

Dr. Diana Alemin Barus, M.Sc

Lecturer of Master's Program in Physics Study Program
Fakultas Matematika Dan Ilmu Pengetahuan Alam
Universitas Sumatera Utara

✉ diana1@usu.ac.id

🏢 USU Faculty of Mathematics and Natural Sciences

🌐 fmipa.usu.ac.id/en/lecturer/diana-alemin-barus

Dr. Diana Alemin Barus, M.Sc., was born in Medan on July 29, 1966, and is a lecturer in Physics at the Universitas Sumatera Utara. She completed her doctoral degree in Physics at the Universitas Sumatera Utara in 2010.

Publications

2024

Jurnal nasional terakreditasi

Effect of Activated Carbon on Cellulose Nanofiber Aerogels for Enhanced Solar Steam Generation

DIANA ALEMIN BARUS , KEVIN NAINGGOLAN

2024

Jurnal internasional bereputasi

Facile synthesis and electrochemical performance of bacterial cellulose/reduced graphene oxide/NiCo-layered double hydroxide composite film for self-standing supercapacitor electrode

DIANA ALEMIN BARUS

2024

Prosiding seminar internasional

Synthesis of Carbon Dots from butterfly pea (*Cliptoria ternatea*) as detection of the heavy metal ion Cu ²⁺

DIANA ALEMIN BARUS

2023

Jurnal nasional terakreditasi

The Effect of Fe₃O₄ Addition on the Density and Porosity of Cellulose Nanofiber Aerogel Extracted by Oil Palm Trunk

DIANA ALEMIN BARUS

2023

Jurnal nasional terakreditasi

Pemanfaatan Aplikasi Gudang Tani Untuk Meningkatkan Nilai Jual Hasil Panen Petani

DIANA ALEMIN BARUS , ERTINA SABARITA BARUS

2023

Jurnal nasional terakreditasi

Carbon Dots Synthesis from Soybean with Urea Doped As Sensitive Fe (II) Ion Detection

DIANA ALEMIN BARUS

2023

Jurnal internasional bereputasi

Eco-Friendly Preparation of Aerogels Based Cellulose Nanofiber Isolated from Sugar Palm Frond as Effective Palm Oil Absorbent

DIANA ALEMIN BARUS

2023

Prosiding seminar nasional

Studi Kestabilan Thermal Berdasarkan Perubahan Carbonil Index Polimer Nanokomposit

DIANA ALEMIN BARUS

2023

Jurnal internasional bereputasi

Extremely high-efficiency solar steam generation, robust and scalable photothermal evaporator based on ZIF-67@ MXene/rGO decorated rock wool

DIANA ALEMIN BARUS , RISKI TITIAN GINTING , VIVI FAUZIA , HAIRUS ABDULLAH

2023

Jurnal internasional bereputasi

Extremely High-Efficiency Solar Steam Generation, Robust and Scalable Photothermal Evaporator Based on ZIF-67@MXene/rGO Decorated on Rock Wool

DIANA ALEMIN BARUS

2022

Jurnal internasional bereputasi

Effect of Different Composition of Polyethylene Oxide‐Polypyrrole (PEO‐PPy) Nanofiber Mats on Antibacterial and Biocompatibility Properties

DIANA ALEMIN BARUS

2022

Jurnal nasional terakreditasi

Nitrogen-Doped Carbon Dots From Bilimbi Juice (Averrhoa bilimbi L.) Via Hydrothermal Method For Iron and Mercury Sensing

DIANA ALEMIN BARUS

2022

Jurnal internasional

Effect of Different Composition of Polyethylene Oxide-Polypyrrole (PEO-PPy) Nanofiber Mats on Antibacterial and Biocompatibility Properties

DIANA ALEMIN BARUS

2022

Jurnal nasional terakreditasi

Nitrogen-Doped Carbon Dots From Bilimbi Juice (Averrhoa bilimbi L.) Via Hydrothermal Method For Iron and Mercury Sensing

DIANA ALEMIN BARUS

2022

Jurnal internasional bereputasi

Enhanced adsorption performance of chitosan/cellulose nanofiber isolated from durian peel waste/graphene oxide nanocomposite hydrogels

DIANA ALEMIN BARUS

2022

Jurnal internasional bereputasi

Enhanced adsorption performance of chitosan/cellulose nanofiber isolated from durian peel waste/graphene oxide nanocomposite hydrogels

DIANA ALEMIN BARUS

2021

Jurnal nasional terakreditasi

Optimization of Band Pass Filter for Variance Reduction in Determining The Solution of Moment Tensor and Focusing Mechanism with ISOLA-GUI Sequence of The Minahasa PeninsulaÂ ...

