



CURRICULUM VITAE

Prof. Dr. Ratnawulan, M.Si.

Faculty: Fakultas Matematika dan IPA

Study Programs: Pendidikan Fisika

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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

The Effect of Acid, Salt and Base Immersion on Hydrophobic Properties of SiMn/PS Nanocomposite. Journal of Physics: Conference Series, Ratnawulan R., 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, 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

Synthesis and characterization of polystyrene/cuo- Fe_2O_3 nanocomposites from natural materials as hydrophobic photocatalytic coatings. Crystals, Ratnawulan R., 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, Marshel J., 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, Kurniawati A., 2021

Practicality of the interactive multimedia development integrated science with inquiry based learning model of simple machine themes on human muscular and skeleton system integrated 21st century learning. Journal of Physics: Conference Series, Nurhafifah, 2021

Analysis of contextual-based physics textbook development on static fluid materials for 21st century skills learning. *Journal of Physics: Conference Series*, Oktrisma Y., 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*, 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

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 *Lampyrida* 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

Research of the Last 5 Years

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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

Book of the Last 5 Years

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