

Andrew A. Ng

RESEARCH SCIENTIST

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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 antagonists, BCL inhibitors, NOPR antagonists, and various other compounds for IFM Therapeutics, BlackThorn Therapeutics, Teqla, and more

Staff Scientist

Stanford, CA, USA

STANFORD UNIVERSITY CHEM-H MEDICINAL CHEMISTRY KNOWLEDGE CENTER

October 2015–June 2016

- Synthesis of small molecule oncological 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
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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, L ^A T _E X, 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