STAFF HANDBOOK

DEPARTMENT OF CHEMISTRY

Faculty of Mathematics and Natural Sciences

Mulawarman University

PREFACE

Welcome to the Staff Handbook of the Department of Chemistry.

This handbook serves as a comprehensive resource for all academic staff, from our newest colleagues to our most seasoned professors. It's designed to be your go-to guide for navigating the policies, procedures, and resources that underpin our department's daily operations and strategic goals.

Department of Chemistry is a vibrant community dedicated to excellence in teaching, ground-breaking research, and impactful service. We pride ourselves on fostering an environment that encourages intellectual curiosity, collaborative discovery, and the professional growth of every individual. This handbook outlines the expectations and support systems in place to help you thrive in your roles, whether in the lecture hall, the laboratory, or in your contributions to the broader university and scientific communities.

We understand that a dynamic academic environment requires clear communication and accessible information. Therefore, this handbook covers essential topics such as teaching guidelines, research support, administrative procedures, professional development opportunities, and health and safety protocols. We encourage you to familiarize yourself with its contents and refer to it regularly.

Your contributions are invaluable to the continued success and reputation of the Department of Chemistry. We believe that by working together, we can continue to advance chemical knowledge, inspire the next generation of scientists, and make a significant difference in the world.

We are delighted to have you as part of our team and look forward to a productive and rewarding academic year.

Samarinda, 2025

Prof. Dr. Teguh Wirawan, M.Si.
Coordinator of Bachelor's Degree in Chemistry
Department of Chemistry, Faculty of Mathematics and Natural Sciences
Mulawarman University

TABLE OF CONTENT

Staff Handbook

Name	*Prof. Dr. Drs. Ir. Daniel, M.Si*		
Employee Identification Number (EIN).	*196612112000121001*		
Place and date of birth	*Deli Serdang, Desember 11, 1966*		
Post	*Professor*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Analytical Chemistry* *Doctoral Degree: Analytical Chemistry*	*Universitas Sumatera Utara* *Universitas Sumatera Utara* *Universitas Sumatera Utara*	*1991* *2001* *2007*
Employment	*Lecturer*	*Faculty of Mathematics and natural sciences*	*2000-present*
Research and development projects over the last 5 years	1. *Making Surfactants and Biodiesel from Castor Oil (Jatropa Curcas L.) by Esterification (2023-Member)* 2. *Utilization of Chitosan from Exuviae Maggot (Hermetia illucens) as Edible Coating for Tomato Fruit (Lycopersicon esculentum) and Edible Film with the Addition of Honey as an Antibacterial (2024, Leader)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights			
Important publications over the last 5 years	1. Ritson Purba, Enos Tangke Arung, Harlinda Kuspradini, **Daniel**, (2021), Isolation of Active Compounds from Original Plants of East Kalimantan as Cosmetics, *Proceedings of the Joint Symposium on Tropical Studies* (JSTS-19) 2. Neli, P.P., **Daniel**, Chairul, S., Agustina, M., (2021), Phytochemical Test and Antioxidant Activity Test of n-Hexane, Ethyl acetate and Residual		

	Ethanol Fraction Extract from Sungkai Leaves (*Peronema canescens* Jack.) using DPPH Method, *Journal Atomic*, 6(1), 22-27 3. Putri, A.S., **Daniel,** Chairul, S., (2021), Phytochemical and Antibacterial Test of Methanol Extract of Mahony Leaves (Swiegenia mahogany (L.) Jacq), Journal Atomic, 6(2), 64-67 4. A Nurhidayah, **Daniel**, IA Hiyahara (2021) Sintesis Asetil Askorbat Melalui Asetilasi Tanpa Pelarut Dan Katalis *Jurnal Atomik* 6 (2) 5. Nur Hamid, **Daniel**, Chairul Saleh, (2022), Zeolitization Of Coal Waste As Cu(Ii) Ion Adsorbent, *Jurnal Kimia Riset*, 7(2), 167–181 6. **Daniel**, Masmur, I., Perangin-Angin, S., Pasaribu, S. P., Magdaleni, A. R., Hestina, Sembiring, H. B., Pasaribu, A., and Sitinjak, E. M. (2023), Material Design Of Bimetallic Catalysts on Nanofibers for Highly Efficient Catalytic Reduction of 4-Nitrophenol, ACS omega, 8(19), 17234-17244. 7. Aji Zaldya NM, **Daniel**, Irfan Ashari Hiyahara, Agustina R. Magdalen, (2023), Karakterisasi Sifat Fisik Kimia Metil Ester Minyak Biji Wijen (Sesamum indicum L.) dan Komposisinya, *Jurnal Kimia Mulawarman*, 20(2), 75-84 8. Putri Faizah A, **Daniel**, Saibun Sitorus, Agustina Rahayu Magdalena, (2024), The Anti-hyperuricemic Activity Test Of Ethanol Extract Soursop Leaves (Annona Muricata L.) and Analysis Compound Composition of the Contained, *Jurnal Kimia Mulawarman*, 21(2), 67-75 9. Camelia, E.D., Chairul, S., Djihan, R.P., Agustina, R.M., **Daniel**, (2024), Potential Antioxidant Activity of Methanol Extract of Singkil Leaves (Premna corymbose Roxb & Wild), Journal Atomic, 9(2), 137-144
Activities in specialist bodies over the last 5 years	

CURRICULUM VITAE

Name	*Prof. Dr. Aman Sentosa Panggabean, M.Si.*		
Employee Identification Number (EIN).	*197506302000121001*		
Place and date of birth	*Simaung-maung, June 30, 1975*		
Post	*Analytical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree: Analytical Chemistry* *Doctoral Degree: Separation and speciation of Analytical Chemistry*	*North Sumatera University* *North Sumatera University* *Institut Teknologi Bandung*	*1998* *2001* *2009*
Employment	*Lecturer*	*Faculty of Mathematics and Natural Sciences*	*2002 - present*
Research and development projects over the last 5 years	1. *Synthesis and Characterization of Silver Nanoparticle Modified with l-cysteine using NaBH4 as Reductor for Development of Analysis Method (Member, 2024)* 2. *Preconcentration of Cu(II) Ion based of Magnetic- Alginate Microcapsule (MNPS-ALG) (Member, 2023)* 3. *Synthesis and Utilization of Deoiled Spent Bleaching Earth Pillarled of TiO2/WO3 Nanocomposites in Water and Wastewater Treatment through the Solar Photocatalytic Method (Member, 2020)*		
Industry collaborations over the last 5 years	-		

Patents and proprietary rights	*Method Manufacturing and Membrane Composition of Ion Selective Electrode Cu^{2+} based on Polyvinyl Chloride (PVC) with Ethylene Diamine Tetra Acetate (EDTA) as a Ionophor* — *Patents* — *2021*
Important publications over the last 5 years	1. **Panggabean, A.S**., Gripaldi, F., and Pasaribu, S.P. (2021) Preparation and Characterization of Pb(II) Ion Selective Electrode based on Dithizone as Chemical Sensor, *Anal. and Bioanal. Electrochem.*, 13(3), 383–392 2. Abdullah, H., Siburian, R., Pasaribu, S.P., and **Panggabean, A.S**. (2021) *Visible-Light Driven Ni-Incorporated CdS Photocatalytic Activities for Azo-Bond Cleavages with Hydrogenation Reaction*, Chemistry Select, 6(9), 2041-2050 3. **Panggabean, A.S**., Malinda, R., Pasaribu, S.P. and Wirawan, T. (2021). Verification of the Test Method for Determination of Boron in NPK Blending Fertilizer Using Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES), *AIP Conference Proceedings* **2360**, 050007 4. Arif, M.S., Ulfiya, R., Erwin and **Panggabean, A.S**. (2021). Synthesis Silver Nanoparticles Using Trisodium Citrate and Development in Analysis Method, *AIP Conference Proceedings* **2360**, 050007 5. Robiansyah, M., Pasaribu, S.P., dan **Panggabean, A.S**. (2021) Perbandingan Penentuan Kadar Proksimat dalam Batubara Menggunakan Metode Gravimetri Konvensional dan Thermogravimetric Analysis, *Jurnal Kimia Saintek dan Pendidikan*, 5(2), 64-71 6. Hayon, L.L., Alimuddin, and **Panggabean, A.S**. (2021) Validation Method Of Determination of Cd (II) in NPK Fertilizer fy Flame Atomic Absorption Spectrophotometry at the Quality Control Laboratory, PT. Pupuk Kalimantan Timur, *Jurnal Kimia Mulawarman*, 19(1), 8-16 7. Surya, A.S., Yusuf, B., dan **Panggabean, A.S**. (2021) Perbandingan Kinerja Analitik Hasil Penentuan Ion Logam Pb Dengan Menggunakan Spektrofotometer Serapan Atom di Berbagai Laboratorium Samarinda, *Jurnal Kimia Mulawarman*, 6(2), 68-73 8. Prayuda, A., **Panggabean, A.S**., dan Erwin. (2021) Penambahan Ca(OH)2 Pada Umbi Gadung (Dioscorea Hispida) Menggunakan Spektrofotometri Visibel, *Jurnal Atomik*, 6(1), 28-31 9. Sujito, Pasaribu, S.P., Wirawan, T., and **Panggabean, A.S**., (2022), Gas-Liquid Separator Modified on CV-AAS System for Determination of Total Hg in the Industrial Wastewater Samples, *MOLEKUL,* 17 (3), 292–300 10. Fidayana, R.A., Wirawan, T., and **Panggabean, A.S**., (2022), Validation of Ion Selective Electronic Methods at Pupuk Kalimantan Timur Company for Determining Ammonia Levels (NH_3) in Ambient Air, *Jurnal Kimia Mulawarman*, 19 (1), 1-7 11. Widyastuti, H., Subagyono, R,R,D,J., dan **Panggabean, A.S**. (2022) Sintesis Silika Gel dari Abu Sekam Padi Termodifikasi Kitosan Serta Aplikasinya Sebagai Adsorben Methylene Blue, *Jurnal Kimia Mulawarman*, 19(2), 63-65 12. Victoria, S., Sitorus, S., dan **Panggabean, A.S**. (2022) Parameter Verification of Anionic Surfactants Determination in Wastewater with MBAS Method using UV-Vis Spectrophotometer, *Jurnal Atomik*, 2022, 07(2), 15-19 13. Rizky, M., Alimuddin, and **Panggabean, A.S**. (2022) The Manufacturing of Silica Gel from Cane Pulp Cinders (*Saccharum Officinarum*) and the Application for Adsorption Cu(II) Ion, *Jurnal Kimia Mulawarman*, 20(1), 23-30 14. Arif, M.S., Risdayana, R., Sari,I.Y.L., and **Panggabean, A.S**. (2022) Synthesis of Silver Nanoparticles (AgNPs) Using Aggregate Mangrove Leaf Extract (Sonneratia alba) for Colorimetric Analysis of Chloramphenicol, AIP Conference Proceedings **2668**, 030010

	15. Pasaribu, S.P., Masmur, I., Hestina, and **Panggabean, A.S**. (2023). Facile synthesis of self-healing poly-acrylic acid/TiO2 hybrid hydrogel for photocatalytic hydrogenation of 4-nitrophenol to 4-aminophenol, *Materials Chemistry and Physics*, 305, 127875 16. Yuwono, B.B.,Panggabean, A.S., dan SP Pasaribu, S.P. (2023) Evaluasi Proses Insinerasi Limbah Bahan Berbahaya Dan Beracun Menggunakan Insinerator Pada PT. PLKK Kutai Kertanegara, *Jurnal Review Pendidikan dan Pengajaran (JRPP)* 6(4), 1078-1085 17. Menono, F.F., Wirawan, T., and **Panggabean, A.S**., (2024), Electrodecolorization of Sarung Tenun Samarinda Liquid Waste Dye Stuff Using PbO_2/Cu Electrode, *Jurnal Atomik*, 9 (1), 34-43 18. Fikriah, I., Masruhim, M.A., Paramita, S., Marliana, E., **Panggabean, A.S**., Ismail, S., Kusuma, I.W., Kim, Y and Kim, S. (2024). Acute toxicity, secondary metabolites, and antioxidant activity of Macaranga tanarius from post-coal mining and non-mining areas in East Kalimantan, Indonesia. *Narra J*., 4 (2), 791-800 19. Lianasari, I.Y., **Panggabean, A.S**., Yusuf, B., dan Koesnarpadi, S. (2024) Kinerja Analitik Mikrokapsul Magnetit-Alginat (MNPs-ALG) untuk Analisis Ion Logam Cu (II) dan Aplikasinya pada Sampel Alam, *KOVALEN: Jurnal Riset Kimia*, 10 (1), 20-29 20. Az Zahra, U.F., Hindryawati, N., dan **Panggabean, A.S**. (2024) Sintesis Dan Karakterisasi Nanopartikel Perak Termodifikasi Kitosan Menggunakan Reduktor NaBH4, *Jurnal Atomik*, 9(2), 120-127 21. Anwar, A., Pasaribu, S.P. dan **Panggabean, A.S**. (2024) Verifikasi Metode Penentuan Sulfur Dioksida (SO2) Pada Sampel Udara Ambien Dengan Metode Pararosanilin Menggunakan Spektrofotometer UV-Visibe, *Jurnal Kimia Mulawarman*, (1), 1-6 22. Erzha, N., Sitorus, S., dan **Panggabean, A.S**. (2024) Pemanfaatan Limbah non B3 Fly Ash dan Bottom Ash dari Kegiatan PLTU sebagai Subtitusi Bahan Baku Pembuatan Paving Block dan Batako, *Jurnal Atomik*, 9 (2), 128-136 23. Fikriah, I., Masruhim, M.A., Marliana, E., **Panggabean, A.S**., Ismail, S., Kusuma, I.W. and Paramita, S. (2025). Antioxidant Activity of Mahang Leaves from PostCoal Mining Revegetated Areas in East Kalimantan, *IOP Conf. Series: Earth and Environmental Science* 1447, 012025 24. Rosyada, A., Arif, M.S., dan **Panggabean, A.S**. (2025) Pembuatan Dan Karakterisasi Membran Elektroda Selektif Ion Cu(Ii) Menggunakan Ionofor Na2S Sebagai Sensor Kimia, *Jurnal Atomik*, 10(1), 32-40
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* *Member* *2015-present*

