Timothy F. Jamison

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Education

1997	Ph.D. (Chemistry), Harvard University
1990	B.S. (Chemistry), University of California, Berkeley

Research and Professional Experience

2019 – present	Associate Provost, MIT
2015 – 2019	Department Head, MIT, Department of Chemistry
2015 – present	Robert R. Taylor Professor of Chemistry, MIT Department of Chemistry
2009 – present	Professor, MIT, Department of Chemistry
2006 – 2009	Associate Professor, MIT, Department of Chemistry
2004 – 2006	Associate Professor (without tenure), MIT, Department of Chemistry
2002 – 2005	Paul M. Cook Career Development Chair
1999 – 2004	Assistant Professor, MIT, Department of Chemistry
1997 – 1999	Postdoctoral Fellow, Harvard University (Prof. Eric N. Jacobsen)
1991 – 1997	Graduate Student, Harvard University (Prof. Stuart L. Schreiber)
1990 – 1991	Fulbright Fellow, ETH Zürich, Switzerland (Prof. Steven A. Benner)
1988 – 1990	Undergraduate Research, UC Berkeley (Prof. Henry Rapoport)
1988	Summer Research Assistant, Eastman Kodak, Rochester, NY
1987	Co-op Research Assistant, ICI Americas, Richmond, CA

Honors, Awards, and Professional Activities

2018	Change Maker Award, MIT Title IX
2016	FP - Global Thinker of 2016
2015 – 2018	*Chemical Reviews*, Associate Editor
2014 – present	Co-Founder, Chairman of the Board, and Scientific Advisor, Snapdragon Chemistry, Inc.
2014	Council of Chemical Research Collaboration Award
2013	Teaching Prize for Undergraduate Education, MIT School of Science
2012 – present	Fellow of the Royal Society of Chemistry
2012	Royal Society of Chemistry Merck Award
2011	Arthur C. Cope Scholar Award, American Chemical Society
2011 – present	*Journal of Flow Chemistry*, Editorial Board
2011 – present	*Advanced Synthesis and Catalysis*, Academic Advisory Board
2008 – 2010	Petroleum Research Fund Advisory Board
2006	JSPS Invitation Fellowship
2004	Sloan Research Fellow
2004	GlaxoSmithKline Scholar Award
2003	Amgen Young Investigator Award
2002	Paul M. Cook Career Development Chair
2002	Boehringer Ingelheim New Investigator Award
2001	National Science Foundation CAREER Award
2000	3M Innovation Award
1997 – 1999	Postdoctoral Fellow, Cancer Research Fund, Damon Runyon-Walter Winchell Foundation
1991 – 1994	National Science Foundation Predoctoral Fellow
1991 – 1993	Certificate of Distinction in Teaching, Harvard University (3 times)
1990 – 1991	Fulbright Fellow (Swiss Universities Grant)
1990	Graduated with High Honors (Chemistry), UC Berkeley
1990	Saegebarth Prize (Undergraduate Research Excellence in Chemistry)

1990	Phi Beta Kappa
1988 – 1989	President's Undergraduate Fellow, UC Berkeley
1985 – 1989	Chancellor's Scholar, UC Berkeley
1986 – 1989	Eastman Kodak Scholar

Publications:

MIT

2022

Mear SJ, Nguyen LV, Rochford AJ, Jamison TF. “Synthesis of (±)-Emtricitabine and (±)-Lamivudine by Chlorotrimethylsilane-Sodium Iodide Promoted Vorbrüggen Glycosylation”. *The Journal of Organic Chemistry* **2022;** 87 (5), 2887-2897 DOI: 10.1021/acs.joc.1c02772

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Ahlqvist, G. P.; Burke, E. G.; Johnson, J. A.; Jamison, T. F. "Continuous dimethyldioxirane generation for polymer epoxidation," *Polymer Chem.* **2021**,*12*, 489-493. DOI: 10.1039/d0py01676d.

Gopalsamuthiram, V.; Williams, C.; Noble, J.; Jamison, T. F.; Gupton, B. F.; Snead, D. R. "A Concise Route to MK-4482 (EIDD-2801) from Cytidine: Part 2," *Syn. Lett.* **2021**, *32*, 326-328. DOI: 10.1055/a-1275-2848.

Dietz, J.-P.; Ferenc, D.; Jamison, T. F.; Gupton, B. F.; Opatz, T. "Di-tert-butyl Phosphonate Route to the Antiviral Drug Tenofovir," *Org. Process Res. Dev.* **2021**, *25*, 789-798. DOI: 10.1021/acs.oprd.0c00473.

Ahlqvist, G. P.; McGeough, C. P.; Senanayake, C.; Armstrong, J. D.; Yadaw, A.; Roy, S.; Ahmad, S.; Snead, D. R.; and Jamison, T. F. "Progress Toward a Large-Scale Synthesis of Molnupiravir (MK-4482, EIDD-2801) from Cytidine," *ACS Omega* **2021**, *6*, 10396-10402. DOI: 10.1021/acsomega.1c00772.

