

## STAFF HANDBOOK



<b>Name</b>	<b>Dr. Zaiunul Arifin Imam Supardi, M.Si</b>		
<b>Position</b>	<b>1. Lecturer in Physics Study Program (Bachelor Degree)</b> <i>Materials Science, Physical Mathematics, and Quantum Physics</i> <b>2. Lecturer in Science Education Study Program (Master Degree)</b> <i>Quantum Physics</i> <b>3. Lecturer in Science Education Study Program (Ph. D Degree))</b> <i>Philosophy of Science</i>		
	<b>Associate Professor in:</b> <i>Materials Science, Physical Mathematics, Quantum Physics and Philosophy of Science</i>		
<b>Academic Career</b>	<b>Degree</b>	<b>University</b>	<b>Year</b>
	<b>Bachelor</b> on at <i>Physics Education</i>	<i>IKIP Negeri Surabaya-Indonesia</i>	<i>1983-1988</i>
	<b>Master</b> on <i>Physics</i>	<i>Institut Teknologi Bandung - Indonesia</i>	<i>1992-1995</i>
	<b>Doctor</b> on <i>Science and Materials Engineering</i>	<i>Institut National Polytechnique de Grenoble - France</i>	<i>1998-2001</i>
	<i>Summer School on Superconducting Materials</i>	<i>SCENET, Community European, Karlsruhe Institute of Technology - Germany</i>	<i>2001</i>
	<i>BATAN Accelerator School</i>	<i>BATAN Yogyakarta</i>	<i>2002</i>
<b>Employment</b>	<b>Position</b>	<b>Employer</b>	<b>Period</b>
	<i>Lecturer on Physics Education Study Program, Bachelor Degree</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>1990 - Now</i>
	<i>Lecturer on Physics Study Program, Bachelor Degree</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>1998 - Now</i>
	<i>Lecturer on Science Education Study Program, Master Degree</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>2002 - Now</i>
	<i>Lecturer on Science Education Study Program, Doctor Degree</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>2009 - Now</i>
	<i>Secretary on Science Education Study Program (Master and Doctor)</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>2011 - 2016</i>
	<i>Head of Physics Department</i>	<i>Universitas Negeri Surabaya - Indonesia</i>	<i>2016 - 2019</i>
	<i>Academic Senat</i>	<i>Faculty of Mathematics and Science, UNESA</i>	<i>2019 - 2022</i>

	<b>Title</b>	<b>Funder</b>	<b>Year</b>	<b>Amount of Financing (million)</b>
<b>Research and Development Project Over the Last 5 Years</b>	<i>Portfolio Development of Doctoral Program of Science Education Courses in the Context of International Accreditation</i>	<i>Penelitian Kebijakan FMIPA</i>	<i>2023</i>	<i>20</i>
	<i>Characteristics of Polyaniline/Metal Oxide Composites as Liquefied Petroleum Gas (LPG) Sensor Materials</i>	<i>Penelitian Kompetitif dasar FMIPA</i>	<i>2022</i>	<i>20</i>
	<i>Development of the Unesa Chancellor's Regulation on the Code of Ethics for Lecturers, Academic Ethics and Planning for Unesa PTN-BH (Member)</i>	<i>Penelitian PNBPN (Penelitian Kebijakan Strategis Univ (PTNBH) )</i>	<i>2021</i>	<i>50</i>
	<i>Mojokerto City Chemistry Teacher Competency Improvement in Compiling a Minimum Competency Assessment (AKM) (member)</i>	<i>Penelitian kebijakan Pascasarjana</i>	<i>2021</i>	<i>25</i>
	<i>The Effect of the Double Boiler Process on Betel Leaf (Piper Betle L.) Processing to Maintain the Content of Tannins as a Natural Antiseptic in the Manufacture of Hand Sanitizers to Prevent the Spread of Covid-19</i>	<i>Penelitian Kebijakan FMIPA UNESA</i>	<i>2020</i>	<i>12</i>
	<i>Doping Alumunium Hidroksida (Al(OH)3) Pada Komposit Polyvinileden Fluoride – Cellulose Acetate (PVDF-CA) Sebagai Separator untuk Baterai Lithium Ion (Head)</i>	<i>Penelitian Kebijakan FMIPA UNESA</i>	<i>2019</i>	<i>10</i>
	<i>Fabrication of Core-shell Fe3O4@SiO2 Nanoparticles and Their Application as Water Filters) (Member)</i>	<i>Penelitian Strategis Nasional Institusi</i>	<i>2017-2018</i>	<i>70</i>
	<i>Creative Responsibility Based Learning (CRBL) Model and C3PDR Learning Model to Train Scientific Creativity of Physics Education Undergraduate Students</i>	<i>Penelitian PNBPN Pascasarjana</i>	<i>2018</i>	<i>50</i>
	<i>The Effectiveness of the "Science Orientation" Learning Model and the PBL Model to Improve the Critical Thinking Skills of Science Education Teacher Candidate Students. (Members)</i>	<i>Penelitian Kebijakan Pasca Sarjana UNESA</i>	<i>2017</i>	<i>60</i>
<b>Community Service Over The Last 5 Years</b>	<b>Title</b>	<b>Funder</b>	<b>Year</b>	<b>Amount of Financing (million)</b>
	<i>Workshop on Making Science Learning Media and IT-Based Evaluation</i>	<i>PKM Kebijakan FMIPA</i>	<i>2017</i>	<i>7,5</i>
	<i>Provision of Household-Scale Consumption Water for</i>	<i>BOPTN FMIPA UNESA</i>	<i>2018</i>	<i>7,5</i>

