

# Woojin Bae

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## WORK EXPERIENCE

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- Multi-dimensional Materials Chemistry Lab** | SNU, Seoul, Republic of Korea Mar. 2024-Present
- Synthesis Ag cluster-based AIGS(silver indium gallium sulfide)-core
  - Analyze LMBs SEI Components by Cryo-TEM Imaging and region-specific characterization
- Marketing team & manager** | SNU festival, Seoul, Republic of Korea Jun. 2021-May. 2022
- Promoted the festival through the online website during COVID-19
  - Created and performed promotional content and videos
  - Secured a **\$2300 sponsorship** agreement with the shared scooter company 'Swing'
- Vice president** | CBE Interim Leadership, Seoul, Republic of Korea Dec. 2020-Mar. 2021
- Conducted freshman orientation, facilitating the integration of new students, via Zoom during COVID-19.
- R&E Student** | Center for Cell-Encapsulation Research, KAIST, Daejeon, Republic of Korea Mar. 2018-May. 2019
- Created a porous titanium oxide shell to facilitate the simple culturing of astrocytes
  - Confirmed the function of encapsulated astrocytes by analyzing the length of neurons co-cultured with astrocytes
  - Poster presentation on 'Korean Chemical Society Future Chemist Research Presentation Competition'

## EDUCATION

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- Bachelor's degree in Chemical Biological Engineering** | Seoul national University 2020-Present
- Major in Chemistry** | Daejeon Science High School for the gifted 2017-2020

## HONORS & AWARDS

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- 3<sup>rd</sup> Prize** | AUA-HKUST Entrepreneurship Bootcamp Final Presentation Jul. 2024
- Borderless Healthcare: A Platform for Overseas Patients to Obtain Prescriptions Everywhere
- Excellence Poster Award** | The 5th Undergraduate Student Advanced Experimental Research Program Jan. 2024
- Consideration on the relationship between microscopic structure and macroscopic shape according to the synthesis conditions of Hollow ZSM-5
- Team Section Selected** | Changing SNU Contest Jul. 2022
- Spatial-restricted messenger. The receiver can open a message only at the point where the sender had designated it to do so. Consists of an experimental UI Design, including 100 different interfaces for the loading screen.
- The Education and Research Foundation Scholarship** | College of Engineering, SNU Mar. 2021-Jun. 2021
- Merit-based Scholarship** | Department of Chemical Biological Engineering, SNU Sep. 2020-Dec. 2020
- 2020 Future Chemistry Talent Award** | The Korean Union of Chemical Science and Technology Societies Feb. 2020
- Awarded as one of the **top 6 science high school students** in Korea
- Excellence Poster Award** | 2019 Gifted School R&E Joint presentation Jan. 2019
- Regulation of astrocyte growth using porous titanium oxide shells
- Encouragement Prize** | 2017 Korea Foundation for the Advancement of Science & Creativity Conference Jan. 2018
- Correlation between Z-potential and contact angle of QDs solution

## INTERNATIONAL ACTIVITIES

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- AUA-HKUST Entrepreneurship Bootcamp 2024** | HKUST, Hong Kong. Jul. 2024
- SNU-UMN Culture Exchange Program** | via Zoom Mar. 2024-Apr. 2024
- SNU in EU program** | Brussels School of Governance, Belgium Jul. 2024
- Understanding European Unions (EU)
  - Make a presentation about "The European External Action Service"

- Korean representative** | 51st Joint School Science Exhibition, Hong Kong **Aug. 2018**  
• Wettability Change of Self-Assembled Monolayers (SAMs) of Thiol on Gold
- Summer International Exchange program** | KAMS, Fort Hays state University, USA **Jul. 2018**  
• Synthesis of conventional Quantum dots, CdSe; eco-friendly Quantum Dots, ZnSe. Applying them on Gratzel cell

## EXTRACURRICULAR ACTIVITIES

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- Presentation on **TEM Seminar** | Multi-dimensional Materials Chemistry Lab, SNU **May. 2024**  
• Amplitude and Phase Contrast
- 2023 Winter Vacation Data Science Bootcamp: **Computing** | Graduate School of Data Science, SNU **Feb. 2024**
- Encouragement Prize** | SNU in the World Program UCC Contest, Office of International Affairs, SNU **Nov. 2022**
- Serving military service** | Daegu, Republic of Korea **Aug.2022-May.2024**  
• 110<sup>th</sup> Squadron, operating F-15K Slam Eagle  
• Selected as an exemplary soldier
- Student Mentor** | Seoul National University Social Responsibility **Apr. 2023-Present**  
• Selected as a superb mentor

## SKILLS & LANGUAGES

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- **Instruments:** Cryo-TEM, SEM, UV-Vis, OM, PL
- **Language:** Korean (Native), English (C1, TOEFL 95)
- **Computer Language:** Python, Html, CSS, JSON, C (Experienced)
- **Design:** Adobe Premiere Pro, Adobe illustrator, Color correction