CURRICULUM VITAE

Name	*Prof. Dr. Ir. Bohari, M.Si*		
Employee Identification Number (EIN).	*196511051991031003*		
Place and date of birth	*Bantaeng, Nov 5, 1973*		
Post	*Analytical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Organic Chemistry* *Doctoral Degree: Organic Chemistry*	*Hasanudin University* *Gadjah Mada University* *Universite de PAU et des Pays de l'Adour*	*1990* *1996* *2001*
Employment	Lecturer Lecturer	Faculty of Education and Science Faculty of Mathematics and natural sciences	*1991-2001* *2001-present*
Research and development projects over the last 5 years	3. *Synthesis and Characterization of Silver Nanoparticle Modified with l-cysteine using NaBH4 as Reductor for Development of Analysis Method (Member, 2024)* 4. *Preconcentration of Cu(II) Ion based of Magnetic- Alginate Microcapsule (MNPS-ALG) (Member, 2023)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights			

Important publications over the last 5 years	1. Erwin, Anita Karolina Dari, Djihan Ryn Pratiwi, **Bohari**, Anton Rahmadi, (2020), An anthraquinone derivative from Coptospella tomentosa (Blume) root (Merung), *Eurasia J Biosci*, 14, 3015-3017 2. Arifin Syam Surya, **Bohari**, Aman Sentosa Panggabean (2021) Perbandingan Kinerja Analitik Hasil Penentuan Ion Logam Pb Dengan Menggunakan Spektrofotometer Serapan Atom di Berbagai Laboratorium Samarinda, *Jurnal Kimia Mulawarman*, 6(2), 68-73 3. Rohmah, M., Rahmadi, A., Yanti, I., Jannah S.M., **Bohari**, and Supratman, U., (2020), Quantitation and optimization of β-carotene and α-tocopherol in emulsion prototype with reversed-phase chromatography, *Food Research*, 5(2), 290-297 4. **Bohari**, Selvi Jumiatul Astati, Mirhansyah Ardana, Herman Herman, Arsyik Ibrahim, Laode Rijai, Firzan Nainu, Islamudin Ahmad, (2021), Optimizing Natural Deep Eutectic Solvent Citric Acid-Glucose Based Microwave-Assisted Extraction of Total Polyphenols Content from *Eleutherine bulbosa* (Mill.) Bulb, *Indones. J. Chem*., 21(4), 797-805 5. Herman, **Bohari**, Laode Rijai, Hadi Kuncoro, Anni Anggraeni, Abdul Mutalib, Husein H. Bahti, (2021), Parameter selection of Polystyrene-Dietilenetriaminepenta acetate Resin Synthesis for the separation of rare Earth Elements by using PlackettBurman Experimental Design, *Research J. Pharm. and Tech*. 14(11), 5629-5634 6. Desy Youlanda, Saibun Sitorus, **Bohari**, (2022), Pemanfaatan Arang Aktif Serbuk Gergaji Kayubangkirai (Shorealavefolia Endert) Sebagai Adsorben Pelumas (Oli) Bekas, *Jurnal Atomik*, 07(1), 18-21 7. Rosmita Sari, Moh. Syaiful Arif, **Bohari**, (2022), Anaisis dan Karakterisasi Nanopartikel Perak (AgNPs) Untuk Mendeteksi Kloramfenikol Dengan Metode Kolorimetri, *Jurnal Atomik*, 07(2), 20-25 8. Moh. Syaiful Arif, Indra Kurniawan, **Bohari**, (2023), Analisis Chloramphenicol Pada Udang Windu (Penaeus Monodon) Secaraspektrofotometri Berbasis Reaksi Diazotasi, *Jurnal Kimia Mulawarman*, 20(2), 85-91 9. Hairin Nisa, Moh. Syaiful Arif, **Bohari**, (2024), Sintesis Nanopartikel Perak Termodifikasi L-Cysteinesebagai Metode Analisis: Review Jurnal, *Jurnal Atomik*, 9(1), 44-48
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* *Member* *2015-present*

CURRICULUM VITAE

Name	*Prof. Dr. Ir. Erwin, M.Si*		
Employee Identification Number (EIN).	*197010011995121001*		
Place and date of birth	*Batu-Batu, October 01, 1970*		
Post	*Organic Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Organic Chemistry* *Doctoral Degree: Chemistry*	*Hasanuddin University* *Bandung Institute of Technology* *Hasanuddin University*	*1995* *2002* *2010*
Employment	*Lecturer* *Lecturer*	*Faculty of Education and Science* *Faculty of Mathematics and natural sciences*	*1995-2002* *2002-present*
Research and development projects over the last 5 years	1. *Variation of ZIF-8 Material Synthesis and Characterization and Adsorption Test Against Tetracycline Antibiotics (2024-Member)* 2. *Making Surfactants and Biodiesel from Castor Oil (Jatropa Curcas L.) by Esterification (2023-Member)* 3. *Synthesis and Characterization of Chitosan Nanoparticles from Clam Shells (Cerithidea obtuse) as Cd(II) Ion Adsorbents (2020-Member)* 4. *Potential of Active Compounds as Antioxidants and Anticancer from Mentawa Bark (Artocarpus anisophyllus) (2020, Leader)* 5. *Potential of Active Compounds as Candidates for Anticancer and Antioxidant Drugs from Merung Roots (Coptosapelta tomentosa Valeton K. Heyne) (2019-Leader)*		

	6. *Profile of Active Compounds from Tampoi Bark (Baccaurea macrocarpa Miq) and Its Potential as a Candidate for Antioxidant and Anticancer Drugs (2018-Leader)* 7. *Active compound profile and pharmacological test of Dayak onion bulbs (Eluetherine palmifolia (L) Merr) as a candidate for dengue fever drug on the number of platelet cells in male mice (Mus musculus S) (2018-Member)* 8. *Chemical Profile and Active Potential as Antioxidant of Mentawa Stem Wood Extract (Artocarpus anisophyllus Var.) (2018-Member)* 9. *Utilization of Deoiled Spent Bleaching Earth Pillarized TiO_2 Using Surfactant From Klerak Fruit In Textile Wastewater Treatment Through Photocatalytic Method (2017-Member)* 10. *Functionalization of Nano-Silica from Rice Husk Ash with Phosphonic and Sulfonic Acid as Catalysts (2016-Member)*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	-
Important publications over the last 5 years	1. Muhammad Dahlan Balfas, Idris Mandang, Tamrin, **Erwin**, Zulkarnain, Pagoray, H., and Sudarmadji, T. (2025), Distribution and Contamination Level of Heavy Metal Iron (Fe) in Benanga Reservoir Sediment, Samarinda City, East Kalimantan*, Journal of Water Resource and Protection*, 17(4), 291-305. 2. Kumala, W.P., **Erwin**, Kuncoro, H., Aziz, A., Usman, Purba, R., and Masruhim, M.A., (2025), Anti-Gastric Ulcer Activity of Red Cabbage Ethanol Extract (*Brassica Oleracea* Var. Capitata L.), *International Journal of Pharmaceutical and Bio-Medical Science*, 5 (3), 160-162 3. **Erwin**, Febrianti, I., Subur P. Pasaribu, and Aziz, A. (2024), Determination of Total Flavonoid Content (TFC) and Antioxidant Activity of Insulin Plant (Smallanthus sonchifolius), *Jurnal Sains dan Kesehatan*, 6 (4), 570-575. 4. **Erwin**, Maulina, S., Bohari, Usman, U., Alimuddin, and Erwin, N.A. (2024), Toxicity Test, Antioxidant Activity, and Determination ofTotal Flavonoid Content (TFC) of N-Hexane andEthyl Acetate Fraction from *Uncaria Nervosa* Elmer (Bajakah) Root Wood, *International Journal of Pharmaceutical and Bio-Medical Science*, 04 (08), 699-70 5. Usman, U., Masruhim, M. A., Kusumaningtiyas, P., **Erwin**, and Bulan, D.E., (2023), *Trop J Nat Prod Res*, Antioxidant and Antidiabetic from *Rhizophora mucronata* Derived from Sambera Beach, East Kalimantan, Indonesia, 05 (03), 160-162. 6. Usman, U., Kusumaningtyas, P., Sukemi, and **Erwin**, (2023), An Evaluation of the Antidiabetic and Antimicrobial Activity of an Ethanolic Extract from *Rhizophora mucronata* Leaf*, Jurnal Sains dan Kesehatan*, 5 (4), 541-549. 7. Fitriani, A., Kartika, R and **Erwin**, (2023), , Fermentation of Jackfruit Seeds (Artocarpus heterophyllusLam.) Produces Ethanol by Saccharomyces cerevisiae with Gas Chromatography (GC) Analysis, *Jurnal Riset Kefarmasian Indonesia*, 5 (3), 487-497. 8. Tullah, M.H., Marliana, M., dan **Erwin**, Antioxidant Activity Test of Methanol Extract of Ambon Banana Peel (Musa paradisiaca var. sapientum (L.) Kunt.) Using DPPH Method, (2023), *Jurnal Atomik*, 08(2) hal 54-59 9. **Erwin** and Usman, U. (2023), Bioactivity and Chemical Compounds of Merung Plants (*Coptosapelta tomentosa*), *Jurnal Sains dan Kesehatan*, 5 (3), 402-408

	10. Saleh, C., Sestiani, M., and **Erwin**, (2023), Activity of Alang-Alang (*Imperata cylindrica* (L.) P. Beauv) Leaves Methanol Extract as Anti-inflammatory, *Jurnal Sains dan Kesehatan*, 5 (3), 290-298. 11. Maulida, F.E.N., Alimuddin, and **Erwin**, (2023), , Extraction And Characterization Of Pectin From Lemon Lime Peel Waste (*Citrus amblycarpa*), *Jurnal Kimia Mulawarman*, 20 (2), 56-63 12. Erwin, Rahmadani, I.A., Alimuddin, and Ridhay, A. (2022), Penentuan Kadar Flavonoid Total Ekstrak Daun, Kulit Batang, Dan Batang Tumbuhan Afrika (*Vernonia amygdalina* Del), Ulin - J Hut Trop, (2),197-203 13. Widyaningrum, S.S., Kartika, R dan **Erwin**, (2022), Fermented Cassava Rubber (*Monihot carthagenensis* MÜII) Becomes Ethanol With Albumin Utilazation From Cork Fish (*Channastriata*) As A Source Of Nitrogen For Microbes, Jurnal Kimia Mulawarman, 19 (2), 66-68
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* *Member* *2021-present*

CURRICULUM VITAE

Name	*Prof. Dr. Subur P. Pasaribu, M.Si*		
Employee Identification Number (EIN).	*197209282000121001*		
Place and date of birth	*Parsoburan, September 28, 1972*		
Post	*Organic Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Analytical Chemistry* *Doctoral Degree: Analytical Chemistry*	*Universitas Sumatera Utara* *Universitas Sumatera Utara* *Universitas Sumatera Utara*	*1996* *2001* *2020*
Employment	*Lecturer*	*Faculty of Mathematics and natural sciences*	*2000-present*
Research and development projects over the last 5 years	1. *Genetic Diversity of Actinomycete Bacteria Producing Petase-Like Enzymes from East Kalimantan (Member, 2021)* 2. *From Industry to Industry: Utilization of Hazardous and Toxic Materials Waste as Catalyst Material for Renewable Energy Production Applications and Industrial Waste Processing (2023, Member)* 3. *Computational Study of O-Guaiocol Decomposition Using Density Functional Theory (DFT) Method (2023, Member)* 4. *From Industry to Industry: Utilization of Hazardous and Toxic Materials Waste as Catalyst Material for Renewable Energy Production Applications and Industrial Waste Processing (2024, Member)* 5. *Utilization of Chitosan from Exuviae Maggot (Hermetia illucens) as Edible Coating for Tomato Fruit (Lycopersicon esculentum) and Edible Film with the Addition of Honey as an Antibacterial (2024, Member*		

	6. *Hybrid System of Phase Change Materials- Photovoltaic/ Thermal (PCM- PV/ T) for Application in Humid Tropical Region: Numerical and Experimental Study (2025, Member)*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	*Method of Preparation and Composition of Cu^{2+} Ion-Selective Electrode (ISE) Membrane Based on Polyvinyl Chloride (PVC) with the Active Ingredient Ethylene diamine tetra acetic Acid (EDTA).* — *Patents* — *2021* *The Regional Action Plan for Greenhouse Gas Emission Reduction (RAD-GRK) in Kutai Kartanegara Regency* — *Proprietary rights* — *2022*
Important publications over the last 5 years	10. **Pasaribu,S.P.,** Ginting,M., Masmur,I., and Kaban, J., (2020), Silver Chloride Nanoparticles Embedded in Self-Healing Hydrogels with Biocompatible and Antibacterial Properties, *Journal of Molecular Liquids*, 310, 113263. 11. Abdullah,H., Siburian, R., **Pasaribu, S.P.,** and Panggabean, A.S., (2020),Visible-Light Driven Ni-Incorporated CdS Photocatalytic Activities for Azo-Bond Cleavages with Hydrogenation Reaction, *Chemistry Select*, 6 (9), 2041-2050. 12. Panggabean,A.S., Wirdhaningsih,S.P.P., and **Pasaribu, S.P.,** (2020), Preconcentration of Ion Ni (II) using Ca-Alginate Modified Resin with Dimethylglyoxime as a Filler Material of Column, *Jurnal Kimia Valensi*, 6 (1), 40-46. 13. Ginting,M., **Pasaribu,S.P.,** Masmur, I., and Kaban, J., (2020), Self-Healing Composite Hydrogel with Antibacterial and Reversible Restorability Conductive Properties, *RSC advances*, 10 (9), 5050-5057. 14. Robiansyah, M., **Pasaribu, S.P.**, and Panggabean, A.S., (2021), Comparison of Proximate Content Determination in Coal Using Conventional Gravimetric Method and Thermogravimetric Analysis, *Jurnal Kimia Saintek Dan Pendidikan*, 5 (2), 64-71. 15. Panggabean,A.S., Gripaldi,F., and **Pasaribu, S.P.,** (2021), Preparation and Characterization of Pb (II) Ion Selective Electrode based on Dithizone as Chemical Sensor, *Analytical and Bioanalytical Electrochemistry*, 13 (3), 383-392. 16. Panggabean, A.S., Malinda, R, **Pasaribu, S.P.,** and Wirawan, T., (2021), Verification of the Test Method for Determining Boron in NPK Blending Fertilizer Using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES), *AIP Conference Proceedings*, 2360 (1), 050006. 17. Avitri, A.R., **Pasaribu,S.P.,** and Astuti, W., (2022), Synthesis of Antibacterial Edible Film from Porang Tuber Glucomannan (Amorphophallus Muelleri) Incorporated with Ethanol Extract of Tiwai Onion Tuber (Eleutherine Bulbosa (Mill.) Urb.), *Jurnal Kimia Mulawarman*, 20 (1), 9-16. 18. Sujito, **Pasaribu, S.P.,** Wirawan, T., and Panggabean, A.S., (2022), Gas-Liquid Separator Modified on CV-AAS System for Determination of Total Hg in the Industrial Wastewater Samples, *Molekul*, 17 (3), 292–300

