works '99*, San Jose, Feb., 1999.

- Micro-jet Printing of Refractive Microlenses
  W. Royall Cox, Ting Chen, Chi Guan, Donald J. Hayes and Rick E. Hoenigman, Brian T. Teipen and Duncan L. MacFarlane, *Proceedings, OSA Diffractive Optics and Micro-Optics Topical Meeting,* Kailua-Kona, Hawaii, June 1998

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  W.R. Cox, D.J. Hayes, T. Chen, R.F. Hoenigman, D.L. MacFarlane, *Proceedings, ISHM '96,* Minneapolis, Minn., October 1996. (Best session paper)

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- Ink-Jet as Direct-Write Technology for Fuel Cell Packaging and Manufacturing
  V.G. Shah, D.J. Hayes, and D.B. Wallace, in *Fuel Cell Electronics Packaging*, K. Kuang, K. Easler eds., Springer, 2007.

- Electronics Application of Inkjet Technology
  V.G. Shah and D.B. Wallace, in *Electronics Application of Inkjet Technology*, Realize Advanced Technology Limited, Tokyo, Sept., 2006.

- Opto-electronic Packaging Enabled by Direct Write Micro-printing Technology
  D.J. Hayes and T. Chen, *Proceedings OFC 2005*, Anaheim CA, March 6-11, 2005.

- Next Generation Optoelectronic Components Enabled By Direct Write Microprinting Technology
  D.J. Hayes and T. Chen, *Proc., SPIE Defense and Security Symposium*, Orlando FL, April 2004.

- Low-cost Solar Cell Fabrication by Drop-on-Demand Ink-jet Printing
  V.G. Shah and D.B. Wallace, *Proc. IMAPS 37th Annual International Symposium on Microelectronics,* Long Beach, Ca, November 14-18, 2004

- Direct Write of Passive Components by Ink-Jet Printing Technique
  V. Shah, D.J. Hayes, *Proc., IMAPS Advanced Technology Workshop on Passive Integration* , Ogunquit, Maine, June 19-21, 2002

- Trimming and Printing of Embedded Resistors Using Demand-Mode Ink-Jet Technology and Conductive Polymer
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- MicroJet Printing of Solder and Polymers for Multi-Chip Modules and Chip-Scale Packages
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  D.B. Wallace and D.J. Hayes, *Proceedings, SMTA's Emerging Technology Symposium* , Minneapolis, Minn., October, 1997.

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- Ink Jet Technology for Manufacturing and Instrument Applications
  D Wallace, P Cooley, B Antohe, D Hayes, T Chen, *Proceedings, 20th workshop on Micromachining, Micromechanics and Microsystems (MME 09)* , September 20-22, 2009, Toulouse.

- Portable Vapor Generator for the Calibration and Test of Explosive Detectors
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- Vapor Generator for the Calibration and Test of Explosive Detectors
  Antohe B.V., Hayes D. J., Taylor D. W., Wallace D. B., Grove M. E. and Christison M., *Proceed. 2008 IEEE International Conference on Technologies for Homeland Security*, Boston, MA, May 11-13, 2008.

- Piezoelectric Trace Vapor Calibrator
  R.M. Verkouteren, G. Gillen, and D.W. Taylor, , *Rev. Sci. Instrum.* 77, 085104, 2006.

- Real-Time Calibration and Testing of Chemical Sensor Enabled by Precision Microdispensing Technology ,
  D.J. Hayes and D.W. Taylor, Proceedings, *SPIE Defense and Security Symposium* , Orlando, FL, March 28-April 1, 2005.

- Solder Jet" - Optics Jet" - AromaJet" - Reagent Jet - Tooth Jet and other Applications of Ink-Jet Printing Technology
  D.B. Wallace and D.J. Hayes, *Proceedings, NIP18: International Conference on Digital Printing Technologies* , San Diego, CA, Sept. 29, 2002

- Photo-Realistic Ink-Jet Printing Through Dynamic Spot Size Control
  D.B. Wallace, V. Shah, D.J. Hayes, and M.E. Grove, *Proceedings*, *IS&T's 11th Int. Congress in Non-Impact Printing Technologies*
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