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Siti Utari Rahayu, S.Si., M.Sc was born in Medan on September 29, 1988. She is a lecturer in Physics at the Universitas Sumatera Utara. She completed her Master of Science in 2016.

Publications

2026

Jurnal internasional bereputasi

Bandgap-tunable ternary $\text{Cd}_x\text{Zn}_{1-x}\text{Se}$ nanocrystals for high-efficiency sensitized solar cells

SITI UTARI RAHAYU , REKSI M SILABAN , Wen-Tzu Chiang , Ming-Way Lee , Patsorn Boon-On , Jen-Bin Shi

2025

Jurnal internasional bereputasi

Round-Robin Interlaboratory Comparison of Large-Area Organic Thin-Film and Perovskite Solar Cells

Chia-Yuan Chen , Ming-Way Lee , SITI UTARI RAHAYU

2025

Jurnal internasional bereputasi

Synthesis of Nano Carbon of Potatoes as Electrode for Environmentally Friendly Supercapacitor

DR. INDRI DAYANA S SI, M.Si , HABIB SATRIA , MORANAIN MUNGKIN , DADAN RAMDAN , MUHAMMAD FADLAN SIREGAR , SITI UTARI RAHAYU , JUNAIDI

2025

Jurnal nasional terakreditasi

An In-depth Study of Relation Between Band Gap Energy and Lattice Constant for Cubic Phase LiSnX_3 (X= F, Cl, Br, and I) Perosvkite

SITI UTARI RAHAYU , JUNAINA SAHPUTRI SAGALA , RUSSELL ONG

2025

Jurnal nasional terakreditasi

An In-depth Study of Relation Between Band Gap Energy and Lattice Constant for Cubic Phase LiSnX_3 (X = F, Cl, Br, and I) Perosvkite

SITI UTARI RAHAYU , Russell Ong , Junaina Sahputri Sagala

2024

Jurnal internasional bereputasi

DEVELOPMENT OF POTATO NANO CARBON AS ELECTRODE FOR SUPERCAPACITORS ACHIEVES GREEN-SUSTAINABLE DEVELOPMENT GOALS

SITI UTARI RAHAYU , MARTHA RIANNA

2024

Jurnal internasional bereputasi

Enhanced Photovoltaic Performance of Heavy-Metal-Free AgInS_2 Quantum Dot-Sensitized Solar Cells Using a Facile SILAR Method

Ming-Way Lee , Yu-Rou Wang , SITI UTARI RAHAYU

2024

Prosiding seminar internasional

Highly Efficient CdSe Quantum Dot-Sensitized Solar Cells via a Facile SILAR Method: Dependence of the SILAR Cycles on Optical Properties and Photovoltaic Performance

Ming-Way Lee , SITI UTARI RAHAYU

2023

Jurnal internasional bereputasi

AgInS₂/CdSe type-II core/shell quantum dot-sensitized solar cells with an efficiency of 11.75% under 0.1 sun

SITI UTARI RAHAYU , Yu-Rou Wang , Jen-Bin Shi , Ming-Way Lee

2023

Jurnal internasional bereputasi

Ternary alloyed BaxCd_{1-x}S nanocrystals: Synthesis, bandgap tuning, and photovoltaic performance

SITI UTARI RAHAYU , Yu-Lun Tai , Patsorn Boon-On , Yu-Rou Wang , Ming-Way Lee

2023

Prosiding seminar internasional

Characterization of physical of filters based on pahae natural zeolite and active charcoal of cocoa rind

YUAN ALFINSYAH SIHOMBING , SUSILAWATI , SITI UTARI RAHAYU

2023

Prosiding seminar internasional

The influence of sulfuric acid crosslinked on mechanical and chemical properties of chitosan/Pahae natural zeolite membrane

YUAN ALFINSYAH SIHOMBING , SUSILAWATI , SITI UTARI RAHAYU

2023

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Zeolite filter-activated charcoal cocoa bark as ammonium absorbing material in greywater waste

YUAN ALFINSYAH SIHOMBING , SUSILAWATI , SITI UTARI RAHAYU

2023

Jurnal internasional bereputasi

Effect of reduced graphene oxide (rGO) in chitosan/Pahae natural zeolite-based polymer electrolyte membranes for direct methanol fuel cell (DMFC) applications

YUAN ALFINSYAH SIHOMBING , SITI UTARI RAHAYU , SUSILAWATI

2023

Jurnal internasional bereputasi

Filter material based on zeolite-activated charcoal from cocoa shells as ammonium adsorbent in greywater treatment

SUSILAWATI , SITI UTARI RAHAYU , YUAN ALFINSYAH SIHOMBING

2022

Jurnal internasional bereputasi

Rare-earth-incorporated ternary CexCd_{1-x}S quantum dot-sensitized solar cells

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2022

Jurnal internasional bereputasi

The Effectiveness of Pahae Natural Zeolite-Cocoa Shell Activated Charcoal Nanofilter as a Water Adsorber in Bioethanol Purification