	19. Yuwono,B.B., Panggabean, A.S., and **Pasaribu, S.P.,** (2023), Evaluation of Hazardous and Toxic Waste Incineration Process Using an Incinerator at PT. PLKK Kutai Kartanegara, *Jurnal Review Pendidikan dan Pengajaran (JRPP)*, 6 (4), 1078-1085. 20. **Pasaribu,S.P.,** Masmur,I., Hestina, and Panggabean, A.S., (2023), Facile Synthesis of Self-Healing Polyacrylic Acid/TiO_2 Hybrid Hydrogel for Photocatalytic Hydrogenation of 4-Nitrophenol to 4-Aminophenol, *Materials Chemistry and Physics*, 305, 127875. 21. Shuwanto, H., Lie, J., Abdullah, H., **Pasaribu,S.P.,** (2023), Preparation of Fe-doped zinc oxysulfide (Fe-Zn(O,S)) with Surface Defects for the Hydrogen Evolution Reaction, *Jurnal Kimia Mulawarman*, 20 (2), 92-97. 22. Daniel, Masmur, I., Perangin-Angin, S., **Pasaribu, S. P.**, Magdaleni, A. R., Hestina, Sembiring, H. B., Pasaribu, A., and Sitinjak, E. M. (2023), Material Design Of Bimetallic Catalysts on Nanofibers for Highly Efficient Catalytic Reduction of 4-Nitrophenol, *ACS omega*, 8(19), 17234-17244. 23. Anwar, A., **Pasaribu, S.P.,** and Panggabean, A.S., (2024), Method Verification of Sulfur Dioxide (SO_2) Determination in Ambient Air Samples by Pararosaniline Method Using UV-Visible Spectrophotometer, *Jurnal Kimia Mulawarman*, *22*(1), 1 - 6. 24. Shuwanto, H., Lie, J., Abdullah, H., **Pasaribu, S. P.,** Masmur, I., Tiffany, Nur, N.S., and Kastario., (2024), Medical Waste Utilization as A Carbon Source Assisting Nanothorn $ZnIn_2S_4$ for Photocatalytic Hydrogen Evolution and Hydrogenation Reaction, *Journal of the Taiwan Institute of Chemical Engineers*, 159, 105284. 25. Shuwanto, H., Lie, J., Abdullah, H., **Pasaribu, S. P.,** and Masmur, I., (2025), Boosting Photocatalytic Hydrogen Generation and Photo-Destruction of Tetracycline by In-Situ Oxygen Vacancies $ZnIn_2S_4$, *Chemical Engineering Science*, 302, 120900. 26. Shuwanto, H., Lie, J., Abdullah, H., **Pasaribu, S. P.,** Masmur, I., Tiffany, Nur, N.S., and Kastario., (2025), Seaweed-Like Structure of a $NiCo_2O_4/NiFe_2O_4$/C Nanoelectrocatalyst: An Effective Strategy for Boosting Overall Water Splitting, *ACS Applied Energy Materials*, 8(7), 4321-4330.		
Activities in specialist bodies over the last 5 years	*Indonesian Chemical Society*	*Member*	*2011-present*
	Himpunan Kimia Indonesia (HKI)	*Member*	*2011-present*

CURRICULUM VITAE

Name	*Prof. Dr. Rudi Kartika, M.Si*		
Employee Identification Number (EIN).	*19670205 199403 1 002*		
Place and date of birth	*Medan, 05 February 1967*		
Post	*Biochemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry*	*Sumatera Utara University*	*1992*
	Master Degree Biotechnology	*Institiute Pertanian Bogor*	*1999*
	Doctoral Degree: Chemistry	*Sumatera Utara University*	*2018*
Employment	*Head of The Chemistry Laboratory*	*Faculty of Mathematics and Natural Sciences*	*2000-2001*
	Head of The Analytical Chemistry Laboratory	*Faculty of Mathematics and Natural Sciences*	*2001*
	Head of Integrated Laboratory	*Faculty of Mathematics and Natural Sciences*	*2007-2014*
	Head of The Biochemistry Laboratory	*Faculty of Mathematics and Natural Sciences*	*2014-2019*
	Lecturer	*Faculty of Teacher Training and Education*	*1994-1997*
	Lecturer		*2001-present*

	Faculty of Mathematics and Natural Sciences
Research and development projects over the last 5 years	1. *Potential of Bacteria from Bukit Pinang Samarinda Landfill for Hydrolytic Enzyme Producers as Bioremediation Agents for Organic Materials (2023, Member)*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	*Sebenaq River Cross Section Profile* *Proprieatary rights* *2024*
Important publications over the last 5 years	1. Utami, N. P., Astuti, W., and **Kartika, R**., (2020) Endophytic Bacteria Screening From The Leaves of Okra (*Abelmoschus esculentus* L. *Moench*) Which Produced Lipase, *Jurnal Atomik*, 5(2), 73-75. 2. Corebima, D. D., **Kartika, R**., and Hindryawati, N., (2020) Corelation Of Pb Metal Ion Concentration To Protein Concentration In Coopah Morals (*Gafrarium tumidium*) Taken On The Bontang Beach, East Kalimantan, *Jurnal Atomik*, 5(2), 87-93. 3. Gunawan, Y., Yusuf, B., **Kartika, R**., (2020) Mercury Exposure in the Scalp Hair of Malahing Residents, Bontang, East Kalimantan, *Agrociencia*, 54(2), 31-39. 4. Okawanti, R. V., Astuti, W., and **Kartika, R**., (2020) The Ethanol Making Out Of Cempedak Seeds (*Artocarpus Champedan*) With Tofu Dreg Addition As Fermentation Nutrition, *International Journal of Scientific & Technology Research*, 9(2), 622-625. 5. Sudrajat, Lariman, **Kartika, R**., and Prahastika, W., (2021) Microelement Analysis In Edible Muscle Of Oreochromis Niloticus From Two Different Age Of Reclaimed Post Coal Mining Ponds East Kalimantan Using Sem-Edx, *International Journal of Scientific & Technology Research*, 10(6) 1-6. 6. Khairunnisa, D., Astuti, W., and **Kartika, R**., (2021) Effect Of Metal Ions On The Activity Of Lipase Basic Extract From Cempedak (*Artocarpus integer* (Thunb.) Merr.) Tree Sprout, *Prosiding Seminar Nasional Kimia,* 42-45. 7. Ulfa, Y. S., **Kartika, R**., and Saleh, C., (2021) Phytochemical Test And Antibacterial Activity Of Merung Leaves (*Coptosapelta tomentosa*) Against *Staphylococcus aureus* and *Propionibacterium acnes* Bacteries, *Jurnal Atomik*, 6(1), 35-38. 8. Sulistiyawati, R. R., Saleh, C., and **Kartika, R**., (2021) Phytochemical Test And Stability Test Of Coloring Materials From Ketapang (*Terminalia catappa* Linn.) Leaves Extracts, *Jurnal Atomik*, 6(2), 60-63. 9. Asmawati, N., **Kartika, R**., and Yusuf, B., (2022) Analysis Of Water Quality And Health Complaints Of Students Using Post-Mining Pond Water In Pondok Pesantren Darul Fatta Loa Buah, Samarinda City, *Prosidng Seminar Nasional Kimia*, 86-90. 10. Setiawan, A. D., **Kartika, R**., and Gunawan, R., (2022) Adsorption of Cu(II) Ion in Aqueous Solution by *Pseudomonas* sp. Biosorbent, *AIP Conference Proceedings*, 1-9. 11. Priatna, H., **Kartika, R**., and Hindryawati, N., (2022) Corelation Of Pb Metal Ion Concentration To Protein Concentration In Ground Scale (Anadara granosa) Taken On The Beach Of Muara Badak East Kalimantan, *Prosiding Seminar Nasional Kimia*, 36-43. 12. Riki, R., **Kartika, R**., and Gunawan, R., (2022) Biosorption of Pb2+ ion by bacterium Pseudomonas sp., *AIP Conference Proceedings*, 1-7.

	13. **Kartika, R**., Alsultany, F. H., Jalil, A. T., Mahmoud, M. Z., Fenjan, M. N., and Rajabzadeh, H., (2022) Ca12O12 nanocluster as highly sensitive material for the detection of hazardous mustard gas: Density-functional theory, *Inorganic Chemistry Communications*, 137, 109174. 14. Anugerah, D., **Kartika, R**., and Gunawan, R., (2022) Method verification and absorption of Cr6+ ion by the bacterium *Pseudomonas* sp, *AIP Conference Proceedings*, 1-7. 15. Widyaningrum, S. S., **Kartika, R**., and Erwin., (2022) Fermented Cassava Rubber (Moniho Fermented Cassava Rubber (*Monihot carthagenensi*s MÜII) to Ethanol by Utilizing Albumin from Cork Fish (*Channa striata*) as a Nitrogen Source for Microbes, *Jurnal Atomik*, 19(2), 66-68. 16. **Kartika, R**., Ritonga, A. H., Sulastri, L., Nurnila, S., and Simanjuntak, D. P., (2023) Biosorption of Hexavalent Chromium Cr(VI) using Microalgae Scenedesmus sp as Environmental Bioindicator, *International Journal of Technology*, 14(4), 791-799. 17. Simanjuntak, T., **Kartika, R**., and Yusuf, B. (2024) Analysis of Water Quality and Water Quality Status of Belayan River in Kenohan Sub-District, Kutai Kartanegara District, *IOP Conference Series:Earth and Environmental Science*, 1493. 18. Ricard, R. J., Gunawan, R., and **Kartika, R**., (2025) Study of water quality and water quality status using pollutant index in Sebenaq River, Mahakam Ulu Regency, East Kalimantan, *Edelweis Applied Science and Technology*, 9(2), 2005-20021
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* *Member* *2021-present*

CURRICULUM VITAE

Name	*Prof. Dr. Teguh Wirawan, M.Si*		
Employee Identification Number (EIN).	*196902201994031001*		
Place and date of birth	*Ngawi, February 20, 1969*		
Post	*Analytical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Analytical Chemistry* *Doctoral Degree: Analytical Chemistry*	*Brawijaya University* *Gadjah Mada University* *Airlangga University*	*1992* *2002* *2018*
Employment	*Lecturer* *Lecturer*	*Faculty of Education and Science* *Faculty of Mathematics and natural sciences*	*1994-2002* *2002-present*
Research and development projects over the last 5 years	1. *Utilization of Lai Fruit Peel (Durio Kutejensis (Hassk.) Becc.) as a Textile Dye Adsorbent for Household Industry Wastewater from the Samarinda Seberang Handwoven Sarung (2021, Leader)* 2. *Modification and Characterization of Titania Catalyst Supported by Mesoporous Carbon from Fish Bones for Styrene Oxidation with Hydrogen Peroxide as Oxidant (2021, Member)* 3. *Immobilization of Fulvic Acid on Fe_3O_4 Nanoparticles and Its Application as a Selective Adsorbent for Heavy Metals and Dye from Liquid Waste of the Samarinda Weaving Industry (2021, Member)*		

	4. *Synthesis of Magnetic-Modified Coffee Grounds Waste from Cafes as an Adsorbent for Dyes and Heavy Metals (2021, Leader)* 5. *Modification and Characterization of Titania Catalyst Supported by Mesoporous Carbon from Fish Bones for Styrene Oxidation with Hydrogen Peroxide as Oxidant (2022, Member)* 6. *Fabrication and Characterization of Calcium Sulfate Hemihydrate from Fish Bone Carbon to Support Titania Catalyst (2023, Member)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights	*The method of making fish bone carbon as a support catalyst for titania in styrene oxidation*	*Patents*	*2024*
	The process of making magnetite nanoparticle adsorbent coated with fulvic acid (Fe_3O_4-AF).	*Patents*	*2024*
	Adsorption of Textile Dyes from Wastewater of Samarinda Seberang Handwoven Sarung Industry Using Lai Fruit Peel Powder (Durio Kutejensis (Hassk.) Becc).	*Proprietary rights*	*2024*
	Adsorption of Cationic Ions and Rhodamine B using Humic Acid from Peat Soil of Samboja, East Kalimantan.	*Proprietary rights*	*2024*
	Electrodecolorization of Liquid Waste from the Handwoven Sarung Industry in Samarinda Using PbO_2/Fe Electrodes.	*Proprietary rights*	*2024*
Important publications over the last 5 years	1. Nurhadi, M., Kusumawardani, R., **Wirawan, T**., Sumari, S., Lai, S.Y., and Nur H., (2021), Catalytic Performance of TiO_2–Carbon Mesoporous-Derived from Fish Bones in Styrene Oxidation with Aqueous Hydrogen Peroxide as an Oxidant, *Bulletin of Chemical Reaction Engineering & Catalysis*, 16 (1), 88-96 2. Nurfarizha, H., **Wirawan, T**., and Widodo, N.T., (2022), Adsorpsi Fenol oleh Arang Aktif Ampas Kopi Teraktivasi Fisik dan kimia, *Jurnal Atomik*, 06 (2), 111-18 3. Fidayana, R.A., **Wirawan, T**., and Panggabean, A.S., (2022), Validasi Metode Elektroda Selektif Ion (ESI) di PT.Pupuk Kalimantantimur Untuk Penentuan Kadar Ammonia (NH_3) di Udara Ambien, *Jurnal Kimia Mulawarman*, 19 (1), 1-7 4. Kusumawardani, R., Nurhadi, M., **Wirawan, T**., Prasetyo, A., Agusti, N.N., Lai, S.Y.,and Nur H,n (2022), Kinetic Study of Styrene Oxidation over Titania Catalyst Supported on Sulfonated Fish Bone-derived Carbon, *Bulletin of Chemical Reaction Engineering & Catalysis*, 17 (1), 194-204 5. Soegianto, A., Widyanita, A., Afandi, M., **Wirawan, T.**, and Mohamed, R.M.S.R., (2022), Cadmium and zinc accumulation and depuration in		