DIANA ALEMIN BARUS

2021

Artikel ilmiah

Optimization of Band Pass Filter for Variance Reduction in Determining The Solution of Moment Tensor and Focusing Mechanism with ISOLA-GUI Sequence of The Minahasa Peninsula,Â,Â ...

DIANA ALEMIN BARUS

2020

Jurnal internasional bereputasi

MESOPOROUS AEROGEL OF ARENGA PINNATA ENDOSPERM AND THEIR APPLICATION TO ADSORB VITAMIN E FROM PALM FATTY ACID DISTILLATE

DIANA ALEMIN BARUS

2020

Jurnal internasional bereputasi

Mesoporous aerogel of arenga pinnata endosperm and their application to adsorb vitamin e from palm fatty acid distillate

DIANA ALEMIN BARUS

2020

Jurnal nasional terakreditasi

Investigation of the Effect of 60% of the Addition of Latex on Asphalt Pen 60-70

DIANA ALEMIN BARUS

2020

Jurnal nasional

The Effect of Addition of Used Styrofoam on the Characteristics of Asphalt Physical Properties

DIANA ALEMIN BARUS

2020

Jurnal internasional bereputasi

Synthesis of Carboxymethyl Polysaccharide from Arenga Pinnata Polysaccharide and Monochloroacetic

DIANA ALEMIN BARUS

2019

Jurnal internasional bereputasi

Optimization Iteration Min-Max Cross over Genetic Algorithm to Generate Fuzzy membership Function Automatically

DIANA ALEMIN BARUS

2019

Jurnal internasional bereputasi

The use of nanofibrils cellulose of sugarcane bagasse as precursor in synthesizing carbon nanodots by hydrothermal method

DIANA ALEMIN BARUS

2019

Jurnal internasional bereputasi

Improvisation of Mechanical Properties on Natural Rubber Latex Nanocomposites with Additioning of Cellulose Nanocrystals (CNCs) Percolated by Carbon Nanotubes (CNTs) in VariousÂ ...

DIANA ALEMIN BARUS , AMIR HAMZAH SIREGAR , SAHARMAN GEA

2019

Jurnal internasional bereputasi

Eye Disease Detection System Use Forward Chaining Methods

DIANA ALEMIN BARUS

2019

Jurnal nasional terakreditasi

PERAN ASAM SULFAT SECARA SEQUENT PADA EPOKSIDASI METIL ESTER TURUNAN MINYAK BIMOLI

DIANA ALEMIN BARUS

2019
Jurnal internasional

Phase Formation of M-Type BaFe₁₂O₁₉/ZnO Magnetic Material

DIANA ALEMIN BARUS

2019
Jurnal internasional

Improvisation of Mechanical Properties on Natural Rubber Latex Nanocomposites with Additioning of Cellulose Nanocrystals (CNCs) Percolated by Carbon Nanotubes (CNTs) in Various

DIANA ALEMIN BARUS

2019
Jurnal nasional

Briquettes manufacturing: mechanisation of briquette productions at SME santan coco

DIANA ALEMIN BARUS

2019
Prosiding seminar internasional

The Benefit of Infrastructure Development: An Analysis

DIANA ALEMIN BARUS

2018
Jurnal internasional bereputasi

Determination of Half Value Layer (HVL) Value on X-Rays Radiography with using Aluminum, Copper and Lead (Al, Cu, and Sn) Attenuators

DIANA ALEMIN BARUS

2018
Jurnal internasional bereputasi

Effect of Chemical Treatment on Conducting Polymer for Flexible Smart Window Application

DIANA ALEMIN BARUS

2018
Jurnal internasional bereputasi

The study on physical and mechanical properties of latex/graphene oxide composite film

DIANA ALEMIN BARUS

2018
Jurnal internasional

Determination of Half Value Layer (HVL) Value on X-Rays Radiography with using Aluminum, Copper and Lead (Al, Cu, and Sn) Attenuators

