



**FISIKA**  
FMIPA UNPAD

MARCH 2023



# Staff Handbook

Welcome to Physics UNPAD



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# PROF. DR. ENG. CAMELLIA PANATARANI, M.SI

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Nanomaterial),  
Hiroshima University, Japan, 2002-2005

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia, 1998-  
2001

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia,  
1993-1998

## TEACHING AREA

Fundamental Physics  
Scientific Research Method  
Waves and Vibration  
Nanoscience and Nanotechnology

## AWARDS

**Outstanding Lecturer**, Unpad & National  
2006 & 2011

**L'Oreal - UNESCO for Women in Science  
(FWIS)**, Indonesia, 2008

**Outstanding XL Indonesia Award**, Indonesia  
2009

**Kartini Award**, Indonesia 2010

## ORGANIZATION

- Physical Society of Indonesia
- The Society of Chemical Engineering Japan
- Indonesia Material Research Society (MRS-Id)
- Society Powder Technology of Indonesia (SPTI)

## INDUSTRY COLLABORATION

AWEV Solution, Ltd  
2018-Present

## EMPLOYMENT Since 2003

### PROFESSOR

Material Science, 2016-present

### PATENTS (11 TOTAL)

**IDP000076656** Beadsmill dengan Separator dan  
Impleer Terpisah

**IDS000004922** Sintesis Fosfor Biru  
Gd<sub>5</sub>Si<sub>3</sub>O<sub>12</sub>N:Ce (Blue Phosphorus Synthesis  
Gd<sub>5</sub>Si<sub>3</sub>O<sub>12</sub>N:Ce), 2020.

**IDP000078291** Pulse Combustion Tanpa Katup  
untuk Pemanas Terkontrol

**IDS000005222** FIBUTECH sebagai Generator  
Penghasil Gelembung Mikro-Nano (Fine Bubble)  
untuk Pengolahan Kualitas Air, 2020

### SELECTED PUBLICATIONS (105 TOTAL)

**2023** "Synthesis of Mesoporous Silica SBA-15  
from Geothermal Sludge." Materialia 27.  
doi:10.1016/j.mtla.2022.101637.

**2020** "The Effects of Divalent and Trivalent  
Dopants on the Luminescence Properties of ZnO  
Fine Particle with Oxygen Vacancies."  
Advanced Powder Technology 31 (7): 2605-  
2612. doi:10.1016/j.apt.2020.04.024.

**2004** "The Crystallinity and the  
Photoluminescent Properties of Spray Pyrolyzed  
ZnO Phosphor Containing Eu<sup>2+</sup> and Eu<sup>3+</sup> Ions."  
Journal of Physics and Chemistry of Solids 65  
(11): 1843-1847.  
doi:10.1016/j.jpics.2004.06.008.

**2003** "Synthesis of Single Crystalline ZnO  
Nanoparticles by Salt-Assisted Spray  
Pyrolysis." Journal of Nanoparticle Research 5  
(1-2): 47-53. doi:10.1023/A:1024486519731.

# PROF. DR. ENG. I MADE JONI, M.SC

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Nanotechnology),  
Hiroshima University, Japan 2008-2011

**Master Degree** (Theoretical Physics),  
Jawaharhal Nehru University, India, 1998-2000

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia, 1993-1997

### PROFESSIONAL QUALIFICATION

Registered Technology Transfer Professionals  
(RTTP), Oxford, Oxienta, 2019

### TEACHING AREA

Nanotechnology  
Instrumentation Physics  
Statistical Physics  
Quantum Physics  
Medical Instrumentation

### AWARDS & SCHOLLARSHIP

**DGHE Overseas Scholarships**, Indonesia  
2008-2011

**ICCR Scholarship**, India, 1998-2000

**JSPS** in Strategic Fostering Program for Young  
Researchers Engaged in Natural Sciences  
toward the Establishment 2010

**Satyalancana Karya Satya**, Indonesia 2017

### ORGANIZATION

- Head of Physical Society of Indonesia  
(West Java Branch)
- The Society of Chemical Engineers Japan
- Society Powder Technology of Indonesia  
(SPTI)

### EMPLOYMENT Since 2001

#### PROFESSOR

Nanotechnology (2016-present)

#### INDUSTRY COLLABORATION

PT. Bukit Asam; PT. Pupuk Indonesia,  
PT Pupuk Sriwijaya, etc

#### SELECTED PATENTS (12 TOTAL)

**IDP000078291** Pulse Combustion Tanpa Katup  
untuk Pemanas Terkontrol

**IDS000005222** FIBUTECH sebagai Generator  
Penghasil Gelembung Mikro-Nano (Fine Bubble)  
untuk Pengolahan Kualitas Air, 2020

