



DR. FRIDA ULFAH ERMAWATI, M. SC.

Position	Quantum Physics, Crystallography and X-Ray Diffraction Analysis, Ceramic Dielectric Materials, Thermodynamics, Elementary Physics I & II, English Language		
	Assistant Professor in Materials Science		
	Degree	University	Year
Academic Career	Bachelor of Physics Education	IKIP Negeri Surabaya - Indonesia	1985-1990
	Master of Science (Materials Science)	Monash University, Melbourne, Victoria, Australia	1997 - 2000
	Doctor of Physics (Materials Science)	Institute of Technology Surabaya (ITS), Sukolilo Surabaya, Indonesia	2011 - 2016
Employment	Position	Employer	Period
	Lecturer in Physics Study Program	Universitas Negeri Surabaya, Indonesia	1993 - Now
	The Coordinator of the Website Team in Faculty of Mathematics and Natural Sciences	Faculty of Mathematics and Natural Sciences, Universitas Negeri Surabaya, Indonesia	2017 - Now
Research and development projects over the last 5 years	Year	Title	Position
	2019	Karakterisasi Struktur dan Mikrostruktur Bahan Keramik Dielektrik Bi ₂ O ₃ -Doped (Mg _{1-x} Zn _x)TiO ₃ (Grant - IDR 45 Millions)	Head Researcher
	2019	Doping Aluminium Hidroksida (Al(OH) ₃) pada Komposit Polyvinileden Fluoride-Cellulose Acetate (PVDF-CA) sebagai separator Lithium Ion. (Grant - IDR 10 Millions)	Research member
	2019	Study on heating profile of liquid-mixing synthesized ZnTiO ₃ (Self Funding - IDR 10 Millions)	Head Researcher
	2018	The effect of heat treatment to the formation, decomposition and crystallinity of liquid-mixing-synthesized ZnTiO ₃ (Self Funding - IDR 10 Millions)	Head Researcher
	2018	Sintesis dan Analisis Struktur Bahan Dielektrik Keramik Mg(Ti _{1-x} Sn _x)O ₃ (Grant - IDR 10 Millions)	Head Researcher
	2017	Analisis kemampuan literasi keuangan dan matematika serta upaya membangun budaya literasi keuangan dan matematika siswa SD. (Grant - IDR 50 Millions)	Research Member
	2017	Dilatometric shrinkage study on magnesium titanate-based ceramic systems. (Self Funding - IDR 10 Millions)	Head Researcher
	2017	Contribution of relaxation effect to the permittivity of Mg _{1-x} Zn _x TiO ₃ ceramics. (Grant - IDR 10 Millions)	Head Researcher
	2017	Grain size analysis on pure and Zn-doped Ilmenite Magnesium Titanate Powders. (Self Funding - IDR 10 Millions)	Head Researcher

	2016	Preparation and structural study of $Mg_{1-x}Zn_xTiO_3$ ceramics and their dielectric properties from 1 Hz to 7.7 GHz. (Grant – EUROS 4,000)	Head Researcher
	2015	A simple dissolved metals mixing route to prepare nanostructured $Mg_{0.8}Zn_{0.2}TiO_3$ solid solution. (Self Funding – IDR 10 Millions)	Head Researcher
	2014	A dissolving route in synthesis of high purity $Mg_{0.5}Zn_{0.5}TiO_3$ nanocrystal. (Self Funding – IDR 10 Millions)	Head Researcher
	2014	Comprehensive structural study on $Zn_xMg_{1-x}TiO_3$ solid solutions with total scattering data: A Preliminary study. (Self Funding – IDR 10 Millions)	Head Researcher
Patents and Proprietary Rights	Year	Title	Certificate No.
Proprietary Rights	2019	Perangkat Instrumen Tes Diagnostik Miskonsepsi Berformat Four-Tier Untuk Materi MOMENTUM DAN IMPULS.	000143300
	2019	Perangkat Instrumen Tes Diagnostik Miskonsepsi Berformat Four-Tier Untuk Materi ARUS LISTRIK SEARAH.	000143301
	2019	Perangkat Instrumen Tes Diagnostik Miskonsepsi Berformat Four-Tier Untuk Materi DINAMIKA ROTASI DAN KESETIMBANGAN BENDA TEGAR.	000143299
	2019	Perangkat Instrumen Tes Diagnostik Miskonsepsi Berformat Four-Tier Untuk Materi FLUIDA DINAMIK.	000143281
	2019	Instrumen Perangkat Pembelajaran Materi VEKTOR Dengan Metode Trigonometri Hand Trick.	000142134
	2019	Instrumen Pembelajaran Materi PEMANTULAN GELOBANG TALI Berbasis Penilaian Kinerja.	000141342
	2019	Buku ajar Mahasiswa ber-ISBN dengan judul: "Difraksi Sinar-X: Teori dan Analisis Data Eksperimen".	000139628
	2019	Perangkat Instrumen Tes Diagnostik Miskonsepsi Berformat Four-Tier Untuk Materi ALAT OPTIK.	000147901
Patent Draft	2018	Sintesis Serbuk $Mg(Ti_{1-x}Sn_x)O_3$ Dengan Tingkat Kemurnian Tinggi Hasil Preparasi Dari Pencampuran Larutan Dan Karakterisasi Strukturnya".	Reg. No. P00201806029
Proprietary Rights	2018	Buku ajar mahasiswa ber-ISBN dengan judul "Fisika Bahan Keramik"	000104991
	2018	Instrumen tes diagnostik miskonsepsi berformat Four-tier untuk materi USAHA DAN ENERGI.	000104993
Important publications over the last 5 years	Year	Title, DOI No. & Journal Name	
	2019	Misconception profile of students in senior high school IV Sidoarjo East Java in work and energy concepts and the causes evaluated using Four Tier Diagnostic test DOI:10.1088/1742-6596/1387/1/012062 IoP Conference Series: Journal of Physics: Conference Series. 1387 (2019) 012062 https://iopscience.iop.org/article/10.1088/1742-6596/1387/1/012062	
	2019	Study on Heating Profile of Liquid-mixing-synthesized $ZnTiO_3$. DOI:10.1088/1757-899X/599/1/012010 IoP Conference Series: Materials Science and Engineering. 599 (2019) 012010 https://iopscience.iop.org/issue/1757-899X/599/1	