	tilapia (Oreochromis niloticus) tissues following sub-lethal exposure, *Bulletin of Environmental Contamination and Toxicology,* https://doi.org/10.1007/s00128-022-03504-8 6. Sujito, Pasaribu, S.P., **Wirawan, T**., and Panggabean, A.S., (2022), Gas-Liquid Separator Modified on CV-AAS System for Determination of Total Hg in the Industrial Wastewater Samples, *MOLEKUL,* 17 (3), 292–300 7. **Wirawan, T**., Hindryawati, Noor, and Widodo, NT., (2022), Synthesis of magnetic coffee grounds from cafe as a dye adsorbent, *AIP Conference Proceedings* 2668, 030013 8. Hindryawati, Noor., **Wirawan, T**., Koesnarpadi, S., Daniel, Ramadhannur, A.R., Nurhadi, M., Santoso, U.T., Sulistyaningsih, T., and Masykur, A., (2022), Methylene Blue Degradation Using Fe_3O_4-ZnO/WO_3 Catalyst, *AIP Conference Proceedings*. 2668, 030004-1–030004-7 (2022) 9. Olliviani, N., **Wirawan, T**., and Sitorus, S., (2023), Adsorpsi Zat Warna Tekstil Ungu Dari Air Limbah Industri Rumah Tangga Sarung Tenun Samarinda Seberang Dengan Menggunakan Serbuk Kulit Buah Lai (Durio Kutejensis (Hassk.) Becc.), *Jurnal Atomik*, 08 (2), 43-49 10. **Wirawan, T**., Wiradikara Az. I, and Hindryawati, N., (2023), Adsorpsi Metilen Biru Menggunakan Arang Aktif dari Tandan Kosong Kelapa Sawit (TKKS), *Jurnal Kimia Mulawarman*, 21 (1), 8-17 11. Syaima, H., Hindryawati, Hiyahara, I,A., **Wirawan, T**., Arief, M.A., Widodo, N.T., Ahmad, A.A., and Maniam, G.P., (2023), Green Synthesis of Silver Nanoparticles using Ketapang Leaf Extract (*Terminalia Catappa* L.) Assisted by Ultrasound for Photodegradation of Methylene Blue, *Jurnal Bahan Alam Terbarukan*, 12 (2), 166–173 12. **Wirawan, T**., Nurhadi, M., Rahmadani, A., Prananto, Y.P., Zhu, Z., Lai, S.Y., and Nur, H., (2023), One Pot Synthesis of Calcium Sulfate Hemihydrate from Fishbone-derived Carbon, *Bulletin of Chemical Reaction Engineering & Catalysis*, 18 (3), 398-406 13. Hindryawati, N., Ramadhani, W, **Wirawan, T**, and Maniam, G.P., (2023), Sonocatalytic degradation of methylene blue using WO_3-ZnO composite, *AIP Conference Proceedings* 2431, 050004 14. Nurhadi, M., Kusumawardhani, R., **Wirawan, T**., Lai, S.Y., and Nur, H., (2023), Synergistic Ti-Fe Oxides on Fishbone-Derived Carbon Sulfonate: Enhanced Styrene Oxidation Catalysis, *Indones. J. Chem*. 23 (6), 1514-1524 15. Menono, F.F., **Wirawan, T**., and Panggabean, A.S., (2024), Elektrodelokalisasi Zat Warna Limbah Cair Sarung Tenun Samarinda Menggunakan Elektroda PbO_2/Cu, *Jurnal Atomik*, 9 (1), 34-43 16. Sari, R.A.K., **Wirawan, T**., and Sitorus, S., (2024), Adsorpsi Zat Warna Dari Air Limbah Industri Rumah Tangga Sarung Tenun Samarinda Seberang Dengan Menggunakan Adsorben Dari Arang Aktif Serbuk Kulit Buah (*Durio Kutejensis* (Hassk.) Becc.), *Jurnal Atomik*, 9 (1), 1-8 17. Koesnarpadi, S., **Wirawan, T**., Nurhadi, M., Wirhanuddin,W., Prananto, Y.P., Nazarudin, N., Degirmenci, V., Lai, S.Y., and Nur, H., (2024), Oxidation of Styrene to Benzaldehyde Using Environmentally Friendly Calcium Sulfate Hemihydrate-Supported Titania Catalysts, *Bulletin of Chemical Reaction Engineering & Catalysis*, 19 (4), 622-634 18. Rachim, A.S., Subagyono, R.R.D.J.N., and **Wirawan, T**., (2024), Ekstraksi Ion Cd^{2+} Dengan Ditizon Sebagai Zat Pembawa Dan Span-80 Sebagai Surfaktan Menggunakan Teknik Emulsi Membran Cair, *Jurnal Kimia Mulawarman*, 21 (2), 93-102 19. Sam, R.F., **Wirawan, T**., and Aziz, A., (2024), Adsorpsi Zat Warna Rhodamine B Menggunakan Serbuk Kulit Buah Lai (*Durio Kutejensis* (Hassk.) Becc.) Sebagai Adsorben, *Jurnal Atomik*, 9 (2), 96-104

Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)*	*Member*	*2021-present*

CURRICULUM VITAE

Name	*Prof. Dr. Soerja Koesnarpadi, M.Si*		
Employee Identification Number (EIN).	*197409242000121001*		
Place and date of birth	*Wonogiri, September 24, 1974*		
Post	*Analytical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Chemistry* *Doctoral Degree: Analytical Chemistry*	*Diponegoro University* *Gadjah Mada University* *Gadjah Mada University*	*1999* *2002* *2018*
Employment	*Lecturer*	*Faculty of Mathematics and natural sciences*	*2000-present*
Research and development projects over the last 5 years	1. *Fabrication And Characterization Of Calcium Sulfate Hemihydrate From Fish Bone Carbon For Titania Catalyst Support (2024, Member)* 2. *Synthesis And Characterization Of L-Cysteine Modified Silver Nanoparticles Using $NaBH_4$ Reductor As Analysis Method Development (2024, Member)* 3. *Development of PVA Cross-Linked Chitosan/Alginate/Zeolite Clinoptilolite Microcomposite Hydrogel for Adsorbent Application of Pharmaceutical Residues in Waters (2023, Member)* 4. *Preconcentration Of Cu(Ii) Ions Based On Magnetic-Alginate Microcapsules (MNPS-ALG) (2023, Member)* 5. *Functionalization of Humic Acid on Fe_3O_4 Nanoparticles and Its Application for Degrading Synthetic Dyes and Heavy Metals. (2022, Member).* 6. *Immobilization of Fulvic Acid on Fe_3O_4 Nanoparticles and Its Application as a Selective Adsorbent for Heavy Metals and Dye from Liquid Waste of the Samarinda Weaving Industry (2021, Leader).* 7. *Hybrid Extract of Phyllanthus niruri Linn. with TiO_2–Chitosan Composite as Sunscreen and Antioxidant Agent. (2021, Member)*		

	8. *Advanced Oxidation Process in Wastewater Treatment Using WO3 Composite Material Through Sonocatalytic (2021, Member)* 9. *Synthesis and Characterization of Chitosan Nanoparticles from Clam Shells (Cerithidea obtuse) as Adsorbents of Cd(II) Metal Ions (2020, Leader).* 10. *Synthesis of Chitosan-Magnetite naoparrticles and Its Application for drug of Antiabcteria (2019, Leader)*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	*Book's Dawah for Protecting and Caring of Earth* — *Proprietary rights* — *2024* *Synthesis of Fulvic Acid-Coated Magnetite Nanoparticle Adsorbent (Fe_3O_4–FA)* — *Patents* — *2022* *Tutorial for Producing HandSanitizer* — *Proprietary rights* — *2021* *Video of Producing Liquid Organic Fertilizer* — *Proprietary rights* — *2021* *What is Eco-Enzyme and Why to Produce?* — *Proprietary rights* — *2021* *Synthesis of Humic Acids-Coated Magnetite Nanoparticle Adsorbent* — *Patents* — *2019* *Method for Producing adsorbent of magnetite nanoparticle coated humic acids (*Fe_3O_4/HA *)* — *Patents* — *2018*
Important publications over the last 5 years	1. **Koesnarpadi. S,** Wirawan. T., Nurhadi. M., Wirhanuddin, Prananto. Y.P., Nazarudin, Degirmenci. V., Lai. S.Y., Nur. H., (2024), Oxidation of Styrene to Benzaldehyde Using Environmentally Friendly Calcium Sulfate Hemihydrate-Supported Titania Catalysts, *Bulletin of Chemical Reaction Engineering and Catalysis*, Vol 9, Issues 4, 622-634 2. **Koesnarpadi, S**., Anuar, H., Widodo, N.T., Hastuti, B., Hadi, S., *(2024),* Chitosan Crosslinking from Clam Shells (*Cerithidea obtusa*) with Tripolyphosphate for Cadmium (II) Adsorption, *JKPK (Jurnal Kimia dan Pendidikan Kimia)*, Vol 9 No. 2, 185-197 3. Wulandari, D.D., **Koesnarpadi, S.**, Hindryawati, N., (2024), Adsorption of Methylene Blue using Composite Fe3O4-Activated Charcoal Cassava Skin (Manihot esculenta C.), *Jurnal Kimia Mulawarman*, Vol 21 No 2, 103-115 4. Lianasari. I.Y., Panggabean. A.S., Yusuf. B., **Koesnarpadi. S.,** (2024). Analytical Performance of Magnetite-Alginate Microcapsules (MNPs-ALG) for Cu(II) Metal Ion Analysis and Its Application to Natural Samples, *KOVALEN*, Vol 10 No. 1, 20-29

	5. **Koesnarpadi**, S., Widodo, N.T., Maulana, A., (2022) Humic Acid-Modified Magnetite Nanoparticles for Removing $[AuCl_4]^-$ in Aqueous Solutions, *Jurnal Kimia Sains dan Aplikasi (JKSA)*, Vol 25 No. 1, 27-33 6. Hindryawati, N., Maniam, G.P., Pratama, I.R., Gunawan, R., **Koesnarpadi, S.,** (2022) ,Study of Sonocatalytic Activity ZnO-WO3 Composite on Degradation Phenol in Aqueous Solution *Jurnal Bahan Alam Terbarukan* , Vol 11 No 1 7. Hindryawati, N., Wirawan, T., **Koesnarpadi**, S., Daniel, Rahmi, A., Nurhadi, M., Santoso, U.T., Sulistyaningsih, T., Masykur, A., (2022), Methylene blue degradation using Fe3O4-ZnO/WO3 catalyst, *AIP Conference Proceedings, 2668, 030012* 8. Darmawan, J., **Koesnarpadi** S., Hindryawati, N., (2022), Fulvic acids coated magnetite nanoparticles for methylene blue adsorption, *AIP Conference Proceedings, 2668, 030012* 9. **Koesnarpadi, S**., Fitriani, D., Widodo, N.T., Wirawan, T., Marliana, E., (2022). Preparation of fulvic acids-functionalized magnetite for lead (II) adsorption in aqueous solutions, *AIP Conference Proceedings, 2534* 10. Santosa, S.J., Krisbiantoro, P.A., Yuniarti, M., Kustomo, **Koesnarpadi, S.,** (2021), Magnetically separable humic acid-functionalized magnetite for reductive adsorption of tetrachloroaurate(III) ion in aqueous solution, *Environment Technology Monitoring Management, Vol 21, 00029-5, 2215-1532* 11. Dirgayanti, D.S., **Koesnarpadi**, S., Hindryawati, N., (2021), Synthesis and characterization of Fe_3O_4-Activated Carbon and it's application to adsorb methylene blue, *Earth and Environmental Science IOP Publising : 623 - 012070* 12. Oktaviana, D,A, **Koesnarpadi**, S., Widodo, N.Y., (2021), Preparation Of Magnetite-Fulvic Acid (Fe3o4-Fa) From Peat Soil And Application To Adsorb Rhodamine-B, *Jurnal Kimia Mulawarnan*, Vol 18, No. 2 13. **Koesnarpadi**, S., Astuti, W., Lianasari, I.Y., (2020), Nanoparticles Fe_3O_4 modified chitosan and its antibacterial applications, *AIP Conference Proceedings,* 2237, *020022* 14. Wirawan, T., **Koesnarpadi**, S., Widodo, T.W., (2020), Study of Rhodamine B adsorption onto activated carbon from spent coffee grounds *AIP Conference Proceedings,* 2237, *020022*
Activities in specialist bodies over the last 5 years	*Organisation* — *Role* — *Period* *The Indonesian Chemical Society* — *Member* — *2018 - 30 April 2027* *The Indonesian Nano Society.* — *Member* — *2020- Present*

CURRICULUM VITAE

Name	*Dr. Saibun Sitorus, M.Si*		
Employee Identification Number (EIN).	*196610101991021004*		
Place and date of birth	*Rianiate, October 10, 1966*		
Post	*Organic Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry*	*Universitas Negeri Medan*	*1989*
	Master Degree : Inorganic Chemistry	*Universitas Hasanuddin*	*1994*
	Doctoral Degree: Physical Chemistry	*Universitas Airlangga*	*2000*
Employment	*Lecturer*	*Faculty of Education and Science*	*1991-2001*
	Lecturer	*Faculty of Mathematics and natural sciences*	*2001-present*
Research and development projects over the last 5 years	1. *Making Surfactants and Biodiesel from Castor Oil (Jatropa Curcas L.) by Esterification (2023-Member)* 2. *Utilization of Chitosan from Exuviae Maggot (Hermetia illucens) as Edible Coating for Tomato Fruit (Lycopersicon esculentum) and Edible Film with the Addition of Honey as an Antibacterial (2024, Member)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights			