**IDP000076656** Beadsmill dengan Separator dan  
Impeler Terpisah

**PID201901309** Pembuatan Baterai Aluminium  
Udara, 2019.

**IDP000081534** Model Flotasi Sel Ganda untuk  
Pemurnian Grafit

**P00201700883** Stasiun Pengisian Kendaraan  
Listrik (Electric Vehicle Charging Station), 2017.

#### SELECTED PUBLICATIONS (148 TOTAL)

**2018** "Augmentation of Graphite Purity from  
Mineral Resources and Enhancing %  
Graphitization using Microwave Irradiation: XRD  
and Raman Studies." *Diamond and Related  
Materials* 88: 129-136.  
doi:10.1016/j.diamond.2018.07.009.

**2011** "Surface Functionalization for Dispersing  
and Stabilizing Hexagonal Boron Nitride  
Nanoparticle by Bead Milling." *Colloids and  
Surfaces A: Physicochemical and Engineering  
Aspects* 388 (1-3): 49-58.  
doi:10.1016/j.colsurfa.2011.08.007.

# PROF. DR. RISDIANA, M.ENG

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## CONTACT

risdiana@phys.unpad.ac.id

## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Applied Physics),  
Tohoku University, Japan 2006

**Master Degree** (Applied Physics),  
Waseda University, Japan 2003

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia 1998

## TEACHING AREA

Fundamental Physics  
Introduction to Solid State Physics  
Magnetic Materials and Superconductors  
Mechanics  
Scientific Research Method  
Crystallography and Diffraction Technique

## AWARDS

**Outstanding Lecturer**, Unpad  
2014

## ORGANIZATION

- Vice President of Indonesia Magnetism Society
- PIC Consortium of Functional Materials of Unpad-ITB-ITS-UI-UGM with The Physical and Chemical Research Institute (RIKEN)
- Physical Society of Indonesia

## EMPLOYMENT Since 1999

### PROFESSOR

Magnetic Materials and Superconductors  
2016-Present

### INDUSTRY COLLABORATION

The Physical and Chemical Research Institute (RIKEN) Japan (2020-present)

### PATENT

**P00202109848** Teknik Sintesis Dan Scale-Up Bahan Silicone Oil Sebagai Cairan Pengganti Vitreous Humour

### SELECTED PUBLICATIONS (131 TOTAL)

**2019.** "Study of Transport and Magnetic Properties of Electron-Doped Superconducting Cuprates  $\text{Eu}_{1.85}\text{Ce}_{0.15}\text{Cu}_{1-y}\text{Zn}_y\text{O}_{4+\alpha-\delta}$ ." *Physica C: Superconductivity and its Applications* 557: 41-43.  
doi:10.1016/j.physc.2018.12.007.

**2010.** "Muon Spin Relaxation Study of the Cu Spin Dynamics in Electron-Doped High-  $T_c$  Superconductor  $\text{Pr}_{0.86}\text{La}_{0.14}\text{Cu}_{1-y}\text{Zn}_y\text{O}_4$ ." *Physical Review B - Condensed Matter and Materials Physics* 82 (1).  
doi:10.1103/PhysRevB.82.014506.

**2008.** "Cu Spin Dynamics in the Overdoped Regime of  $\text{La}_{2-x}\text{Sr}_x\text{Cu}_{1-y}\text{Zn}_y\text{O}_4$  Probed by Muon Spin Relaxation." *Physical Review B - Condensed Matter and Materials Physics* 77 (5).  
doi:10.1103/PhysRevB.77.054516.

**2006.** "Distinct Fermi-Momentum-Dependent Energy Gaps in Deeply Underdoped  $\text{Bi}_2\text{Tl}_2$ ." *Science* 314 (5807): 1910-1913.  
doi:10.1126/science.1133411.

# PROF. DR.RER.NAT. AYI BAHTIAR

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Physics),  
University Mainz University, Germany  
2004

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
1997

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1994

## TEACHING AREA

Optics  
Optical Communication System  
Optoelectronics Technology  
Modern Physics  
Material Physics  
Waves and Vibration

## AWARDS

**Outstanding Head of Study Program**  
Unpad  
2010

**Outstanding Head of Study Program**  
Indonesia, Finalist  
2010

## ORGANIZATION

- Physical Society of Indonesia
- Materials Research Society of Indonesia (MRS-Id)

## EMPLOYMENT Since 1997

### PROFESSOR

Physics  
2022-Present

### SELECTED PUBLICATIONS (60 TOTAL)

**2022** "Single Crystal Perovskite MAPbBr<sub>3</sub> Prepared by Using Antisolvent Vapor-assisted Crystallization Method", Journal of Physics: Conference Series 2376 (1), 012005, doi:10.1088/1742-6596/2376/1/012005

**2022** "Physical and Optical Properties of N,S-Codoped Carbon Quantum Dots Derived from Cigarette Butts for Mercury Ions Detection", Journal of Physics: Conference Series 2344 (1), 012001, doi.org/10.1088/1742-6596/2344/1/012001.

