

# Andrew A. Ng

RESEARCH SCIENTIST

1083 Ticonderoga Drive, Sunnyvale, CA 94087

☎ (+1) 650-336-4586 | ✉ andrew.ng5@outlook.com | in 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  $\gamma$ -functionalization of C(sp<sup>3</sup>)-H bonds
- Pd-catalyzed directed oxidative cascade synthesis of spirocycles
- Undirected C(sp<sup>3</sup>)-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)<sub>3</sub> 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	<b>McCormick Fellowship</b> , The University of Chicago, Physical Sciences Division	Chicago, IL
2015	<b>VICHF SAVI International Research Fellowship</b> , NSF & Center for C-H Bond Functionalization	Chicago, IL
2012–2015	<b>Odyssey Scholarship</b> , The University of Chicago	Chicago, IL
2013, 2014	<b>Summer Research Grant</b> , The University of Chicago, Department of Chemistry	Chicago, IL
2012–2014	<b>APIASF/United Health Foundation Scholarship</b> , United Health	Sunnyvale, CA
2012–2013	<b>OCA-AXA Achievement Scholarship</b> , AXA	Sunnyvale, CA
2012–2015	<b>Frank Livermore Trust Scholarship</b> , Frank Livermore Trust	Palo Alto, CA
2012–2013	<b>PG&amp;E Bright Minds Scholarship</b> , PG&E	Palo Alto, CA

## PROFESSIONAL HONORS & AWARDS

2012	<b>US National Chemistry Olympiad Outstanding Participation</b> , American Chemical Society	Santa Clara, CA
2011	<b>US National Chemistry Olympiad Excellent Participation</b> , American Chemical Society	Santa Clara, CA

## NON-PROFESSIONAL HONORS & AWARDS

July 2012	<b>Network Design, 7<sup>th</sup> Place, National Leadership Conference</b> , Future Business Leaders of America	San Antonio, TX
July 2011	<b>E-Business, 1<sup>st</sup> Place, National Leadership Conference</b> , Future Business Leaders of America	Orlando, FL
May 2012	<b>Scholastic Excellence Award</b> , US Marine Corps	Cupertino, CA
Nov. 2011	<b>Eagle Scout</b> , Boy Scouts of America, Troop 75	Los Altos, CA

# Selected Presentations

---

<b>6<sup>th</sup> Annual Frontiers in C-H Functionalization</b>	Emory University
“Cyclic amidine synthesis via borane-silane activation of unactivated N-heterocycles”	October 1-4, 2015
<b>Degree Program in the Sciences</b>	The University of Chicago
“Biocatalysis via ruthenium polypyridyl photocatalyst artificial metalloenzymes (ArMs)”	Feb. 18, 2015
<b>6<sup>th</sup> ACS IL-IA Undergraduate Research Conference</b>	St. Ambrose University
“Photoredox biocatalysis via ruthenium polypyridyl artificial metalloenzymes (ArMs)”	Nov. 15, 2014

# Skills

---

<b>Laboratory Skills</b>	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)
<b>Programming Skills</b>	Python, R, L <sup>A</sup> T <sub>E</sub> X, HTML/CSS
<b>Software Experience</b>	Dotmatics, Mnova, Topspin, PyMOL, Avogadro, Windows, Linux, Microsoft Office, computer networking
<b>Languages</b>	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

---

<b>Professional Interests</b>	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
<b>Non-Professional Interests</b>	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