Important publications over the last 5 years	1. **Saibun Sitorus**, Yerwanto Ilang, Rudy Agung Nugroho (2020), Analisis kadar logam Pb, Cd, Cu, As pada air, sedimen dan bivalvia di Pesisir Teluk Balikpapan, *Dinamika Lingkungan Indonesia*, 7(2), 89-94 2. Evi Mashunah, Erwin, **Saibun Sitorus**, (2020), Isolasi dan Identifikasi Steroid dari Ekstrak n-Heksana Daun Afrikam (*Vernonia amygdalina Del.*), *KOVALEN: Jurnal Riset Kimia*, 6(1), 2020: 18-22 3. Dedy Prasetyo, **Saibun Sitorus**, dan Rahmat Gunawan, (2020), Penggunaan Spektrofotometer UV Dan HPLC Pada Analisis Kandungan Kafein Kopi Arabika dan Robusta, *Jurnal Atomik*, 05(2), 76-80 4. Muhamad Yulianto, **Saibun Sitorus**, dan Rahmat Gunawan, (2020), Penurunan Konsentrasi Fenol Pada Air Laut Balikpapan Yang Tercemar Minyak Menggunakan Metode Adsorpsi, *Jurnal Atomik*, 05(1), 6-10 5. Muhammad Harjan Wiranata, **Saibun Sitorus** dan Nanang Tri Widodo, (2020), Pemanfaatan Serbuk Kiambang (*Salvinia molesta*) Sebagai Adsorben Fe(II) dan Mn(II), *Jurnal Atomik*, 05(1), 46-49 6. Alfian Irviansyah, **Saibun Sitorus**, Aman Sentosa Panggabean, (2020), Identifikasi Batuan Paf, Naf Dan Uncertain Dengan Menggunakan Metode NTAPP Pada Area PT. Trubaindo Coal Mining, Melak-Kalimantan Timur, *Indo. J. Chem. Res*, 7(2), 120-126 7. Nur Arissah, **Saibun Sitorus**, Dan Rahmat Gunawan, (2020), Pemanfaatan Biji Wanyi (Mangifera Caesia Jack.) Dalam Pembuatan Etanol Secara Hidrolisis Enzimatis Dan Fermentasi Menggunakan *Saccharomyces Cerevisiae, Jurnal Atomik,* 05(2), 119-122 8. Muhamad Wahyudin, Lambang Subagiyo, **Saibun Sitorus**, (2021), Pengaruh Volume Tampung Kolam Settling pond Terhadap Pengelolaan Air Limbah Pertambangan Batubara di PT. XXX, Kalimantan Timur, *Media Ilmiah Teknik Lingkungan (MITL)*, 6(1), 01–10 9. Linda Agustina, **Saibun Sitorus**, Ika Yekti Lianasari, (2021), Pemanfaatan Arang Aktif Dari Limbah Serbuk Gergaji Kayu Bangkirai (Shorea Laevifolia Eudert) Sebagai Adsorben Zat Warna Rhodamin B, *Jurnal Atomik*, 6(2), 119-123 10. Victoria, S., Sitorus, S., dan **Panggabean, A.S**. (2022) Parameter Verification of Anionic Surfactants Determination in Wastewater with MBAS Method using UV-Vis Spectrophotometer, *Jurnal Atomik*, 07(2), 15-19 11. Aries Oman, **Saibun Sitorus**, Chairul Saleh, (2022), Pemanfaatan Larutan Natrium Klorida (NaCl) Untuk Menurunkan Kadar Sianida Pada Rebung Bambu Kuning (*Bambusa vulgaris Schrad*. Ex J.C) Secara Spektrofotometri UV-Vis, *Jurnal Atomik*, 07(1), 22-29 12. Muhammad Wahyugo Iswara, **Saibun Sitorus**, dan Rahmat Gunawan, (2022), Adsorpsi Senyawa Asam Benzoat Menggunakan Karbon Aktif Batang Pisang (*Musa Paradisiaca*. L), *Jurnal Atomik*, 07(1), 35-42 13. Stefanie Victoria, **Saibun Sitorus**, dan Aman Sentosa Panggabean, (2022), Verifikasi Parameter Pengujian Surfaktan Anionik Dalam Air Limbah Dengan Metode Mbas Menggunakan Spektrofotometer UV-Vis, *Jurnal Atomik*, 07(2), 15-19 14. Nadira Oliviani, Teguh Wirawan*, **Saibun Sitorus** (2023), Adsorpsi Zat Warna Tekstil Ungu Dari Air Limbah Industri Rumah Tangga Sarung Tenun Samarinda Seberang Dengan Menggunakan Serbuk Kulit Buah Lai (Durio Kutejensis (Hassk.) Becc.)*, Jurnal Atomik,* 08(2), 43-49. 15. **Saibun Sitorus**, and A. Khafifah Dwi Rachmat, (2023), Feasibility study of concentration of chemical and physical parameters in excavated water coal mining as a cage fishing destination *JURNAL PENDIDIKAN KIMIA (JPKIM)*, 15 (3), 221-228 16. Nutfahryza Erzha, **Saibun Sitorus**, Aman Sentosa Panggabean, (2023), Pemanfaatan Limbah Non B3 Fly Ash Dan Bottom Ash Dari Kegiatan Pltu Sebagai Subtitusi Bahan Baku Pembuatan Paving Block Dan Batako, *Jurnal Atomik*, 9(2), 128-136

	17. Putri Faizah A, Daniel, **Saibun Sitorus**, Agustina Rahayu Magdalena, (2024), The Anti-hyperuricemic Activity Test Of Ethanol Extract Soursop Leaves (Annona Muricata L.) and Analysis Compound Composition of the Contained, *Jurnal Kimia Mulawarman*, 21(2), 67-75 18. Amelia Putri Cahyani, **Saibun Sitorus**, Djihan Ryn Pratiwi, (2024), Analisis Kadar Nitrogen (N) Total Dan Besi (Fe) pada Penambahan Bioaktivator Em4 Terhadap Kompos (Sampah Kacang Panjang-Kulit Kacang Kedelai), Jurnal Kimia Mulawarman, 22(1), 32-38 19. Riska Alif Kartika Sari, Teguh Wirawan, **Saibun Sitorus**, (2024), Adsorpsi Zat Warna Dari Air Limbah Industri Rumah Tangga Sarung Tenun Samarinda Seberang Dengan Menggunakan Adsorben Dari Arang Aktif Serbuk Kulit Buah Lai (*Durio Kutejensis* (Hassk.) Becc.), *Jurnal Atomik*, 9(1), 1-8 20. Helda Syahfari, Rifki Ihsan Saputra, Zikri Azham, and Saibun Sitorus, (2025), Antibacterial Activity of Ethanol Extract of Gotu Kola (*Centella asiatica* L.) Leaves against Pseudomonas solanacearum: Phytochemical Study and Bioactivity Testing, *Asian Journal of Agricultural and Horticultural Research*, 12(1), 1-9
Activities in specialist bodies over the last 5 years	

CURRICULUM VITAE

Name	*Drs. Alimuddin, M.Si*		
Employee Identification Number (EIN).	*196508071993031002*		
Place and date of birth	*Bontosunggu, August 7, 1965*		
Post	*Analytical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Chemistry* *Doctoral Degree:*	*Hasanudin University* *Airlangga University* *-*	*1992* *1998* *-*
Employment	*Lecturer* *Lecturer*	*Faculty of Education and Science* *Faculty of Mathematics and natural sciences*	*2008-2001* *2001-present*
Research and development projects over the last 5 years	1. *Synthesis and Characterization of Silver Nanoparticle Modified with l-cysteine using $NaBH_4$ as Reductor for Development of Analysis Method (Member, 2024)* 2. *Sintesis Nanopartikel Perak Termodifikasi L-Cystein Sebagai Sensor Chloramphenicol Secara Colorimetry (2022, Member)* 3. *Prakonsentrasi Ion Cu (Ii) Berbasis Microkapsul Magnetik-Alginat (MNPS-ALG) (2023, Leader)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights	-		

Important publications over the last 5 years	1. Erwin, Tonapa, Zenthise Gandi; **Alimuddin**, (2020), Toxicity Assay of *Baccaurea motleyana Mull*. Arg. Wood Extracts (Rambai) and Chemical Compounds Evaluation for the Most Active Fraction, *Research Journal of Pharmacy and Technology,* 13(11) 2. Ayu Wanti Ashari, **Alimuddin**, dan Saibun Sitorus, (2020), Pengaruh Variasi Waktu Terhadap Xilena Menggunakan Karbon Aktif Dari Limbah Batang Pisang (*Musa Paradisiaca* L), *Jurnal Atomik*, 05(2), 62-66 3. Yasrin, **Alimuddin**, dan Aman Sentosa Panggabean, (2020), Pembuatan Silika Gel Dari Abu Daun Bambu Petung (*Dendrocalamus Asper* (Schult. F) Backer Ex Heyne) Dan Aplikasinya Untuk Adsorpsi Ion Cd (II), *Jurnal Atomik*, 05(2), 107-113 4. Akhmad Fauzi, **Alimuddin** dan Nanang Tri Widodo, (2020), Modifikasi Adsorben Silika Dari Abu Sekam Padi Dengan Kitosan Untuk Adsorpsi Ion Mangan (Total), *Jurnal Atomik*, 05(2), 81-86 5. Yahya Said, **Alimuddin**, Rahmat Gunawa, (2021), Penentuan Kualitas Air Sumur Bor Menggunakan Filter Pengadsorpsi Dari Abu Sekam, *Jurnal Atomik,* 06(1), 6-12 6. Erwin, Djihan Ryn Pratiwi, Iwan Saputra, Alimuddin, (2021), Antioxidant Assay with Scavenging DPPH Radical of *Artocarpus anisophyllus* Miq Stem bark extracts and Chemical compositions and Toxicity Evaluation for the Most Active Fraction, *Research Journal of Pharmacy and Technology*, 14(5) 7. Diah Kusumaningsih, **Alimuddin**, Erwin, (2020), Analisis Rhodamin B Pada Saus Tomat Yang Beredar Di Samarinda Menggunakan Spektrofotometer UV-Vis, *Jurnal Kimia Mulawarman*, 17(2), 52-55 8. Hayon, L.L., **Alimuddin**, and Panggabean, A.S. (2021) Validasi Metode Penentuan Cd (Ii) Dalam Pupuk Npk Secara Spektrofotometri Serapan Atom Nyala Di Laboratorium Uji Kualitas, PT. Pupuk Kalimantan Timur, *Jurnal Kimia Mulawarman*, 19(1), 8-16 9. Rizky, M., **Alimuddin**, and Panggabean, A.S. (2022) Pembuatan Silika Gel Dari Abu Ampas Tebu (*Saccharum Officinarum*) dan Aplikasinya Untuk Adsorpsi Ion Cu(II), *Jurnal Kimia Mulawarman*, 20(1), 23-30 10. Erwin, Rahmadani, I.A., **Alimuddin**, and Ridhay, A. (2022), Penentuan Kadar Flavonoid Total Ekstrak Daun, Kulit Batang, Dan Batang Tumbuhan Afrika (*Vernonia amygdalina Del*), *Ulin - J Hut Trop*, (2),197-203 11. Maulida, F.E.N., **Alimuddin**, and Erwin, (2023), Ekstraksi Dan Karakterisasi Pektin Dari Limbah Kulit Jeruk Limau (*Citrus amblycarpa*), *Jurnal Kimia Mulawarman*, 20 (2), 56-63 12. Erwin, Maulina, S., Bohari, Usman, U., **Alimuddin**, and Erwin, N.A. (2024), Toxicity Test, Antioxidant Activity, and Determination of Total Flavonoid Content (TFC) of N-Hexane andEthyl Acetate Fraction from Uncaria Nervosa Elmer (Bajakah) Root Wood, *International Journal of Pharmaceutical and Bio-Medical Science*, 04(08), 699-70
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* *Member* *2023-present*

CURRICULUM VITAE

Name	*Dr. Abdul Aziz, M.Si*		
Employee Identification Number (EIN).	*196711101993031006*		
Place and date of birth	*Bulukumba, 10th November 1967*		
Post	*Physical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Chemistry* *Doctoral Degree: Physical Chemistry*	*Hasanuddin University* *Bandung Institute of Technology* *Bandung Institute of Technology*	*1991* *2006* *2022*
Employment	*Lecturer*	*Faculty of Education and Teacher Training* *Faculty of Mathematics and natural sciences*	*1993-2001* *2002-present*
Research and development projects over the last 5 years	*1.*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights			

Important publications over the last 5 years	1. Kumala, W.P., Erwin, Kuncoro, H., **Aziz, A,** Usman, Purba, R., Masruhim, M.A., Anti-Gastric Ulcer Activity of Red Cabbage Ethanol Extract (*Brassica Oleracea* Var. Capitata L.), *Int. J. of Pharmaceutical and Bio-Medical Sci.* 2025, Vol. 05 Issue 03, 169-162. DOI: https://doi.org/10.47191/ijpbms/v5-i3-02 2. Erwin, Febrianti, I., Subur P. Pasaribu, S.P., **Aziz, A.**, Determination of Total Flavonoid Content (TFC) and Antioxidant Activity of Insulin Plants (*Smallanthus sonchifolius*), *J. Sains Kes*. 2024. Vol 6. No 4. 570-575. **DOI**: https://doi.org/10.25026/jsk.v6i4.2360 3. **Aziz, A**., Ndruru,S.T.C.L., Bundjali, B., Wahyuningrum, D., Arcana, I.M., Synthesis of Polymer Electrolyte Membranes from Sulfonated Poly(Arylene Ether Ketones) with Partial Substitution of Carboxylate Acid Group, *ChemistrySelect,* 2022, Vol.*7*, No. 4. 1-11.
Activities in specialist bodies over the last 5 years	*The Indonesian Chemical Society* *Member* *2018 - 30 April 2027*