**2022** "Superhydrophobic Ni-Reduced Graphene Oxide Hybrid Coatings with Quasi-Periodic Spike Structures", Nanomaterials 12 (3), 314, https://doi.org/10.3390/nano12030314.

**2020** "Inorganic-Organic Hybrid Perovskite Solar Cells Fabricated with Additives", Key Engineering Materials 860, 3-8, doi.org/10.4028/www.scientific.net/kem.860.3

**2020** "Improved the Performance and Stability at High Humidity of Perovskite Solar Cells by Mixed Cesium-Methylammonium Cations", Key Engineering Materials 860, 9-14, doi.org/10.4028/www.scientific.net/kem.860.9.

**2019** "Characteristics of Large Area Perovskite Solar Cells from Electrodes of Used Car Batteries", Materials Science Forum 966, 373-377, doi.org/10.4028/www.scientific.net/msf.966.373

# DR. FITRILAWATI, M.SC

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2001

**Master Degree** (Physics),  
Macquarie University, Australia  
1993

**Bachelor Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
1983

## TEACHING AREA

Material Physics  
Thin Film Technology  
Physical Mathematics  
Material Characterization Technique  
Nuclear Physics

## AWARDS/FELLOWSHIP

**Max-Planck Society Fellowship**, Mainz  
Germany, 1999

**NUS Postdoctoral Fellowship**, Singapore  
2001-2002

**Matsumae International Fellowship**,  
Tsukuba Japan, 2004

**JSPS Fellowship**, Osaka Japan  
2008

**SAME Fellowship**, Mainz Germany, 2013  
2013

## ORGANIZATION

- Indonesian Optical Society
- Physical Society of Indonesia

## EMPLOYMENT Since 1994

### ASSOCIATE PROFESSOR

Physics  
2008-Present

### SELECTED PUBLICATIONS (69 TOTAL)

**2019** "Structural, Spectroscopic and Optical Gain of Nd<sup>3+</sup> Doped Fluorophosphate Glasses for Solid State Laser Application." *Journal of Luminescence* 216. doi:10.1016/j.jlumin.2019.116738.

**2019** "Structural and Spectroscopic Properties of Er<sup>3+</sup> Doped Sodium Lithium Borate Glasses." *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 223. doi:10.1016/j.saa.2019.117342.

**2005**. "Langmuir-Blodgett-Kuhn and Self-Assembled Films of Asymmetrically Substituted Poly(Paraphenylene)." *Langmuir* 21 (26): 12146-12152. doi:10.1021/la0505667.

**2003**. "Planar Waveguides of PPV Derivatives: Attenuation Loss, Third-Harmonic Generation and Photostability." *Optical Materials* 21 (1-3): 511-519. doi:10.1016/S0925-3467(02)00192-1.

**2001**. "Effects of Phenylene Ring Derivatization of Polyaniline on its Optical Properties." *Optical Materials* 16 (3): 361-367. doi:10.1016/S0925-3467(00)00047-1.

# DR. TOGAR SARAGI

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2005

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
1997

**Bachelor Degree** (Physics),  
Universitas Negeri Medan, Indonesia  
1993

## TEACHING AREA

Material Characterization Technique  
Electromagnetics  
Fundamental Physics  
Modern Physics  
Material Synthesis Method  
Magnetic and superconducting materials  
Magnetic Physics and

## AWARDS

**Satyalancana Karya Satya X**, Indonesia  
2014

**Satyalancana Karya Satya XX**, Indonesia  
2018

## ORGANIZATION

- Physical Society of Indonesia
- Indonesian Magnetic Society (IMS)

## EMPLOYMENT Since 1996

### ASSOCIATE PROFESSOR

Physics  
2017-Present

### INDUSTRY COLLABORATION

The Physical and Chemical Research Institute  
(RIKEN) Japan  
2020-Present

## SELECTED PUBLICATIONS (46 TOTAL)

**2022** Study of Magnetic Properties and Relaxation Time of Nanoparticle Fe<sub>3</sub>O<sub>4</sub>-SiO<sub>2</sub>. Materials. 15, 4(2022), 1573 (1-10).