	<i>Communities in Tarokan Village, Kab. Kediri, East Java</i>		
	<i>Parabolic Antenna installation assistance, Satellite Signal Position Tracking, TV Program Tracking, and Digital Information Sorting Education for the Community in Mojokerto Regency</i>	<i>PNBP FMIPA Unesa</i>	<i>2019</i> <i>7,5</i>
	<i>Online Workshop for Creating Scientific Content on COVID-19 Info at the Physics Department, Surabaya State University</i>	<i>PKM Kebijakan FMIPA</i>	<i>2020</i> <i>7</i>
	<i>Scientific Article Writing Training to Improve Scientific Publications for MGMP Teachers in Lamongan Regency</i>	<i>PKM Kebijakan FMIPA</i>	<i>2021</i> <i>10</i>
	<i>Scientific Article Writing Training to Improve Scientific Publication of Surabaya City MGMP Teachers</i>	<i>PKM kebijakan FMIPA</i>	<i>2022</i> <i>10</i>
	<i>Ardulno Based Line Tracer Robot Training for Students of SMAN 15 Surabaya</i>	<i>PKM kebijakan FMIPA</i>	<i>2023</i> <i>10</i>
<b>Industry Collaborations Over the Last 5 Years</b>	<b>Title</b>	<b>Partner</b>	<b>Year</b>
<b>Patents and Property Right</b>	<b>Title</b>	<b>Patent ID</b>	<b>Year</b>
	<i>Francois Weiss, Philip Odier, and Zainul Arifin Imam Supardi, In- situ fabrication of YBCO thick - films using spray pyrolysis method at high temperature</i>	<i>(Fr-0202217 expand CE, USA, and Japan)</i>	<i>2002-now</i>
	<i>Bahan Literasi Sains Kimia</i>	<i>000289171</i>	<i>2021</i>
	<i>Panduan Penyusunan Asesmen Kompetensi Minimum (AKM) Mata Pelajaran Kimia</i>	<i>000274868</i>	<i>2021</i>
	<i>Model Creative-Scientific Decision Making Skills (CSDMS) Dalam Melatihkan Keterampilan Berpikir Kreatif Dan Keterampilan Pengambilan Keputusan Mahasiswa</i>	<i>000383588</i>	<i>2022</i>
	<i>Panduan Penyusunan Soal Higher Order Thinking Skills (HOTS) Mata Pelajaran Kimia</i>	<i>000484518 / EC00202351583</i>	<i>2023</i>
	<i>Lembar Kerja Mahasiswa Materi Listrik Arus Searah Dan Kemagnetan Berbasis Model Creative-Scientific Decision-Making Skills (CSDMS)</i>	<i>J000484514/ EC00202351579,</i>	<i>2023</i>
	<i>Bahan Ajar Mahasiswa Materi Listrik Arus Searah Dan Kemagnetan Berbasis Model Creative-Scientific Decision-Making Skills (CSDMS)</i>	<i>000484515/ EC00202351580</i>	<i>2023</i>
	<i>Buku Ajar Mahasiswa Pokok Bahasan Usaha Dan Energi Dengan Model Clarity Learning</i>	<i>000484516/ EC00202351581</i>	<i>2023</i>

