



CURRICULUM VITAE

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Biography

Scopus of the Last 5 Years

The Characterization of the Hydrophobic Surface of Nanocomposites Aloe vera/PS for Antimicrobial Pathogens. Science and Technology Indonesia, Putri L.Z., 2023

The Synthesis of CuO/Polystyrene Nanocomposite Superhydrophobic Layer using The Spin Coating Method. Science and Technology Indonesia, Ratnawulan, 2022

The Effect of Calcium Carbonate (CaCO_3) and Polystyrene (PS) Composition on Contact Angle and Compressive Strength of Hydrophobic Cement Mortar. Journal of Physics: Conference Series, Septiana D., 2022

The Effect of Sintering Temperature on Hydrophobic characteristic of Silica Manganese/Polystyrene (SiMn/PS) Nanocomposite. Journal of Physics: Conference Series, Ratnawulan, 2022

Effect of composition CaCO_3 /polyurethane (PU) on contact angle of the surface and compressive strength of mortar. Journal of Physics: Conference Series, Nazein, 2022

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Meta-analysis of the influence of 21st century high school students' skills in learning physics using a guided inquiry model. Journal of Physics: Conference Series, Hidayatullah S., 2022

The Effect of Variation Calcination Temperature of Polystyrene/Tetrahydrofuran (PS/THF) Hydrophobic Layers on Contact Angle and the Compressive Strength of Cement Mortar. Journal of Physics: Conference Series, Syaputri O., 2022

The Effect of SiMn/PS Composition on Hydrophobic Properties of Nanocomposite Thin Layer. Journal of Physics: Conference Series, Ratnawulan, 2022

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The practicality of interactive multimedia integrated science based on guided inquiry with theme energy in the life that integrates of learning for the 21st century. *Journal of Physics: Conference Series*, Ariani R., 2021

The effect of calcination temperature on the structure of iron oxide phase from west Sumatra. *Journal of Physics: Conference Series*, Fauzi A., 2021

The Characteristic of Luciferase cDNA of *Lamprigera* sp. (Lampyridae: Coleoptera). *Journal of Physics: Conference Series*, Ahda Y., 2021

Synthesis and characterization Hausmannite (Mn₃O₄) nanoparticle of manganese ores prepared by high-energy milling. *International Journal of Advanced Science and Technology*, Ratnawulan, 2020

Validity of science student books with the theme of energy in life based integrated local materials using integrated models for 21st century learning. *Journal of Physics: Conference Series*, Hidayat Z., 2020

Validity of integrated science teacher's book with the themes of blood fluid using integrated connected type learning in the 21st century. *Journal of Physics: Conference Series*, Helfira R., 2020

Analysis of interactive media development of VIII grade integrated science with simple machine themes on human muscular and skeleton system using connected types integrated 21st century learning. *Journal of Physics: Conference Series*, Nurhafifah, 2020

Validation of Integrated Science Teacher book with the theme of the Human Body System Adaptation to Temperature Changes using Integrated Type of 21st Century Learning. *Journal of Physics: Conference Series*, Samra A., 2020

Validation of integrated science teacher book integrated mode with scene life energy in the regional local content based sijunjung for 21st century skills. *Journal of Physics: Conference Series*, Sarmi R.S., 2020

Validity of integrated science teacher's book on junior high school based on character with the theme of cohesion and adhesion on living with shared model. *Journal of Physics: Conference Series*, Kendedes T.A., 2020

Analysis of interactive media integrated natural science with energy themes in the life of using integrated types that integrate of learning for the 21st century. *Journal of Physics: Conference Series*, Ariani R., 2020

Validity of integrated natural science teacher book with theme senses of sight and optical devices using connected model integrated 21st century learning. *Journal of Physics: Conference Series*, Melati A., 2020

Optimization of hydrophobic nanocomposite thin film from silica/polietilen. *Journal of Physics: Conference Series*, Fauzi A., 2020

Design of integrated science student book theme adaptation of the human body to change temperature integrated 21st century learning using integrated types. *Journal of Physics: Conference Series*, Supriadi T., 2020

An analysis of development of student's worksheets with the theme integrated science energy in life by using integrated type of integrated learning in 21st century. *Journal of Physics: Conference Series*, Gusti D.A., 2020