**2021** Refining Process and Identifying Content of Local Iron Sand. Material Science Forum (MSF). 1028(2021), 26-31.

**2020** Fe<sub>3</sub>O<sub>4</sub>.SiO<sub>2</sub>: A Study of Structural and Magnetic Properties in Various Volume of Tetraethyl Orthosilicate. Key Engineering Material (KEM), 860(2020), 83-88.

**2020** Blocking Temperature of Magnetite Nanoparticles Fe<sub>3</sub>O<sub>4</sub> Encapsulated Silicon Dioxide SiO<sub>2</sub>. Key Engineering Material (KEM), 855 (2020), 172-176.

**2019** Physical Properties of Encapsulated Iron Oxide. Materials Science Forum. 966, (2019), 277-281.

**2018** The Effect of pH and Sintering Treatment on Magnetic Nanoparticles Ferrite Based Synthesized by Coprecipitation Method. Journal of Physics Conf. Series.

# DR. SAHRUL HIDAYAT

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Sinta ID: 5998872



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## CONTACT

sahrul@unpad.ac.id

## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Mathematics and Natural Sciences), Universitas Padjadjaran, Indonesia  
2011

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2001

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1997

## TEACHING AREA

Energy Physics  
Modelling  
Energy Conservation  
Algorithms and Programming  
Numerical Computation

## AWARDS

**JSPS Fellowship**, Osaka Japan  
2009

**Directorate General of Higher Education Fellowship** Indonesia  
2010

**Satyalancana Karya Satya X**, Indonesia  
2012

## ORGANIZATION

- Physical Society of Indonesia
- Materials Research Society Indonesia (MRS-Id)

## EMPLOYMENT Since 1998

### ASSOCIATE PROFESSOR

Physics  
2014-Present

### PATENTS

**IDP000076939**, Metode Sintesis Partikel Polistiren dan Pembuatan Material Kristal Fotonik pada Substrat Fleksibel dari Partikel Polistiren yang Dibuat dengan Metode Tersebut

## SELECTED PUBLICATIONS (45 TOTAL)

**2018** "Synthesis and Characterization of Carboxymethyl Cellulose (CMC) from Salak-Fruit Seeds as Anode Binder for Lithium-Ion Battery, Journal of Physics: Conference Series, Volume 1080.". doi:10.1088/1742-6596/1080/1/012017.

**2018** "Synthesis and Characterization of CMC from Water Hyacinth for Lithium-Ion Battery Applications. AIP Conference Proceedings 1927, 030023". doi:10.1063/1.5021216.

**2015** Conduction Properties of PTMSPMA-PEO and its Application as Polymer Electrolyte in LiFePO<sub>4</sub> Batteries. Materials Science Forum. Vol. 827. doi:10.4028/www.scientific.net/MSF.827.125.

**2013** "Synthesis of Hybrid Polymer and its Application as Distributed Feedback Laser." Sains Malaysiana 42 (4): 521-527.

**2011** "Application of Hybrid Polymer as a Two Dimensional Grating and it's Lasing Characteristic." Sains Malaysiana 40 (1): 39-42.

# LUSI SAFRIANI, PH.D

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Applied Chemistry),  
Tohoku University, Japan  
2008

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2000

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1997

## TEACHING AREA

Electricity and Magnetism  
Fundamental Physics  
Mathematical Physics  
Material Characterization Technique  
Polymer Functional

## ORGANIZATION

The Physical Society of Indonesia  
(Finance)

## EMPLOYMENT Since 1998

### ASSOCIATE PROFESSOR

Physics  
2016-Present

### INDUSTRY COLLABORATION

The Physical and Chemical Research Institute  
(RIKEN) Japan  
2008-Present

### PATENTS

**IDP000076939** Metode Sintesis Partikel  
Polistiren dan Pembuatan Material Kristal  
Fotonik pada Substrat Fleksibel dari Partikel  
Polistiren yang Dibuat dengan Metode Tersebut

### SELECTED PUBLICATIONS (45 TOTAL)

**2014** Possible Existence of the Stripe  
Correlations in Electron-Doped Superconducting  
Cuprates  $\text{Eu}_{1.85}\text{Ce}_{0.15}\text{Cu}_{1-y}\text{Ni}_y\text{O}_{4+\alpha-\delta}$   
Studied by Muon-Spin-Relaxation. *Advanced  
Materials Research*. Vol. 896.  
doi:10.4028/www.scientific.net/AMR.896.354.

