

# MAKEDA TEKLE-SMITH

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## PROFESSIONAL APPOINTMENTS

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- 2022 – present      Assistant Professor  
Department of Chemistry, Columbia University, New York, NY
- 2021 – 2022        Postdoctoral Fellow  
Department of Chemistry and Biochemistry, UCLA, Los Angeles, CA  
*Advisor: Abigail Doyle*
- 2019 – 2021        Princeton Presidential Postdoctoral Fellow  
Department of Chemistry, Princeton University, Princeton, NJ  
*Advisor: Abigail Doyle*
- 2014 – 2019        NSF Graduate Research Fellow  
Department of Chemistry, Columbia University, New York, NY  
*Advisor: James Leighton*
- 2010 – 2014        ACS Scholar Undergraduate Research Fellow  
Department of Chemistry, Pomona College, Claremont, CA  
*Advisor: Cynthia Selassie*
- 2009                California Nanosystems Institute Research Assistant  
Department of Chemistry and Biochemistry, UCSB, Santa Barbara, CA  
*Advisor: Alison Butler*

## EDUCATION

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- 2014 – 2019        Ph.D., Chemistry  
Columbia University, New York, NY  
*Advisor: James Leighton*
- 2010 – 2014        B.A., Chemistry  
Pomona College, Claremont, CA  
*Advisor: Cynthia Selassie*
- 2013                Exchange Student, Chemistry  
Jesus College, Cambridge University, Cambridge, UK

## AWARDS AND HONORS

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2022	Thieme Chemistry Journals Awardee
2021	Merck Underrepresented Students of Color Research Award
2020	CAS Future Leaders Award
2019	Princeton University Presidential Postdoctoral Research Fellowship
2019	Pegram Award for Meritorious Achievements in Research, Columbia University
2018	Women Chemists Committee/Merck Research Award
2017	Miller Teaching Award, Columbia University
2016	National Science Foundation Graduate Research Fellowship
2014	Columbia University Dean's Diversity Fellow
2014	Robert Rowan III '68 Memorial Prize in Chemistry, Pomona College
2014	Burnand-Partridge Foundation Scholar
2010 – 2014	Office of Black Student Affairs Academic Excellence Award, Pomona College
2010 – 2014	Y.M. and Helen Posthuma Scholar
2010 – 2014	American Chemical Society Scholar

## PRESENTATIONS

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2023	"Catalytic Approaches to High Value Synthetic Targets," Barnard College, Department of Chemistry, New York, NY, October. (Invited oral presentation)
2023	"Catalytic Approaches to High Value Synthetic Targets," Empowering Women in Organic Chemistry Joint Virtual Symposium Series, May. (Keynote speaker)
2022	"Methyl Radical: A Key Intermediate in Synthetic Applications," <i>A Symposium in Honor of Cynthia Selassie</i> , Pomona College, Claremont, CA, April. (Invited oral presentation)

- 2022 "Methyl Radical: A Key Intermediate in Synthetic Applications," *263rd ACS National Meeting Earle B. Barnes Award for Leadership in Chemical Research Management Symposium*, San Diego, CA, March. (Invited oral presentation)
- 2021 "Nucleophilic C(sp<sup>3</sup>)-H Fluorination," *Merck Underrepresented Chemists of Color Award Symposium*, October. (Oral presentation)
- 2021 "Nucleophilic C(sp<sup>3</sup>)-H Fluorination," *SoCal Merck Symposium 2021*, Los Angeles, CA, July. (Invited oral presentation)
- 2021 "Nucleophilic C(sp<sup>3</sup>)-H Fluorination Enabled by Photoredox Catalysis," *University of Chicago Future Faculty Symposium*, University of Chicago, May. (Invited oral presentation)
- 2020 "A General Strategy for C(sp<sup>3</sup>)-H Functionalization," *CAS Future Leaders Award Symposium*, November. (Oral presentation)
- 2020 "Harnessing Reactive Intermediates to Address Challenges in Synthesis," *Du Bois Group Speaker Series*, Stanford University, October. (Invited oral presentation)
- 2020 "Nucleophilic Fluorination Enabled by Photoredox Catalysis," *Virtual Chemistry Spotlight@Pfizer Symposium*, Pfizer, Groton, CT, September. (Invited oral presentation)
- 2019 "Anion-catalyzed Silicon Lewis Acid Activation of Carbonyls," *258th ACS National Meeting Remarkable Women in Organic Chemistry Symposium*, San Diego, CA, August. (Invited oral presentation)
- 2019 "Developing New Tools for Organic Chemists," *3rd Women in Science at Columbia Graduate Research Symposium*, Columbia University, New York, NY, April. (Oral presentation)
- 2018 "Design, Synthesis, and Evaluation of Highly Potent Linker-Equipped Analogs of Spongistatin 1 for Targeted Delivery Approaches," *256th ACS National Meeting Women Chemists Committee Merck Research Award Symposium*, Boston, MA, August. (Oral presentation)
- 2018 "Synthetic Innovations Towards the Total Synthesis of Highly Potent Linker-Equipped Analogs of Spongistatin 1," *2018 Chirality Conference*, Princeton, NJ, June. (Poster presentation, awarded 3rd prize)
- 2018 "Design, Synthesis, and Evaluation of Highly Potent Linker-Equipped Analogs of Spongistatin 1 for Targeted Delivery Approaches," *2nd Women in Science at Columbia Graduate Research Symposium*, Columbia University, New York, NY, April. (Poster presentation, awarded 1st prize)