CURRICULUM VITAE

Name	*Dr. Chairul Saleh, M.Si*		
Employee Identification Number (EIN).	*197303312000121001*		
Place and date of birth	*Tanjung Balai, March, 31, 1973*		
Post	*Organic Chemistry*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Organic Chemistry* *Doctoral Degree: Organic Chemistry*	*North Sumatra University* *Padjadjaran University* *North Sumatra University*	*1998* *2002* *2007*
Employment	*Lecturer*	*Faculty of Mathematics and natural sciences*	*2008-present*
Research and development projects over the last 5 years	1. *Utilization of Lai Fruit Peel (Durio Kutejensis (Hassk.) Becc.) as a Textile Dye Adsorbent for Household Industry Wastewater from the Samarinda Seberang Handwoven Sarung (2021, Leader)* 2. *Making Surfactants and Biodiesel from Castor Oil (Jatropa Curcas L.) by Esterification (2023-Member)* 3. *Utilization of Chitosan from Exuviae Maggot (Hermetia illucens) as Edible Coating for Tomato Fruit (Lycopersicon esculentum) and Edible Film with the Addition of Honey as an Antibacterial (2024, Member)*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights	*Kimia triterpenoid*	*Proprietary rights*	*2024*

Important publications over the last 5 years	1. Iqlimah, S., **Chairul, S.**, Erwin, (2021), Phytochemical Screening and Antioxidant Activity using DPPH Method from Kkluwih Seed Plants (*Artocarpus camansi* Blanco), *Jurnal Atomik*, 6(1), 1-5 2. Neli, P.P., Daniel, **Chairul, S.**, Agustina, M., (2021), Phytochemical Test and Antioxidant Activity Test of n-Hexane, Ethyl acetate and Residual Ethanol Fraction Extract from Sungkai Leaves (*Peronema canescens* Jack.) using DPPH Method, *Jurnal Atomik*, 6(1), 22-27 3. Yulyanti, S.U., Rudi, K., **Chairul, S.**, (2021), Phytochemical Test and Antibacterial Activity of Merung Leaves (*Coptosapelta tomentosa*) against Staphylococcus aureus and Propionibacterium acnes Bacteria, *Jurnal Atomik*, 6(1), 35-38 4. Nanda, A., **Chairul, S.**, Winni, A., (2021), Phytochemical and Antibacterial Test of Ethanol Extract of Mahony Seeds (*Swietenia mahagoni* (L.) Jacq), *Jurnal Atomik*, 6(2), 56-59 5. Rizki, R.S., **Chairul, S.**, Rudi, K., (2021), Phytochemical Test and Stability Test of Color Substances from Ketapang Leaf Extract (*Terminalia catappa* Linn.), *Jurnal Atomik*, 6(2), 60-63 6. Putri, A.S., Daniel, **Chairul, S.**, (2021), phytochemical and Antibacterial Test of Methanol Extract of Mahony Leaves (*Swiegenia mahogany* (L.) Jacq), *Jurnal Atomik*, 6(2), 64-67 7. Mutma, I., Winni, A., **Chairul, S.**, (2021), Antibacterial Activity of Methanol Extract of Sambung Urat Plant (*Cayratia carnosa*) Leaves against Salmonella thypi and Propionibacterium acnes, *Jurnal Atomik*, 7(1), 1-5 8. Anies, O., Saibun, S., **Chairul, S.**, (2022), Utilization of Sodium chloride (NaCl) Solution to Reduce Cyanide levels in Rebung Yellow Bamboo (*Bambusa vulgaris* Schrad. Ex. J.C.) bu UV-Vis Spectrophotometry, *Jurnal Atomik*, 7(1), 22-29 9. Niken, K., **Chairul, S.**, Winni, A. (2022), Antibacterial Activity Test of Methanol Extract of Agarwood Leaves (*Aquilariamalaccensis* Lamk.) against Streptococcus sobrinus and Salmonella typhy Bacteria, *Jurnal Atomik*, 7(2), 26-31 10. Lutfiana, D.K., Ritbey, R., **Chairul, S.**, (2022), Phytochemical Analysis and Antibacterial Activity Test of Methanol Extract of Pandanus Leaves (*Pleomle agustitoliia* N.E. Brown), *Jurnal Kimia Mulawarman*, 20(1), 17-22 11. Nur, H., Ritbey, R., **Chairul, S.**, (2023), Anti-inflammatory Effect of Extract and Fractions of Agarwood (Aquilaria malaccensis Lamk.) Leaves, *Jurnal Kimia Mulawarman*, 21(1), 62-66 12. Aulia, R., **Chairul, S.**, Rita, H., Ritbey, R., (2024), Potential Antioxidant Activity of Methanol Extract of Asoka Flower (*Ixora coccinea* L.), *Jurnal Atomik*, 9(1), 9-14 13. Intan, D.P., **Chairul, S.**, Rita, H., Ritbey, R., (2024), Inhibition of a-glusidase Activity from Methanol Extract of Bougainville Flower (Bougainvillea glabra Choisy), *Jurnal Atomik*, 9(1), 25-29 14. Camelia, E.D., **Chairul, S.,** Djihan, R.P., Agustina, R.M., Daniel, (2024), Potential Antioxidant Activity of Methanol Extract of Singkil Leaves (*Premna corymbose Roxb & Wild)*, *Jurnal Atomik*, 9(2), 137-144
Activities in specialist bodies over the last 5 years	*Himpunan Kimia Indonesia (HKI)* — *Member* — *2023-present*

CURRICULUM VITAE

Name	*Dr. Eva Marliana, M.Si*		
Employee Identification Number (EIN).	*197503022000122001*		
Place and date of birth	*Padang, 2nd March 1975*		
Post	*Organic Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Bachelor Degree: Chemistry* *Master Degree : Chemistry* *Doctoral Degree: Organic Chemistry*	*Andalas University* *Gadjah Mada* *Andalas University* *Airlangga University*	*1998* *2000* *2016*
Employment	*Lecturer*	*Faculty of Mathematics and natural sciences*	*2000-present*
Research and development projects over the last 5 years	1. *Fabrication of Composite Material Based on Eggshell Waste (ES) and Titanium Dioxide (TiO_2) as an Adsorbent for Water (2024, Member).* 2. *Potential of Dichloromethane Extract from Temu Kunci Rhizome (Boesenbergia rotunda L.) as Antibacterial, Antioxidant, and Anti-Tyrosinase Agent. (Member 2024)* 3. *Potential of Bacteria from the Bukit Pinang Final Disposal Site in Samarinda for Producing Hydrolytic Enzymes as Bioremediation Agents for Organic Materials. (Member 2023).* 4. *Functionalization of Humic Acid on Fe_2O_3 Nanoparticles and Its Application for Degrading Synthetic Dyes and Heavy Metals. (Member 2022).* 5. *Hybrid Extract of Phyllanthus niruri Linn. with TiO_2–Chitosan Composite as Sunscreen and Antioxidant Agent. (Leader 2021)*		

	6. *PurificationImmobilization of Fulvic Acid on Fe_3O_4 Nanoparticles and Its Application as a Selective Adsorbent for Heavy Metals and Dye from Liquid Waste of the Samarinda Weaving Industry (2021, Member).* 7. *Mechanism of Action of Antiasthmatic Compounds from Curcuma aeruginosa Roxb. Rhizome in Extract and Isolated Forms. (Member 2020).* 8. *Development of Cholesterol-Lowering and Immune-Boosting Herbal Remedies Based on Indigenous Plants of East Kalimantan to Reduce the Risk in COVID-19 Patients with Comorbidities. (Member 2020).*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights	*Optimization of Composite Material Formulation Based on Eggshell Waste (ES) and Titanium Dioxide (TiO_2) for Efficient Water Purification by Adsorption*	*Proprietary rights*	*2024*
	Synthesis of Fulvic Acid-Coated Magnetite Nanoparticle Adsorbent (Fe_3O_4–FA)	*Patents*	*2022*
	Production Process of a Health Drink Based on Belimbing Wuluh (Averrhoa bilimbi L.)	*Patents*	*2018*
	Method for Producing Oleate Chitosan Coating Film via Interesterification Reaction of Acetylated Chitosan Aldimine with Oleic Acid	*Patents*	*2018*
	Extraction Process of Semipolar Compounds from Macaranga hosei King ex Hook.f. Leaves	*Patents*	*2018*
	Extraction Process of Dracontomelon dao Leaves and Their Antioxidant Activity for Use as a Natural Antioxidant	*Patents*	*2010*
Important publications over the last 5 years	1. Fikriah, I., Masruhim. M.A**., Marliana, E**., Panggabean. A.S., Ismail. S., Kusuma. I.W., Paramita, S., (2025) Antioxidant Activity of Mahang Leaves from Post-Coal Mining Revegetated Areas in East Kalimantan, *IOP Conference Series: Earth and Environmental Science*, 1447(1), 012025. 2. Munir, R. Hamdani, D., Darnah, **Marliana, E**., Munir, R., Intifadhah, S.H., Kusuma, R., (2025). The solid state dispersion method for synthesizing		

	eggshells ES/TiO2 composite to enhance photocatalytic degradation methylene blue, *MethodsX*; 14 (June) 103150. 3. Fikriah, I., Masruhim. M.A**., Marliana, E**., Panggabean. A.S., Ismail. S., Kusuma. I.W., Paramita, S., Kim, YU., Kim, SY., (2024). Acute toxicity, secondary metabolites, and antioxidant activity of *Macaranga tanarius* from post-coal mining and non-mining areas in East Kalimantan, Indonesia, *Narra J* 2024; 4 (2): e791. 4. Koesnarpadi,S., Fitriani, D., Widodo, N.T., Wirawan, T., **Marliana, E**., (2022). Preparation of fulvic acids-functionalized magnetite for lead (II) adsorption in aqueous solutions, *AIP conf. Proc*. 2534. 5. Paramita, S., Ismail, S., Moerad, E.B**., Marliana, E**., (2021). A short overview of Curcuma aeruginosa with curative potentials against COVID-1, *Asian Journal of Chemistry*, 33(4), 789-792. 6. Saputri, R.D., Aldin, Tjahjandarie, T.S., **Marliana, E**., Tanjung, M., (M.F., 2023) Aktivitas Antikanker Senyawa Pterokarpan Dari Kulit Batang Aka Kalesi (*Spatholobus ferrugineus*) , *Jurnal Kimia Mulawarman*, 20 (2). 7. Al Hayyu, W.N., Astuti, W. , **Marliana, E.**, (2022). Potensi Bakteri Endofit Daun Pucuk Merah (*Syzygium Myrtifolium Walp*.) Sebagai Antibakteri Terhadap Propionibacterium Acnes, *Jurnal Kimia Mulawarman* 20 (1). 8. Isyahro, N.R., Widodo, N.T., **Marliana, E.,** Sunscreen Test of Methanol Extract, N-Hexane, Ethyl Acetate and Methanol-Water Fraction of *Artocarpus lanceifolius Roxb*. Leaves Based on In Vitro Method, *Jurnal Ilmiah Sains*, 23 (2), 158-167.
Activities in specialist bodies over the last 5 years	*The Indonesian Chemical Society* — *Member* — *2018 - 30 April 2027* *The Indonesian Society. of Natural Products. Chemistry* — *Member* — *10 January 2024 – 31 December 2027*

CURRICULUM VITAE

Name	*Dr. Winni Astuti, M.Si*		
Employee Identification Number (EIN).	*197503032000122001*		
Place and date of birth	*Kotabumi, 3 March 1975*		
Post	*Biochemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Doctor (Biochemistry)* *Master of Science (Biochemistry)* *Bachelor of Science (Chemistry)*	*Bandung Institute of Technology* *Bandung Institute of Technology* *Lampung University*	*2015* *2001* *1999*
Employment	*Lecturer at Department of Chemistry, Faculty of Mathematics and Natural Sciences*	*Mulawarman University*	*2000 - present*
Research and development projects over the last 5 years	1. *Potensi Ekstrak Diklorometana dari Rimpang Temu Kunci (Boesenbergia rotunda L) Sebagai Antibakteri, Antiokasidan dan Anti tirosinase Tahun : 2024, Team Member Rp. 12.000.000* 2. *Potensi Bakteri dari Tempat Pembuangan Akhir Bukit Pinang Samarinda Untuk Penghasil Enzim Hidrolitik sebagai Agen Bioremediasi Bahan Organik Tahun : 2023, Team Member Rp. 12.000.000*		

Industry collaborations over the last 5 years	-
Patents and proprietary rights	-
Important publications over the last 5 years	1. **Winni, Astuti,** Rabiatul Adawiyah**,** Amanda Aulia Putri and Djihan Ryn Pratiwi, (2024) Raw Starch-Degrading Amylase from Bacteria in Karang Mumus River *al Kimiya*: Jurnal Ilmu Kimia dan Terapan 11(2), 141-146. https://doi.org/10.15575/ak.v11i2.39438 2. Muhammad Sadam Usdin, **Winni Astuti**, Djihan Ryn Pratiwi (2024) Optimization Time Production of Secondary Metabolites Extracts Endophytic Bacteriaof Ciplukan Leaves (*Physalis angulata L*.) *Jurnal Atomik* Vol. 9(1). 15-18; E-ISSN 2549-0052 3. Dea Rakasiwi, **Winni Astuti**, Eva Marliana (2023) Potensi Antibakteri Ekstrak Etanol Meniran (Phyllanthus niruri L.) Terhadap *Streptococcus sobrinus* dan *Salmonella typhi*, *Jurnal Atomik*, 8(1), published 14 March 2023 4. Hendrica Mini Vera, **Winni Astuti**, Djihan Ryn Pratiwi (2023) Skrining Lipase dari Bakteri Air Bendungan Benanga Lempake Kecamatan Samarinda Utara dan Potensinya sebagai Aditif Detergen *Jurnal Atomik*, 8(2). 50-53. ISSN 2549-0052. 5. Wihda Nisa Al Hayyu, **Winni Astuti**, Eva Marliana (2022) Potensi Bakteri Endofit Daun Pucuk Merah (*Syzygium Myrtifolium Walp*.) Sebagai Antibakteri Terhadap *Propionibacterium Acnes, Jurnal Kimia Mulawarman*. 20(1) https://doi.org/10.30872/jkm.v20i1.1015 6. Anggun Ridha Avitri, Subur P. Pasaribu, **Winni Astuti** (2022) Pembuatan Edible Film Yang Bersifat Antibakteri Dari Glukomanan Umbi Porang (*Amorphophallus Muelleri*) yang Diinkorporasi dengan Ekstrak Etanol Umbi Bawang Tiwai (Eleutherine Bulbosa (Mill.) Urb.) *Jurnal Kimia Mulawarman*. 20(1) 7. Oktavia Widya Nursanti, **Winni Astuti,** Ritbey Ruga (2022) Skrining Amilase, Lipase dan Protease dari Bakteri Endofit Daun Ciplukan (Physalis angulata L.) *Jurnal Atomik*, 7(2). 1-5. ISSN 2549-0052.
Activities in specialist bodies over the last 5 years	*The Indonesian Chemichal Society.* *Member.* *2018 - Present*

