



## CURRICULUM VITAE

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### Biography

Prof. Dr. Rahadian Zainul, S.Pd., M.Si. is an expert in the field of Computational and Physical Chemistry and serves as a professor in the Chemistry Department, Faculty of Mathematics and Natural Sciences at Universitas Negeri Padang. He was born in Sungai Penuh on January 21, 1974. His formal education includes a Bachelor's degree in Chemical Education obtained from IKIP Padang during 1992-1997, a Master's degree in Chemistry from Andalas University in 1999, and a Doctorate in Chemistry from the same university in 2015. As a dedicated academician, Prof. Zainul currently holds several key positions at his university, including Secretary of LPPM UNP since 2023, Head of the UNP Campbiotics (Center for Advanced Material Processing, Artificial Intelligence and Biophysics Informatics) Center since 2021, and Head of the Center for Publication, Intellectual Property Rights and Innovation (PPHKI-Innovation) since early 2023. Beyond his academic activities, Prof. Zainul is also a successful entrepreneur with ownership of 7 Foundations focused on IT and Education, Social, and Economic sectors. He is the founder of Insparagon, managing 10 International Publishers and owning various publishing companies that oversee more than 10 international journals across various fields. His research proficiency is reflected in his focus on physical chemistry, with his scientific works being cited more than 2000 times. Prof. Zainul has impressive Scopus & Google Scholar H-Indexes, 15 & 33 respectively, and has recorded 682 citations and 123 publications in Scopus. In the past five years, he has written over 126 technical articles, published 100 books, edited 16 books, and holds a patent for an invention titled "Hexagonal Photoreactor Thin Plate Copper Oxide to Generate Electricity from Room Light and the Process of Making Thin Plate Copper Oxide". Additionally, he has registered 91 patents, 5 trademarks, and 61 copyrights. In research, Prof. Zainul has led various projects, including Copper Oxide Photocatalyst Material, Room Light Photoreactor, Blended System in Indonesia, Anti-Covid Coating Material, and High Sensitivity Sensor for Glucose in international collaboration with UPSI Malaysia. He is also active in community service activities and has received research funding from various institutions and established collaborations with international researchers. Prof. Zainul continues to make significant contributions to the academic and research world through his relentless hard work and dedication.

### Scopus of the Last 5 Years

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### Research of the Last 5 Years

Disain, Modifikasi Dan Fabrikasi Film-coating Nano-cu<sub>2</sub>o/cuo Untuk Aplikasi Anti Virus Covid 19 Pada Cahaya Ruang. Penelitian Terapan Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2023

Disain Dan Modifikasi Sensor Glukosa Elektrokimia Sensitivitas Tinggi Berbasis Elektroda Komposit Graphene/1-penil-3-metil-4-benzoil-5-pirazolone Termodifikasi. Penelitian Kerjasama Perguruan Tinggi Luar Negeri, Leader: Rahadian Zainul, Implementation Year: 2022

Pengembangan Model Pembelajaran Guided Discovery Blended Learning (gdbl) Pada Materi Asam Basa Untuk Sekolah Penggerak Di Sma/ma. Penelitian Tesis Magister, Leader: Rahadian Zainul, Implementation Year: 2022

Disain, Modifikasi Dan Fabrikasi Film-coating Nano-cu<sub>2</sub>o/cuo Untuk Aplikasi Anti Virus Covid 19 Pada Cahaya Ruang. Penelitian Terapan Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2022

Pengembangan Modul Elektronik (e-modul) Dengan Virtual Lab Berbasis Model 5e Instructional Pada Materi Kesetimbangan Kimia Untuk Meningkatkan Kemampuan Berpikir Kritis Peserta Didik Di Sma/ma. Penelitian Tesis Magister, Leader: Rahadian Zainul, Implementation Year: 2022

Disain Dan Modifikasi Nanomaterial Oksida Tembaga Untuk Foto-inaktifasi Mikrobiologi Dengan Menggunakan Pendekatan Molekular Dan Komputasi Dftb+. Pd-penelitian Dasar, Leader: Rahadian Zainul, Implementation Year: 2022

Pengembangan Content Learning System Berbasis Discovery Learning Pada Materi Struktur Atom Dan Sistem Periodik Unsur Kelas X Smk Untuk Meningkatkan Keterampilan Berpikir Tingkat Tinggi. Penelitian Tesis Magister, Leader: Rahadian Zainul, Implementation Year: 2021