**2014** Charge Carrier Dynamics of Active  
Material Solar Cell P3HT:ZnO Nanoparticles  
Studied by Muon Spin Relaxation ( $\mu\text{SR}$ ).  
*Advanced Materials Research*. Vol. 896.  
doi:10.4028/www.scientific.net/AMR.896.477.

**2008** "Fabrication of Inverse Opal  $\text{TiO}_2$   
Waveguide Structure." *Japanese Journal of  
Applied Physics* 47 (2 PART 2): 1208-1210.  
doi:10.1143/JJAP.47.1208.

# DR. ANDRI ABDURROCHMAN

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Photonic Instrumentations & Processes),  
Université de Strasbourg, France, 2015

**Master Degree** (Instrumentation and Control),  
Institut Teknologi Bandung, Indonesia, 2022

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia 1998

## TEACHING AREA

Electronics  
Medical Instrumentation  
Biophysics  
Optical Communication System  
Measurement Calibration and Standardization

## ORGANIZATION

- Physical Society of Indonesia
- Indonesian Optical Society

## INDUSTRY COLLABORATION

PT. Inovasi Teknologi Bangsa  
2022-Present

## EMPLOYMENT Since 2003

### ASSISTANT PROFESSOR

Physics  
2010-Present

## PATENTS

**FR1554317**, Dispositif de traitement laser et station de travail comportant un tel dispositif  
**P00202009021** Metode dan Perangkat Penyedot Aerosol Ekstra Oral  
**P00202008187** Perangkat Penanda Proses Induksi Hipnosis

## SELECTED PUBLICATIONS (11 TOTAL)

**2021** Control Prototype of Manipulator Robot for Skin Cancer Therapy. Advances in Intelligent Systems and Computing. Vol. 1291 AISC. doi:10.1007/978-981-33-4062-6\_7.

**2020** "Development of Precision Pump and High Voltage DC-Regulator for Electrospinning Apparatus: Experimental Test with Preparation of PVA Microfiber.". doi:10.1088/1742-6596/1568/1/012006.

**2019** A Potential Application of Photonic Jet in Observing Micro-Metric Materials. Materials Science Forum. Vol. 966 MSF. doi:10.4028/www.scientific.net/MSF.966.507.

**2018** "Observing Micro-Meter Object using Photonic Jet.". doi:10.1088/1742-6596/1080/1/012051.

**2016** "Photonic Jet Subwavelength Etching using a Shaped Optical Fiber Tip." Optics Letters 41 (9): 2073-2076. doi:10.1364/OL.41.002073.

# NORMAN SYAKIR, DRS., MS

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia &  
1987

**Master Degree** (Physics),  
Macquarie University, Australia  
1996

**Bachelor Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
1983

## TEACHING AREA

Introduction to Solid State Physics  
Materials Functional  
Environmental Physics  
Anatomical Physics and Physiology  
Nuclear Physics

## ORGANIZATION

Physical Society of Indonesia

## EMPLOYMENT Since 1986

### ASSISTANT PROFESSOR

Physics  
2013-Present

### SELECTED PUBLICATIONS (42 TOTAL)

**2020** Blocking Temperature of Magnetite Nanoparticles  $Fe_3O_4$  Encapsulated Silicon Dioxide  $SiO_2$ . Key Engineering Materials. Vol. 855 KEM. doi:10.4028/www.scientific.net/KEM.855.172.

**2019** "Study of Transport and Magnetic Properties of Electron-Doped Superconducting Cuprates  $Eu_{1.85}Ce_{0.15}Cu_{1-y}Zn_yO_{4+\alpha-\delta}$ ." Physica C: Superconductivity and its Applications 557: 41-43. doi:10.1016/j.physc.2018.12.007.

**2017** "Characteristic of Thermally Reduced Graphene Oxide as Supercapacitors Electrode Materials." doi:10.1088/1757-899X/196/1/012034.

**2017** "Modification of Blue LED using Organic-Inorganic Hybrid Polymer Doped with Nile Red for Artificial Lighting of Photosynthesis". doi:10.1088/1742-6596/877/1/012016.

**2015** Characterization of Optical and Structure Properties of Polydimethylsiloxanes. Materials Science Forum. Vol. 827. doi:10.4028/www.scientific.net/MSF.827.99.

# DR. OTONG NURHILAL, M.SI

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Biotechnology),  
Universitas Padjadjaran, Indonesia  
2022

**Master Degree** (Physical Chemistry)),  
Universitas Padjadjaran, Indonesia  
2005

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1994

## TEACHING AREA

Energy Physics  
Energy Conversion  
Thermodynamics  
Biomass  
Asset Integrity Management of Steam and  
Gas Power Plant Facilities

## EMPLOYMENT Since 1995

### ASSISTANT PROFESSOR

Physics  
2008-Present

## SELECTED PUBLICATIONS (14 TOTAL)

**2021** "High Sulfur Content of Mesoporous Activated Carbon Composite Derived from Water Hyacinth." Sustainability (Switzerland) 13 (22). doi:10.3390/su132212880.