Development of high school physics class XI book, based on concept map to enhance the high-level thinking skills (HOTS). *Journal of Physics: Conference Series*, Gusnedi G., 2020

Spectral properties of *Lampyrus Noctiluca* firefly from Sumatra. *Journal of Physics: Conference Series*, Ratnawulan, 2020

Validity of student book development science integrated with blood fluid theme using integrated learning type connected integrated 21st century learning. *Journal of Physics: Conference Series*, Putri T.A., 2020

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Analysis of interactive media integrated natural science by the motion themes in life using integrated connected type 21st century learning. *Journal of Physics: Conference Series*, Kurniawati A., 2020

Web of Science (WoS) of the Last 5 Years

Synthesis and Characterization of Polystyrene/CuO-Fe₂O₃ Nanocomposites from Natural Materials as Hydrophobic Photocatalytic Coatings. *CRYSTALS*, Ratnawulan, R; Ramli, R; Fauzi, A; Ae, SH;, 2021

Google Scholar of the Last 5 Years

Development of student competencies in integrated science subjects class VIII based on cognitive technology in the era of society 5.0. *Linguistics and Culture Review* 6 (S3), 237-247, 2022, S Rahmiwati, F Festiyed, R Ratnawulan, 2022

The Level Of Effectiveness Of Student Books Using The Problem Based Learning Model To Improve 21st Century Skill. *International Journal of Progressive Sciences and Technologies* 31 (2), 115-120, 2022, Y Oktrisma, R Ratnawulan, 2022

Pengembangan Multimedia Interaktif IPA Terpadu berbasis Inkuiri Terbimbing dengan Tema Energi dalam Kehidupan Terintegrasi Pembelajaran Abad 21. *Jurnal Penelitian Pembelajaran Fisika* 8 (1), 100-112, 2022, R Ariani, R Ratnawulan, 2022

The Synthesis of CuO/Polystyrene Nanocomposite Superhydrophobic Layer using The Spin Coating Method. *Science and Technology Indonesia* 7 (2), 158-163, 2022, R Ratnawulan, A Fauzi, S Sarimai, 2022

The effect of using discovery learning model in high school physics learning: a meta-analysis. *Jurnal Pendidikan Fisika* 10 (2), 93-106, 2022, DP Ramadhani, R Ratnawulan, 2022

IDENTIFICATION OF STUDENT'S MISCONCEPTIONS ON STRAIGHT MOTION MATERIALS USING FOUR-TIER DIAGNOSTIC TEST AND CERTAINTY OF RESPONSE INDEX (CRI). *Pillar of Physics Education* 15 (1), 21-30, 2022, IS Madina, R Ratnawulan, SY Sari, PD Sundari, T Mayasari, 2022

The Effect of Acid, Salt and Base Immersion on Hydrophobic Properties of SiMn/PS Nanocomposite. *Journal of Physics: Conference Series* 2309 (1), 012024, 2022, R Ratnawulan, SR Putri, D Septiana, SG Putri, A Fauzi, 2022

The Effect of SiMn/PS Composition on Hydrophobic Properties of Nanocomposite Thin Layer. *Journal of Physics: Conference Series* 2309 (1), 012019, 2022, SG Putri, D Septiana, SR Putri, A Fauzi, 2022

Effect of composition CaCO₃/polyurethane (PU) on contact angle of the surface and compressive strength of mortar. *Journal of Physics: Conference Series* 2309 (1), 012009, 2022, D Wazellin, M Fachrozy, SP Jingga, 2022

Meta-analysis of the influence of 21st century high school students' skills in learning physics using a guided inquiry model. *Journal of Physics: Conference Series* 2309 (1), 012057, 2022, S Hidayatullah, R Wulan, 2022

The Effect of Sintering Temperature on Hydrophobic characteristic of Silica Manganese/Polystyrene (SiMn/PS) Nanocomposite. Journal of Physics: Conference Series 2309 (1), 012012, 2022, D Septiana, SR Putri, SG Putri, A Fauzi, 2022

The Effect of Variation Calcination Temperature of Polystyrene/Tetrahydrofuran (PS/THF) Hydrophobic Layers on Contact Angle and The Compressive Strength of Cement Mortar. Journal of Physics: Conference Series 2309 (1), 012005, 2022, O Syaputri, D Septiana, M Salam, 2022

