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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

2026
Jurnal nasional terakreditasi

Rule-Based IoT Decision Support System for Real-Time Chili Plant Growth Monitoring

ERTINA SABARITA BARUS , DIANA ALEMIN BARUS , DELIMA SITANGGANG , AGUNG PRABOWO , PALMA JUANTA

2025
Jurnal nasional terakreditasi

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

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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

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2024
Prosiding seminar internasional

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

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2023
Jurnal nasional terakreditasi

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

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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

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2023
Jurnal internasional bereputasi

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

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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

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2022
Jurnal internasional bereputasi

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

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

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

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

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2022
Jurnal internasional bereputasi

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

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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 ...

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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 PeninsulaÃ‚Â ...

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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

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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

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2020
Jurnal internasional bereputasi

Synthesis of Carboxymethyl Polysaccharide from Arenga Pinnata Polysaccharide and Monochloroasetic

DIANA ALEMIN BARUS

2019
Jurnal internasional bereputasi

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

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2019
Jurnal internasional bereputasi

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

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2019
Jurnal internasional bereputasi

Eye Disease Detection System Use Forward Chaining Methods

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2019
Jurnal internasional

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

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2019
Jurnal nasional terakreditasi

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

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2019
Jurnal internasional

Phase Formation of M-Type BaFe12O19/ZnO Magnetic Material

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2019
Jurnal nasional

Briquettes manufacturing: mechanisation of briquette productions at SME santan coco

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2019
Prosiding seminar internasional

The Benefit of Infrastructure Development: An Analysis

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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

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2018
Jurnal internasional bereputasi

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

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2018
Jurnal internasional bereputasi

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

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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 VariousÃ‚Â …

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2018
Prosiding seminar nasional

Pemetaan Objek Retribusi Menggunakan GIS Untuk Meminimalisir Pungli

NISKARTO ZENDRATO , DIANA ALEMIN BARUS

2018
Jurnal internasional

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

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2018
Jurnal internasional bereputasi

Fabrication of Solution-Processed Methylammonium Lead Iodide

PerovskiteSolar Cells and Photodetector

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2016
Jurnal nasional terakreditasi

PENGARUHVARIASIKONSENTRASILARUTANPENGENDAPTERHADAP 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

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2010
Prosiding seminar nasional

PEMBUATAN POLIMER NANOKOMPOSIT DENGAN MENGGUNAKAN CLAY MONTMORILLONITE PADA POLIPROPILENA

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2010
Prosiding seminar internasional

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

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2010
Jurnal internasional

PENGARUH KESTABILAN THERMAL TERHADAP PENGGUNAAN MONTMORILLONITE PADA NANOKOMPOSIT POLIPROPILENA

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2026
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Pemanfaatan Aplikasi Gudang Tadi Untuk Meningkatkan Nilai Jual Hasil Panen Petani

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

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2026
Jurnal nasional terakreditasi

Journal of Technomaterial Physics

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

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

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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

2026

Dialog Interaktif Perempuan Karo Indonesia : Perempuan dan Budaya

MARIA , DIANA ALEMIN BARUS

2026

Dialog Interaktif Perempuan Karo Indonesia: Perempuan dan Budaya

MARIA , DICKY ANDREA SEMBIRING , DIANA ALEMIN BARUS

2021
Ipteks Bagi Masyarakat

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

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2020
Ipteks Bagi Masyarakat

Simulasi Kinerja Pertanian,Pendidikan,Kesehatan dan Informasi Dalam

Mendukung Ketahanan Masyarakat Desa Bangun Meriah

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2020
Ipteks Bagi Masyarakat

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

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2019
Ipteks Bagi Kewirausahaan

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

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

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Intellectual Property Rights

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Paten nasional

Metode Pembuatan Hidrogel darikulit Ari Kopi

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2021
Paten nasional

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

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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

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