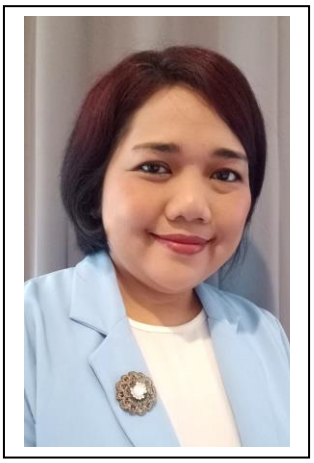
CURRICULUM VITAE

Name	*Dr. Noor Hindryawati, M. Si*		
Employee Identification Number (EIN).	*197712132000122001*		
Place and date of birth	*Yogyakarta, 13 December 1977*		
Post	*Inorganic Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Doctorate (Industrial Chemistry)* *Master degree (Chemistry)* *Undergraduate degree (Chemistry Education)*	*University Malaysia Pahang* *Gadjah Mada University* *Mulawarman University*	*2011* *2002* *1996*
Employment	*Lecturer*	*Chemistry Department, Faculty Of Mathematic and Natural Sciences*	*2005*
Research and development projects over the last 5 years	*1. Sintesis Dan Pemanfaatan Deoiled Spent Bleaching Earth Terpilar Tio2/Wo3 Nanokomposit Dalam Pengolahan Air Dan Air Limbah Melalui Metode Solar Photochalytic (2019; HIBAH PDUPT, DIKTI; Leader; Rp. 99.400.000)* *2. Pemanfaatan Nano Silika Abu Sekam Padi Termodifikasi Ni (Ni/Sio2) Sebagai Katalis Pada Konversi Palm Fatty Acid Distillate (PFAD) Menjadi Biofuel (2019, BOPTN; FMIPA; 22.500.000)*		

	3. *Sintesis Nanopartkel Perak Yang Terimobilisasi Pada Hidrogel Alginat Dan Aplikasinya Sebagai Antimikrobial (2019; IDB Project; Rp. 50.000.000)* 4. *Advanced Oxidation Process Dalam Pengolahan Limbah Cair Menggunakan Material Komposit WO3 Melalui Sonocatalytic (2020; WCR; Rp. 110.000.000)* 5. *Pengembangan Material Sensitizer Dari Ekstrak Tanaman Hutan Tropis Hybrid Semikonduktor Sebagai Peningkat Efesiensi Sel Surya. 2021. (PNBP FMIPA; Rp. 30.000.000)* 6. *Green Synthesis Nanopartikel Perak Dengan Bioreduktor Dari Ekstrak Kulit Batang Cempedak Dan Daun Ketapang Serta Aplikasinya Dalam Advanced Oxidation Processes Mendegradasi Polutan Organik (2023; Pnbp Fmipa; 12.000.000)* 7. *Variasi Sintesis Material ZIF-8 dan Karakterisasinya serta Uji Adsorpsi Terhadap Antibiotik Tetrasiklin (PNBP; 2024; 12.500.00)* 8. *Ekstrak Beberapa Tumbuhan Tropis Kalimantan Timur Sebagai Bahan Pembuatan Nanopartikel Perak dan Uji Kemamp uan sebagai Antibakteri, Sitotoksik dan Penyembuh Luka (Rp. 184.657.000; 2022)*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	*Variasi Komposisi Pembuatan Komposit Fe3O4/TiO2/ZnO Melalui Reaksi Padat-Padat* — *Patents* — *2024* *Preparation of Metal Oxide From Gypsum* — *proprietary rights* — *2015* *Proses Pembuatan Adsorben Magnetit Nanopartikel Terlapis AsamFulvat* — *proprietary rights* — *2024*
Important publications over the last 5 years	1. Validasi Metode Penentuan Benzena, Toluena dan Xilena pada Sampel Udara dan Tanah Menggunakan Kromatografi Gas. 2019. *ALCHEMY Jurnal Penelitian Kimi**a*****.** Vol. 15. Issue 1 Pages 177-189, 2019 2. Modification Of Spent Bleaching Earth With WO3 And The Application For Photocatalytic Degradation Of Waste Dyestuff Under Solar Light. *Jurnal Bahan Alam Terbarukan*. Vol. 8 (2), 84-89, 2020 3. Studi Variasi Berat Katalis Wo3-Sbe Dalam Proses Sonokatalitik Methylene Blue. *Jurnal Atomik*. Vol. 4 (2), 102-106, 2019 4. Photocatalytic Degradation Of Methylene Blue By Tio2/WO3-Deoiled Spent Bleaching Earth. *Journal Of Physics: Conference Series*. Vol 1277 (1), 012005, 2019 5. A Review On Photocatalytic: Modification Of Material And The Application To Removal Of Dye In Wastewater. *Journal Of Physics: Conference Series*. Vol 1277 (1), 012006, 2019. 6. Modification of Spent Bleaching Earth with WO3 and the Application for Photocatalytic Degradation of Waste Dyestuff under Solar Light. *Jurnal Bahan Alam Terbarukan*. 2020 7. Synthesis and characterization of Fe3O4-Activated Carbon and it's application to adsorb methylene blue. *IOP Conference Series: Earth and Environmental Science*. 2021

	8. Ultrasound Assisted the Degradation of Methylene Blue Using WO3-Deoiled Spent Bleaching Earth as a catalyst. *IOP Conference Series: Materials Science and Engineering*. 2020 9. Biodiesel production using palm fatty acid distillate and rice husk silica supported $NiSO_4$ as catalyst. *AIP Conference Proceedings*.2020 10. Biosynthesis of silver nanoparticles from aqueous extract of *Myrmecodia pendans* bulb. AIP Conference Proceedings.2020 11. Exploitation of cost-effective renewable heterogeneous base catalyst from banana (Musa paradisiaca) peel for effective methyl ester production from soybean oil. *Applied Nanoscience*, 1-12.2021 12. Enhanced biodiesel production via esterification of palm fatty acid distillate (PFAD) using rice husk ash (NiSO4)/SiO2 catalyst. *Applied Nanoscience*. 2021. 13. Biodiesel (Methyl Esters). *Maejo International Journal of Energy and Environmental Communication*. 2021 14. Preparation of Dye-Sensitized Solar Cell (DSSC) Using TiO2 and Mahkota Dewa Fruit (*Phaleria Macrocarpa (Scheff) Boerl*.) Extract. *Jurnal Bahan Alam Terbarukan*. 2021 15. Fulvic acids coated magnetite nanoparticles for methylene blue adsorption. *AIP Conference Proceedings* **2668**, 030011 (2022); https://doi.org/10.1063/5.01117382022 16. Synthesis of magnetic coffee grounds from cafe as a dye adsorbent. *AIP Conference Proceedings* 2668 (1), 030013. 2022 17. Methylene blue degradation using Fe_3O_4-ZnO/WO_3 catalyst. *AIP Conference Proceedings* 2668 (1), 030013. 2022 18. Utilization of Urang-aring (*Eclipta prostrata* L.) leaf as natural pigments for sensitizers TiO_2 based dye-sensitized solar cells. *AIP Conference Proceedings* 2668 (1), 030013. 2022 19. In vivo and in vitro assays using biosynthesized silver nanoparticles on *Aeromonas hydrophila*-infected *Clarias gariepinus* 20. Study of Sonocatalytic Activity ZnO-WO3 Composite on Degradation Phenol in Aqueous Solution. *Jurnal Bahan Alam Terbarukan* 11 (1), 50-57. 2022 21. Green Synthesis Of Silver Nanoparticles Using Ketapang Leaf Extract (Terminalia Catappa L.) Assisted By Ultrasound. *Jurnal Bahan Alam Terbarukan* 12 (2), 166-173.2023 22. Adsorption Of Methylene Blue Using Active Charcoal From Empty Fruit Bunch (EFB). *Jurnal Kimia Mulawarman* 21 (1), 8-16. 2023 23. Sonocatalytic degradation of methylene blue using WO3-ZnO composite. *AIP Conference Proceedings* 2431 (1). 2023 24. Adsorption of Methylene Blue using Composite Fe3o4-Activated Charcoal Cassava Skin (Manihot esculenta C.). DD Wulandari, S Koesnarpadi, N Hindryawati. *Jurnal Kimia Mulawarman* 21 (2), 103-115. 2024.
Activities in specialist bodies over the last 5 years	*Indonesian Chemical Society* *treasurer* *2019-2025*

CURRICULUM VITAE



Please fill out and submit one table per person.

Name	*Dr. RR Dirgarini Julia Nurlianti Subagyono, M.Sc*		
Employee Identification Number (EIN).	*198207152006042001*		
Place and date of birth	*Samarinda, 15 July 1982*		
Post	*Physical Chemistry Laboratory, Chemistry Department*		
Academic career	*Doctor of Philosophy (Chemistry)* *Master of Science (Chemistry)* *Bachelor of Science (Chemistry)*	*Monash University, Australia* *Monash University, Australia* *Gadjah Mada University, Indonesia*	*2011* *2009* *2000*
Employment	*Lecturer at the Chemistry Department*	*Mulawarman University*	*2006 - Present*
Research and development projects over the last 5 years	1. *Kinetics, Isotherm and Performance Study of Microalgae Biochar Beads for Adsorption of Textile Colors in Batch and Continuous Systems (2025-2026, Ministry of Higher Education, Science and Technology, of the Republic of Indonesia)* 2. *Utilization of Pyrolysis Products of Rubber Waste using MgO Nanoparticle Catalyst as Bio-Asphalt Binder and Asphalt Mixture (2024, Ministry of Research, Technology and Higher Education of the Republic of Indonesia)*		

	3. *Developing the second generation of chemistry board games for fun and interactive chemistry learning (Alumni Grant Scheme, 2022-2023, Australia Awards in Indonesia)* 4. *World Class Research, Production of Bio-Jet Fuel/Fuel Additives from B. braunii: Kinetic Study, Pyrolysis and Catalytic Upgrading, (2021-2023, Ministry of Research, Technology and Higher Education of the Republic of Indonesia)* 5. *Developing chemistry board games for fun and interactive chemistry learning (Alumni Grant Scheme, 2019, Australia Awards in Indonesia)* 6. *Computational Study of Flavonoid and Auron Compounds Against Sars-Cov-2 Virus Proteins (6LU7 and 6VSB) (2022, PNBP FMIPA UNMUL)* 7. *Computational Study of O-Guaiancol Decomposition by Density Functional Theory (DFT) Method (2023, PNBP FMIPA UNMUL)* 8. *Differences in the effect of Fe^{+3} doping on $Cs[Bita_2O_7]$ two-layered Dion Jacobson phase perovskite on structure and electromechanical properties(2024, PNBP FMIPA UNMUL)*		
Industry collaborations over the last 5 years	1. *The development of nickel-based materials, PT. BaNiql Teknologi Indonesia, 2024* 2. *The exploration of rubber industry by-product processing, PT. Multi Kusuma Cemerlang, 2024-2025*		
Patents and proprietary rights	*Chemipoly, Registration number 000177142*	*Proprietary rights*	*2019*
	Kartu Unsur (Element card), Registration number 000173358	*Proprietary rights*	*2019*
	Ular tangga kimia (Chemistry snakes and ladders), Registration number 000177140	*Proprietary rights*	*2019*
	Chemical Detective Kit: A manual book, Registration number EC00202343541	*Proprietary rights*	*2023*
	Chemical Detective Kit Narrated Video (Number: EC00202343509)	*Proprietary rights*	*2023*
	Method and Chemical Composition of Mesoporous Silica SBA-15 Synthesis from Bambu Petung Leaf Ash (Dendrocalamus Asper), IDP000076242	*Patent*	*2021*

Important publications over the last 5 years	1. *RR Dirgarini Julia Nurlianti Subagyono, Nabila Mutiara Madani, Chintya Zalza Laola Claudia Buyu Prechisilia, Nabilah Sinar Sahirah, Devira Ulva Utami, Assyfa Machmudah Qosim, Mohd. Asyraf Kassim, Rahmat Gunawan, Veliyana Londong Allo, 2025, Pyrolysis of microalgae over Ni/Al-SBA-15 and Ni/Ga-SBA-15 catalysts prepared using a low-acidity solvent and ultrasonic-assisted sol-gel method, Journal of Analytical and Applied Pyrolysis, Volume 186, 106935* 2. *RR Dirgarini J. N. Subagyono, Sri A. Putri, Maykel Manawan, Mamun Mollah, Rudy A. Nugroho, and Rahmat Gunawan, 2023, Catalytic Pyrolysis of the Green Microalgae Botryococcus braunii over Ni/SBA-15 Prepared by the Ultrasonic-Assisted Sol-Gel Method, ACS Omega, Vol 8 (9), 8582-8595* 3. *RR Dirgarini J. N. Subagyono, Polonius Dosi Miten, Ruth Junita Sinaga, Ardiana Wijayanti, Ying Qi, Marc Marshall, Ari Susandy Sanjaya, Alan L. Chaffee, 2022, Pyrolysis of fast-growing wood Macaranga gigantea: Product characterisation and kinetic study, Fuel, Vol 315, 123182* 4. *R. R. Dirgarini Julia Nurlianti Subagyono, Wardina Masdalifa, Siti Aminah, Rudy Agung Nugroho, Mamun Mollah, Veliyana Londong Allo, and Rahmat Gunawan, 2021, Kinetic Study of Copyrolysis of the Green Microalgae Botryococcus braunii and Victorian Brown Coal by Thermogravimetric Analysis, ACS Omega, Vol 6 (47), 32032-32042* 5. *R.R. Dirgarini J.N. Subagyono, Ying Qi, Alan L. Chaffee, Rudianto Amirta, Marc Marshall, 2021, Pyrolysis-GC/MS Analysis of Fast Growing Wood Macaranga Species, Indonesian Journal of Science and Technology, Vol 6 (1), 141-158* 6. *Nurdahniyati, Nunung Handayani, RR Dirgarini Julia Nurlianti Subagyono, Eko Kusumawati, 2021, Antibacterial Test of Ag/SBA-15 From Petung Bamboo Leaf Ash Against Escherichia coli, Jurnal Kimia Mulawarman, Vol 18, pp. 56-61* 7. *R. R. Dirgarini J. N. Subagyono, Marc Marshall, W. Roy Jackson, Anthony R. Auxilio, Yi Fei, Alan L. Chaffee, 2020, Upgrading Microalgal Biocrude Using NiMo/Al-SBA-15 as a Catalyst, Energy and Fuels, Vol 34 (4) pp. 4618-4631.* 8. *Siti Sarah, R. R. Dirgarini Julia Nurlianti Subagyono, Veliyana Londong Allo, Rahmat Gunawan, 2024, Synthesis and characterization of mesoporous silica SBA-15 prepared by the ultrasonic assisted-sol gel method, The 4th International Conference on Mathematics and Sciences (The 4th ICMSc), AIP Conf. Proc. 3095, 030003-1-030003-6; https://doi.org/10.1063/5.0204746* 9. *RR Dirgarini J N Subagyono, Wardina Masdalifa, Siti Aminah, Rudy Agung Nugroho, Mamun Mollah, Veliyana Londong Allo, Rahmat Gunawan. Co-Pyrolysis of Botryococcus braunii and Victorian Brown Coal: A Kinetic Study, The third International Conference on Mathematics and Sciences (ICMSc 2021), October 2021, Indonesia* 10. *RR Dirgarini J.N. Subagyono., Puspitasari, R., Sanjaya, A.S., Suwinarti, W. Characterization of slow pyrolysis products of Macaranga motleyana: Effect of sample size, IOP Conference Series: Materials Science and Engineering Volume 833 (2020), doi:10.1088/1757-899X/833/1/012045* 11. *Nasri, RRDJ N Subagyono, R Gunawan. Electron transfer study between hydrogen molecules and graphene surface, IOP Conference Series: Materials Science and Engineering Volume 833 (2020), doi:10.1088/1757-899X/833/1/012026* 12. *Ying Qi, Will Han, Dirgarini J.N. Subagyono, Yi Fei, Marc Marshall, W. Roy Jackson, Antonio F. Patti, Alan L. Chaffee, 2018, Characterisation of the products of low temperature pyrolysis of Victorian brown coal in a semi-*