The Effect of Calcium Carbonate (CaCO₃) and Polystyrene (PS) Composition on Contact Angle and Compressive Strength of Hydrophobic Cement Mortar. Journal of Physics: Conference Series 2309 (1), 012003, 2022, D Septiana, O Syaputri, M Salam, 2022

PHOTOCATALYST COATING OF MNO-FE₂O₃PS FROM NATURAL MATERIALS. SPECTRUM 1 (01), 30-35, 2022, SR Putri, R Wulan, E Ollia, D Zaldi, FK Kamal, 2022

Synthesis and Characterization of Polystyrene/CuO-Fe₂O₃ Nanocomposites from Natural Materials as Hydrophobic Photocatalytic Coatings. Crystals 11 (1), 31, R Ratnawulan, R Ramli, A Fauzi, S Hayati AE, 2021

The effect of calcination temperature on the structure of iron oxide phase from west Sumatra. Journal of Physics: Conference Series 1876 (1), 012028, 2021, A Fauzi, R Ratnawulan, 2021

The practicality of interactive multimedia integrated science based on guided inquiry with theme energy in the life that integrates of learning for the 21st century. Journal of Physics: Conference Series 1876 (1), 012051, 2021, R Ariani, A Fauzi, 2021

Practicality of student worksheets science based on problem based learning models with the theme of the motion in life using integrated connected type 21st century learning. Journal of Physics: Conference Series 1876 (1), 012050, 2021, J Marshel, A Fauzi, 2021

Practicality of interactive multimedia of natural science integrated with the theme of motion in life using an integrated scientific approach to 21st-century learning. Journal of Physics: Conference Series 1876 (1), 012049, 2021, A Kurniawati, A Fauzi, 2021

Efektivitas LKPD IPA terpadu tema energi dalam kehidupan dengan PBL terintegrasi pembelajaran abad 21 untuk meningkatkan sikap peserta didik. Jurnal Penelitian Pembelajaran Fisika 7 (1), 2021, DA Gusti, R Ratnawulan, 2021

The effect of addition sorbitol and Carboxy Methyl Cellulose (CMC) on the quality of biodegradable plastics from avocado seed starch. Pillar of Physics 13 (2), 2021, L Margaretha, 2021

The Characteristic of Luciferase cDNA of Lamprigera sp.(Lampyridae: Coleoptera). Journal of Physics: Conference Series 1940 (1), 012074, 2021, Y Ahda, A Pranata, A Achyar, 2021

THE EFFECT OF HYDROPHOBIC CALCINATION TEMPERATURE VARIATION OF SILICA/POLYSTYRENE COMPOSITE (SiO₂/PS) ON THE DURABILITY OF SELF CLEANING MATERIALS. PILLAR OF PHYSICS 14 (1), 2021, D Juliawati, R Ratnawulan, 2021

Practicality of the interactive multimedia development integrated science with inquiry based learning model of simple machine themes on human muscular and skeleton system. Journal of Physics: Conference Series 1876 (1), 012053, 2021, A Fauzi, 2021

Analysis of contextual-based physics textbook development on static fluid materials for 21st century skills learning. Journal of Physics: Conference Series 1876 (1), 012046, 2021, Y Oktrisma, 2021

Development of high school physics class XI book, based on concept map to enhance the high-level thinking skills (HOTS). *Journal of Physics: Conference Series* 1481 (1), 012135, 2020, G Gusnedi, R Ratnawulan, A Putra, 2020

Pengembangan Perangkat Pembelajaran Fisika SMA Berbasis Pendekatan Induktif Guided Discovery Materi Gelombang Terintegrasi Bencana Tsunami. *Natural Science: Jurnal Penelitian Bidang IPA dan Pendidikan IPA* 6 (1), 54-65, 2020, DA Naspin, P Deswita, A Fauzi, R Wulan, 2020

Optimization of hydrophobic nanocomposite thin film from silica/polietilen. *Journal of Physics: Conference Series* 1481 (1), 012011, 2020, A Fauzi, LZ Putri, 2020