## PUBLICATIONS

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7. Sural, S.; Botero, J. Q.; Hobert, O.\*; **Tekle-Smith, M. A.\*** “Synthesis of the auxin analog 5-Ph-IAA for conditional protein depletion in *C. elegans* using the AID2 system” *STAR Protocols*. 2024. *Accepted*.
6. Leibler, I. N.-M.; Gandhi, S. S.; **Tekle-Smith, M. A.\***; Doyle, A. G.\* “Strategies for Nucleophilic C(sp<sup>3</sup>)-(Radio)Fluorination” *J. Am. Chem. Soc.* 2023. *145*, 9928-9950.
5. Leibler, I. N.-M.; **Tekle-Smith, M. A.** “N-Acetoxyphthalimide,” *Encyclopedia of Reagents for Organic Synthesis*; John Wiley & Sons, Ltd: Chichester, United Kingdom, 2021.
4. Leibler, I. N.-M.\*; **Tekle-Smith, M. A.\***; Doyle, A. G. “A General Strategy for C(sp<sup>3</sup>)-H Functionalization with Nucleophiles Using Methyl Radical as a Hydrogen Atom Abstractor,” *Nat. Commun.* 2021, *12*, 6950.
3. Kariofillis, S. K.; Shields, B. J.\*; **Tekle-Smith, M. A.\***; Zacuto, M. J.; Doyle, A. G. “Nickel/Photoredox-Catalyzed Methylation of (Hetero)aryl Chlorides Using Trimethyl Orthoformate as a Methyl Radical Source,” *J. Am. Chem. Soc.* 2020, *142*, 16, 7683–7689.
2. Suen, L. M.; **Tekle-Smith, M. A.**; Williamson, K. S.; Infantine, J. R.; Reznik, S. K.; Tanis, P. S.; Casselman, T. D.; Sackett, D. L.; Leighton, J. L. “Design, 22-step synthesis, and evaluation of highly potent linker-equipped analogs of spongistatin 1,” *Nat. Commun.* 2018, *9*, 4710.
1. **Tekle-Smith, M. A.**; Williamson, K. S.; Hughes, I. F.; Leighton, J. L. “Direct, Mild, and General *n*-Bu<sub>4</sub>NBr-Catalyzed Aldehyde Allylsilylation with Allyl Chlorides,” *Org. Lett.* 2017, *19*, 6024–6027.

## TEACHING EXPERIENCE

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Spring 2024	UN2408: <i>First-Year Seminar</i> , Columbia University Guest Lecture: Synthetic Applications of Photoredox Catalysis
Fall 2023	G4148: <i>Synthetic Methods</i> , Columbia University
Spring 2023	UN2408: <i>First-Year Seminar</i> , Columbia University Guest Lecture: Synthetic Applications of Photoredox Catalysis
Fall 2022	G4148: <i>Synthetic Methods</i> , Columbia University
Summer 2019	S2543: <i>Organic Chemistry Laboratory</i> , Columbia University
Summer 2019	S2543: <i>Organic Chemistry Laboratory</i> , Columbia University

2017 – 2018	Lead Teaching Fellow, Columbia University Workshops: “Inclusive Teaching in Chemistry” “What is Mentoring? Teaching Outside the Classroom”
2014 – 2015	Teaching Assistant, Columbia University UN2495, UN2496: <i>Organic Chemistry Laboratory</i>
2013 – 2014	Teaching Assistant, Pomona College CHEM110A, CHEM110B: <i>Organic Chemistry Laboratory</i>
2013 – 2014	Teaching Assistant, Pomona College CHEM158A: <i>Physical Chemistry</i>

## PROFESSIONAL SERVICE

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2024 – present	<b>Early Career Advisory Board Member.</b> Organic Chemistry Frontiers.
2023 – present	<b>Organic Chemistry Colloquium Coordinator.</b> Department of Chemistry, Columbia University.
2022 – present	<b>Diversity, Equity, and Inclusion Committee Member.</b> Department of Chemistry, Columbia University.
2022 – present	<b>Organic Chemistry Problem Set Session Coordinator.</b> Department of Chemistry, Columbia University.
2022 – present	<b>Tri-Institutional Organic Chemistry Symposium Coordinator.</b> I have established a joint symposium between Columbia University, The City College of New York, and New York University in collaboration with Prof. Mark Biscoe and Prof. Marvin Parasram.
2022 – present	<b>Columbia Chemistry-Graduate Education Mentoring (Chem-GEM) Faculty Advisor.</b> Department of Chemistry, Columbia University. Graduate student-led outreach initiative aimed at educating undergraduates about graduate school and the admission process.
2020 – present	<b>Manuscript Referee.</b> Journals: Synlett, Organic Letters, Journal of the American Chemical Society, Nature, Journal of Organic Chemistry, ACS Catalysis.
2020 – present	<b>ACS Scholars Program Mentor.</b> American Chemical Society.