

KAYLA PARADHITA

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Chemistry graduate from Universitas Gadjah Mada with hands-on research experience in laboratory including transforming PVC waste into nanofiber membrane filters and synthesis of heterogeneous catalyst for bio-jet fuel conversion research. Skilled in material preparation, analytical testing, experimental optimization, having a instrument operating experience, skilled in quantitative data analysis using Origin software, and calculating Accelerated Shelf Life Testing (ASLT). Proven leadership managing 50+ member organizations as Head Chief and HR staff. Interested in laboratory, R&D, and quality control roles.

CORE COMPETENCE

- **Analytical Instruments:** Particle Size Analyzer (PSA), FTIR, Raman Spectroscopy, and Electrospinning instrument operating experience and data interpretation, XRD, SEM-EDX, XPS, and NH₃-TPD data results interpretation, fast learner on new instruments.
- **Testing and QC Fundamentals:** Accelerated Shelf-Life Testing (ASLT / Arrhenius model) and Fe/metal content analysis, sample preparation, results documentation, procedure documentation.
- **Software dan Reporting:** Origin (data analysis and interpretation), MS Word, MS Excel, Spreadsheets, MS PowerPoint, Google Workspace.
- **Soft Skills:** Attention to detail, team leadership and coordination, English (oral and written), communication, situation assessment and decision making.

EDUCATION

Gadjah Mada University - Yogyakarta, Indonesia

[August 2022 - August 2026]

- Bachelor of Chemistry (GPA 3.19)

RESEARCH EXPERIENCE

Nano Center Indonesia - Tangerang Selatan, Indonesia

Researcher Intern

[March 2025 - July 2025]

- Executed research of transforming PVC (polyvinyl chloride) waste into nanofiber membrane filters for face masks supporting sustainable material innovation.
- Developing 4 variation of nanofiber membranes with in total 25 samples from a various ingredient and samples composition using the electrospinning instrument and adjusted process parameters to optimize the product performance.
- Performed Particle Size Analysis (PSA) on 6 samples of commercial brand including, sample preparation, instrument operation, 18 times testing measurement, and results documenting.
- Operating 4 instrument including Electrospinning, Raman Spectroscopy, Particle Size Analyzer (PSA), and Fourier Transform Infrared Spectroscopy (FTIR), analyze and interpreting the result using Origin Software.
- Documenting the experiment procedures and results into more systematically format and presenting the results every 2 weeks to evaluate the material and product and make decision wich product has the best performance.

Department of Chemistry, Universitas Gadjah Mada - Yogyakarta, Indonesia

Undergraduate Thesis Researcher

[September 2025 - January 2026]

- Synthesized an Fe-impregnated activated carbon (Fe/AC) heterogenous catalyst using an Fe precursor (FeCl₂·4H₂O) sourced from LFP battery waste and activated carbon derived from oil-palm empty fruit bunch (TKKS) waste .
- Performed Fe-content catalyst material characterization across 5 analytical instruments (XRD, FTIR, SEM-EDX, XPS, NH₃-TPD) to verify metal loading, structural, surface, and morphological properties of the catalyst, then interpreted the quality and quantity results using Origin software.
- Documented experimental procedures, catalyst characterization, and oil characterization results systematically to support evidenc based conclusions on material performance.

- Successfully develop 2 variation of Fe/AC heterogeneous catalyst for the catalytic conversion of Black Soldier Fly (maggot) oil into bioavtur (bio-jet fuel) with 56,02% yield and 81,57% bio-jet fuel selectivity.

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ORGANIZATIONAL EXPERIENCE

Hear Me MIPA (HMM) - Yogyakarta, Indonesia

Head Chief

[June 2024 - December 2024]

- Lead and organized an organization of 50 members and 5 divisions and their work programs.
- Secured 5 work program collaboration agreements between the organization and the faculty.
- Built and strengthened relationships with other organizations at the faculty and university level.
- Initiated a new program across 5 divisions to drive organizational improvement.
- Successfully created a discussion and communication forum between students, lecturers from 8 majors in faculty, and the dean to address mental health issues within the faculty.
- Authored the organizations code of ethics and member commitment letter in coordination with related divisions.

ACADEMIC PROJECT

- Calculating Accelerated Shelf Life Testing (ASLT) using the Arrhenius kinetic model to project product shelf life under varying storage temperatures as part of Kimia Pangan class coursework.