Andrew A. **Ng**

Research Scientist

1083 Ticonderoga Drive, Sunnyvale, CA 94087

(+1) 650-336-4586 | andrew.ng5@outlook.com | andrewng5

Education

Master of Science, Chemistry

Chicago, IL, USA

The University of Chicago, Physical Sciences Division — *September 2016–June 2017*

- McCormick Fellow
- Research Advisor: *Professor Guangbin Dong*
- Graduate Research: Studies in C-H bond functionalization

Bachelor of Arts, Chemistry (Honors in Chemistry and the College)

Chicago, IL, USA

The University of Chicago, The College — *October 2012–June 2015*

- Research Advisor: *Professor Jared C. Lewis*
- Honors Thesis: *Studies of Artificial Metalloenzymes for Selective Biocatalysis*
- Colonizations in Hong Kong Study Abroad Program

Work Experience

Research Scientist I

Santa Clara, CA, USA

Nanosyn — *July 2017–Present*

- Synthesis of small molecule leads and analogues for clients
- Including anti-inflammatory NLR antagonists for IFM Therapeutics, BCL inhibitors for Teqla, and various compounds for a multitude of clients

Staff Scientist

Stanford, CA, USA

Stanford University ChEM-H Medicinal Chemistry Knowledge Center — *October 2015–June 2016*

- Synthesis of small molecule inhibitors targeting the protein-protein CREB-CBP binding interaction, in collaboration with the Sakamoto Lab in the Stanford School of Medicine

Research Experience

Graduate Research Assistant

Chicago, IL, USA

The University of Chicago, Department of Chemistry — *September 2016–June 2017*

- Research Advisor: *Professor Guangbin Dong*
- Amine-directed γ-functionalization of C(sp^3)-H bonds
- Pd-catalyzed directed oxidative cascade synthesis of spirocycles
- Undirected C(sp^3)-H borylation of methylene carbons

Visiting Student Researcher

Yuseong-gu, Daejeon, S. Korea

KAIST, Department of Chemistry — *June 2015–September 2015*

- Research Advisor: *Professor Sukbok Chang*
- Synthesis of *exo*-cycloamidines *via* borane-catalyzed two-step, one-pot reductive hydrosilylation and [3+2] rearrangement of unactivated N-heterocycles

Undergraduate Research Assistant

Chicago, IL, USA

The University of Chicago, Department of Chemistry — *Feb. 2013 – Mar. 2015*

- With Honors in Chemistry and the College
- Research Advisor: *Professor Jared C. Lewis*
- Synthesis of $Ru(bpy)_3$ and Mn(salen) complex-derived artificial metalloenzymes and according selective biocatalytic oxygenation studies

Teaching

Teaching Assistant

Chicago, IL, USA

The University of Chicago — *September 2016–June 2017*

- CHEM 22000-22100-22200: Organic Chemistry I-II-III

Honors & Awards

Fellowship and Scholarships

2016–2018 **McCormick Fellowship**, The University of Chicago, Physical Sciences Division — *Chicago, IL*
2015 **VICHF SAVI International Research Fellowship**, NSF & Center for C-H Bond Functionalization — *Chicago, IL*
2012–2015 **Odyssey Scholarship**, The University of Chicago — *Chicago, IL*
2013, 2014 **Summer Research Grant**, The University of Chicago, Department of Chemistry — *Chicago, IL*
2012–2014 **APIASF/United Health Foundation Scholarship**, United Health — *Sunnyvale, CA*
2012–2013 **OCA-AXA Achievement Scholarship**, AXA — *Sunnyvale, CA*
2012–2015 **Frank Livermore Trust Scholarship**, Frank Livermore Trust — *Palo Alto, CA*
2012–2013 **PG&E Bright Minds Scholarship**, PG&E — *Palo Alto, CA*

Professional Honors & Awards

2012 **US National Chemistry Olympiad Outstanding Participation**, American Chemical Society — *Santa Clara, CA*
2011 **US National Chemistry Olympiad Excellent Participation**, American Chemical Society — *Santa Clara, CA*

Non-Professional Honors & Awards

Nov. 2011 **Eagle Scout**, Boy Scouts of America, Troop 75 — *Los Altos, CA*

Selected Presentations

6th Annual Frontiers in C-H Functionalization — *Emory University*
"Cyclic amidine synthesis via borane-silane activation of unactivated N-heterocycles" — *October 1-4, 2015*

Degree Program in the Sciences — *The University of Chicago*
"Biocatalysis via ruthenium polypyridyl photocatalyst artificial metalloenzymes (ArMs)" — *Feb. 18, 2015*

6th ACS IL-IA Undergraduate Research Conference — *St. Ambrose University*
"Photoredox biocatalysis via ruthenium polypyridyl artificial metalloenzymes (ArMs)" — *Nov. 15, 2014*

Skills

Laboratory Skills NMR spectroscopy (1D, 2D), mass spectrometry (GC-MS, LC-MS), chromatography (column, TLC, HPLC, including preparatory scale), standard synthetic organic techniques (e.g. Rotovap, glovebox, Schlenk, microwave)
Programming Skills Python, R, LaTeX, HTML/CSS
Software Experience Dotmatics, Mnova, Topspin, PyMOL, Avogadro, Windows, Linux, Microsoft Office, computer networking
Languages English, Cantonese Chinese (functional), Spanish (conversant), Mandarin Chinese (introductory)

Societies and Organizations

Boy Scouts of America; including NESA and Order of the Arrow
The University of Chicago Alumni Schools Committee

Interests

Professional Interests medicinal chemistry (immuno-oncology, neurodegenerative), early stage drug discovery and development (hit to lead, optimization, & QSAR), C-H bond functionalization, carbon-carbon and carbon-heteroatom bond formation, catalytic redox chemistry, green chemistry, molecular recognition

Non-Professional Interests short sprints, basketball, team sport play design and calling; education, pedagogy, and teaching (all ages); guitar, information technology, programming, data science, machine learning, decision theory, game theory, microeconomics, music theory, classics, Texas Hold'em poker, computer science