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Efektifitas Pengembangan Lembar Kerja Peserta Didik (LKPD) Fisika SMA Berbasis Model Pembelajaran Generatif. *Natural Science: Jurnal Penelitian Bidang IPA dan Pendidikan IPA* 6 (2), 126-134, 2020, RH Saputri, P Deswita, A Fauzi, R Wulan, 2020

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The Effect of Volume Fraction on Acoustic Properties of Areca Nut Midrib Fibers Composites with Natural Adhesives. *Jurnal Teknik Mesin* 10 (2), 102-108, 2020, P Pratiwi, H Fahmi, A Yanto, IF Soni, 2020

Effectiveness Cream and Ointment of *Spirulina platensis* extract against amount of Fibroblas and Wound Area: Study on white rats whose skin is incised. *Indonesian Journal of Environmental Management and Sustainability* 4 (2), 39-42, 2020, B Irenesia, R Yuniarti, E Mahati, 2020

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Efektivitas Buku Siswa IPA Terpadu dengan Tema Energi dalam Kehidupan berbasis Materi Lokal Menggunakan Model Integrated untuk Meningkatkan Kecakapan Abad 21. *JEP (Jurnal Eksakta Pendidikan)* 4 (1), 49-56, 2020, Z Hidayat, RS Sarmi, R Ratnawulan, 2020

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Validation of Integrated Science Teacher book with the theme of the Human Body System Adaptation to Temperature Changes using Integrated Type of 21st Century Learning. *Journal of Physics: Conference Series* 1481 (1), 012099, 2020, A Samra, 2020

Analysis of interactive media integrated natural science with energy themes in the life of using integrated types that integrate of learning for the 21st century. *Journal of Physics: Conference Series* 1481 (1), 012048, 2020, R Ariani, 2020

An analysis of development of student's worksheets with the theme integrated science energy in life by using integrated type of integrated learning in 21st century. *Journal of Physics: Conference Series* 1481 (1), 012045, 2020, DA Gusti, 2020

Analysis of Students Worksheet (LKPD) integrated science with the theme of the motion in life using integrated connected type 21st century learning. *Journal of Physics: Conference Series* 1481 (1), 012046, 2020, J Marshel, 2020

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Validity of student book development science integrated with blood fluid theme using integrated learning type connected integrated 21st century learning. *Journal of Physics: Conference Series* 1481 (1), 012111, 2020, TA Putri, R Wulan, 2020

Recent Advances in Pyrolysis. *BoD–Books on Demand*, 2020, HAH Ibrahim, 2020

The Effect of Heavy Metal Pollutants on Bioluminescence Intensity of Luminous Mushrooms (*Nenothopanus* sp). *EKSAKTA: Berkala Ilmiah Bidang MIPA 21* (2020), 98-109, 2020, WM Ihsan, R Ratnawulan, 2020

Optimization of the Optimum Condition of Mushroom Light Excitation (*Neonothopanus* sp) Bioluminescence. *EKSAKTA: Berkala Ilmiah Bidang MIPA 22* (2020), 1-9, 2020, M Qurniawati, R Ratnawulan, 2020

Pembelajaran Menulis Teks Puisi Menggunakan Metode Think Talk Write (TTW) Berbantuan Media Audio Visual pada Siswa Kelas X SMK Bina Insan Bangsa Ngamprah. *Parole: Jurnal Pendidikan Bahasa dan Sastra Indonesia* 3 (6), 2020, R Wulan, RT Sudrajat, D Firmansyah, 2020

Synthesis and Characterization of Polystyrene/CuO-Fe₂O₃ Nanocomposites from Natural Materials as Hydrophobic Photocatalytic Coatings. *Crystals* 11 (1), 31, 2020, R Ratnawulan, R Ramli, A Fauzi, S Hayati AE, 2020

Analysis of interactive media development of VIII grade integrated science with simple machine themes on human muscular and skeleton system using connected types integrated 21st *Journal of Physics: Conference Series*, 2020, R Nurhafifah, 2020

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Research of the Last 5 Years

Sintesis Dan Karakterisasi Nanokomposit Fotokatalis Mn₂O₃/ps/fe₂o₃ Untuk Pelapis Selfcleaning. Penelitian Kerjasama Pt Luar Negeri Dasar, Leader: Ratnawulan, Implementation Year: 2020

