



HARISTYO PRIYANDITO

CHEMISTRY STUDENT

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Fresh Graduates Chemistry student at Brawijaya University with **strong research interest in analytical chemistry and materials, experience in energy materials, food & beverage analysis**, electrocatalysis, hydrogen fuel cells, and electrochemical characterization. Experienced in developing Ni/N-C catalysts and N-doped carbon materials for oxygen reduction reaction (ORR) applications in Anion Exchange Membrane Fuel Cells (AEMFCs). **Skilled in chemical analysis, material synthesis, surface modification, advanced characterization techniques, and electrochemical performance evaluation.** Furthermore, wants to build a career as Product Innovation & Development, Quality Control or Quality Assurance.

EDUCATION

Brawijaya University

Chemistry - GPA 3.63 (scale 4.00)

- Learned fundamental knowledge about chemistry, while also exploring materials science, electrochemistry, colloid and surface chemistry with complemented by coursework in **analytical, energy, food, and environmental chemistry**, also fundamentals of the chemical industry. Additionally, gaining a fundamental understanding of chemical instruments.

THESIS

Surface Modification of Carbon Black and Thermal Treatment of Ni/N-C Catalyst Toward Half-Cell Electrocatalytic Performance in the Oxygen Reduction Reaction for Cathode Anion Exchange Membrane Fuel Cell Applications - Optimization of Nickel Downstreaming Product to Catalyst

EXPERIENCE

Research Intern – Research Center for Energy Conversion and Conservation, Badan Riset dan Inovasi Nasional (BRIN)

Sept 2025 - Feb 2026

- Developed materials **Nickel to Catalyst** Ni/N–C and N doped rGO/CB with controlled surface to enhance catalytic performance and durability for Hydrogen Fuel Cell Applications. Also, participated in the battery recycling for hydrogen production project.
- Conducting Carbothermic Reduction in the **Purification** of Nickel Metal from Used **NMC Battery** Cathode Materials using the Coprecipitation Method.
- Participated in **discussions with researchers regarding clean energy technologies, hydrogen economy development**, battery recycling, and decarbonization strategies, strengthening perspectives on national energy transition initiatives.
- Ensured proper documentation, chemical handling, and materials compliance aligned with laboratory safety protocols and material data management systems.

Analyst Intern – LABKESDA Jakarta (Regional Food & Health Laboratory)

Jun 2025 - Aug 2025

- Performed comprehensive sample preparation for food and beverage analysis, ensuring accuracy, cleanliness, and consistency in analytical workflows.
- Operated analytical instruments while ensured data integrity through meticulous calibration, blank control, and quality-control procedures across multiple analytical instruments.
- Applied strong laboratory safety, chemical handling, and contamination-prevention practices throughout testing activities.

Laboratory Assistant of Basic Chemistry

Feb 2025 - Jun 2025

- Prepared laboratory equipment and materials for practical sessions
- Explained theoretical concepts with open discussion and supervised practical sessions while implementing K3 (Occupational Health & Safety Practices) principles
- Reviewed and assessed student's practical reports based on demonstrated skills.

Coordinator of Program Desa Mandiri Pupuk

Jun 2024 - July 2024

- Designed, proposed ideas, Coordinate, and supervised 13 staff members to ensure effective event execution
- Managed activity budget planning and resource allocation. Also collaborated with village officials and farmer groups to support community engagement
- Delivered presentations as an event speaker.

Coordinator of Competition Division in PORMABA

Des 2022 - May 2023

- Coordinated 7 staff members to design all aspects of the event (competition selection, concept, structure, venue, budget, rundown, and vendors)
- Collaborated with involved divisions, the faculty, and external parties (vendors) to ensure the event's success
- Initiated the Department Circle Forum to mediate issues and led the General Meeting Forum for the event.

SKILLS

- **Languages:** Bahasa Indonesia (Native), English (Intermediate)
- **Technical Skills:** Ms. Word, Ms. Excel, Wet Lab, Origin, MarvinSketch, Avogadro, ImageJ
- **Soft skills:** teamwork, leadership, problem solving, team management, collaborative

TOOLS & INSTRUMENTS EXPERIENCE

- UV-VIS, AAS Spectrophotometer, ICP-OES, FTIR Spectrometer, HPLC, TLC, Vapordest, GC-FID, Rotary Evaporator RV 10 Digital, Microscope Olympus CX33 Digital, Refraktometer, Centrifuge, Electrochemical Testing (FlexCell), SEM-EDS, and *Water Contact Angle* (WCA).

PROJECT EXPERIENCE

- Surface-Modified Carbon Black as a Platform for Ni–Nx Active Site Formation toward Efficient ORR Catalysts for AEMFC Applications.
- The Effect of GO:CB Ratio on N-Doped rGO/CB Catalyst on the Electrocatalytic Performance of Half Cell ORR Cathode of AEMFC Applications.
- Effect of Carbothermic Reduction on the Purification of Nickel Metal from Used NMC Battery Cathode Materials using the Coprecipitation Method.
- Extraction and Effectiveness Testing of Clove (*Syzygium aromaticum* L.) Essential Oil as a Natural Repellent Agent For Mosquito in Lotion Formulation.
- Characterization of Bioplastic Materials Based on Cassava and Rice Starch Modified with Carrageenan and Aloe Vera for Enhanced Functional Properties.