	Title	Year
<b>Important Publications Over the Last 5 Years</b>	<i>The Comparison of OR-IPA Teaching Model And Problem Based Learning Model Effectiveness To Improve Critical Thinking Skillsof Pre-Service Physics Teachers, Journal of Baltic Science Education, vol. 17(2), (April 2018)</i>	2018
	<i>Electrical Performances of Lithium-Ion Coin Cell Based onReduced Graphene Oxide (RGO), Atlantis Press, Atlantis Highlights in Engineering (AHE), vol.1 page: 785-787 (2018)</i>	2018
	<i>Morphology and Porosity of Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub> Core-Shell Adsorptionfor Heavy Metal Pb(II), Atlantis Press, Atlantis Highlights in Engineering (AHE), vol.1 page: 788-792 (2018)</i>	2018
	<i>The development of metacognition-based learning media for the industrial electronics field in a vocational high school, World Trans on Engineering and Technology Education, vol. 16 (2), page: 179-185</i>	2018
	<i>Structure Analysis of Fe<sub>3</sub>O<sub>4</sub>@ SiO<sub>2</sub> Core Shells Prepared from Amorphous and Crystalline SiO<sub>2</sub> Particles, IOP Conference Series: Materials Science and Engineering, vol. 367 (1), 012010</i>	2018
	<i>Phase Transition of SiO<sub>2</sub> Nanoparticles Prepared from Natural Sand: The Calcination Temperature Effect, Journal of Physics: Conference Series 1093 (1), 012025</i>	2018
	<i>The Development of Inquiry Learning Materials to Complete Content Life System Organization in Junior High School Students, Journal of Physics: Conference Series 947 (1), 012034</i>	2018
	<i>Synthesis and Characterization of <math>\gamma</math>-Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> Composite Materials, Journal of Physics: Conference Series 1093 (1), 012015</i>	2018
	<i>The Role Of Knowledge Mastery And Science Process Skills To Increase The Scientific Creativity, Unnes Science Education Journal 7 (2)</i>	2018
	<i>Application of Inquiry Learning to Exercise Critical Thinking Skillsin Light Material of Elementary School Students, MISEIC 2018</i>	2018
	<i>The effect of multiple external representations (MERs) worksheets toward complex system reasoning achievement, Journal of Physics:Conference Series 983 (1), 012202</i>	2018
	<i>Synthesis of PANi-SiO<sub>2</sub> Nanocomposite with In-Situ Polymeriza- tion Method: Nanoparticle Silica (NPS) Amorphous and CrystallinePhase, Journal of Physics: Conference Series 997 (1), 012052</i>	2018
	<i>The effectiveness of OR-IPA teaching model to improve students' critical thinking skills on senior high school physics subject, Journal of Physics: Conference Series, vol. 1157 (3), 032011</i>	2019
	<i>Phase and Magnetic Properties of Fe<sub>3</sub>O<sub>4</sub>/SiO<sub>2</sub> Natural Materials- Based Using Polyethylene Glycol Media, IOP Conference Series: Materials Science and Engineering 515 (1), 012017</i>	2019
	<i>Complexity of student's argument in reasoning plant tissue system through multiple representations, Journal of Physics: Conference Series 1157 (2), 022068</i>	2019
	<i>ORNE Learning Model to Improve Problem-Solving Skills of Physics Bachelor Candidates: An Alternative Learning in the Covid-19 PandemicJurnal Penelitian Fisika dan Aplikasinya (JPFA)Vol 10, No.1, pp-71-80 <a href="http://dx.doi.org/10.26740/jpfa.v10n1.p71-80">http://dx.doi.org/10.26740/jpfa.v10n1.p71-80</a></i>	2020
	<i>The Improvement of Critical Thinking Skills of Primary School Students Through Guided Inquiry Learning Models with Integrated Peer Instructions Studies in Learning and Teaching, Vol 1 (2), pp.104- 111 <a href="https://scie- journal.com/index.php/SiLeT/article/download/39/22">https://scie- journal.com/index.php/SiLeT/article/download/39/22</a></i>	2020