**2020** Synthesis of High Quality Porous Carbon from Water Hyacinth. Key Engineering Materials. Vol. 860 KEM. doi:10.4028/www.scientific.net/KEM.860.173.

**2018** "Sustainable Energy Development of Bio Briquettes Based on Rice Husk Blended Materials: An Alternative Energy Source.". doi:10.1088/1742-6596/1013/1/012184.

**2017** "Combustion Quality Analysis of Briquettes from Variety of Agricultural Waste as Source of Alternative Fuels" doi:10.1088/1755-1315/65/1/012012.

**2016** "Optimal Design of an Atmospheric Water Generator (AWG) Based on Thermo-Electric Cooler (TEC) for Drought in Rural Area.". doi:10.1063/1.4941874.

# SETIANTO, S.SI., M.SI

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## CONTACT

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Biotechnology),  
Universitas Padjadjaran, Indonesia  
2020-Present

**Master Degree** (Physics),  
Universitas Gadjah Mada, Indonesia  
2007

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1998

## TEACHING AREA

Computational Physics  
Quantum Physics  
Wave  
Introduction to Solid State Physics  
Core Physics

## ORGANIZATION

Physical Society of Indonesia

## EMPLOYMENT Since 1999

### ASSISTANT PROFESSOR

Physics  
2017-Present

## SELECTED PUBLICATIONS

(17 total)

**2023** "Semi-Empirical Infrared Spectra Simulation of Pyrene-Like Molecules Insight for Simple Analysis of Functionalization Graphene Quantum Dots." Scientific Reports 13 (1). doi:10.1038/s41598-023-29486-z.

**2022** "One-Step Synthesis of Lead Zirconate Titanate Particles using a Solid-State Reaction Method." Heliyon 8 (3). doi:10.1016/j.heliyon.2022.e09125.

**2021** "Structure and Phase Analysis of Calcium Carbonate Powder Prepared by a Simple Solution Method." Heliyon 7 (11). doi:10.1016/j.heliyon.2021.e08344.

**2013** "Optical Properties of Amorphous Silicon Quantum Dots (a-Si QDs) with various Dot Size using Extended Hückel Theory.". doi:10.1063/1.4820319.

**2013** "Synthesis and Dispersion of Nanoparticles, and Indonesian Graphite Processing.". doi:10.1063/1.4820275.

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Master Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
1998

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1995

## TEACHING AREA

Quantum Physics  
Particle Physics  
Mechanics  
Statistical Physics  
Nuclear Physics

## EMPLOYMENT Since 1993

### ASSISTANT PROFESSOR

Physics  
2016-Present

### SELECTED PUBLICATIONS (6 TOTAL)

**2020** "Visualization the Electrostatic Potential Energy Map of Graphene Quantum Dots.". doi:10.1063/5.0003019.

**2018** "Synthesis and Characterization of ZnO:Ca<sup>2+</sup> Prepared by Simple Solution Method.". doi:10.1063/1.5021231.

**2016** "Correction Until Second Order of Ground State Energy and Wave Function of Hydrogen Atom Caused by Stark Effect in Three Dimensional.". doi:10.1063/1.4941881.

**2013** "Optical Properties of Amorphous Silicon Quantum Dots (a-Si QDs) with various Dot Size using Extended Hückel Theory.". doi:10.1063/1.4820319.

**2013** "Improvement on Droplet Production Rate of Ultrasonic - Nebulizer in Spray Pyrolysis Process.". doi:10.1063/1.4820320.

# DR. ANNISA APRILIA, M.SI

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2013

**Master Degree** (Theoretical Physics),  
Institut Teknologi Bandung, Indonesia  
2006

**Bachelor Degree** (Physics),  
Institut Teknologi Bandung, Indonesia  
2004

## TEACHING AREA

Mathematical Physics  
Material Physics  
Functional Materials  
Core Physics  
Experimental Physics

## ORGANIZATION

- Physical Society of Indonesia
- Indonesian Optical Society

## EMPLOYMENT Since 2006

### ASSISTANT PROFESSOR

Physics  
2014-Present

### SELECTED PUBLICATIONS (40 TOTAL)

**2020** "One-Pot Synthesis of Carbon-Doped TiO<sub>2</sub> with Bimetallic Ni-Ag Co-Catalysts in Photodegradation of Methylene Blue Under Uv and Visible Irradiation." Bulletin of Chemical Reaction Engineering & Catalysis 15 (1): 35-42. doi:10.9767/bcrec.15.1.4811.35-42.

