

STAFF HANDBOOK



Publication Link:

<https://sinta.kemdikbud.go.id/authors/profile/6031416#!>

Name	Prof. Dr. Mangasi Alion Marpaung, M.Si
Position	Lecturer in Master Physics Education
Educational Background	<ol style="list-style-type: none">1. Bachelor's degree (Physics), UGM Yogyakarta2. Master's degree (Optoelectronics),University of Indonesia3. Doctoral degree (Physics), University of Indonesia
Academic Career (Employment)	Lecturer, Master of Physics Study Program, Faculty Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development project over the last 5 years	<ol style="list-style-type: none">1. 2021 - Application of LIBS Method for Determination of Heavy Metal Contamination in Processed Milk and Marine Fish in Low Pressure Gas Environment.2. 2020 - Design And Development Of Free-Fall Motion Instruments In Air And Liquid Medium For The Study Of Velocity Terminal Motion Based On Arduino Micro Controller.3. 2020 - Application of LIBS Method for Determination of Heavy Metal Contamination in Processed Milk and Marine Fish in Low Pressure Gas Environment.4. 2020 - Synthesis of Ba(Fe,Co,Ni)₁₂O₁₉ Magnetic Thin Films For High Capacity Data Storage Applications.5. 2020 - Ba(Fe,Co,Ti)₁₂O₁₉/SiO₂ Nanocomposite Material For Radar Frequency Wave Absorbing Applications.6. 2020 - Laser Induced Plasma Engineering For Analysis Of Hazardous Contaminants In Food Products.7. 2019 - Ba(Fe,Co,Ti)₁₂O₁₉/SiO₂ Nanocomposite Material For Radar Frequency Wave Absorbing Applications

	<p>8. 2019 - Synthesis of Ba(Fe,Co,Ni)₁₂O₁₉ Magnetic Thin Films For High Capacity Data Storage Applications.</p> <p>9. 2019 - Synthesis of Ba(Fe,Co,Zn)₁₂O₁₉ As Radar Wave Absorbing Material.</p> <p>10. 2019 - Application of LIBS Method for Determination of Heavy Metal Contamination in Processed Milk and Marine Fish in Low Pressure Gas Environment.</p>
Industry collaboration/ Community Services over the last 5 year	<p>1. 2021 - Training In The Making Of Astronomy Media For Learning At Open Schools In Ciracas Sub-District, East Jakarta.</p> <p>2. 2020 - Training In The Making Of Astronomy Media To Observe The Changing Of Seasons In Parung Area, Bogor District, West Java Province.</p> <p>3. 2020 - Microhydro Manufacturing Training For Low Power Electricity In Parung Area, Bogor District, West Java Province.</p> <p>4. 2019 - Training On The Use Of Digital-Based Literation Portal Websites.</p>
Patents and Intellectual Property Right (IPR)	<p>1. 2020 - Module For Making Magnetic Materials (Ca,Ba)Fe₁₂O₁₉.</p> <p>2. 2020 - Magnetic Material Composition Of BaFe₁₀O₁₉ And Method Of Their Production.</p> <p>3. 2019 - Microwave Absorption Properties of Single and Multiple Absorbers in Barium Hexaferate and Silica Based Materials.</p> <p>4. 2017 - Making La_{0.8}Ba_{0.2}MnO₃ Magnets For Micro Wave Absorbor Applications.</p> <p>5. 2017 - Formulation And Methods For Making Magnetic Materials For Micro Wave Absorptor Applications.</p>
Important publications over the last 5 years	<p>1. 2022 - Simple Defocus Laser Irradiation To Suppress Self-Absorption In Laser-Induced Breakdown Spectroscopy (LIBS)</p> <p>2. 2022 - Determination Of Micronutrients And Toxic Elements In Moringa Oleifera Leaves By Calibration Free Laser-Induced Breakdown Spectroscopy (LIBS)</p> <p>3. 2021 - High Sensitivity Hydrogen Analysis In Zircaloy-4 Using Helium-Assisted Excitation Laser-Induced Breakdown Spectroscopy</p> <p>4. 2021 - Millimeter Wave Absorption Properties Of Teflon At Frequency Range From 50 Ghz To 67 Ghz</p> <p>5. 2021 - Permeability And Permittivity Measurements Of Teflon In Millimeter Wave</p> <p>6. 2021 - Unusual Parallel Laser Irradiation For Suppressing Self-Absorption In Single Pulse Laser-Induced Breakdown Spectroscopy</p> <p>7. 2021 - Complex Permeability, Permittivity And Microwave Absorption Properties Of Barium Hexaferrite Synthesized From Natural Iron Sand</p> <p>8. 2021 -Structural, Magnetic And Microwave Absorption Properties Of Natural Iron Sand</p>