Sintesis Dan Karakterisasi Lapisan Superhidrofobik Nanokomposit Silika/polystyrene (sio2/ps) Dari Mineral Ekonomis Sumatera Barat Untuk Material Self Cleaning. Penelitian Dasar, Leader: Ahmad Fauzi, Implementation Year: 2020

Community Service of the Last 5 Years

Bimbingan Teknis Pembuatan Bahan Ajar Fisika Terintegrasi Materi Bencana Gempabumi Untuk Meningkatkan Kompetensi Mitigasi Bencana Guru-guru Fisika Sma Se Kabupaten Pasaman Barat. Program Kemitraan Masyarakat (pkm), Leader: Ahmad Fauzi, Implementation Year: 2022

Bimbingan Teknis Implementasi Pembelajaran Abad 21 Dalam Lkpd Ipa Terpadu Untuk Peningkatan Kompetensi Pedagogik Dan Profesional Guru Ipa Smp/mtsn Di Kota Batusangkar. Program Kemitraan Masyarakat (pkm), Leader: Ratnawulan, Implementation Year: 2021

IPR's of the Last 5 Years

E-Modul IPA SMA Sekolah Penggerak Terintegrasi Inkuiri Terbimbing Dengan Tema Lingkungan Hidup. Inventor: Silmi Hidayatullah, M.Pd dan Prof. Dr. Ratnawulan, M.Si, Publication Date: 2023-05-18

E-Modul Fisika SMA Kelas X Berbasis Discovery Learning Model Terintegrasi Pembelajaran Abad 21. Inventor: Dwi Putri Ramadhani, M.Pd dan Prof. Dr. Ratnawulan, M.Si, Publication Date: 2022-11-07

Photocatalyst Coating of MnO-Fe₂O₃/PS from Natural Materials. Inventor: Dr. Ratnawulan, M.Si.; Suchi Ramadhani Putri; Elsa Ollia, S.Si.; Dafri Zaldi, S.Si., Publication Date: 2021-03-18

Nanocomposite Coating Of Si / Polystyren For Water And Dust Repellent From Natural Materials. Inventor: Dila Juliawati, Dian Septiana, Dr. Ratnawulan, M.Si, Lathifa Zonesya Putri, S.Si, Publication Date: 2021-10-04

Photocatalyst Coating Of MnO-Fe₂O₃/PS From Natural Materials. Inventor: Dr. Ratnawulan, M.Si., Suchi Ramadhani Putri, Publication Date: 2021-10-04

Lembar Kerja Peserta Didik IPA Terpadu Dengan Tema Energi Dalam Kehidupan Menggunakan Problem Based Learning Terintegrasi Pembelajaran Abad 21. Inventor: Ratnawulan, Dian Arima Gusti, Publication Date: 2020-07-12

Multimedia Interaktif IPA Terpadu Dengan Tema Gerak Dalam Kehidupan Menggunakan Pendekatan Saintifik Terintegrasi Pembelajaran Abad 21. Inventor: Ratnawulan, Anisa Kurniawati, Publication Date: 2020-07-12

Multimedia Interaktif IPA Terpadu Berbasis Inkuiri Terbimbing Dengan Tema Energi Dalam Kehidupan Terintegrasi Pembelajaran Abad 21. Inventor: Ratnawulan, Rizka ariani, Ahmad Fauzi, Publication Date: 2020-07-12

Multimedia Interaktif IPA Terpadu Model Inquiry Based Learning Dengan Tema Pesawat Sederhana Pada Sistem Rangka Dan Otot Manusia Terintegrasi Pembelajaran Abad 21. Inventor: Ratnawulan, Nurhafifah, Publication Date: 2020-07-12

Lembar Kerja Peserta Didik IPA Terpadu Berbantuan Model Problem Base Learning Dengan Tema Gerak Dalam Kehidupan Menggunakan Tipe Connected Terintegrasi Pembelajaran Abad 21. Inventor: Ratnawulan, Joviana, Publication Date: 2020-07-12

Book of the Last 5 Years

Recent Advances in Pyrolysis. ISBN: 1789840635, Publisher: Intechopen, Year: 2020

Synthesis and Characterization of Forsterite (Mg_2SiO_4) Nanomaterials of Dunite from Sumatera. ISBN: 9781789840643, Publisher: Intechopen, Year: 2020