**2019** "Study of Transport and Magnetic Properties of Electron-Doped Superconducting Cuprates Eu 1.85 Ce 0.15 Cu 1-y Zn y O 4+α-δ." Physica C: Superconductivity and its Applications 557: 41-43. doi:10.1016/j.physc.2018.12.007.

**2018** "Influences of Al Dopant Atoms to the Structure and Morphology of Al Doped ZnO Nanorod Thin Film." doi:10.1088/1742-6596/1080/1/012009.

**2017** "Zinc Oxide/TiO<sub>2</sub> Bilayer Heterojunction as a Working Electrode in Quasi Solid Dye Sensitized Solar Cells." doi:10.1088/1757-899X/214/1/012033.

**2013** "Influences of Dopant Concentration in Sol-Gel Derived AZO Layer on the Performance of P3HT:PCBM Based Inverted Solar Cell." Solar Energy Materials and Solar Cells 111: 181-188. doi:10.1016/j.solmat.2012.12.033.

# NOWO RIVELI, PH.D

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Nuclear Physics),  
Ohio University, USA  
2014

**Master Degree** (Physics),  
Universitas Indonesia, Indonesia  
2007

**Bachelor Degree** (Physics),  
Universitas Indonesia, Indonesia  
2004

### TEACHING AREA

Nuclear Physics  
Solar Energy  
Astrophysics  
Radiation Physics and Dosimetry  
Quantum Physics

### EMPLOYMENT Since 2016

#### ASSISTANT PROFESSOR

Physics  
2019-Present

### SELECTED PUBLICATIONS (49 TOTAL)

**2021** "Effect of Light Irradiation on the Diffusion Rate of the Charge Carrier Hopping Mechanism in p3ht-zno Nanoparticles Studied by  $\mu$ +sr." Energies 14 (20).  
doi:10.3390/en14206730.

**2021** Study on the Diffusion Rate of the Charge Carrier Transport in Regio-Random and Regio-Regular P3HT. Materials Science Forum. Vol. 1028 MSF.  
doi:10.4028/www.scientific.net/MSF.1028.204.

**2019** Study on the Diffusion Rate of the Charge Carrier Transport in Regio-Random p3ht. Materials Science Forum. Vol. 966 MSF.  
doi:10.4028/www.scientific.net/MSF.966.471.

**2016** "Transverse Energy Production and Charged-Particle Multiplicity at Midrapidity in various Systems from  $s_{NN} = 7.7$  to 200 GeV." Physical Review C 93 (2).  
doi:10.1103/PhysRevC.93.024901.

**2015** "Centrality Dependence of Low-Momentum Direct-Photon Production in Au+Au Collisions at  $s_{NN} = 200$  GeV Centrality Dependence of Low-Momentum Direct- ... A. Adare Et Al." Physical Review C - Nuclear Physics 91 (6).  
doi:10.1103/PhysRevC.91.064904.

# DR. BUDI ADIPERDANA, M.SI

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Chemistry),  
Universitas Padjadjaran, Indonesia  
2013

**Master Degree** (Chemical Physics),  
Institut Teknologi Bandung, Indonesia  
2009

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
2005

### TEACHING AREA

Computational Physics  
Artificial Intelligence  
Digital Image Processing  
Computational Material Science  
Fluid Dynamics  
Robotics

## ORGANIZATION

Physical Society of Indonesia

## EMPLOYMENT Since 2018

### ASSISTANT PROFESSOR

Computational Materials  
2022-Present

### SELECTED PUBLICATIONS (18 TOTAL)

**2019** MSR Spectrum Reconstruction using Monte Carlo Approach: A Preliminary Study. Materials Science Forum. Vol. 966 MSF. doi:10.4028/www.scientific.net/MSF.966.483.

**2014** "An Effect of the Supercell Calculation on Muon Positions and Local Deformations of Crystal Structure in La<sub>2</sub>CuO<sub>4</sub>". doi:10.1088/1742-6596/551/1/012051.

**2013** "Muon Site Estimation on La<sub>2</sub>CuO<sub>4</sub> using Dipole Field and Density Functional Theory Calculation.". doi:10.1063/1.4820323.

**2012** "MsR Study of Charge Carrier Diffusion in Regioregular Poly(3-Butylthiophene-2,5-Diyl)". doi:10.1016/j.phpro.2012.04.048.