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| | <p>9. 2021 - Application Of Laser-Induced Plasma Spectroscopy To Detect Contaminants In Food</p> <p>10.2021 - The Development Of Electronic Module Based On Problem Based Learning On Balance And Rotation Dynamic Topic To Improve Science Literacy Of Senior High School Students</p> <p>11.2021 - Microwave Absorbing Properties Of Teflon Coating For X-Band Frequencies</p> <p>12.2020- Suppression Of Self-Absorption In Laser-Induced Breakdown Spectroscopy Using A Double Pulse Orthogonal Configuration To Create Vacuum-Like Conditions In Atmospheric Air Pressure</p> <p>13. 2020- Microwave Absorption Performance Of Barium Hexaferrite Multi-Nanolayers</p> <p>14.2020 - Rapid Powder Analysis With Laser-Induced Breakdown Spectroscopy At Low Pressure Ambient Helium Gas Employing Bamboo Charcoal As A Sample Holder</p> <p>15. 2020 - Emission Spectrochemical Analysis Of Soft Samples Including Raw Fish By Employing Laser-Induced Breakdown Spectroscopy With A Subtarget At Low-Pressure Helium Gas</p> <p>16.2020 - Underlying Physical Processes For Time Dependent Variations Of He Triplet And Singlet Intensities In Laser-Induced He Plasma</p> <p>17.2020 - Suppression Of Self-Absorption Effect In Laser-Induced Breakdown Spectroscopy By Employing A Penning-Like Energy Transfer Process In Helium Ambient Gas</p> <p>18.2020 - Comparison Of Excitation Mechanisms And The Corresponding Emission Spectra In Femto Second And Nano Second Laser-Induced Breakdown Spectroscopy In Reduced Ambient Air And Their Performances In Surface Analysis</p> <p>19.2019 - Structure And Magneticproperties Of Barium Hexaferrite BaFe₁₀Co₁₉ Films</p> <p>20.2019 - Study On Mechanical Properties Of Metal Matrix Composites (Mmcs) Al-Cu-Mg/Sicp With Powder Metallurgy</p> <p>21.2019 - Design And Development Equipment To Measure The Motion Quantities Of An Object That Moving In Air Or In Fluid</p> <p>22.2019 - Microwave Absorption Properties Of Single And Double-Layer Absorbers Based On BaFe₁₂O₁₉ And SiO₂</p> <p>23.2019 - Microwave Absorbing Characteristics In Multilayer Absorbers Based On Barium Ferrite And Teflon</p> <p>24.2019 - Silicon Carbide (Sic) Effect On Mechanical Properties And Corrosion Rates On Composite Al/Sic And Al-Cu/Sic</p> <p>25.2019 - Quantification Of Rare Earth Elements With Low Pressure Laser Induced Breakdown Spectroscopy Employing Subtarget Supported Micro Mesh Sample Holder</p> <p>26.2019 - Underlying Physical Process For The Unusual Spectral Quality Of Double Pulse Laser Spectroscopy In He Gas</p> |
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	<p>27.2019 - H-D Analysis Employing Energy Transfer From Metastable Excited-State He In Double-Pulse LIBS With Low-Pressure He Gas</p> <p>28.2019 - Complex Permittivity, Permeability And Microwave Absorption Studies Of Double Layer Magnetic Absorbers Based On BaFe₁₂O₁₉ And BaFe₁₀CoZnO₁₉</p> <p>29.2019 - Enhanced Microwave Absorbing Capabilities Of Multilayer Absorbers Based On BaFe₁₂O₁₉ And Fe₃O₄</p> <p>30.2018 - The Influence Of Contextual Learning Model And Critical Thinking To Science Literacy Of High School First Year Students</p> <p>31.2018 - Shock Wave Plasma Generation In Low Pressure Ambient Gas From Powder Sample Using Subtarget Supported Micro Mesh As A Sample Holder And Its Potential Applications For Sensitive Analysis Of Powder Samples</p> <p>32.2018 - Effects Of Sintering Temperature On Structure, Magnetic And Dielectric Properties Of La_{0.5}Sr_{0.5}Fe_{0.9}Mn_{0.05}Ti_{0.05}O₃ Material</p> <p>33.2018 - Synthesis Of La_{1-x}Ca_xMnO₃ (X = 0 And 0.2) Through Ultrasonic Mixing And Its Characterisation</p> <p>34.2018 - Magnetic And Microwave Absorbing Properties Of BaFe_{12-2x}Co_xZn_xO₁₉ (X = 0.0; 0.2; 0.4; 0.6) Nanocrystalline</p> <p>35.2018 - Preliminary Panoramic Study Of River Calm Muscle Using Neodymium:Yttrium-Aluminum-Garnet (Nd: YAG) Laser-Induced Breakdown Spectroscopy (LIBS)</p> <p>36.2018 - Microwave Absorbing Studies Of Magnetic Materials For X-Band Frequencies</p> <p>37.2018 - Double Layer Microwave Absorption Characteristics Of Barium Hexaferrite/Silica Composite For X-Band Frequencies.</p>
<p>Activities in Professional organizational over the last 5 years</p>	<p>-</p>



Publication Link:

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Educational Background	<ol style="list-style-type: none"> 1. Bachelor's degree (Physics Education), IKIP Jakarta. 2. Master's degree (Physics), UGM Yogyakarta. 3. Doctoral degree (Environmental education), IKIP Jakarta.
Academic Career (Employment)	Lecturer, Master of Physics Study Program, Faculty Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development project over the last 5 years	<ol style="list-style-type: none"> 1. 2019 - Development Electronic Module With Discovery Learning Models To Improve High Order Thinking Skills (Hots) Senior High School Student.
Industry collaboration/ Community Services over the last 5 year	<ol style="list-style-type: none"> 1. 2021 - Ppm Training In The Making Of Smart Orbital Gangsing Media (Gso) With Kahoot Assistance For Physics Teacher At Sma N 1 Pebayuran Kab. Bekasi. 2. 2021 - Ppm Improvement Of The Quality Of Learning Smas Kartika Viii-1 In Kel. Srengseng sawah kec. Jagakarsa city of jakarta selatan through the implementation of wopi (website of physics instructional). 3. 2021 - Science Literacy Development Training At Sman 3 Ciledug, Tangerang, Banten. 4. 2020 - Physics Problem Development Training For Divergenic Thinking Ability.

<p>Patents and Intellectual Property Right (IPR)</p>	<ol style="list-style-type: none"> 1. 2021 - Metacognitive Knowledge (Valid Theory and Example Problems). 2. 2021 - Learning Motivation (Theory and Examples of Valid Instruments). 3. 2021 - Simple Electrical Circuit. 4. 2020 - High School Physics Theory and Problems Divergent Thinking and High School Physics HOTS Theory and Problems. 5. 2020 - Divergent Thinking High School Physics Theory and Problems. 6. 2020 - Android Application Of Ibnu Haitham Biography Comics. 7. 2020 - Basic Physics Practicum Worksheet 1 Science-Based Writing Heuristic (SWH). 8. 2018 - Sir Isaac Newton Biography Comic Book.
<p>Important publications over the last 5 years</p>	<ol style="list-style-type: none"> 1. 2022 -The Relationship Between Personality And Environmentally Responsible Behavior In Green High School 2. 2022 - The Development E-Learning Assisted By Flashcard To Improve Students Scientific Literacy In High School On The Kinetic Theory Of Gases Materials 3. 2022 - Analysis Of Distance Learning Physics During The Covid-19 Pandemic 4. 2022 - The Effectiveness Of Using Quizizz In Fundamental Physics Learning In The Era Of The Covid-19 Pandemic 5. 2021 - Phet-Assisted Electronic Student Worksheets Of Physics (Eswop) On Heat For Inquiry Learning During Covid 6. 2021 - Identifying High School Students' Misconceptions Using Digital Four-Tier Diagnostic Tests In Distance Learning 7. 2021 - The Development Of Digital Comic As Learning Media Based On Picture-And-Picture Learning Model On Global Warming Materials During Distance Learning 8. 2021 - Project Based Learning (Pjbl) Learning Model In Science Learning: Literature Review 9. 2021 - Review Of Trends Project Based Learning (Pjbl) Integrated STEM In Physics Learning 10.2021 - Design Of Virtual Physics Laboratory (VPL) On Collision Topic 11.2021 - Trends Of Flipped Classroom Studies For Physics Learning: A Systematic Review 12.2021 - A Review Of Research On The Use Of Augmented Reality In Physics Learning 13.2021 - Enhancing Students' Learning Activities Using Problem-Based Learning Model On Temperature And Heat Concept 14.2021 - Flipped Learning Models And Students' Scientific Literacy On Physics Achievement Test