Breen, C. P.;* Nambiar, A. M. K.;* Jamison, T. F.; Jensen, K. F. "Ready, Set, Flow! Automated Continuous Synthesis and Optimization," *Trends in Chemistry* **2021**, *3*, 373-386. DOI: 10.1016/j.trechm.2021.02.005. *contributed equally

Fu, W. G.; MacQueen, P. M.; Jamison, T. F. "Continuous flow strategies for using fluorinated greenhouse gases in fluoroalkylations," *Chemical Society Reviews* **2021**, *50*, 7378-7394. DOI: 10.1039/d0cs00670j.

Florit, F.; Nambiar, A. M. K.; Breen, C. P.; Jamison, T. F.; Jensen, K. F. "Design of dynamic trajectories for efficient and data-rich exploration of flow reaction design spaces," *React. Chem. Eng.* **2021**, 6, 2306-2314. Advance Article. DOI: 10.1039/D1RE00350J.

Gopalsamuthiram, V.; Kadam, A. L.; Noble, J.; Snead, D.; Williams, C.; Jamison, T. F.; Senanayake, C.; Yadaw, A.; Roy, S.; Sirasani, G.; Gupton, B. F.; Burns, J.; Cook, D. W.; Stringham, R. W.; Ahmad, S.; Krack, R. "Towards a Practical, Non-enzymatic Process for Molnupiravir from Cytidine," *Organic Process Research & Development* **2021** *25*, 2679-2685, DOI: 10.1021/acs.oprd.1c00219

McGeough, C. P.;* Mear, S. J.;* Jamison, T. F. "A Call for Increased Focus on Reproductive Health within Lab Safety Culture," *J. Am. Chem. Soc.* **2021**, *143*, 12422-12427. DOI: 10.1021/jacs.1c03725. *contributed equally

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Vasudevan, N.; Ahlqvist, G. P.; McGeough, C. P.; Paymode, D. J.; Cardoso, F. S. P.; Lucas, T.; Dietz, J.-P.; Opatz, T.; Jamison, T. F.; Gupton, F. B.; Snead, D. R. "A concise route to MK-4482 (EIDD-2801) from cytidine," *Chem. Comm.* **2020**, *56*, 13363-13364. DOI: 10.1039/d0cc05944g.

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Fu, W. C.; Jamison, T. F. "Deuteriodifluoromethylation and *gem*-Difluoroalkenylation of Aldehydes Using $ClCF_2H$ in Continuous Flow," *Angew. Chem. Int. Ed.* **2020**, *59,* 2-8.

Nguyen, L.; Jamison, T. F. "Total Synthesis of (±)-Sceptrin,"*Org.Lett.* **2020**, https://pubs.acs.org/doi/10.1021/acs.orglett.0c01381

Breen, C. P.; Parrish, C.; Shangguan, N.; Majumdar, S.; Muren, H.; Jamison, T. F.; Bio, M. M. "A Scalable Membrane Pervaporation Approach for Continuous Flow Olefin Metathesis," *Org. Process Res. Dev.* **2020**, https://pubs.acs.org/doi/abs/10.1021/acs.oprd.0c00061.

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Seo, H. Jamison, T. F. "Catalytic Generation and Use of Ketyl Radical from Unactivated Aliphatic Carbonyl Compounds," *Org. Lett.* **2019**, *21*, 10159-10163.

Mear, S. J.; Jamison, T. F. "Diazotization of *S*-Sulfonyl-cysteines," *J. Org. Chem.* **2019**, *84*, 15001-15007.

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Kelley, E. H.; Jamison, T. F. "Synthesis of the *EFG* Framework of the Tamulamides A and B," *Org. Lett.* **2019,** *21,* 8027-8030.

Coley, C. W.; Thomas, D. A.; Lummiss, J. A. M.; Jaworski, J. N.; Breen C. P.; Schultz, V.; Hart, T.; Fishman, J. S.; Rogers, L.; Gao, H.; Hicklin, R. W.; Plehiers, P. P.; Byington, J.; Piotti, J. S.; Green, W. H.; Hart, A. J.; Jamison, T. F.; Jensen, K. F. "A Robotic Platform for Flow Synthesis of Organic Compounds Informed by AI Planning," *Science* **2019**, *365*, eaax1566.

- **MIT News**: Ham, B. "Guided by AI, robotic platform automates molecule manufacture" http://news.mit.edu/2019/automate-molecule-production-ai-0808
- **Technology Networks**: "Pairing Prediction and Robotic Flow Synthesis" https://www.technologynetworks.com/drug-discovery/news/pairing-prediction-and-robotic-flow-synthesis-322689

Fu, W. C.; Jamison, T. F. "Modular Continuous Flow Synthesis of Imatinib and Analogues," *Org. Lett.* **2019**, *21,* 6112-6116.

