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Education:

University of Illinois, Chicago	B. S.	2000	Mechanical Engineering
Cornell University	Ph.D.	2005	Biomedical Engineering

Professional Experience:

2014-present UT Bredesen Center Faculty and Academic Coordinator, UT, Knoxville
2011-present Adjunct Assistant Professor, University of Tennessee, Knoxville EECS Department
2006-present Research Staff Member (Senior Staff Scientist), Biosciences Division and Center for Nanophase Materials Sciences, ORNL
2005–2006 Postdoctoral Fellow, Oak Ridge Associated Universities/ORNL
2000–2005 NSF Graduate Fellow, Cornell University, Ithaca, NY
2003–2004 Microfabrication Consultant/Process Engineer, Center for Innovative Visual Rehabilitation, Boston, MA
1999–2000 Graduate Research Assistant, University of Illinois–Chicago
1999–2000 Branch Engineer Simpson Strong-Tie Company Inc., Addison, IL
1998–1999 Undergraduate Research Assistant, University of Illinois–Chicago
1997–1998 Mechanical Engineering Co-Op, RR Donnelley & Sons, Dwight, IL

Professional Activities, Honors, Awards:

NIH Interdisciplinary Molecular Sciences and Technology Review Panel, 2015
Battelle Multi-Scale Toxicology Initiative 2009
NCI/NIH Review Panel, Innovative Molecular Analysis Technologies, Emerging 2008-2009
Technologies, Cancer Sample Preparation 2008–2009
Biomedical Engineering Society, 2003–2005
Cornell Nanobiotechnology Center 2002–2005
University Honors, University of Illinois–Chicago, 2000
Pi Tau Sigma, Mechanical Engineering Society–President, 1999
Harold A. Simon Memorial Award, UIC Mechanical Engineering Department, 1999
Tau Beta Pi, Engineering Honors Society, 1998

Selected Peer-Reviewed Publication: (Google Scholar User Profile: Scott Thomas Retterer)

- (1) Aufrecht, J.A., Timm, C.M., Bible, A., Morrell-Falvey, J.L., Pelletier, D.A., Doktycz, M.J., Retterer, S.T., (2018) Quantifying the Spatiotemporal Dynamics of Plant Root Colonization by Beneficial Bacteria in a Microfluidic Habitat. *Advanced Biosystems* (in press)
- (2) Shankles, P.G., Millet, L.J., Aufrecht, J.A., Retterer, S.T., (2018) Access microfluidics through feature-based design software for 3D printing. *PLOS ONE*. doi.org/10.1371/journal.pone.0192752
- (3) Wilmoth, J. L., Doak, P. W., Timm, A., Halsted, M., Anderson, J. D., Ginovart, M., Prats, C., Portell, X., Retterer, S. T., and Fuentes-Cabrera, M. (2018) A Microfluidics and Agent - Based Modeling Framework for Investigating Spatial Organization in Bacterial Colonies: The Case of *Pseudomonas Aeruginosa* and H1-Type VI Secretion Interactions. *Front. Microbiol.* 9.
- (4) Sloetjes, S. D., Digernes, E., Olsen, F. K., Chopdekar, R. V., Retterer, S. T., Folven, E., and

- Grepstad, J. K. (2018) Interplay between bulk and edge-bound topological defects in a square micromagnet. *Appl. Phys. Lett.* 112.
- (5) Hachtel, J. A., Davidson, R. B. I., Kovalik, E. R., Retterer, S. T., Lupini, A. R., Haglund, R. F. J., Lawrie, B. J., and Pantelides, S. T. (2018) Polarization- and wavelength-resolved near-field imaging of complex plasmonic modes in Archimedean nanospirals. *Opt. Lett., OL* 43, 927–930.
- (6) Hasim, S., Allison, D. P., Mendez, B., Farmer, A. T., Pelletier, D. A., Retterer, S. T., Campagna, S. R., Reynolds, T. B., and Doktycz, M. J. (2018) Elucidating Duramycin's Bacterial Selectivity and Mode of Action on the Bacterial Cell Envelope. *Front. Microbiol.* 9.
- (7) Ievlev, A. V., Belianinov, A., Jesse, S., Allison, D. P., Doktycz, M. J., Retterer, S. T., Kalinin, S. V., and Ovchinnikova, O. S. (2017) Automated Interpretation and Extraction of Topographic Information from Time of Flight Secondary Ion Mass Spectrometry Data. *Scientific Reports* 7, 17099.
- (8) Masigol, M., Barua, N., Retterer, S. T., Lokitz, B. S., and Hansen, R. R. (2017) Chemical copatterning strategies using azlactone-based block copolymers. *Journal of Vacuum Science & Technology B* 35.
- (9) Aufrecht, J. A., Ryan, J. M., Hasim, S., Allison, D. P., Nebenführ, A., Doktycz, M. J., and Retterer, S. T. (2017) Imaging the Root Hair Morphology of Arabidopsis Seedlings in a Two-layer Microfluidic Platform. *Journal of Visualized Experiments : JoVE* –e55971.
- (10) Hasim, S., Allison, D. P., Retterer, S. T., Hopke, A., Wheeler, R. T., Doktycz, M. J., and Reynolds, T. B. (2017) β -(1,3)-Glucan Unmasking in Some *Candida albicans* Mutants Correlates with Increases in Cell Wall Surface Roughness and Decreases in Cell Wall Elasticity. *Infection and Immunity* 85, e00601–16.
- (11) Chopdekar, R. V., Li, B., Wynn, T. A., Lee, M. S., Jia, Y., Liu, Z., Biegalski, M. D., Retterer, S. T., Young, A. T., Scholl, A., and Takamura, Y. (2017, May 5) Nanostructured complex oxides as a route towards thermal behavior in artificial spin ice systems. *Phys. Rev. Materials*.
- (12) Timm, A. C., Halsted, M. C., Wilmoth, J. L., and Retterer, S. T. (2017) Assembly and Tracking of Microbial Community Development within a Microwell Array Platform. *Journal of Visualized Experiments : JoVE* e55701–e55701.
- (13) Halsted, M., Wilmoth, J. L., Briggs, P. A., Hansen, R. R., Briggs, D. P., Timm, A. C., and Retterer, S. T. (2016) Development of transparent microwell arrays for optical monitoring and dissection of microbial communities. *Journal of Vacuum Science & Technology B* 34, 06K103.
- (14) Mo, J., Kang, Z., Retterer, S. T., Cullen, D. A., Toops, T. J., Green, J. B., Mench, M. M., and Zhang, F.-Y. (2016) Discovery of true electrochemical reactions for ultrahigh catalyst mass activity in water splitting. *Science Advances* 2, e1600690–e1600690.
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- In-Situ Photopolymerization of Monodisperse and Discoid Oxidized Methacrylated Alginate Microgels in a Microfluidic Channel. *Biomicrofluidics* **2016**, *10*, 011101.
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- (22) Timm, A. C.; Shankles, P. G.; Foster, C. M.; Doktycz, M. J.; Retterer, S. T. Characterization of Extended Channel Bioreactors for Continuous-Flow Protein Production. *Journal of Vacuum Science & Technology B* **2015**, *33*, 06FM02.
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Patents

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