	<p>15.2021 - Project Based Blended Learning And Independent Learning On Critical Thinking Skill</p> <p>16.2021 - Development Of Virtual Reality-Based Learning Media On Electromagnetic Wave Radiation Material</p> <p>17.2021 - Implementation Of Think Pair Share Model In Physics Learning To Determine Cognitive, Affective And Psychomotor Learning Outcomes And Student Responses</p> <p>18.2021 - Massive Open Online Simulation (MOOS) Of Physics Concepts Microscopic For Improving Creative Thinking</p> <p>19.2021 - Development Of Learning Material In The Form Of A Smartphone Application On The Subject Of Temperature And Heat By Inquiry-Based Learning (IBL) For Physics High School Subject</p> <p>20.2021 - Dynamical System Of Relativistic Particle Under One Dimensional Harmonic Oscillator Potential</p> <p>21.2021 - The Use Of Google Classroom As ICT Literacy To Improve Physics Students Collaboration Skill In Industrial Revolution 4.0</p> <p>22.2021 - The Effect Of Inquiry Learning Model And Logical Mathematical Intelligence On The Learning Outcomes Of High School Students</p> <p>23.2021 - Hots And The 21st Century Learning Skills: Formed With Practicum-Based Physics Learning Worksheets</p> <p>24.2021 - Essay Questions On Dynamic Fluid Physics Material To Measure Intellection Thinking Ability Of Grade XI High School Students</p> <p>25.2021 - The Analysis Of Cognitive Abilities And Critical Thinking Skills With Contextual Approaches On Heat Transfer Concepts For Junior High School Students</p> <p>26.2021 - Worksheets, Discovery Learning, And 3d Media Based On Qr-Code: The Ability To Analyze Is Formed In Physics Practicum</p> <p>27.2021 - Comparison Of Problem-Based Learning Strategies Assisted By Animated Video And Non-Assisted By Animated Video Against Metacognitive Abilities Of High School Students</p> <p>28.2021 - Development Of Basic Physics I Practicum Worksheet With Science Writing Heuristic (Swh) Approach To Improve Science Process Skills</p> <p>29.2021 - The Effects Of Active Learning Model Team Quiz Type Assisted By Animation Video On Critical Thinking Ability Of High School Students</p> <p>30.2021 - Imposed Conditions To Make Gauge Invariance In Gross-Pitaevskii Equation With Time-Dependent Potential</p> <p>31.2021 - The Influence Of Inquiry Learning Model Using Phet And Learning Motivation On Metacognition Of Class XI High School Students</p>
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	<p>32.2021 - Project Based Learning: Model Electric Power Plants Mas Wawi (Biomass, Sun, Water, And Wind) To Improve Student Energy Literacy</p> <p>33.2021 - EFFECT OF NATURAL DISASTER-BASED VIDEO MEDIA TO INCREASE STUDENT'S ENVIRONMENTAL SENSITIVITY</p> <p>34.2020 - The Implementation Of Collaborative Learning Models Using Worksheet To Increase Student Learning Outcomes At Senior High School The Subject Of Light Waves</p> <p>35.2020 - The Development Of Guided Inquiry Student Worksheet Using Tracker Video Analysis For Kinematics Motion Topics</p> <p>36.2020 - The Effects Of Cooperative Learning Model Think Pair Share Assisted By Animation Media On Learning Outcomes Of Physics In High School</p> <p>37.2020 - The Effects Of Active Learning Model Guided Note Taking On Student's Critical Thinking Ability In High School</p> <p>38.2020 - The Differences In Physics Learning Outcomes Based On Gender After Using Blended Problem-Based Learning Model</p> <p>39.2020 - Specialized Social Media Platform For Integrated Thematic Based Science Learning</p> <p>40.2019 - Theremin As Teaching Aid To Improve Student Understanding Of Waves</p> <p>41.2019 - Development Of Sound Wave And Light Wave E-Book Physics Based On Scientific Approach To Improve Science Process Skills For Secondary School Students</p> <p>42.2019 - Renewable Energy Props Development</p> <p>43.2019 - Effect Of Project Based Learning Model Assisted By Student Worksheet On Critical Thinking Abilities Of High School Students</p> <p>44.2019 - Improvement Of Students' Critical Thinking Ability Through Problem-Based Learning (PBL) Model Class XI MIPA 3 On Temperature And Heat Material</p> <p>45.2019 - The Effect Of Flipped Classroom Model On Student's Physics Learning Outcome In Work And Energy Concept</p> <p>46.2019 - Development Of E-Handout Materials Physics Based Android For Improvement Learning Outcomes Senior High School Student</p> <p>47.2019 - Developing Optical Instruments Encyclopedia Based On Problem Based Learning</p> <p>48.2019 - The Development Of Newton's Law Encyclopedia Based On Advance Organizer</p> <p>49.2019 - Development Of Work And Energy Encyclopedia Based On Science Technology Society</p> <p>50.2019 - Developing Of Modified Inquiry-Based Laboratory Worksheet On Optical Topic</p>
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	<p>51.2019 - The Development Of The Physics Practicum Worksheet In Electricity Based On Modified Inquiry Approach</p> <p>52.2019 - Developing E-Module For Fluids Based On Problem-Based Learning (PBL) For Senior High School Students</p> <p>53.2019 - Augmented Reality Water Rocket: Develop An Enrichment Book Of Physics</p> <p>54.2019 - Development Of Work And Energy Encyclopedia Based On Science Technology Society [Desarrollo De Enciclopedia De Trabajo Y Energía Basada En La Ciencia, La Sociedad Tecnológica]</p> <p>55.2019 - Validation Of Environmental Personality (Conscientiousness, Agreeableness, Neuroticism, Openness, Extraversion) And Its Effect On Students' Pro-Eco Behavior Mediated By Intention To Act</p> <p>56.2018 - Character Building In Physics Learning For Indonesia Children</p> <p>57.2018 - The Development Of A Physics Knowledge Enrichment Book "Optical Instrument Equipped With Augmented Reality" To Improve Students' Learning Outcomes</p> <p>58.2018 - Relationship Between Time Management And Students' Learning Outcomes At Grade XI - Science On Fluid Statics Subject</p>
<p>Activities in Professional organizational over the last 5 years</p>	



Publication Link:

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Name	Prof. Dr. Sunaryo, M.Si
Position	Lecturer in Master Physics Education
Educational Background	<ol style="list-style-type: none"> 1. Bachelor's degree (Physics Education), IKIP Jakarta. 2. Master's degree (Physics), UGM Yogyakarta. 3. Doctoral degree (Environmental education), IKIP Jakarta.
Academic Career (Employment)	Lecturer, Master of Physics Study Program, Faculty Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development project over the last 5 years	<ol style="list-style-type: none"> 1. 2021 - Sustainable Environmental Physics E-Module In The Era Of Pandemic Covid 19. 2. 2020 - Development Of Electric Field Interaction Experiment Set For Active Learning Of Physics In High School. 3. 2018 – Development of Multirepresentational and Contextual Based Web Based Learning for Physics Education Programs.
Industry collaboration/ Community Services over the last 5 year	<ol style="list-style-type: none"> 1. 2021 - Training In The Making Of Astronomy Media For Learning At Open Schools In Ciracas Sub-District, East Jakarta. 2. 2021 - Ppm Improvement Of The Quality Of Learning Smas Kartika Viii-1 In Kel. Srengseng Sawah Kec. Jagakarsa City Of Jakarta Selatan Through The Implementation Of Wopi (Website Of Physics Instructional). 3. 2021 - Ppm Assistance Of State High School Teacher M.H. Thamrin Cipayung East Jakarta In Using Microsoft Teams To Optimize Learning Activities And Boarding Development In The Pandemi Period.