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- **C&E News**: Nguyen, T. "Chemists Hand Off Reaction Optimization to Automated Plug and Play Flow System" https://cen.acs.org/synthesis/Chemists-hand-off-reaction-optimization/96/i38
- **MIT News**: Trafton, A. "Plug-and-Play Technology Automates Chemical Synthesis" http://news.mit.edu/2018/technology-automates-chemical-synthesis-0920

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Heckman, L. M.; He, Z.; Jamison, T. F. "Synthesis of Highly Substituted 2-Arylindoles via Copper-Catalyzed Coupling of Isocyanides and Arylboronic Acids," *Org. Lett.* **2018**, *20,* 3263-3267.

Leibfarth, F. A.; Russell, M. G.; Langley, D. M.; Seo, H.; Kelly, L. P.; Carney, D. W.; Sello, J. K.; Jamison, T. F. "Continuous-Flow Chemistry in Undergraduate Education: Sustainable Conversion of Reclaimed Vegetable Oil into Biodiesel," *J. Chem. Educ.* **2018**, *95,* 1371-1375.

Ziegler, R. E.; Desai, B. K.; Jee, J.-A.; Gupton, B. F.; Roper, T. D.; Jamison, T. F. "7-Step Flow Synthesis of the HIV Integrase Inhibitor Dolutegravir," *Angew. Chem. Int. Ed.* **2018**, *57*, 7181-7185.

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Katcher, M. H.; Jamison, T. F. "Studies Toward Brevisulcenal F via Convergent Strategies for Marine Ladder Polyether Synthesis," *Tetrahedron* **2018**, *74,* 1111-1122.

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Britton, J.; Jamison, T. F. "The Assembly and Use of Continuous Flow Systems for Chemical Synthesis," *Nat. Protoc.* **2017**, *12,* 2423-2446.

Seo, H.; Bédard, A.-C.; Chen, W. P.; Hicklin, R. W.; Alabugin, A.; Jamison, T. F. "Selective N-Monomethylation of Primary Anilines with Dimethyl Carbonate in Continuous Flow," *Tetrahedron* **2017**, *74,* 3124-3128.

Morse, P. D.; Jamison, T. F. "Synthesis and Utilization of Nitroalkyne Equivalents in Batch and Continuous Flow," *Angew. Chem. Int. Ed.* **2017**, *56,* 13999-14002.

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Wicker, A. C.; Leibfarth, F. A.; Jamison, T. F. “Flow-IEG Enables Programmable Thermodynamic Properties in Sequence-Defined Unimolecular Macromolecules,” *Polym. Chem.* **2017***, 8,* 5786-5794.

Lin, H.; Dai, C.; Jamison, T. F.; Jensen, K. F. “A Rapid Total Synthesis of Ciprofloxacin Hydrochloride in Continuous Flow,” *Angew. Chem. Int. Ed.* **2017**, *56,* 8870-8873

Su, X.; Hübner, J.; Kauke, M. J.; Dalbosco, L.; Thomas, J.; Gonzalez, C. C.; Zhu, E.; Franzreb, M.; Jamison, T. F.; Hatton, T. A. “Redox Interfaces for Electrochemically Controlled Protein-Surface Interactions: Bioseparations and Heterogeneous Enzyme Catalysis,” *Chem. Mater.* **2017**, *29,* 5702-5712.

Su, X.; Bromberg, L.; Tan, K.-J.; Jamison, T. F.; Padhye, L. P.; Hatton, T. A. “Electrochemically Mediated Reduction of Nitrosamines by Hemin-Functionalized Redox Electrodes,” *Environ. Sci. Technol. Lett.* **2017**, *4,* 161-167.

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Britton, J.; Jamison, T. F. “A Unified Continuous Flow Assembly-Line Synthesis of Highly Substituted Pryazoles and Pyrazolines,” *Angew. Chem. Int. Ed.* **2017**, *56,* 8823-8827.

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Bédard, A.-C.; Longstreet, A. R.; Britton, J.; Wang, Y.; Moriguchi, H.; Hicklin, R. W.; Green, W. H.; Jamison, T. F. “Minimizing E-Factor in the Continuous-Flow Synthesis of Diazepam and Atropine,” *Bioorg. Med. Chem.* **2017**, *25,* 6233-6241.

Seo, H.; Katcher, M. H.; Jamison, T. F. “Photoredox Activation of Carbon Dioxide for Amino Acid Synthesis in Continuous Flow,” *Nat. Chem.* **2017**, *9,* 453-356.

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McTeague, T. A.; Jamison T. F. “Photoredox Activation of SF_6 for Fluorination,” *Angew. Chem. Int. Ed.* **2016**, *55,* 15072-15075.

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