*Curriculum Vitae*

# MINWOO BAE

Undergraduate Student
Department of Chemistry, Massachusetts Institute of Technology
Samsung Scholarship Fellow
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## EDUCATION

Massachusetts Institute of Technology *Sep 2013 – Now*

- B.A. in Chemistry, Class of 2019 (Expected); paused two years for military service.
- GPA: 5.0/5.0

Seoul Science High School *Mar 2010 – Feb 2013*

## RESEARCH EXPERIENCE

Undergraduate Researcher *MIT, Sep 2016 – Now*

- Supervisor: Prof. Stephen Buchwald
- Developed a CuH catalysis system toward enantioselective aziridine synthesis. Conducted reaction set-up, TLC, Biotage purification, column chromatography, and NMR analysis.

Undergraduate Researcher *MIT, Feb 2014 – May 2014*

- Supervisor: Prof. Timothy Jamison
- Synthesized a palette of highly functionalized heterocycles using Cu-catalyzed C-N cross-coupling reaction. Conducted isocyanides formation and photoredox-catalyzed reactions. Performed chemical analysis methods such as HPLC, TLC, and NMR.

Research and Education Program *Korea University, Apr 2010 – Dec 2010*

- Supervisor: Prof. Kwang Yeon Hwang
- Thesis: "Protein Crystallization of A Recombinase Protein, XerC." Conducted gene cloning, protein purification using Ni-affinity, ion exchange and gel filtration chromatography and protein crystallization.

## EXPERIENCE

Internship *Samsung Bioepis, Jun 2016 – Aug2016*

- Worked on a project for the FDA approval of a Remicade Biosimilar (SB4). Wrote impurity clearance, process validation, scale-down methods, and scale-up reports of the protein purification process.

Military Service *KATUSA, Jul 2014 – Apr 2016*

- Worked in a Behavioral Health Clinic at 121$^{st}$ Combat Support Hospital, 8$^{th}$ Army USAG Yongsan, as a Sergeant of Korean Augmentation to the U.S. Army (KATUSA) program. Performed duties as both a medic and a liaison between the U.S. and Republic of Korea Army.

Korean Chemistry Olympiad Summer/Winter School *KChO, 2010 – 2012*

- Received trainings in organic chemistry, inorganic chemistry, physical chemistry and analytical chemistry for the preparation of International Chemistry Olympiad.

## PUBLICATION

1. "Synthesis of Highly Functionalized Polycyclic Quinoxaline Derivatives Using Visible-Light Photoredox Catalysis" He, Z; **Bae, M**; Wu, J; Jamison, T. F. *Angew. Chem., Int. Ed.* **2014**, *126*(52), 14679-14683

## DISTINCTIONS

MIT Laureates and Leaders Program Fellow *MIT, 2016*

- One of the 20 sophomores selected for high motivation and talent in the pursuit of a graduate degree in STEM fields.

Paul E. Gray Endowment Fund for UROP *MIT, 2016 Fall*

CRC Press Freshman Chemistry Achievement Award *MIT, 2014*

- One of the two freshmen awarded for outstanding academic achievement in chemistry.

Samsung Scholarship Fellow *Samsung, 2012*

- One of the five prospective undergraduates selected for academic excellence from Korea.

Gold Medal, 44th International Chemistry Olympiad *IChO, 2012*

- Ranked 2nd out of 283 participants. "*South Korea Dominates Chemistry Olympiad (C&EN)*"

## ACTIVITIES

MIT Oori Performer *MIT, Sep 2013 – Now*

- Performed "*samul nori*," a Korean Traditional Percussion genre, for in a variety of events at MIT and across Cambridge.

MIT ClubChem Treasurer *MIT, Sep 2016 – Now*

MIT Undergraduate Biochemistry Association Freshman Representative *MIT, Sep 2013 – May 2014*

Seoul National University Children's Hospital Math Teacher *SNUH, Oct 2012 – Jul 2013*

- Taught math to patients of childhood cancer