	<p>4. 2021 - Training In The Making Of Astronomy Media To Observe The Changing Of Seasons In Parung Area, Bogor District, West Java Province.</p> <p>5. 2020 - Training On Making Micro Hydro For Low Power Power Plants In The Parung Area, Bogor Regency, West Java Province.</p> <p>6. 2019 - Microhydro Manufacturing Training For Low Power Power Plant In Pandeglang Area.</p>
Patents and Intellectual Property Right (IPR)	<p>1. 2020 - E-Module Global Warming.</p>
Important publications over the last 5 years	<p>1. 2022 - Structure Evolution Due To Heat Treatment Of Aluminum Nanoparticle With Different Sizes: A Molecular Dynamics Study</p> <p>2. 2022 - Influence Of Heating And Cooling Rates On Thermodynamic Properties Of Aluminum Thin Film From 300 To 1100 K</p> <p>3. 2021 - The Effect Of Voltage And Electrode Types On Hydrogen Production From The Seawater Electrolysis Process</p> <p>4. 2021 - E-Book Static Fluid And Dynamic Fluid Web-Based With A Problem-Based Learning Model To Improve Students Physics Problem-Solving Skills</p> <p>5. 2021 - The Effect Of The Use Of Harmonic Movement Phet Interactive Simulation In Online Learning Process On Mastering The Concept Of High School Students</p> <p>6. 2021 - Development Of E-Module With A Scientific Approach To Improve The Student's Critical Thinking Skills At Class XI Student High School In Optical Tools Material</p> <p>7. 2021 - The Video-Based STEM Experiment: An Observation Of The Momentum Of A Bouncing Ball</p> <p>8. 2021 - Preliminary Study On The Effect Of Time On Hydrogen Production From Electrolysis Of The Seawater</p> <p>9. 2021 - The Dynamics Of A Hockey Player Body On Passing The Ball</p> <p>10. 2021 - Investigating The Groundwater Usage For Environmental Education: Case Study At 35 High School In Jakarta</p> <p>11. 2021 - Leaf Flakes For Learning Electric Fields In Senior High School</p> <p>12. 2021 - Imposed Conditions To Make Gauge Invariance In Gross-Pitaevskii Equation With Time-Dependent Potential</p> <p>13. 2020 - Development Of Electronic Modules By Scientific Approach To Train Science Process Skills</p> <p>14. 2019 - Melting Of Gold Nanoparticle: Study On Structural Evolution</p>

	<p>15.2019 - Development Of Web Based Massive Open Online Course On Fundamental Physics Subject To Increase Students' Higher Order Thinking Skill</p> <p>16.2019 - Using Car Toys With Videos To Introduce Kinematics In Physics</p> <p>17.2019 - Identification Of Fault Components In Diesel Engine Sounds On Train Using Neural Network</p> <p>18.2019 - Unveil Of Virtual Physics Laboratory (VPL) With Battery Microscopic Simulation (BMS) To Promote Of Problem Solving Activity</p> <p>19.2019 - Distribution Of Seismic Wave Velocity Beneath Sunda-Banda Arc Transition Zone Using Local Earthquake Tomography</p> <p>20.2019 - Mini Photovoltaic System Project: Physics Laboratory Activities Through A Technology-Rich Learning Environment</p> <p>21.2019 - Feasibility Of Based Augmented Reality Devices Discovery Learning On Students Learning Outcomes In Morphology Of Wijaya Kusuma Flower (<i>Epiphyllum Anguliger</i>)</p> <p>22.2019 - Developing E-Module For Fluids Based On Problem-Based Learning (PBL) For Senior High School Students</p> <p>23.2019 - Moment Tensor Analysis Using Regional And Temporary Deployment 2008 Data For Sumatran Active Fault Zone Earthquakes.</p>
<p>Activities in Professional organizational over the last 5 years</p>	



Publication Link:

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Name	Dr.rer.nat Bambang Heru Iswanto, M.Si.
Position	Lecturer in Master Physics Education
Educational Background	<ol style="list-style-type: none"> 1. Bachelor's degree (Physics Education), IKIP Jakarta. 2. Master's degree (Physics), ITB Bandung. 3. Doctoral degree (Artificial Intelligence) – Technische Universitaet Berlin (TU Berlin), Jerman
Academic Career (Employment)	Lecturer, Master of Physics Study Program, Faculty Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development project over the last 5 years	<ol style="list-style-type: none"> 1. 2021 - Simulation Of The Movement Of The Covid-19 Virus Droplets Using The Monte Carlo Method. 2. 2021 - Improving Tea Leaf Detection Based On Computer Vision Using Wavelet And Fuzzy Fusion. 3. 2020 - Introduction To Tea Plant Quality Using Digital Image And Machine Learning Methods. 4. 2019 - Machine Learning Analysis Of Magnetic Properties And Soil Geochemical. 5. 2019 - Development Of Quantum Cryptography-Based Document Security System Using The Event By Event Method. 6. 2018 - Development Of Quantum Cryptography-Based Document Security System Using The Event By Event Method.
Industry collaboration/ Community Services over the last 5 year	<ol style="list-style-type: none"> 1. 2021 - Literacy And Ict Skills Development For Indonesia Workers In Singapore. 2. 2021 - Using Audiosonic To Improve Quality Of Physics Learning In High Schools In Jatisampurna District, Bekasi City, West Java.

	<p>3. 2020 - Computer Simulation Programming Training For Physics Teacher In Bogor District.</p> <p>4. 2019 - Ict Study In Physics Learning.</p>
Patents and Intellectual Property Right (IPR)	<p>1. 2021 - Learning Media.</p> <p>2. 2020 - Tea Leaf Image Feature Extraction Program With DTCWT-GLC in Matlab.</p> <p>3. 2020 - Magnetic Force Demonstration on Cylinder Metal in Straws.</p>
Important publications over the last 5 years	<p>1. 2021 - Study Of Tofu Wastewater Treatment Using Anaerobic Baffled Reactor: Laboratory Scale</p> <p>2. 2021 - Wastewater Treatment For Tofu Home Industries In Semanan, West Jakarta Using Electrocoagulation Method With Electrode Al-Stainless Steel</p> <p>3. 2021 - Virtual Test Instruments To Measure Scientific Literacy Of High School Students On Work And Energy</p> <p>4. 2021 - Visualization Lorentz Force With Tea Leaves For Studying Magnetic Field In Senior High School</p> <p>5. 2021 - Website Of Physics Instructional (Wopi): Learning Physics From Home During COVID-19</p> <p>6. 2021 - Feature Extraction Of Tea Leaf Images Using Dual-Tree Complex Wavelet Transform And Gray Level Co-Occurrence Matrix</p> <p>7. 2021 - Augmented Reality Geometrical Optics (AR-Gios) For Physics Learning In High Schools</p> <p>8. 2021 - Virtual Microscopic Simulation (VMS) For Physics Learning Of The Photoelectric Effect In High School</p> <p>9. 2021 - Development Of Android Physics Applications (APA) As Learning Media On Dynamic Fluid Concepts</p> <p>10.2021 - Four Tier Test (FTT) Development In The Form Of Virtualization Static Fluid Test (VSFT) Using Rasch Model Analysis To Support Learning During The Covid-19 Pandemic</p> <p>11.2021 - Determination Of Springs Constant By Hooke's Law And Simple Harmonic Motion Experiment</p> <p>12.2021 - Using Accelerometer Smartphone Sensor And Phyphyox For Friction Experiment In High School</p> <p>13.2021 - Video Based Experiment To Determine Focal Length Of A Positive Lens In Physics Learning</p> <p>14.2021 - Faraday's Law Teaching Aids Using Magnetometers On Smartphone And Infrared Sensors For Electromagnetic Induction Learning</p> <p>15.2021 - MIX Reality Based Media Prototype For Learning Physics Of Gravity And Kepler's Law</p> <p>16.2021 - Spring Oscillator As Case Based Learning (CBL) Device</p> <p>17.2021 - Development Of Sensor-Based Learning Tool For The Study Induction Magnetic Force For High School Students</p>