DIANA ALEMIN BARUS

2018
Jurnal internasional bereputasi

Fabrication of Solution-Processed Methylammonium Lead Iodide Perovskite Solar Cells and Photodetector

DIANA ALEMIN BARUS

2018
Jurnal internasional bereputasi

Improvisation of Mechanical Properties on Natural Rubber Latex Nanocomposites with Additioning of Cellulose Nanocrystals (CNCs) Percolated by Carbon Nanotubes (CNTs) in Various

DIANA ALEMIN BARUS

2016
Jurnal nasional terakreditasi

PENGARUH VARIASI KONSENTRASI RUTAN PENGENDAP TERHADAP SIFAT OPTIK NANOPARTIKEL Cu₂O YANG DISINTESIS DENGAN METODE KOPRESIPITASI

DIANA ALEMIN BARUS

2016

Jurnal nasional

Identifikasi dan uji metabolit sekunder bangun-bangun (*Coleus amboinicus*) terhadap penyakit jamur akar putih (*Rigidoporus microporus*) di laboratorium

DIANA ALEMIN BARUS

2010

Prosiding seminar nasional

PEMBUATAN POLIMER NANOKOMPOSIT DENGAN MENGGUNAKAN CLAY MONTMORILLONITE PADA POLIPROPILENA

DIANA ALEMIN BARUS

2010

Prosiding seminar internasional

STUDY OF PURE POLYPROPYLENE AND POLYPROPYLENE WITH NANOCCLAY FOR THE DEVELOPMENT OF POLYMER NANOCOMPOSITES

DIANA ALEMIN BARUS

2010

Jurnal internasional

PENGARUH KESTABILAN THERMAL TERHADAP PENGGUNAAN MONTMORILLONITE PADA NANOKOMPOSIT POLIPROPILENA

DIANA ALEMIN BARUS

2026

Prosiding seminar internasional

Synthesis of Carbon Dots from butterfly pea (*Cliptoria ternatea*) as detection of the heavy metal ion Cu 2+

DIANA ALEMIN BARUS

2026

Jurnal internasional bereputasi

Facile synthesis and electrochemical performance of bacterial cellulose/reduced graphene oxide/NiCo-layered double hydroxide composite film for self-standing supercapacitor

DIANA ALEMIN BARUS

2026

Jurnal internasional

Improvisation of Mechanical Properties on Natural Rubber Latex Nanocomposites with Additioning of Cellulose Nanocrystals (CNCs) Percolated by Carbon Nanotubes (CNTs) in Various

DIANA ALEMIN BARUS

2026

Jurnal nasional terakreditasi

Synthesis of Conductive Carbon Sheet From Coconut Fiber with the Addition of Potassium Hydroxide (KOH) Activator

DIANA ALEMIN BARUS

2026

Jurnal nasional terakreditasi

Optimalisasi Bandpass Filter untuk Variance Reduction dalam Penentuan Solusi Momen Tensor dan Mekanisme Fokus dengan Isola-Gui Sequence Gempa Minahasa Peninsula Tanggal 28

DIANA ALEMIN BARUS

2026

Jurnal nasional terakreditasi

COMPARISON OF THE MAMDANI AND SUGENO METHOD TO INCREASE THE LEVEL OF ANALYSIS THE ADVANTAGES OF INFRASTRUCTURE DEVELOPMENT

DIANA ALEMIN BARUS

2026

2026

Jurnal nasional terakreditasi

Optimization of Band Pass Filter for Variance Reduction in Determining The Solution of Moment Tensor and Focusing Mechanism with ISOLA-GUI Sequence of The Minahasa Peninsula

DIANA ALEMIN BARUS

2026

Jurnal internasional bereputasi

Improvisation of Mechanical Properties on Natural Rubber Latex Nanocomposites with Additioning of Cellulose Nanocrystals (CNCs) Percolated by Carbon Nanotubes (CNTs) in Various

DIANA ALEMIN BARUS

2026

Jurnal nasional terakreditasi

Pemanfaatan Aplikasi Gudang Tadi Untuk Meningkatkan Nilai Jual Hasil Panen Petani

