europass

Maulana Ariefai

Date of birth: 05/11/1999 | **Nationality:** Indonesian | **Gender:** Male |

(+48) 725924128 | maulana.ariefai60@gmail.com |

studencka 15, DS1, 40-743, Katowice, Poland

About me:
Final Master Student in biopharmaceutical material science who are also an IT enthusiast. I have strong backgrounds in material science and chemistry with several experiences in laboratories around the world. Programming skills are obtained through self-studying as my hobbies and doing data analysis in my past project.

WORK EXPERIENCE

01/03/2019 – 30/06/2019 – Sendai, Japan
LABORATORY INTERN – NAGATSUGI LABORATORY (FUNCTIONAL-ORGANIC SYNTHESIS), TOHOKU UNIVERSITY

Selective and stable base pairing by alkynylated nucleosides featuring a spatially-separated recognition interface
• Synthesized new synthetic base pairs of DNA
• Performed NMR analysis and column chromatography

01/05/2019 – 31/10/2019 – Sendai, Japan
STUDENT PROJECT – MURATA LABORATORY (MOLECULAR ROBOTICS), TOHOKU UNIVERSITY

3rd winner at BIOMOD International 2019
Project's title : Reverse Hybridization Chain Reaction for DNA shortening
• Successfully modified Hybridization Chain Reaction
• Made a new chain reaction called Reverse Hybridization Chain reaction that can shorten DNA chain

01/06/2020 – 30/08/2021 – Sendai, Japan
LABORATORY MEMBER – TAKAHASHI LAB (BIOLOGICAL AND MOLECULAR DYNAMICS), TOHOKU UNIVERSITY

Name of the project : Rational peptide design for regulating liquid–liquid phase separation on the basis of residue–residue contact energy
• Made Perl and Python Scripts to predict the synthetic peptides targeting Intrinsically Disordered Regions (IDR) of proteins based on Molecular Dynamics simulation
• Created rational design of peptides for regulating liquid-liquid phase separation
• Analyzed the effect of synthetic peptides to kinetic of the target protein
• Performed protein expression and purification, gel electrophoresis, fluorescence anisotropy titration, and absorption spectroscopy technique

01/05/2022 – 30/06/2022 – Barcelona, Spain
LABORATORY INTERN – IMEM-BRT GROUP, DEPT. OF CHEMICAL ENGINEERING, ESCOLA D'ENGINYERIA DE BARCELONA

PEDOT and ITO doped carbon quantum dots for sensing applications
• Synthesized conductive polymer (PEDOT) with carbon quantum dots as a doping
• Performed spin coating to Indium Tin Oxide(TIO) paper
• Analyzed the performance of doped materials through electrochemistry measurement and surface topography

EDUCATION AND TRAINING

01/10/2017 – 11/09/2021 – Sendai, Japan

BACHELOR OF SCIENCE IN CHEMISTRY – Tohoku University

Biophysics . Gel Electrophoresis · Perl · Python (Programming Language) · Biopython · Fluorescence Anisotropy · Protein Expression · Protein Purification

Address Sendai, Japan | **Field of study** Chemistry | **Final grade** 3.9/4.0 |

Thesis Rational peptide design for regulating liquid–liquid phase separation on the basis of residue–residue contact energy

17/09/2021 – 31/01/2022 – Pisa, Italy

MASTER IN MATERIALS AND NANOTECHNOLOGY – University of Pisa

Highlighted Courses:
Quantum physics of matter, disordered and off equilibrium systems, mechanical behavior of materials, computational material science, green chemistry for materials and processes

Address Pisa, Italy |

Field of study Biopharmaceutical Material Science Erasmus Mundus Joint Master Degree (First semester) |

Final grade 26/30

01/02/2022 – 31/07/2022 – Barcelona, Spain

MASTER OF PHYSICS ENGINEERING – Universitat Politècnica de Catalunya

Highlighted Courses:
Biophysical and material science characterization, machine learning with neural networks, material science of drugs, and molecular soft condensed matters, large facilities: synchrotron and neutron sources

Address Barcelona, Spain |

Field of study Biopharmaceutical Material Science Erasmus Mundus Joint Master Degree (Second semester)

Final grade 8.6/10

01/10/2022 – CURRENT – Katowice, Poland

MASTER OF BIOPHYSICS – University of Silesia in Katowice

Highlighted Courses:
Molecular biophysics, application of vibrational spectroscopy in therapeutic substance studies, fundamental of molecular modelling, computer modelling

Address Katowice, Poland |

Field of study Biopharmaceutical Material Science Erasmus Mundus Joint Master Degree (Third semester)

DIGITAL SKILLS

My Digital Skills

Python | Perl | R

HONOURS AND AWARDS

01/10/2017

Monbukagakusho (MEXT) Scholarship Awardee – Japan's Ministry of Education, Culture, Sports, Science and Technology

Scholarship from Japanese government for my undergraduate that covered tuition and living allowance

27/10/2019

3rd place in BIOMOD International 2019 – BIOMOD

BIOMOD is the biomolecular design competition for undergraduate students around the world. It was held at University of California, San Francisco. I participated with project title "Reverse Hybridization Chain Reaction for DNA shortening".

17/09/2021

Erasmus Mundus Scholarship – Europe Union

Scholarship from Europe Union for BIOPHAM master that covered tuition and living allowance

PUBLICATIONS

Rational peptide design for regulating liquid–liquid phase separation on the basis of residue–residue contact energy

https://doi.org/10.1038/s41598-022-17829-1 – 2022
My bachelor's thesis is published as paper in Scientific Reports

LANGUAGE SKILLS

Mother tongue(s): **INDONESIA**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
JAPANESE	B2	B1	B1	B2	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user