	<p>18.2021 - The Dynamics Of A Hockey Player Body On Passing The Ball</p> <p>19.2021 - Analysis On Interest Motivation Instrument (Iim) For Measure Of Interest And Motivation Of Study Doctoral Physics Education Using Rapidminer</p> <p>20.2021 - The Effect Of Inquiry Models And Motivation To Study On Students' Cognitive Learning Outcomes In Straight Motion Learning At Senior High School (A Case Study)</p> <p>21.2021 - Sound Resonance Practice Device Based On Arduino Uno To Improve The Science Process Skills Of High School Students</p> <p>22.2021 - Osci-Meter": The Practice Device For Oscillation Motion Experiment Using Accelerometer In Smartphone To Improve High School Students' Analytical Thinking Skills</p> <p>23.2021 - Leaf Flakes For Learning Electric Fields In Senior High School</p> <p>24.2020 - Development Of Genetically Improved Farmed African Catfish, <i>Clarias Gariepinus</i>; A Review And Lessons Learned From Indonesian Fish Breeding Program</p> <p>25.2020 - Magnetic Susceptibility Of River Sediment In Polluted Area Of Traditional Gold Mining In Kuris Sumbawa Indonesia</p> <p>26.2020 - Identification Of Environments Based On Magnetic Susceptibility And Geochemical Data Using Multivariate Statistical Analysis</p> <p>27.2020 - Development Of Standardized Online Test To Assess The Students 21st Century Skills</p> <p>28.2020 - Development Of A PCR Marker For The Identification Of Resistance To Motile Aeromonad Septicemia Disease In African Catfish (<i>Clarias Gariepinus</i>)</p> <p>29.2020 - The Significance Of Tropical Microalgae <i>Chlorella Sorokiniana</i> As A Remediate Of Polluted Water Caused By <i>Chlorpyrifos</i></p> <p>30.2019 - Removal Of Heavy Metal (Cu^{2+}) By <i>Thiobacillus</i> Sp. And <i>Clostridium</i> Sp. At Various Temperatures And Concentration Of Pollutant In Liquid Media</p> <p>31.2019 - Delignification And Determination Of Sugar Concentration In Fertilizer As The Preliminary Process Of Bioethanol Production By <i>Aspergillus Fumigatus</i></p> <p>32.2019 - Mobile Digital Education (MDE) For Increasing Competence Of Students Based On E-Characters Mental Revolution (E-CMR)</p> <p>33.2019 - Designing MOOCS With Virtual Microscopic Simulation (VMS) For Increasing Of Student's Levels Of Understanding</p> <p>34.2019 - Expected Likelihood Based Query For Active Learning Of Gaussian Mixture Models Based Classifiers</p>
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	<p>35.2019 - The Simulation Of One-Time-Pad Quantum Key Distribution</p> <p>36.2019 - Kalman Filtering To Real-Time Trace Water Level Measurements Using Ultrasonic Sensor</p> <p>37.2019 - Selection Method To Identify The Dominant Elements That Contribute To Magnetic Susceptibility In Sediment</p> <p>38.2019 - Developing Practicum Device Using Magnetic Sensor For Circular Motion At Senior High School</p> <p>39.2019 - Bioremediation Of Soil Polluted With Copper (Cu²⁺) By Mixed Culture Bacteria Thiobacillus Sp. And Clostridium Sp.</p> <p>40.2018 - The Simulation Of A Symmetric Quantum Key Distribution</p> <p>41.2018 - Sentiment Analysis On Bahasa Indonesia Tweets Using Unigram Models And Machine Learning Techniques</p> <p>42.2018 - Early Warning System Of Flood Disaster Based On Ultrasonic Sensors And Wireless Technology</p> <p>43.2018 - Development Of Thermal Radiation Experiments Kit Based On Data Logger For Physics Learning Media</p> <p>44.2018 - Batch Leachate Treatment Using Stirred Electrocoagulation Reactor With Variation Of Residence Time And Stirring Rate</p> <p>45.2018 - Distribution Patterns Study Of Escherichia Coli As An Indicator For Ground Water Quality At Matraman District, East Jakarta</p> <p>46.2018 - Waste Utilization Of Red Snapper (Lutjanus Sp.) Fish Bone To Improve Phosphorus Contents In Compost.</p>
<p>Activities in Professional organizational over the last 5 years</p>	



Publication Profile

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Name	Dr. Firmanul Catur Wibowo, M.Ed.
Position	Lecturer in Master Physics Education
Educational Background	<ol style="list-style-type: none"> 4. Bachelor's degree Physics Education, Semarang State University 5. Master's degree Physics Education, Indonesia University of Education 6. Doctoral degree Science Education, Indonesia University of Education
Academic Career (Employment)	<ol style="list-style-type: none"> 1. Lecturer in Road Transportation Safety Polytechnic (PKTJ) 2011-2014 2. Lecturer and in Universitas Sultan Ageng Tirtayasa 2014-2019 3. Regional coordinator of SINTA Jabar Banten district Indonesia, Ministry of Education, Culture, Research and Technology 2018-2019 4. Lecturer in Master Physics Education, Jakarta State University
Research and Development project over the last 5 years	<ol style="list-style-type: none"> 1. Development of Augmented Reality Integration (ARI) based Model Physics Independent Learning (MPIL) for Facilitating 21st-Century Skills (21-CS) 2. Development of Augmented Reality Integration Physics (ARIP) to Improve Students' Critical Thinking Skills for Reconstructing Physics Conceptions 3. Pengembangan Interactive Digital Modul Physics (IDMP) Berbasis STEM (Science, Technology, Engineering, Mathematics) Untuk Meningkatkan Kompetensi Abad 21 Employability Skills 4. Development Flipped Classroom Based Inquiry Learning (FCBIL) For 21-Century Skills (21-CS): Problem Solving Skills and Creativity Skills in Prototype Curriculum Schools 5. Development Of an Interactive Book Augmented Reality (IBAR) For Lesson On Student Stem For Facilitating 21st-Century Skills (21-CS)