Pengembangan Sistem Blended Learning Pada Mkdk Di Lptk. Konsorsium Riset Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2021

Pengembangan Sistem Blended Learning Pada Mkdk Di Lptk. Konsorsium Riset Unggulan Perguruan Tinggi, Leader: Rahadian Z, Implementation Year: 2021

Pengembangan Silika Mesopori Termodifikasi Dari Silika Alam Sebagai Material Penukar Anion Menggunakan Template Ctab (cetiltrimetilammoniumbromida) Dan Modifikator Dma (dimetilamin). Pdpt-penelitian Dasar, Leader: Budhi Oktavia, Implementation Year: 2021

Disain, Modifikasi Dan Fabrikasi Film-coating Nano-cu<sub>2</sub>o/cuo Untuk Aplikasi Anti Virus Covid 19 Pada Cahaya Ruang. Penelitian Terapan Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2021



Disain Dan Modifikasi Nanomaterial Oksida Tembaga Untuk Foto-inaktifasi Mikrobiologi Dengan Menggunakan Pendekatan Molekular Dan Komputasi Dftb+. Pdpt-penelitian Dasar, Leader: Rahadian Zainul, Implementation Year: 2021

Sintesis Dan Karakterisasi Material Layer Herbisida Nanohibrid Untuk Sensor Asam Askorbat Dan Glukosa Dengan Elektroda Yang Dimodifikasi. Penelitian Kerjasama Pt Luar Negeri Dasar, Leader: Rahadian Zainul, Implementation Year: 2020

Pengembangan Model Pembelajaran Blended Learning Pada Materi Kimia Kelas X Semester 2 Di Sma/ma Untuk Meningkatkan Kemampuan Berpikir Tingkat Tinggi (hots) Sebagai Implementasi Pengembangan Kecakapan Era 4.0. Penelitian Tesis Magister, Leader: Rahadian Zainul, Implementation Year: 2020

Pengembangan Resin Penukar Anion Menggunakan Silika Alam Sebagai Bahan Dasar Fasa Diam Pada Kromatografi Ion. Penelitian Dasar, Leader: Budhi Oktavia, Implementation Year: 2020

Pengembangan Sistem Blended Learning Pada Mkdk Di Lptk. Konsorsium Riset Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2020

Pengembangan Resin Penukar Anion Menggunakan Silika Alam Sebagai Bahan Dasar Fasa Diam Pada Kromatografi Ion. Penelitian Unggulan Perguruan Tinggi Dasar, Leader: Budhi Oktavia, Implementation Year: 2019

Pengembangan Bahan Ajar Kimia Sma/ma Kelas X Semester 1 Berpendekatan Multipel Representasi Kimia Untuk Melatih Keterampilan Berpikir Tingkat Tinggi (hots) Siswa Sebagai Implementasi Pengembangan Kecakapan Abad 21. Penelitian Tesis Magister, Leader: Mawardi, Implementation Year: 2019

Pengembangan Sistem Blended Learning Pada Mkdk Di Lptk. Konsorsium Riset Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2019

Sintesis Dan Karakterisasi Material Layer Herbisida Nanohibrid Untuk Sensor Asam Askorbat Dan Glukosa Dengan Elektroda Yang Dimodifikasi. Penelitian Kerjasama Pt Luar Negeri Dasar, Leader: Rahadian Zainul, Implementation Year: 2019

Rekayasa Reaktor Tandem Foto-elektrokimia (pv-ec) Untuk Produksi Hidrogen Melalui Splitting Air. Penelitian Terapan Unggulan Perguruan Tinggi, Leader: Rahadian Zainul, Implementation Year: 2019

Disain Dan Modifikasi Katalis Oksida Logam Aktif Nano-multiscale (zno, Cuo, Tio<sub>2</sub> Dan Kompositnya) Untuk Aplikasi Penanganan Limbah Cair Di Sumatera Barat. Penelitian Unggulan Perguruan Tinggi Terapan, Leader: Rahadian Zainul, Implementation Year: 2019

### Community Service of the Last 5 Years

Program Pengembangan Produk Unggulan E-learning Pembelajaran Kimia Sma Yang Terintegrasi Dari Produk Riset Unggulan Kuliah Smart Bagi Guru-guru Mgmp Kimia Kota Padang Panjang. Program Pengembangan Produk Unggulan Pt (p3upt), Leader: Rahadian Zainul, Implementation Year: 2022