DIANA ALEMIN BARUS

Researches

2022

Penelitian Unggulan Perguruan Tinggi

ANALISA PENGGUNAAN BAHAN BIOACTIVE GLASS NANO SILIKA ABU AMPAS TEBU TERHADAP REMINERALISASI ENAMEL GIGI (IN VITRO) Tahun Ke 2 dari 2 tahun

ERLIERA , DIANA ALEMIN BARUS , AMETA PRIMASARI

2021

Penelitian Unggulan Perguruan Tinggi

Analisa Penggunaan Bahan Bioactive Glass Nano Silika Abu Ampas Tebu Terhadap Remineralisasi Enamel gigi (In Vitro) Tahun 1 dari 2 Tahun

ERLIERA , DIANA ALEMIN BARUS , AMETA PRIMASARI

Community Services

2023

Ipteks Bagi Masyarakat

Pelatihan Menjual Produk dan Layanan Pelanggan untuk memperoleh esertifikasi

TULUS JOSEPH HERIANTO , AFRYNA VERONICA , HOTLAN SIAHAAN , JUNEDI GINTING , KURNIA BRAHMANA , PARLINDUNGAN , MAGDALENA LINDA L SIBARANI , DIANA ALEMIN BARUS , ENITA DEWI BR TARIGAN , MUHAMMAD HUSNI THAMRIN

2021

Ipteks Bagi Masyarakat

Aktualisasi Transformasi Pencegahan Covid-19 Berkarakter Keunggulan Lokal di Kelurahan Tanjung Mulia Hilir

DIANA ALEMIN BARUS

2020

Ipteks Bagi Masyarakat

Simulasi Kinerja Pertanian, Pendidikan, Kesehatan dan Informasi Dalam Mendukung Ketahanan Masyarakat Desa Bangun Meriah

DIANA ALEMIN BARUS

2020
Ipteks Bagi Masyarakat

Upaya Pencegahan Penularan Covid-19 dalam Mendukung Kesehatan dan Ketahanan Masyarakat Desa Bangun Meriah Kec.Silimakuta Kab.Simalungun

DIANA ALEMIN BARUS

2019
Ipteks Bagi Kewirausahaan

Pelatihan Pembuatan Salad Dressing Berbasis Kolang-Kaling Bagi Pengusaha Mikro Pengrajin Kolang Kaling

DIANA ALEMIN BARUS

2016
Ipteks Bagi Masyarakat

Sistem Kalibrasi Alat Ukur Panjang di SMA Negeri 1 Tigabinanga Kecamatan Tigabinanga Kabupaten Karo

JUNEDI GINTING , DIANA ALEMIN BARUS

2016
Ipteks Bagi Masyarakat

Penggunaan Alat Pengupas Kulit Kopi di desa Buah Raya Kabupaten Karo

KERISTA SEBAYANG , DIANA ALEMIN BARUS

2010
Ipteks Bagi Masyarakat

Studi Lapangan Penambahan Kewawasan Lingkungan Bagi Mahasiswa Mahasiswi Fisika Ke PT Toba Pulp Lestari Tbk

DIANA ALEMIN BARUS

2010
Ipteks Bagi Masyarakat

Studi Lapangan Mahasiswa Mahasiswi Fisika FMIPA USU terhadap sistem pengelolaan & pengendalian lingkungan pada PT Toba Pulp Lestari Tbk

DIANA ALEMIN BARUS

Intellectual Property Rights

2021
Paten nasional

Proses Pembuatan Aerogel dari Biokomposit selulosa Bakteri/Polisakarida Biji Aren (*Arrenga Pinnata* Merr.) menggunakan *acetobacter xylinum* secara insitu

DIANA ALEMIN BARUS

2020
Paten nasional

MESOPORI AEROGEL DARI POLISAKARIDA ENDOSPERM BIJI AREN (*Arenga pinnata* Merr.) SEBAGAI PENGADSORBSI VITAMIN E YANG TERKANDUNG DALAM DESTILAT ASAM LEMAK MINYAK SAWIT

DIANA ALEMIN BARUS

2020
Paten nasional

Proses Ekstraksi Polisakarida Endosperm Biji Aren (*Arenga pinnata* Merr.) yang dapat Digunakan sebagai Penurun Kadar Gula Darah

DIANA ALEMIN BARUS

2020
Paten nasional

Aparatus untuk pembuatan asap cair dengan pemanfaatan limbah batok kelapa

DIANA ALEMIN BARUS