**2012** "Muon Sites Estimation in La<sub>2</sub>CuO<sub>4</sub> and A New Vanadium Cluster Compound, V<sub>4</sub>S<sub>9</sub>Br<sub>4</sub>, using Electronic and Nuclear Dipole Field Calculations.". doi:10.1016/j.phpro.2012.04.051.

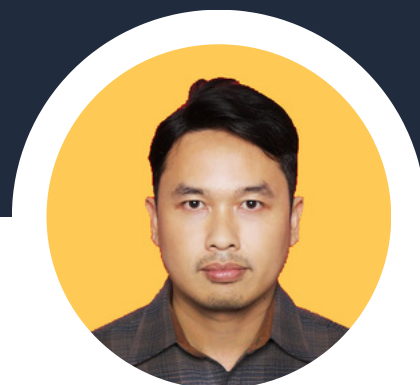
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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Bio-Application and System Engineer),  
Tokyo University of Agriculture and Technology, Japan  
2015

**Master Degree** (Computational Science),  
Institut Teknologi Bandung, Indonesia & Kanazawa University, Japan  
2012

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
2006

## TEACHING AREA

Electronics  
Algorithm and Programming  
Control System Process  
Numerical Computation  
Biomaterial and Biosensor

## AWARDS

**Kanji Takahashi Award** Japan Association of Aerosol Science and Technology, 2019

## ORGANIZATION

- Ministry of Finance of The Physical Society of Indonesia (West Java Branch)
- Physics Alumni Association

## INDUSTRY COLLABORATION

PT. Solusi Bibit Unggul  
Physikalisch-Technische Bundesanstalt (PTB)

## EMPLOYMENT Since 2019

### ASSISTANT PROFESSOR

Computational Physics  
2021-Present

### PATENTS

**JP2019.136636 A**, A method for obtaining controlled optical properties of particle film using electrospray, 2017.

### SELECTED PUBLICATIONS (37 TOTAL)

**2021** "Detachment of Submicron Particles from Substrates using the Suspension-Assisted Ultrasonic Method." Journal of Chemical Engineering of Japan 54 (4): 135-143. doi:10.1252/JCEJ.16WE319.

**2020** "The Effects of Divalent and Trivalent Dopants on the Luminescence Properties of ZnO Fine Particle with Oxygen Vacancies." Advanced Powder Technology 31 (7): 2605-2612. doi:10.1016/j.appt.2020.04.024.

**2018** "Decomposition of Solution Droplets Under the Influence of Thermal Convection Over a Heated Horizontal Plate." Advanced Powder Technology 29 (3): 441-449. doi:10.1016/j.appt.2017.10.026.

**2018** "Particulate Structures Produced by Electrospays of Colloidal Silica Suspensions in both Negative and Positive Zeta Potentials." Advanced Powder Technology 29 (7): 1771-1777. doi:10.1016/j.appt.2018.03.015.

**2018** "Carbonaceous Nanoparticle Layers Prepared using Candle Soot by Direct- and Spray-Based Depositions." Aerosol and Air Quality Research 18 (4): 856-865. doi:10.4209/aaqr.2017.10.0426.

# DR. CUKUP MULYANA

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## EDUCATION

### EDUCATIONAL QUALIFICATION

**Doctorate Degree** (Mathematics and Natural Sciences),  
Universitas Padjadjaran  
2013

**Master Degree** (Physical Engineering),  
Institut Teknologi Bandung, Indonesia  
1989

**Bachelor Degree** (Physics),  
Universitas Padjadjaran, Indonesia  
1981

## TEACHING AREA

Heat Transfer  
Renewable Energy  
Thermodynamics  
Energy Physics  
Geothermal Power Plant

## EMPLOYMENT

### ASSISTANT PROFESSOR

Physics

### SELECTED PUBLICATIONS (17 TOTAL)

**2023** "Synthesis of Mesoporous Silica SBA-15 from Geothermal Sludge." *Materialia* 27. doi:10.1016/j.mtla.2022.101637.

**2017** "Empowerment Model of Biomass in West Java, IOP Conf. Ser.: Earth Environ. Sci. 65 012016DOI 10.1088/1755-1315/65/1/012016". doi:10.1088/1755-1315/65/1/012016.

**2017** "Failure Analysis of Storage Tank Component in LNG Regasification Unit using Fault Tree Analysis Method (FTA)". doi:10.1063/1.4979430.

**2016** "The Thermodynamic Cycle Models for Geothermal Power Plants by Considering the Working Fluid Characteristic.". doi:10.1063/1.4941863.

**2016** "Development of Indonesia Corncob and Rice Husk Biobriquette as Alternative Energy Source.". doi:10.1063/1.4941897.

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H A N D B O O K

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