Pelatihan, Pengembangan Dan Implementasi Elearning-terintegrasi Zoom Berbasis Moodle Dan Smart Library Online, Serta Jurnal Pendidikan Kimia Mandiri Bagi Guru-guru Mgmp Kimia Se Sumatera Barat Di Era 4.0 Dan Masa Pandemi Covid 19. Program Kemitraan Masyarakat (pkm), Leader: Rahadian Zainul, Implementation Year: 2020

Pelatihan Pembuatan Library Online Menggunakan Endnote Dan Publikasi Ilmiah Bagi Guru-guru Smu 2 Kota Padang Panjang. Program Kemitraan Masyarakat (pkm), Leader: Rahadian Zainul, Implementation Year: 2019

Program Pengembangan Produk Unggulan E-learning Pembelajaran Kimia Sma Yang Terintegrasi Dari Produk Riset Unggulan Kuliah Smart Bagi Guru-guru Mgmp Kimia Kota Padang Panjang. Program Pengembangan Produk Unggulan Pt (p3upt), Leader: Rahadian Zainul, Implementation Year: 2023

Workshop Pengembangan E-modul Berbasis Guided Discovery Learning Menggunakan Software Sigil Pada Guru-guru Anggota Mgmp Kimia Kota Padang Panjang. Program Kemitraan Masyarakat (pkm), Leader: Budhi Oktavia, Implementation Year: 2021

### IPR's of the Last 5 Years

Prototype Nano Tembaga Untuk Aplikasi Material Anti Bakteri Pada Semen Portland. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Dr. Fajriah Azra, M.Si, dkk, Publication Date: 2022-09-10

Prototype Modul Elektronik (E-Modul) Dengan Virtual Lab Berbasis Model 5E Instructional Pada Materi Kesetimbangan Kimia Untuk Meningkatkan Kemampuan Berpikir Kritis Peserta Didik Di SMA/MA. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-17

i-Kelas Universitas. Inventor: Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-01-01

Teknologi Tepat Guna Cat Tembok Anti Bakteri. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Dr. Dwi Hilda, S.Si, M.Si, Mirella Fonda Maahury, S.Si, M.Si, Publication Date: 2022-09-22

Prototype Machine Learning Takambang Untuk Prediksi Ekstrak Herbal Sebagai Anti Viral Sers Cov-2. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

PROTOTYPE E-MODUL BERBASIS 5E INSTRUCTIONAL UNTUK MENINGKATKAN KETERAMPILAN BERPIKIR KRITIS PADA MATERI KESETIMBANGAN KIMIA. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Prof. Dr. Ellizar, M.Pd, dkk, Publication Date: 2022-09-23

Disain Dan Aplikasi Machine Learning Prediksi Obat Herbal Anti Covid-19 Berbasis Etnobotani Di Sumatra Barat. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

PROTOTYPE MINI SERVER OFF GRID UNTUK PEMBELAJARAN JARAK JAUH. Inventor: Dr. Rahadian Zainul, S.Pd., M.Si., Drs. Sriadhi, M.Pd., M.Kom., Ph.D., Prof. Drs. Ganefri, M. Pd, Ph,D, Dr. Khairuddin, M. Kes, AIFO, Dr. Muhammad Adri, S.Pd, MT, Dr. K, Publication Date: 2022-01-01

Prototype Sensor Elektrokimia Resistivitas Tinggi Berbasis Carbon/Graphene. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Budi Oktavia, S.Si, M.Si, Ph.D, Prof. Dr. Ilyas Md Isa, Prof. Dr. nat. Karna Wijaya, M.ENG, Prof. Fitria Rahmawati, M.Si, Devi Purnamasari, S.Psi, MKM, Publication Date: 2022-09-10

Prototype Model Pembelajaran Guided Discovery Blended Learning (GDBL) Pada Materi Asam Basa Untuk Sekolah Penggerak Di SMA/MA. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

Disain Dan Modifikasi Sensor Glukosa Elektrokimia Sensitivitas Tinggi Berbasis Elektroda Komposit Graphene/1Penil-3-Metil-4-Benzoil-5-Pirazolone Termodifikasi. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