	<ol style="list-style-type: none"> 6. Development of a Stem-Based Physics Learning Website (Wpf) as a Source of Home Learning (Bdr) for High School Students During the Pandemic 7. Development of E-Character Mental Revolution (E-Krm) Based on Mobile Digital Education (Mde) to Strengthen Santri and Student Competence in Facing the Disruptive Era Development Of Game Open Online Physics Instructional (Goopi) For Improving 21st-Century Careers: Creativity Skill 8. Designing Moocs With Virtual Microscopic Simulation (Vms) For Student's Levels Of Understanding And Model Of Understanding 9. Development of a Virtual Physics Laboratory (VPL) as a Facility for Inquiry and Problem Solving Laboratory Activities for Microscopic Materials for Prospective Physics Teacher Students 10. Development of E-Character Mental Revolution (E-Krm) Based on Mobile Digital Education (Mde) to Strengthen Santri and Student Competence in Facing the Disruptive Era 11. Development of an Assessment Virtual Test (Asvite) Based on Interactive Lecture Demonstration (ILD) to Improve 21st Century Competency Employability Skills 12. Development of a Virtual Physics Laboratory (VPL) as a Facility for Inquiry and Problem Solving Laboratory Activities for Microscopic Materials for Prospective Physics Teacher Students 13. Design For Assessment The Millennial Character Education With System Recording Students Character (Ssrc) For Developing 21 Century Skills
<p>Industry collaboration/ Community Services over the last 5 year</p>	<ol style="list-style-type: none"> 1. International Collaborative Community Services (ICCS): Dissemination of Virtual Microscopic Simulation (VMS) to Sparking Innovation in STEM Education for Facilitating 21st-Century Skills (21-CS) in Universitas Negeri Jakarta and Universiti Sains Malaysia 2. International Collaborative Community Services (Iccs): Dissemination of GOOPI (Game Open Online Physics Instructional) To Sparking Innovation In Stem Education For Facilitating 21st-Century Skills (21-Cs) In Universitas Negeri Jakarta And Universiti Sains 3. PPM to improve the quality of PKBM learning in kel. Tanjung Barat kec. Jagakarsa, administrative city of South Jakarta through the implementation of digital classes based on Microsoft 365 education 4. PPM Speed Orbital (SO) Making Training for Physics Teachers at Dwiwarna High School, Bogor Regency, West Java Province 5. PPM Efforts to Improve the Quality of Az-Ziyadah Islamic Boarding School Education in Klender Village, Duren Sawit District, East Jakarta City through Learning Using Innovative Smart Orbital (ISO) Media 6. PPM Through Training on the Development of Gangsing Smart Orbital (Gso) Media to Improve Creative Thinking Skills for

	Physics Teachers at Dwiwarna High School, Bogor Regency, West Java Province
Patents and Intellectual Property Right (IPR)	<ol style="list-style-type: none"> 1. Story Board Optics Virtual Laboratory (OVL) Based On Physics Independent Learning (PIL) 2. Augmented Reality Integration (ARI) Based Model Physics Independent Learning (MPIL) 3. Program Komputer Interactive Digital Modul Physics (IDMP) Berbasis STEM 4. Program Komputer Augmented Reality Integration Physics (ARIP) 5. Buku Media Dan Sumber Belajar 6. Buku Strategi Mengajar DI Tingkat Pendidikan Menengah 7. eSWoP On Heat 8. Alat Praktikum Pembiasan Cahaya Menggunakan Sensor Photodiode 9. Game Open Online Physics Instructional (GOOPI) 10. Program Komputer SRSC 11. Program Komputer ASVITE (Assessment Virtual Test) 12. Program Komputer Perpindahankalor.com
Important publications over the last 5 years	<ol style="list-style-type: none"> 1. 2022 Digital Learning Research in the Last 30 Years: Important Role of Interactive Learning in Physics 2. 2022 Analyze The Mechanism Of Tsunami Based On The Scopus Database 3. 2022 Implementation Of Online Problem-Based Learning Assisted By Digital Book With 3d Animations To Improve Student's Physics Problem-Solving Skills In Magnetic Field Subject 4. 2021 PhET-assisted electronic student worksheets of physics (eSWoP) on heat for inquiry learning during covid 5. 2021 The technology of interactive book augmented reality (IBAR) for facilitating student 21-century skills 6. 2021 Critical thinking skills on physics learning during COVID- 19 Pandemic: A bibliometric analysis using VOS viewer 7. 2021 E-learning in sains learning: A-review of literature 8. 2021 Project Based Learning (PjBL) learning model in science learning: Literature review 9. 2021 Review of trends project based learning (PjBL) integrated STEM in physics learning 10. 2021 Website of physics instructional (WoPI): Learning physics from home during COVID-19 11. 2021 Trends of flipped classroom studies for physics learning: A systematic review 12. 2021 A review of research on the use of augmented reality in physics learning 13. 2021 Augmented reality geometrical optics (AR-GiOs) for physics learning in high schools 14. 2021 Development of Android Physics Applications (APA) as learning media on dynamic fluid concepts

	<p>15. 2021 Four Tier Test (FTT) development in the form of virtualization static fluid test (VSFT) using rasch model analysis to support learning during the Covid-19 pandemic</p> <p>16. 2021 Unveil problem based learning on physics learning: A literature review</p> <p>17. 2021 Interactive Book Augmented Reality (IBAR) for lesson physics on STEM</p> <p>18. 2021 Flipped learning models and students' scientific literacy on physics achievement test</p> <p>19. 2021 Trends of augmented reality in science learning: A review of the literature</p> <p>20. 2021 Design of Massive Online Simulation (MOS) on concept archimedes' principle</p> <p>21. 2021 Design of massive online simulation in the learning physics of thermodynamics process</p> <p>22. 2021 Design of Massive Online Simulation (MOS) on kinetic theory of gases</p> <p>23. 2021 Digital storytelling of Physics (DiS-Phy): Learning physics from home through stories</p> <p>24. 2021 Dissemination of GOOPI (Game Open Online Physics Instructional) to sparking innovation in education</p> <p>25. 2021 Virtual Microscopic Simulation (VMS) design on light waves: Interference and diffraction</p> <p>26. 2021 Massive Open Online Simulation (MOOS) of physics concepts microscopic for improving creative thinking</p> <p>27. 2021 Product feasibility study: Development of e-learning media on schoology-based in problem based learning model on simple harmonious motion materials</p> <p>28. 2021 Development of Augmented Physics Animation (APA) with the Integration of Crosscutting Concepts about the Covid-19 as a Supplement to the Introductory Physics Course</p> <p>29. 2021 (ISO) Media for improving learning quality using analysis RapidMiner</p> <p>30. 2021 Analysis on interest motivation instrument (iim) for measure of interest and motivation of study doctoral physics education using RapidMiner</p> <p>31. 2021 Development of a Basic Physics Practicum Guide that is Integrated with Qur'anic Verses for Prospective Natural Science Teachers</p> <p>32. 2021 Effectiveness of Virtual Physics Laboratory (VPL) with Dry Cell Microscopic Simulation (DCMS) to Promote of Inquiry Activity about the Battery</p> <p>33. 2021 Implementation of discovery learning in a digital class and its effect on student learning outcomes and learning independence level [version 1; peer review: 1 approved with reservations]</p>
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	<p>34. 2020 Development of the innovative smart orbital (ISO) medium to improve the cognitive skills on the heat transfer concept</p> <p>35. 2020 Analyzing the students' conceptual change on kinetic theory of gases as a learning effect though computer simulations-assisted conceptual change model</p> <p>36. 2019 Mobile Digital Education (MDE) for increasing competence of students based on E-Characters Mental Revolution (E-CMR)</p> <p>37. 2019 Designing MOOCS with Virtual Microscopic Simulation (VMS) for increasing of student's levels of understanding</p> <p>38. 2019 Effectiveness of learning support of asset (assessment simulation test) for reconstruction physics conception</p> <p>39. 2019 Unveiling students' misconceptions through computer simulation-based PDEODE learning strategy on dynamic electricity</p> <p>40. 2019 Unveil of virtual physics laboratory (VPL) with battery microscopic simulation (BMS) to promote of problem solving activity</p> <p>41. 2019 Improvement of students' critical thinking ability through problem-based learning (PBL) model class XI MIPA 3 on temperature and heat material</p> <p>42. 2019 Investigating science interest and cognitive domain with science contextual teaching and learning (SCTL) methods</p> <p>43. 2019 Effect of welfare and teaching motivation on professional competence of elementary teachers using participatory action research (Par) methods</p> <p>44. 2019 Identifying pre-service physics teacher mental model on electric conceptions</p> <p>45. 2019 Optimizing Students' Conceptual Understanding on Electricity and Magnetism through Cognitive Conflict-Based Multimode Teaching (CC-BMT)</p> <p>46. 2019 Virtual media simulation technology on mathematical representation of sound waves</p> <p>47. 2019 Virtual simulation instructional training for students' drop out of mathematical science digital entrepreneurs</p> <p>48. 2019 Educational technology of virtual physics laboratory (VPL) for the microscopic concept</p> <p>49. 2019 Advanced virtual physics laboratory (VPL) of dynamic electricity</p> <p>50. 2018 Level conceptual change pre-service elementary teachers on electric current conceptions through visual multimedia supported conceptual change</p> <p>51. 2018 Improving students' conceptions on fluid dynamics through peer teaching model with PDEODE (PTM-PDEODE)</p>
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Activities in Professional organizational over the last 5 years	<ol style="list-style-type: none"><li data-bbox="516 197 1435 268">1. Member of Physical Society of Indonesia (PSI) number: 07201600643 (2016-now)<li data-bbox="516 268 1435 340">2. American Association of Physics Teachers (AAPT) ID 129181 (2019-now)
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Publication Link:

<https://sinta.kemdikbud.go.id/authors/profile/257982>

Name	Dr. Iwan Sugihartono, M.Si
Position	Lecturer in Master Physics Education
Educational Background	<ol style="list-style-type: none"> 1. Bachelor's degree (Physics), University of Indonesia. 2. Master's degree (Physics), University of Indonesia. 3. Doctoral degree (Materials Physics), University of Indonesia.
Academic Career (Employment)	Lecturer, Master of Physics Study Program, Faculty Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development project over the last 5 years	<ol style="list-style-type: none"> 1. 2022 - Development Of Advanced Materials Based On Zirconium Ceramics And Aluminum Metal Alloys For The Application Of Advanced Nuclear Reactors As A New Energy Source In Indonesia. 2. 2022 - Synthesis Of Cobalt (Co) Doped Zno Nanorods As A Preliminary Study Of The Potential Of Ultraviolet Emitting Devices For Sterilizing Harmful Micro-Organisms. 3. 2021 - The Development Of Magnetic Materials For The Barium Heksaferate System For Microwave Absorption Applications. 4. 2021 - Study Of Lanthanum Doped Zno Thin Films On Structural And Optical Properties. 5. 2021 - Electrodeposition Of Gold Nanoparticle And Its Application As An Antioxidant Agent. 6. 2021 - High Intensity Laser Interactions With Thin Layers Of Functional Metal Alloys. 7. 2020 - Study Of Criteria For Body Position Of Room Hockey Players Based On Height To Obtain Accurate Technique.

<p>Industry collaboration/ Community Services over the last 5 year</p>	<ol style="list-style-type: none"> 1. 2021 - simple algorithm-based robotic training as a stimulator of students' interest in understanding coding. 2. 2021 - implementation of the android-based health notification application for communities in the jakarta area. 3. 2021 - using audiosonic to improve quality of physics learning in high schools in jatisampurna district, bekasi city, west java. 4. 2020 - online experiment guide using simple raw materials as a solution to understanding physics during the covid-19 pandemic. 5. 2019 - stem "robot making". 6. 2019 - stem "algorithm-based robot".
<p>Patents and Intellectual Property Right (IPR)</p>	<ol style="list-style-type: none"> 1. 2022 - Diffusion Coefficient Calculation Of Iron In Liquid Lead Using Molecular Dynamics Method With New Mixing Rule For Lennard Jones Potential Parameters. 2. 2022 - Semiconductor Physics And Technology Book Vol Ii. 3. 2020 - Tea Leaf Image Feature Extraction Program With Dtcwt-Glc In Matlab. 4. 2019 - Video Of Synthesis Of Magnetic Thin Films Using The Ultrasonic Spray Pyrolysis (Usp) Method. 5. 2019 - Documentation Of Ba(Fe,Co,Ni) 12 O 19 Magnetic Thin Film Synthesis Test Results For High Capacity Data Storage Applications. 6. 2019 - Research Documentation Of Magnetic Thin Film Synthesis Ba(Fe,Co,Ni) 12 O 19 For High Capacity Data Storage Applications. 7. 2018 - Extraction Method Of Carica Papaya Leaf Chlorophyll Content As Dye Sensitizer With Optimal Peak Absorbance At Wavelengths Of 430 Nm And 640 Nm.
<p>Important publications over the last 5 years</p>	<ol style="list-style-type: none"> 1. 2022 - Electrodeposition Of Aupt Nanoparticles For Ethanol Electrooxidation Application 2. 2022 - Effect Of Potassium Precursor Concentration On The Performance Of Perovskite-Sensitized Solar Cells 3. 2022 - Structure Evolution Due To Heat Treatment Of Aluminum Nanoparticle With Different Sizes: A Molecular Dynamics Study 4. 2022 - Influence Of Heating And Cooling Rates On Thermodynamic Properties Of Aluminum Thin Film From 300 To 1100 K 5. 2022 - Mechanical And Tribology Properties Of Electrodeposited Ni-Tin/Si3N4 Composite Coatings 6. 2021 - The Effect Of Voltage And Electrode Types On Hydrogen Production From The Seawater Electrolysis Process 7. 2021 - Feature Extraction Of Tea Leaf Images Using Dual-Tree Complex Wavelet Transform And Gray Level Co-Occurrence Matrix