	continuous/flow through system, Fuel vol.234, pp. 1422-1430. https://doi.org/10.1016/j.fuel.2018.07.109 13. *Dirgarini J.N. Subagyono, Ying Qi, W. Roy Jackson, Alan L. Chaffee, 2016, Pyrolysis- GC/MS analysis of biomass and the bio-oils produced from CO/H2O reactions, Journal of analytical and applied pyrolysis vol 120, pp 154-164. http://dx.doi.org/10.1016/j.jaap.2016.05.001* 14. *Dirgarini J.N. Subagyono, Marc Marshall, W. Roy Jackson, Yi Fei, Alan L. Chaffee, 2016, Thermochemical reactions of blue gum and fossil wood with CO/H_2O: Some mechanistic comments, Energy and Fuels, vol. 30(2),pp 1039-1049. https://pubs.acs.org/doi/abs/10.1021/acs.energyfuels.5b02358* 15. *Dirgarini J.N. Subagyono, Marc Marshall, W. Roy Jackson, Alan L. Chaffee, 2015, Improvement in liquid fuel product quality from reactions of grape marc with CO/H_2O, Fuel vol 159, pp 234-240. http://dx.doi.org/10.1016/j.fuel.2015.06.042* 16. *Dirgarini J.N. Subagyono, Marc Marshall, Yi Fei, W. Roy Jackson, Alan L. Chaffee, 2015, Thermo- chemical reactions of algae, grape marc and wood chips using a semi-continuous/flow-through system, Fuel vol 158, pp 927-936. http://dx.doi.org/10.1016/j.fuel.2015.06.026* 17. *Dirgarini J.N. Subagyono, Marc Marshall, W. Roy Jackson, Alan L. Chaffee, 2014, Pressurized thermal and hydrothermal decomposition of algae, wood chip residue, and grape marc: A comparative study, Biomass and Bioenergy vol 76, pp 141-157. http://dx.doi.org/10.1016/j.biombioe.2014.08.020* 18. *Dirgarini J.N. Subagyono, Marc Marshall, W. Roy Jackson, Mee C. Chow, Alan L. Chaffee, 2014, Reactions with CO/H_2O of two marine algae and comparison with reactions under H_2 and N_2, Energy and Fuels vol 25 issue 5, pp 3143-3156. https://pubs.acs.org/doi/10.1021/ef500267r* 19. *Dirgarini J.N. Subagyono, Marc Marshall, Gregory P. Knowles, Alan L. Chaffee, 2014, CO_2 adsorption by amine modified siliceous mesostructured cellular foam (MCF) in humidified gas, Microporous and Mesoporous Materials, vol 186, pp. 84-93. http://dx.doi.org/10.1016/j.micromeso.2013.11.032* 20. *Dirgarini J.N. Subagyono, Zhijian Liang, Gregory P. Knowles, Alan L. Chaffee, 2011, Amine modified mesocellular siliceous foam (MCF) as a sorbent for CO_2, Chemical Engineering Research & Design, vol 89, issue 9, pp. 1647-1657. http://dx.doi.org/10.1016/j.cherd.2011.02.019*
Activities in specialist bodies over the last 5 years	*Indonesian Chemical Society* — *Physical Chemistry Division, Member* — *2020-present*

CURRICULUM VITAE

Name	*Veliyana Londong AlloS.Si., M.Si*		
Employee Identification Number (EIN).	*19890820 201903 2 024*		
Place and date of birth	*Samarinda, August 20, 1989*		
Post	*Physical Chemistry Lecturer in the Bachelor of Chemistry Program*		
Academic career	*Initial academic appointment*	*Institution*	*Year*
	Master of Science (Physical Chemistry)	*Institut Teknologi Bandung*	*2014*
	Bachelor of Science (Chemistry)	*Mulawarman University*	*2011*
Employment	*Lecturer at Chemistry Departement*	*Mulawarman University*	*2016 - Present*
Research and development projects over the last 5 years	1. *Sintesis Nanopartikel Perak Termodifikasi L-Cysteine sebagai chloramphenicol Secara Colorimetry (2022, PNBP FMIPA UNMUL)* *Moh. Syaiful Arif, Alimuddin, Ika Yekti L Sari, Nanang Tri Widodo, Veliyana Londong Allo* *Rp. 17.250.000,-* 2. *Studi Komputasi Senyawa Flavonoid Dan Auron Terhadap Protein Virus Sars-Cov-2(6LU7 Dan 6VSB) (2022, PNBP FMIPA UNMUL)* *Veliyana L Allo, RR Dirgarini J.N Subayono, Rahmat Gunawan, Djihan Ryn Pratiwi, Irfan A Hiyahara*		

	Rp. 18.000.000 3. *Developing The Second Generation Of Chemistry Board Games For Fun And Interactive Chemistry Learning For High School Students In Rural Areas Of East Kalimantan (2022, Australian Grant Scheme)* *RR Dirgarini J.N Subayono, Veliyana L Allo* *Rp. 100.000.000,-* 4. *Studi Komputasi Dekomposisi O-Guaiancol Dengan Metode Density Functional Theory (DFT) (2023, PNBP FMIPA UNMUL)* *Rahmat Gunawan, RR Dirgarini J.N Subayono, Veliyana L Allo, Subur P Pasaribu* *Rp. 12.000.000,-* 5. *Perbedaan Pengaruh Antara Substitusi Dengan Doping Fe+3 Pada Perovskit Fasa Dion Jacobson Lapis Dua Cs[Bita2o7] Terhadap Struktur Dan Sifat Elektromekanika (2024, PNBP FMIPA UNMUL)* *Abdul Aziz, Rahmat Gunawan, RR Dirgarini J.N Subayono, Veliyana L Allo* *Rp. 12.500.000,-*		
Industry collaborations over the last 5 years	-		
Patents and proprietary rights	*Chemipoly* *No. Permohonan : EC00201991088* *Inventor : RR Dirgarini Julia N Subagyono, Fajar Hadi Ramadana, Irfan Ashari Hiyahara, Veliyana Londong Allo*	*Proprietary rights*	*2019*
	Buku Petunjuk Praktikum Detektif Kimia *No. Permohonan : EC00202343541* *Inventor : R R Dirgarini Julia Nurlianti Subagyono, Fajar Hadi Ramadana, Irfan Ashari Hiyahara, Veliyana Londong Allo, Husna Syaima, Moh. Syaiful Arif, Nanang Tri Widodo*	*Proprietary rights*	*2023*

Important publications over the last 5 years	1. RR Dirgarini Julia Nurlianti Subagyono, Nabila Mutiara Madani, Chintya Zalza Laola Claudia Buyu Prechisilia, Nabilah Sinar Sahirah, Devira Ulva Utami, Assyfa Machmudah Qosim, Mohd. Asyraf Kassim, Rahmat Gunawan, **Veliyana L Allo** (2025) Pyrolysis of microalgae over Ni/Al-SBA-15 and Ni/Ga-SBA-15 catalysts prepared using a low-acidity solvent and ultrasonic-assisted sol-gel method *Journal of Analytical and Applied Pyrolysis* 186, 106935 doi:https://doi.org/10.1016/j.jaap.2024.106935 2. Harvina, Rahmat Gunawan, **Veliyana L Allo** (2024) A Mini Review: Studi Komputasi Terhadap Struktur Elektrolit pada Silicene, Graphene, Dan Germanene *Prosiding Seminar Nasional Kimia* 3 (1), 73-77 3. RRDJN Subagyono, **Veliyana L Allo**, Husna Syaima, Moh. Syaiful Arif, Irfan A Hiyahara, Nanang T Widodo, Rahmat Gunawan (2024) Pelatihan Penggunaan Kit Detektif Kimia Dalam Pembelajaran Kimia Bagi Guru-Guru SMA, MA Dan SMK Di Kalimantan Timur *AKM: Aksi Kepada Masyarakat* 4 (2), 353-362, 2024 4. E Mardiani, RRDJN Subagyono, **Veliyana L Allo** (2024) Studi Pirolisis Mikroalga Hijau (*Spirulina Platensis*) Terhadap Konsentrasi Produk Turunan Klorofil *Prosiding Seminar Nasional* KIMIA 3 (1), 64-67 5. S Sarah, RR Subagyono, **Veliyana L Allo**, R Gunawan (2024) Synthesis and Characterization of Mesoporous Silica SBA-15 Prepared By The Ultrasonic Assisted-Sol Gel Method *AIP Conference Proceedings* 3095 (1) doi:https://doi.org/10.1063/5.0204746 6. NN Anisa, RRDJN Subagyono, **Veliyana L Allo** (2024) Analisis Termogravimetri Spirulina Platensis Dengan Katalis Ni/Al-Sba-15 Rasio Si/Al= 10 Menggunakan Laju Pemanasan 10° C/Menit *Prosiding Seminar Nasional Kimia* 3 (1), 151-155 7. **Veliyana L Allo**, S Rahmah, R Gunawan (2023) Studi Molecular Docking Senyawa Turunan Auron Sebagai Inhibitor Glikoprotein Spike Sars-Cov-2 *Akta Kimia Indonesia* 8 (2), 126-137 8. O Rachmawanti, RRD Subagyono, **Veliyana L Allo** (2023) A Kinetic Study Of Pyrolysis Of Bagasse Using Thermogravimetric Analysis *Prosiding Seminar Nasional Kimia* 2 (1), 141-145 9. MIM Pratama, **Veliyana L Allo**, N Hindryawati (2023) Mini-Review: Pembuatan Dye-Sensitized Solar Cells (Dssc) Menggunakan Semikonduktor Tio2 Dengan Bantuan Zat Pewarna Alami A Mini-Review: Fabrication Of Dye-Sensitized Solar *Prosiding Seminar Nasional Kimia* 2022 1 (1), 122-128 10. MF Maahury, **Veliyana L Allo** (2023) DFT calculation and molecular docking of lawsone and its derivatives as antibacterial *AIP Conference Proceedings* 2588 (1) doi:https://doi.org/10.1063/5.0116025 11. MF Maahury, MA Martoprawiro, **Veliyana L Allo** (2022) Molecular Structure And Electronic Properties Of Eugenol And Its Analogues Using Dft *Jurnal Kimia Mulawarman* 19 (2), 58-62 12. **Veliyana L Allo**, GE Farhanah, R Gunawan (2022) In silico analysis of flavonol compound against Mpro COVID-19 *AIP Conference Proceedings* 2668 (1) doi:https://doi.org/10.1063/5.0111695 13. MF Maahury, **Veliyana L Allo** (2021) DFT and molecular docking investigations anthocyanidin to the human epidermal receptor-2 receptor (HER-2) in breast cancer *AIP Conference Proceedings* 2360 (1), 14. DJN Subagyono, H Sa'diyah, **Veliyana L Allo** (2021) Studi Kinetika Reaksi Pirolisis Makroalga Hijau (Eucheuma Cottonii) Dengan Analisis Termogravimetri Menggunakan Metode Friedman *Molluca Journal of Chemistry Education (MJoCE)* 11 (2), 61-73

	15. W Masdalifa, RRDJN Subagyono, **Veliyana L Allo**, RA Nugroho (2021) Co-pirolisis mikroalga hijau (Botryococcus braunii) dan Victorian brown coal dengan variasi laju pemanasan menggunakan thermogravimetric analyser *Prosiding Seminar Nasional Kimia*, 180-186 16. RRDJN Subagyono, IA Hiyahara, **Veliyana L Allo**, R Gunawan (2021) Pelatihan Penggunaan Chemistry Board Games dalam Pembelajaran Kimia bagi Guru-Guru SMA di Kota Samarinda *E-Dimas: Jurnal Pengabdian kepada Masyarakat* 12 (3), 394-400 17. MF Maahury, **Veliyana L Allo** (2021) The computational calculation and molecular docking of aeroplysinin-1 as antibacterial *Indonesian Journal of Chemical Research* 9 (2), 124-128
Activities in specialist bodies over the last 5 years	*Relawan Jurnal Indonesia in East Kalimantan* *Secretary* *2020 – 2025*

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