STAFF
HANDBOOKS

(SCOPUS) **(SINTA)**

Name	Prof. Dr. Sunaryo, M.Sc
Position	Lecturer in Physics Education
Educational Background	1. Bachelor's degrees (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 of Mathematics and Natural Sciences, Jakarta State University, Jakarta 13220, Indonesia.
Research and Development projects over the last 5 years	1. 2021 - Sustainable Environmental Physics E-Module In The Era Of Pandemic Covid 19. 2. 2020 - Development Of Electric Fields 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 Service over the last 5 years	*1.* 2021 - Training In The Making Of Astronomy Media For Learning At Open Schools In Ciracas Sub-District, East Jakarta. *2.* 2021 - Ppm Improvements Of The Quality Of Learning SMAS Kartika VIII-1 In Ex. Srengseng Sawah District. Jagakarsa City of South Jakarta Through The Implementation Of Wow (Website Of Physics Instructional). *3.* 2021 - Ppm Assistance Of State High School Teacher MH Thamrin Cipayung East Jakarta In Using Microsoft Teams To Optimize Learning Activities And Boarding Development In The Pandemic Period. *4.* 2021 - Training In The Making Of Astronomy Media To Observe The Changing Of Seasons In Parung Area, Bogor District, West Java Province.
	5. 2020 - Training On Making Micro Hydro For Low Energy Power Plants In The Parung Area, Bogor Regency, West Java Province. *6.* 2019 - Microhydro Manufacturing Training For Low Power Power Plant in Pandeglang Area.
Patents and Intellectual Property Rights (IPR)	*1.* 2020 - Global E-Module Warming.

Important publications over the last 5 years	1. 2022 - Structure Evolution Due To Heat Treatment Of Aluminum Nanoparticles With Different Sizes: A Molecular Dynamics Study 2. 2022 - Influence Of Heating And Cooling Rates On Thermodynamic Properties Of Aluminum Thin Film From 300 To 1100 K 3. 2021 - The Effect Of Voltage And Electrode Types On Hydrogen Production From The Seawater Electrolysis Process 4. 2021 - E-Book Static Fluid And Dynamic Fluid Web-Based With A Problem-Based Learning Model To Improve Students Physics Problem-Solving Skills 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 6. 2021 - Development Of E-Module With A Scientific Approach To Improve The Student's Critical Thinking Skills At Class XI High School Student In Optical Tools Materials 7. 2021 - The Video-Based STEM Experiment: An Observation Of The Momentum Of A Bouncing Ball 8. 2021 - Preliminary Study On The Effect Of Time On Hydrogen Production From Electrolysis Of The Seawater 9. 2021 - The Dynamics Of A Hockey Player Body On Passing The Ball 10. 2021 - Investigating The Groundwater Usage For Environmental Education: Case Study At 35 High Schools In Jakarta 11. 2021 - Leaf Flakes For Learning Electric Fields In Senior High School 12. 2021 - Imposed Conditions To Make Gauge Invariance In Gross-Pitaevskii Equation With Time-Dependent Potential 13. 2020 - Development Of Electronics Modules By Scientific Approach To Train Science Process Skills 14. 2019 - Melting Of Gold Nanoparticles: Study On Structural Evolution 15. 2019 - Development Of Web Based Massive Open Online Course On Fundamental Physics Subject To Increase Students' Higher Order Thinking Skill 16. 2019 - Using Car Toys With Videos To Introduce Kinematics In Physics 17. 2019 - Identification Of Faults Components In Diesel engine Sounds On Train Using Neural Network

	18. 2019 - Unveil Of Virtual Physics Laboratory (VPL) With Battery Microscopic Simulation (BMS) To Promote Of Problem Solving Activity *19.* 2019 - Distribution Of Seismic Wave Velocity Beneath Sunda-Banda Arc Transition Zone Using Local Earthquake Tomography *20.* 2019 - Mini Photovoltaic System Project: Physics Laboratory Activities Through A Technology-Rich Learning Environment *21.* 2019 - Feasibility Of Based Augmented Reality Devices Discovery Learning On Students Learning Outcomes In Morphology Of Wijaya Kusuma Flower (Epiphyllum Anguliger) *22.* 2019 - Developing E-Module For Fluids Based On Problem-Based Learning (PBL) For Senior High School Students *23.* 2019 - Moment Tensor Analysis Using Regional And Temporary Deployment 2008 Data For Sumatran Active Fault Zone Earthquakes.
Activities in Professional Organization over the last 5 years	