

Ir. Erni Misran, S.T., M.T., Ph.D.

Lecturer of Master's Program in Chemical Engineering Study Program
Faculty of Engineering
Universitas Sumatera Utara

✉ erni2@usu.ac.id

🌐 ft.usu.ac.id/en/lecturer/erni-misran

Erni Misran was born in Medan on September 13, 1973, and is a lecturer in Chemical Engineering at Universitas Sumatera Utara. She completed a Doctoral Program in Chemical and Process Engineering at the Faculty of Engineering and Built Environment of the Universiti Kebangsaan Malaysia (UKM) from 2009-2014. The awards she received were the First Best Speaker at Seminar on Science and Technology (SST) 2006 (Group D: Chemical and Environment), HEDS Forum (SDPF), 2006; LPDP International Scientific Publication Award 2016 for 2 scientific articles; Best Lecturer in Chemical Engineering Department by IKA FT USU 2017; Outstanding Lecturer in Science and Technology I University Level, USU, 2019; and Best Advisor I, USU, 2019 awards.

Publications

2020

Jurnal internasional bereputasi

Preparation and Characterisation of Electrospun Composite Nanofibre Polyvinyl Alcohol/ Nanofibrillated Cellulose Isolated from Oil Palm Empty Fruit Bunches

ERNI MISRAN

2024

Book chapter internasional

Natural dyes in DSSC fabrication: Sources, stability, and performance enhancement efforts

ERNI MISRAN

2017

Jurnal internasional

Characterization of Activated Carbon Produced from Bagasse and Banana Stem Using H₃PO₄ as Activating Agent

ERNI MISRAN , SERI MAULINA

2022

Jurnal internasional bereputasi

Optimization of Microwave-Assisted Pectin Extraction from Cocoa Pod Husk

MAYA SARAH , ERNI MISRAN , SERI MAULINA

2024

Jurnal nasional terakreditasi

Preparation and Identification of Local Microorganisms (LMOs) using Lake Toba Water and Their Utilization for Plastic Biodegradation

CHINTYA SINAR LUMBANTORUAN , ERNI MISRAN , ZUHRINA MASYITHAH

2023

Jurnal nasional terakreditasi

Empowerment of Housewives Through Shibori Weaving Skills and Upgrading Knowledge Related to Dyes and Their Wastes

ERNI MISRAN , SERI MAULINA , MAYA SARAH

2023

Prosiding seminar internasional

Synthesis and characterization of dye-sensitized solar cell (DSSC) using

banana stem activated carbon as a counter electrode and black glutinous rice anthocyanin extract as a dye

ERNI MISRAN

2019

Jurnal nasional

Business development for household scale liquid bath soap

MAYA SARAH , ERNI MISRAN , SERI MAULINA

2023

Jurnal internasional bereputasi

Optimization of fermentation condition to produce liquid organic fertilizer (LOF) from rotten vegetable waste using response surface methodology

ERNI MISRAN , SERI MAULINA , MAYA SARAH

2023

Jurnal internasional bereputasi

Sterilization of oil palm fruit utilizing continuous microwave sterilizer

SERI MAULINA , ERNI MISRAN , MAYA SARAH

2010

Jurnal internasional

Review on Serpentine Flow Field Design for PEM Fuel Cell System

ERNI MISRAN

2023

Jurnal internasional bereputasi

Optimization of fermentation condition to produce liquid organic fertilizer (LOF) from rotten vegetable waste using response surface methodology

ERNI MISRAN , SERI MAULINA , MAYA SARAH

2024

Prosiding seminar internasional

Cinnamaldehyde of cinnamon bark (*Cinnamomum burmannii*) isolation by microwave-assisted extraction method

RISMA FAZILLAH , ERNI MISRAN , ROSDANELLI HASIBUAN

2011

Jurnal internasional

Operating Temperature Effects on Water Transport Behavior in a Single Cell PEMFC

ERNI MISRAN

2024

Jurnal internasional bereputasi

Analysis of drip loss and thermal destruction rate of tuna fillets during the low-temperature preservation period

MAYA SARAH , ERNI MISRAN , MARWATI , ISTI MADINAH HASIBUAN

2026

Prosiding seminar internasional

Response Surface Methodology to Optimize the Yield of Sugarcane Bagasse-Based Hydrochar