8. 2021 - Virtual Microscopic Simulation (VMS) For Physics Learning Of The Photoelectric Effect In High School
9. 2021 - Determination Of Springs Constant By Hooke's Law And Simple Harmonic Motion Experiment
- 10.2021 - Preliminary Study On High-Temperature Oxidation Of Ni-Aln-Tin/Si₃N₄ Electrodeposition Composite Coatings
- 11.2021 - The Effect Of The Use Of Harmonic Movement Phet Interactive Simulation In Online Learning Process On Mastering The Concept Of High School Students
- 12.2021 - The Video-Based STEM Experiment: An Observation Of The Momentum Of A Bouncing Ball
- 13.2021 - Preliminary Study On The Effect Of Time On Hydrogen Production From Electrolysis Of The Seawater
- 14.2021 - Video Based Experiment To Determine Focal Length Of A Positive Lens In Physics Learning
- 15.2021 - The Impact Of The Au/Ag Ratio On The Photocatalytic Activity Of Bimetallic Alloy AuAg Nanoparticle-Decorated ZnO Nanorods Under UV Irradiation
- 16.2021 - Complex Permeability, Permittivity And Microwave Absorption Properties Of Barium Hexaferrite Synthesized From Natural Iron Sand
- 17.2021 - Structural, Magnetic And Microwave Absorption Properties Of Natural Iron Sand
- 18.2021 - Effect Of Elevated Temperature On Ni-Tin-Aln/Si₃N₄composite Coatings In Electrodeposition Process
- 19.2021 - Effect Of Elevated Temperature On Composition And Morphology Of Ni-Tin/Si₃N₄composite Coatings
- 20.2021 - The Dynamics Of A Hockey Player Body On Passing The Ball
- 21.2021 - Microwave Absorbing Properties Of Teflon Coating For X-Band Frequencies
- 22.2020 - Microwave Absorption Performance Of Barium Hexaferrite Multi-Nanolayers
- 23.2020 - The Design Of Information System For Physics Learning Media Laboratory
- 24.2020 - Dependence Of Optical Properties Of Mg-Doped ZnO Nanorods On Al Dopant
- 25.2020 - The Development Of Flip Book Contextual Teaching And Learning-Based To Enhance Students' Physics Problem Solving Skill
- 26.2020 - The Role Of Cobalt Doping On The Photocatalytic Activity Enhancement Of ZnO Nanorods Under UV Light Irradiation
- 27.2020 - The Effect Of Al Element On Electrochemical Impedance Of ZnO Thin Films

	<p>28.2020 - Electropolymerization Of Polyaniline Film As A Conductive Layer For The Electrodeposition Of Ni-Co Alloy</p> <p>29.2020 - Effect Of Temperature On Electrodeposited Nickel Nitride Composite Coatings</p> <p>30.2020 - Cluster Evolution From Ultrafast Laser Irradiation Of Gold Nanoparticle: A Molecular Dynamics Study</p> <p>31.2020 - Electrodepositing Ni-Tin/Si₃N₄ Composite Layer With Variation Of Current Density</p> <p>32.2019 - Specific Capacitance And Impedance Of Electrodeposited Polyaniline, Polypyrrole And Polyaniline/Polypyrrole Composite Films</p> <p>33.2019 - Melting Of Gold Nanoparticle: Study On Structural Evolution</p> <p>34.2019 - The Effects Of Substrate On Enhancement Of UV Emission Of ZnO Nanorods</p> <p>35.2019 - Size Dependencies On Melting Of Gold Nanoparticle: A Molecular Dynamics Study</p> <p>36.2019 - Structure And Magnetic Properties Of Barium Hexaferrite BaFe₁₀O₁₉ Films</p> <p>37.2019 - Study On Mechanical Properties Of Metal Matrix Composites (MMCs) Al-Cu-Mg/SiCp With Powder Metallurgy</p> <p>38.2019 - Thermo As Teaching Aid To Improve Student Understanding Of Waves</p> <p>39.2019 - Microwave Absorbing Characteristics In Multilayer Absorbers Based On Barium Ferrite And Teflon</p> <p>40.2019 - Structure And Mechanical Properties Of Electrodeposited Ni-AlN/Si₃N₄ Composite Coating</p> <p>41.2019 - Development Of Sound Wave And Light Wave E-Book Physics Based On Scientific Approach To Improve Science Process Skills For Secondary School Students</p> <p>42.2019 - Electrodeposition Of Nickel-Nitride Composite Coating: Effects Of Boric Acid On Structure And Mechanical Properties</p> <p>43.2019 - The Influence Of Calcination Temperature On Optical Properties Of ZnO Nanoparticles</p> <p>44.2019 - Morphological, Structural, And Optical Properties Of Co-Doped ZnO NPs Prepared By Precipitation Method</p> <p>45.2019 - Morphology And Optical Properties Of Cu-Al Co-Doped ZnO Nanostructures</p> <p>46.2019 - Rapid And Low Temperature Synthesis Of Ag Nanoparticles On The ZnO Nanorods For Photocatalytic Activity Improvement</p> <p>47.2019 - Magnetic And Structural Properties Of M-Type Barium Hexaferrites Films With Transition Metal Substitutions</p> <p>48.2019 - Complex Permittivity, Permeability And Microwave Absorption Studies Of Double Layer Magnetic Absorbers Based On BaFe₁₂O₁₉ And BaFe₁₀O₁₉</p>
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	<p>49.2019 - Enhanced Microwave Absorbing Capabilities Of Multilayer Absorbers Based On $\text{BaFe}_{12}\text{O}_{19}$ And Fe_3O_4</p> <p>50.2019 - Effect Of Doped Indium Tin Oxide On Bonding And Morphology Of Monomer Cholesteryl Acrylate</p> <p>51.2018 - Crystal Structure Analyses Of Zno Nanoparticles Growth By Simple Wet Chemical Method</p> <p>52.2018 - Formation Of Electrodeposited Ni-Tialn/Si_3N_4 Composite Coating: Effect Of Si_3N_4 Concentration</p> <p>53.2018 - The Effect Of Thickness On Microwave Absorbing Properties Of Barium Ferrite Powder</p> <p>54.2018 - Microwave Absorbing Properties Of $\text{Nd}_2\text{Fe}_{14}\text{B}/\text{Afe}$ Nanocomposite Magnet</p> <p>55.2018 - Laser Induced Ablation Of Aluminum Nanoparticle: A Molecular Dynamics Study</p> <p>56.2018 - Structure And Magnetic Properties Of Co-Zn Substituted Hexagonal Ferrites</p> <p>57.2018 - Effects Of Sintering Temperature On Structure, Magnetic And Dielectric Properties Of $\text{La}_{0.5}\text{Sr}_{0.5}\text{Fe}_{0.9}\text{Mn}_{0.05}\text{Ti}_{0.05}\text{O}_3$ Material</p> <p>58.2018 - Structural Change Of Aluminum Thin Film In The Temperature Range From 300 K To 1000 K</p> <p>59.2018 - Synthesis Of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($x = 0$ And 0.2) Through Ultrasonic Mixing And Its Characterisation</p> <p>60.2018 - Enhancement Of UV Photoluminescence In Zno Tubes Grown By Metal Organic Chemical Vapour Deposition (MOCVD)</p> <p>61.2018 - Noise Properties Of The Faraday Effect Measurement Systems</p> <p>62.2018 - Electrodeposited Ni-Tialn Composite Coating On Tungsten Carbide: Effect Of Surfactant Concentration On Physical And Mechanical Properties</p> <p>63.2018 - Magnetic And Microwave Absorbing Properties Of $\text{BaFe}_{12-2x}\text{Co}_x\text{Zn}_x\text{O}_{19}$ ($x = 0.0; 0.2; 0.4; 0.6$) Nanocrystalline</p> <p>64.2018 - Mn-Doping-Induced Photocatalytic Activity Enhancement Of Zno Nanorods Prepared On Glass Substrates</p> <p>65.2018 - Microwave Absorbing Studies Of Magnetic Materials For X-Band Frequencies</p> <p>66.2018 - Double Layer Microwave Absorption Characteristics Of Barium Hexaferrite/Silica Composite For X-Band Frequencies.</p>
<p>Activities in Professional organizational over the last 5 years</p>	