

# Syamil Muharror Ahsanul Husna

[syamilmuharror@gmail.com](mailto:syamilmuharror@gmail.com) | [linkedin.com/in/syamil-muharror/](https://www.linkedin.com/in/syamil-muharror/) | (+81)80-9635-4200 | Sendai, Japan

## EDUCATION

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*Master of Science in Chemistry* Expected Graduation: Sep. 2025

**Tohoku University, Sendai, Japan**

The International Graduate Program for Advanced Science (IGPAS) Program, Graduate School of Chemistry, GPA: 4.00/4.00. (PI: Kiyoto Kamagata).

*Bachelor of Science in Chemistry*

Oct. 2019 – Sep. 2023

**Tohoku University, Sendai, Japan**

Advanced Molecular Chemistry (AMC) Program, Department of Chemistry, GPA: 3.50/4.00.

Undergraduate thesis: Elucidating fusion dynamics of FUS droplets using optical tweezers and fluorescence microscopy. (PI: Kiyoto Kamagata).

## RESEARCH EXPERIENCES

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Dec. 2021 – Sep. 2023 **Undergraduate Research**

**Takahashi Laboratory, Tohoku University, Sendai, Japan**

Single molecular study of biomolecular condensates of DNA-binding protein such as p53 and FUS by using optical tweezers. Kickstarted the project by building the optical tweezers and created experiment protocols to elucidate the coalescence process of target protein droplets. The data analysis is done by developing Python algorithm along with scripts for the image processing software ImageJ.

May – Sep. 2021

**Nagatsugi Laboratory, Tohoku University, Sendai, Japan**

Development of unnatural base pairs (UBPs) with selective and stable base pairing. Performed 30 organic chemistry synthesis to test new reaction schemes to obtain two new UBPs under various conditions, including anhydrous, oxygen-sensitive, and dealt with organometallic reagents and hazards (especially Sonogashira reaction).

## HONORS & GRANTS

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Nov. 2023 **Student Presentation Award**

The 61<sup>st</sup> Annual Meeting of the Biophysical Society of Japan, Nagoya, Japan.

Oct. 2023 – Mar. 2024 **MEXT SGU Scholarship**

Recipient of government scholarship for master's that covers tuition, entrance fee, and living stipend.

Oct. 2019 – Sep. 2023 **MEXT Scholarship for Undergraduates**

Recipient of the four years undergraduate government scholarship selected through competitive university entrance screening that covers the tuition, entrance fee, living stipend, and a round-trip plane ticket.

## ORAL PRESENTATION

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Nov. 2023 **Syamil MA Husna**, Atsumi Hando, Saori Kanbayashi, Kiyoto Kamagata, "Elucidating fusion dynamics of FUS droplets using optical tweezers and fluorescence microscopy. The 61st Annual Meeting of the Biophysical Society of Japan, Nagoya, Japan.

## TEACHING EXPERIENCE

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- Jul. 2022 – Present     **English Student Supporter | Miyagi Sendai Daisan High School**  
Assisting students in improving their communication and research presentation skills in English.
- Apr. 2021 – Apr. 2022     **Chemistry Tutor Volunteer (Remote) | Ajak Gerak**  
Taught high school level chemistry in Indonesia.

## LEADERSHIP POSITIONS

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- Apr. 2023 – Apr. 2024     **President | Tohoku University Foreign Student Association (TUFSA), Sendai, Japan.**  
Led the organizational reform of the international student association which had been inactive for three years due to the pandemic by rebuilding it from the ground up. Responsibilities include managing events, advertising, and contacting sponsors.
- Jun. 2023 – Nov. 2023     **Leader | Tohoku University International Festival (TUIF), Sendai, Japan.**  
Led and coordinated the committee for the biggest international festival in Tohoku region, sold out 1000 tickets. Responsible to managing the whole committee to bring success to the festival.
- Jul. 2021 – Jul. 2022     **Internal Affairs Div. Leader | Indonesian Student Association in Sendai (PPI Sendai), Sendai, Japan**  
Organize bimonthly events for Indonesian students living in Sendai.

## SKILLS & TECHNIQUES

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Programming language:	Python	Machine/Software:	Fluorescent microscopy
	Selenium (Python)		Confocal microscopy
Laboratory skills:	R (Programming Language)		Optical tweezers
			Igor Pro
	Organic synthesis		ChemOffice
	Cell experiments		CAS-SciFinder
	Protein experiments		Adobe Illustrator

## LANGUAGES

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English (IELTS Band 8.0), Japanese (JLPT N2), and Indonesian (Native)