Prototype Sensor Pasta Menggunakan Multi-Wall-Carbon Nanotube (MWCNT) Untuk Aplikasi Lingkungan. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

Teknologi Tepat Guna Nanomaterial Tembaga Untuk Pembuatan Cat Anti Bakteri. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Dr. Fajriah Azra, M.Si, dkk, Publication Date: 2022-09-10

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Prototype Model Pembelajaran Blended Learning Pada Materi Kimia Kelas X Semester 2 Di SMA/MA Untuk Meningkatkan Kemampuan Berfikir Tingkat Tinggi (HOTS) Sebagai mplementasi Pengembangan Kecakapan Era 4.0. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

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PROTOTYPE SISTEM APLIKASI PEMBELAJARAN BLENDED. Inventor: Dr. Rahadian Zainul, S.Pd., M.Si., Drs. Sriadhi, M.Pd., M.Kom., Ph.D., Prof. Drs. Ganefri, M. Pd, Ph,D, Dr. Khairuddin, M. Kes, AIFO, Dr. Muhammad Adri, S.Pd, MT, Dr. K, Publication Date: 2022-01-01

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Prototype Film Coating Oksida Logam Anti Mikroorganisme. Inventor: Prof. Dr. Rahadian Zainul, S.Pd, M.Si, Dr. Dwi Hilda, S.Si, M.Si, Mirella Fonda Maahury, S.Si, M.Si, Publication Date: 2022-09-22

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Disain Modifikasi Dan Fabrikasi Film-Coating Nano-Cu<sub>2</sub>O/CuO Untuk Aplikasi Anti Virus Covid-19 Pada Cahaya Ruang. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

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Konsorsium Inovasi Pendidikan Indonesia (Ki-Pi.org). Inventor: Dr. Rahadian Zainul, S.Pd., M.Si., Prof. Drs. Ganefri, M. Pd, Ph,D, Dr. Khairuddin, M. Kes, AIFO, Dr. Muhammad Adri, S.Pd, MT, Drs. Sriadhi, M.Pd., M.Kom., Ph.D., Dr. K, Publication Date: 2022-01-28

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Disain Dan Modifikasi Nanomaterial Mikrobiologi Dengan Menggunakan Pendekatan Molekuler Dan Komputasi DFTB+. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si., Publication Date: 2022-12-20

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Cat Antibakteri Oksida Logam. Inventor: Prof. Dr. Rahadian Zainul, S.Pd., M.Si.; Dr. Dwi Hilda, S.Si., M.Si.; Mirella Fonda Maahury, M.Si., Publication Date: 2022-09-22

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METODE PEMBUATAN MIE HIJAU DENGAN SARI PATI SAWI (BRASSICA CHINENSIS VAR. PARACHINENSIS). Inventor: Dr. Rahadian Zainul, S.Pd., M.Si.; Jesica Nondra Mita, Publication Date: 2021-12-28

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Prototype Of Hexagonal Photo-Reactor For Degradation Humic Acid Using Cu-Zno As A Catalyst In Visible Lights. Inventor: Dr. Rahadian Zainul, S.Pd., M.Si.; Fauzan Yan Hawari; Ghoury Kharisma Anjali; Intan Anika Putri; Sintia Noveliza, Publication Date: 2021-07-21

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Panduan Kuliah Smart App Berbasis Android. Inventor: Dr. Rahadian Zainul, S.Pd., M.Si., Dr. Muhammad Adri, S.Pd., M.T., Drs. Sriadhi, M.Pd., M.Kom., Ph.D., Dr. Khaerudin, M.Pd, Neni Wahyuningtyas, S.Pd., M.Pd., rof. Dr. D, Publication Date: 2021-05-01

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Synthesis of Sodium Silicate (Na<sub>2</sub>SiO<sub>3</sub>) from Natural Silica using Sodium Hydroxide (NaOH). Inventor: Budhi Oktavia, S.Si, M.Si, Ph.D; Illa Ramadhani, S.Si; Dr. Rahadian Zainul, S.Pd, M.Si, Publication Date: 2021-10-01

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KOMPOSISI DONAT DARI CHOCOLATE (THEOBROMA CACAO L). Inventor: Rahadian Zainul, Reny Rahmalina, Anisa Safitri, Publication Date: 2023-08-04

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