SUSILAWATI , YUAN ALFINSYAH SIHOMBING , SITI UTARI RAHAYU

2022

Jurnal internasional bereputasi

FABRICATION AND MODIFICATION OF CHITOSAN/PAHAE NATURAL

ZEOLITE/REDUCED GRAPHENE OXIDE (CS/PNZ/rGO)-BASED POLYMER ELECTROLYTE MEMBRANES

YUAN ALFINSYAH SIHOMBING , SUSILAWATI , SITI UTARI RAHAYU

2022

Monograf

Aplikasi Semikonduktor Wittichenite (Cu₃BiS₃) pada Sel Surya Tipe Quantum Dot-Sensitized Solar Cells (QD-SSCs)

SITI UTARI RAHAYU

2021

Monograf

Semikonduktor Natrium Antimon Sulfat (NaSbS₂) Sebagai Material Penyerap Cahaya Pada Quantum Dot-Sensitized Solar Cells (QDSSCs)

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2021

Prosiding seminar internasional

NodeMCU-Based Automatic Motorcycle Tire Pump Monitored by Android Smartphone

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2021

Prosiding seminar internasional

Investigation of chaos behaviour on damped and driven nonlinear simple pendulum motion simulated by mathematica

SITI UTARI RAHAYU , Dr. KERISTA TARIGAN, M.Eng.Sc. , TAKDIR TAMBA

2021

Prosiding seminar internasional

Prototype of Temperature Monitoring System for BTS Shelter using Android Smartphone

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2021

Jurnal internasional bereputasi

THE COMPARISON OF OPAQUE TiO₂ AND TRANSPARENT TiO₂ ON THE PERFORMANCE OF AgSbS₂-SENSITIZED SOLAR CELL PREPARED BY SOLUTION PROCESSING

KERISTA SEBAYANG , SITI UTARI RAHAYU , HERLI GINTING , SAHARMAN GEA , ADITIA WARMAN

2020

Jurnal internasional bereputasi

FABRICATION OF CHITOSAN/NATURAL ZEOLITE COMPOSITE-BASED POLYMER ELECTROLYTE MEMBRANES

YUAN ALFINSYAH SIHOMBING , SUSILAWATI , SITI UTARI RAHAYU

2020

Prosiding seminar internasional

Papaya (Carica papaya L.) leaves extract as an inhibitor for brass in H₂SO₄ solution

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2020

Prosiding seminar internasional

The investigation of chemically deposited Cu₃BiS₃ into mesoporous TiO₂ films for the application of semiconductor-sensitized solar cells

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2018

Prosiding seminar internasional

Preliminary study on the fabrication of cellulose nanocomposite film from oil palm empty fruit bunches partially solved into licl/dmac with the variation of dissolution time

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2018

Prosiding seminar internasional

Enhancing the quality of nata de coco starter by channeling the oxygen into the bioreactor through agitation method

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2018

Jurnal internasional bereputasi

Eco-Friendly NaSbS₂Quantum Dot-Sensitized Solar Cells

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2016

Jurnal internasional bereputasi

Sodium antimony sulfide (NaSbS₂): Turning an unexpected impurity into a promising, environmentally friendly novel solar absorber material

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Researches

2022

Penelitian Unggulan Perguruan Tinggi

Pengaruh Komposisi Reduced Grafena Oksida (rGO) dan Konsentrasi Methanol Terhadap Membran Polimer Elektrolit Kitosan-Zeolit Alam Pahae untuk Aplikasi Direct Methanol Fuel Cells (DMFC)

SUSILAWATI , YUAN ALFINSYAH SIHOMBING , SITI UTARI RAHAYU , MASNITA D SITUMEANG

2021

Penelitian Unggulan Perguruan Tinggi

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SUSILAWATI , YUAN ALFINSYAH SIHOMBING , SITI UTARI RAHAYU , WINA RAHMADANI RANGKUTI

2021

Nanofilter Zeolit-Arang Aktif Kulit Kakao Sebagai Adsorber Air Pada Pemurnian Bioethanol

SUSILAWATI , YUAN ALFINSYAH SIHOMBING , SITI UTARI RAHAYU

Community Services

2021

Ipteks Bagi Masyarakat

Rumah Kompos SMAN Bangun Purba Sebagai Tempat Produksi Pupuk Berbahan Sampah Daun Kering

SUSILAWATI , YUAN ALFINSYAH SIHOMBING , SITI LATIFAH , SITI UTARI RAHAYU

Intellectual Property Rights

2023

Hak cipta nasional

Aplikasi Semikonduktor Wittichenite (Cu₃BiS₃) pada Sel Surya Tipe Quantum Dot-Sensitized Solar Cells (QD-SSCs)

SITI UTARI RAHAYU

2021

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Semikonduktor Natrium Antimon Sulfat (NaSbS₂) Sebagai Material Penyerap

Cahaya Pada Quantum Dot-Sensitized Solar Cells (QDSSCs)

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