	2019	Phase composition and particle size distribution in $Mg(Ti_{1-x}Sn_x)O_3$ powders. DOI: 10.1088/1742-6596/1171/1/012038 IoP Conference Series: Journal of Physics: Conference Series. 1171 (2019) 012038 https://iopscience.iop.org/issue/1742-6596/1171/1	
	2019	The validity of Four-Tier's misconception diagnostic test for Work and Energy concepts. DOI: 10.1088/1742-6596/1171/1/012037 IoP Conference Series: Journal of Physics: Conference Series. 1171 (2019) 012037 https://iopscience.iop.org/issue/1742-6596/1171/1	
	2018	Contribution of relaxation effect to the permittivity of $Mg_{1-x}Zn_xTiO_3$ ceramics. DOI: 10.1088/1757-899X/367/1/012003 IoP Conference Series: Materials Science and Engineering. 367 (2018) 012003 https://iopscience.iop.org/issue/1757-899X/367/1	
	2018	Dilatometric shrinkage study on magnesium titanate-based ceramic systems. DOI: 10.1088/1742-6596/997/1/012005 IoP Conference Series: Journal of Physics: Conference Series. 997 (2018) 01 https://iopscience.iop.org/issue/1742-6596/997/12005	
	2017	Grain size analysis on pure and Zn-doped Ilmenite Magnesium Titanate Powders. http://omega.uhamka.ac.id/ Omega: Jurnal Fisika dan Pendidikan Fisika Vol. 3(1), 15-22 (2017)	
	2016	Preparation and structural study of $Mg_{1-x}Zn_xTiO_3$ ceramics and their dielectric properties from 1 Hz to 7.7 GHz. DOI: 10.1007/s10854-016-4610-6 Journal of Materials Science: Materials in Electronics Vol. 27(7) (2016) 6637-6645. https://link.springer.com/journal/10854/27/7	
	2015	A simple dissolved metals mixing route to prepare nanostructured $Mg_{0.8}Zn_{0.2}TiO_3$ solid solution. DOI: 10.4028/www.scientific.net/AMR.1112.47 . Advanced Materials Research. Vol. 1112 (2015) 47-52.	
Book Written	Year	Title & No. of Pages	ISBN No. & Publisher
	2019	Struktur Kristal Bahan Keramik (127 Pages)	978-602-449-375-2 Unipress UNESA
	2018	Difraksi Sinar-X: Teori dan Analisis Data Eksperimen (142 Pages)	. 978-602-449-209-0 Unipress UNESA
	2017	Fisika Bahan Keramik (92 pages)	978-602-449-047-8 Unipress UNESA
Activities in specialist bodies	Organization	Position	Period
	Materials Research Society of Indonesia (MRS-Id)	Member No. 26218368AB	Valid until January 2023
	Physical Society of Indonesia (PSI)	Member No. 10201500106	Valid until 31 Dec. 2020
	Perkumpulan Pendidik IPA Indonesia (PPII)	Member No. 847/PPII/2017	Valid until 2023