	<i>Applying The Cognitive Style-Based Learning Strategy in Elementary Schools to Improve Students' Science Process Skills, Journal of Turkish Science Education Vol.7 (2), pp.289-301</i>	2020
	<i>Effectiveness of i-SMART learning model using chemistry problems solving in senior high school to improve metacognitive skills and students' conceptual understanding, Pedagogika, 2020, t. 138, nr. 2, p. 37-60</i>	2020
	<i>Guided Inquiry Model with the REACT Strategy Learning Materials to Improve the Students' Learning Achievement. IJORER: International Journal of Recent Educational Research, Vol. 1 (2), pp.156-168</i>	2020
	<i>Magnetic driven electrical conductivity and band gap energy of SrTi1-XCrXO3, AIP Conference Proceedings, Vol. 2251 (1), hal. 040003</i>	2020
	<i>Karakteristik Transfer Muatan pada DSSC dengan Fotoanoda Triple Layer Ag-TiO2, JPSE (Journal of Physical Science and Engineering) Vol. 4, (1), pp.23-29</i>	2020
	<i>The Effectiveness Of Learning Devices Through The Stem Approaches To Train Students'critical Thinking Skills Jurnal Education And Development Vol 8 (2), pp.281-284</i>	2020
	<i>Characterization of Fe3O4/rGO Composites from Natural Sources: Application for Dyes Color Degradation in Aqueous Solution, International Journal of Engineering Vol.33 (1), pp.18-27</i>	2020
	<i>Virtual Classroom Critical Thinking as an Alternative Teaching Model to Improve Students' Critical Thinking Skills in Pandemic Coronavirus, Disease EraEuropean Journal of Educational Research Volume 10, Issue 4, 2003 - 2015.</i>	2021
	<i>Implementation of Virtual Classroom Critical Thinking in High School Physics Classes. MISEIC 2021 Proceedings of the International Joint Conference on Science and Engineering 2021 (Atlantis Press)</i>	2021
	<i>Design clarity learning model to improve advanced clarification ability on physics courses. Cypriot Journal of Educational Sciences, Volume 17, Issue 5, (2022) 1549-1566</i>	2022
	<i>Effectiveness of Clarity Learning Model to Improve Students' Advanced Clarification Critical Thinking Ability in Physics Courses. Pegem Journal of Education and Instruction, Vol. 12, No. 3, 2022 (pp. 49-58)</i>	2022
	<i>The Effectiveness of the Creative-Scientific Decision Making Skliis (CSDMS) Model to Practice Creative Thinking Skills and Decision Making Skills. International Journal of Recent Educational Research: Jurnal Internasional Terindeks Copernicus; Publish: 30 September 2022; Vol 3, No. 5, 2022 pp: 631-639</i>	2022
	<i>Creative-Scientific Decision Making Skills (CSDMS) Learning Model in Training Creative Thinking Skills and Student Decision Making Skills. Journal of Curriculum and Teaching; Jurnal Internasional Terindeks Scopus Q4; Accepted: 14 October 2022, Publish: Vol 11 No. 6, November 2022</i>	2022
	<i>Improving the competence of chemistry teachers in developing the minimum competency assessment (MCA). AIP Conference Proceedings 2619, 080008 (2023).</i>	2023
	<i>Creative-scientific decision-making skills learning model for training creative thinking skills and student decision making skills. Nurture, Vol.17 No.1, pp. 10-15. <a href="https://doi.org/10.55951/nurture.v17i1.141">https://doi.org/10.55951/nurture.v17i1.141</a></i>	2023
	<i>Application of pani/metal oxide composite as an active material of liquified petroleum gas sensors. Digest Journal of Nanomaterials and Biostructuresthis link is disabled, 2023, 18(2), pp. 485-493 <a href="https://doi.org/10.15251/DJNB.2023.182.485">https://doi.org/10.15251/DJNB.2023.182.485</a></i>	2023

<b>Activities in Specialist Bodies Over the Last 5 Years</b>	<b>Organization</b>	<b>Role</b>	<b>Period</b>
	<i>Physical Society of Indonesia (PSI)</i>	<i>Member</i>	<i>2018 – Now</i>
	<i>Perkumpulan Pendidik IPA Indonesia (PPII)</i>	<i>Member</i>	<i>2018 – Now</i>