**SCOTT T. RETTERER**

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**Education:**

University of Illinois, Chicago B. S. 2000 Mechanical Engineering

Cornell University Ph.D. 2005 Biomedical Engineering

**Professional Experience:**

2020- Present Section Head, Nanomaterial Synthesis and Nanofabrication, CNMS ORNL

2019- 2020 Group Leader, Nanofabrication Research Laboratory, CNMS ORNL

2006–present Research Staff Member (Distinguished Staff Scientist), Biosciences Division and Center for Nanophase Materials Sciences, ORNL

2015-2019 Hierarchical Assembly (formerly Interface Directed Assembly) Theme Lead, Center for Nanophase Materials Sciences, ORNL

2014-2018 UT Bredesen Center Faculty and Academic Coordinator, UT, Knoxville

2011-2017 Adjunct Assistant Professor, University of Tennessee, Knoxville EECS Department

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 UndergraduateResearch 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

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

1. Aufrecht, J.; Khalid, M.; Walton, C. L.; Tate, K.; Cahill, J. F.; Retterer, S. T. Hotspots of root-exuded amino acids are created within a rhizosphere-on-a-chip. *Lab Chip* **2022**. DOI: 10.1039/d1lc00705j.
2. Cregger, M.; Carper, D.; Christel, S.; Doktycz, M.; Labbe, J.; Michener, J.; Dove, N.; Johnston, E.; Moore, J.; Velez, J.; et al. Plant-Microbe Interactions: From Genes to Ecosystems Using Populus as a Model System. *Phytobiomes Journal* **2021**, *5* (1), 29-38, Review. DOI: 10.1094/PBIOMES-01-20-0009-FI.
3. White, D.; Chowdhury, S.; Idikuda, V.; Zhang, R.; Retterer, S.; Goldsmith, R.; Chanda, B. cAMP binding to closed pacemaker ion channels is non-cooperative. *Nature* **2021**, *595* (7868), 606-+, Article. DOI: 10.1038/s41586-021-03686-x.
4. Khalid, M., Doktycz, MJ., Retterer, S. Nano-enabled Chemical Imaging: Mapping Chemical Signals that Drive Dynamic Living Systems (2020)., Wiley Imaging and Microscopy Journal; doi: https://analyticalscience.wiley.com/do/10.1002/was. 000400041
5. Doughty, B., Premadasa, U. I., Cahill, J. F., Webb, A. B., Morrell-Falvey, J. L., Khalid, M., Retterer, S. T. & Ma, Y. Z. Total internal reflection enabled wide-field coherent anti-Stokes Raman scattering microscopy (2020). *Opt Lett* **45**, 3087-3090
6. Cahill, J. F., Khalid, M., Retterer, S. T., Walton, C. L. & Kertesz, V. In Situ Chemical Monitoring and Imaging of Contents within Microfluidic Devices Having a Porous Membrane Wall Using Liquid Microjunction Surface Sampling Probe Mass Spectrometry (2020). *J Am Soc Mass Spectr* **31**, 832-839
7. Yang, D., Mannik, J., Retterer, S. T. & Mannik, J. Role of Molecular Crowding in Compacting Escherichia coli Nucleoid (2019). *Biophysical Journal* **116**, 320a
8. Millet, L. J., Aufrecht, J., Labbé, J., Uehling, J., Vilgalys, R., Estes, M. L., Guennoc, C. M., Deveau, A., Olsson, S. & Bonito, G. Increasing access to microfluidics for studying fungi and other branched biological structures (2019). *Fungal Biology and Biotechnology* **6**, 1
9. Aufrecht, J. A., Fowlkes, J. D., Bible, A. N., Morrell-Falvey, J., Doktycz, M. J. & Retterer, S. T. Pore-scale hydrodynamics influence the spatial evolution of bacterial biofilms in a microfluidic porous network (2019). *PloS one* **14**, e0218316
10. 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* April 2018 doi: 10.1002/adbi.201800048

**Selected Patents**

1. Retterer, S. T., Doktycz, M. J., and Ut-Battelle, L. (2017) Method for preparing small volume reaction containers.
2. Doktycz, M. J.; Allison, D. P.; Barnett, C. F.; Retterer, S. T.; Ut-Battelle, L. Active Materials for Prevention and Treatment of Fouled Surfaces. **2014**.
3. Retterer, S. T.; Doktycz, M. J.; T, R. S.; J, D. M. Method for Preparing Small Volume Reaction Containers. **2012**.

***Collaborators and Co-Editors***

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