ERNI MISRAN , ROSDANELLI HASIBUAN , VIQRY PRAMANANDA

2024

Jurnal internasional bereputasi

Ultrasonic assisted adsorption of methylene blue using blood clam shell as a low-cost adsorbent

ERNI MISRAN

2022

Prosiding seminar internasional

The Influence of PVOH Concentration on the Structural Morphology and Dimension of Electrospun Nanofibers

SAHARMAN GEA , ERNI MISRAN , BASUKI , SUHUT ALEXANDER SITUMORANG , MAHYUNI HARAHAP

2025

Jurnal internasional bereputasi

One-step process of glycerol purification by adsorption using passion fruit peel-based activated carbon

ERNI MISRAN

2021

Jurnal nasional terakreditasi

Parameter Biokinetika dari Degradasi Limbah Kol dan Tomat Menggunakan Sistem Bioreaktor Anaerobik

ERNI MISRAN

2024

Jurnal internasional bereputasi

Input Process Output (IPO) Framework for Engineering Higher Education Accreditation in Indonesia

ERNI MISRAN

2023

Jurnal internasional bereputasi

Sterilization of oil palm fruit utilizing continuous microwave sterilizer

ERNI MISRAN , SERI MAULINA , MAYA SARAH

2026

Jurnal nasional

ESTIMASI TEORETIS PEROLEHAN BIOETANOL DARI HIDROLISIS TANDAN KOSONG KELAPA SAWIT (TKS) MENGGUNAKAN ASAM ENCER1

ERNI MISRAN

2025

Jurnal internasional bereputasi

Ultrasonic-assisted adsorption of methylene blue using shrimp shells as a low-cost adsorbent: Evaluation on the adsorption isotherm, kinetics, and thermodynamics

ERNI MISRAN , DEWI AGUSTINA IRYANI , MUHAMMAD DANI SUPARDAN

2024

Prosiding seminar internasional

The effect of storage temperature on the quality of yellowfin tuna (*Thunnus albacares*) fillet at low temperature storage for long-term preservation of fishery products

MAYA SARAH , ERNI MISRAN , MARWATI

2024

Jurnal internasional bereputasi

Ultrasonic assisted adsorption of methylene blue using blood clam shell as a low-cost adsorbent

ERNI MISRAN , MUHAMMAD DANI SUPARDAN , DEWI AGUSTINA IRYANI , Erni Misran

2021

Jurnal internasional bereputasi

Identification of the components by lcms/ms-qtof and toxicity of ethanol extracts of *Musa paradisiaca* L. Stems

ERNI MISRAN

2019

Jurnal internasional bereputasi

Effect of material length on kinetics of essential oil hydrodistillation from lemongrass (*Cymbopogon citratus*)

ERNI MISRAN

2024

Jurnal internasional bereputasi

Optimization of microwave-assisted hydrolysis of glucose from oil palm empty fruit bunch

2013

Jurnal internasional bereputasi

Water transport characteristics of a PEM fuel cell at various operating pressures and temperatures

ERNI MISRAN

2025

Jurnal internasional bereputasi

Optimization of microwave-assisted hydrolysis of glucose from oil palm empty fruit bunch

ERNI MISRAN , MAYA SARAH , FATIMAH

2013

Jurnal internasional bereputasi

Electrochemical properties of a PEMFC operating with saturated hydrogen and dry air

ERNI MISRAN

2016

Jurnal nasional

Pemanfaatan Karbon Aktif dari Ampas Teh sebagai Adsorben pada Proses Adsorpsi \hat{I}^2 -Karoten yang Terkandung dalam Minyak Kelapa Sawit Mentah

ERNI MISRAN

2023

Jurnal internasional bereputasi

Extraction of Citronella Oil from Lemongrass (*Cymbopogon winterianus*) by Sequential Ultrasonic and Microwave-Assisted Hydro-Distillation

ERNI MISRAN , MAYA SARAH

2020

Jurnal internasional

Performance of Paddy Dryer with Screw Conveyor Assisted Parabolic Cylinder Collector as Thermal Generator

ERNI MISRAN

2017

Prosiding seminar internasional

Solar Energy Dryer Kinetics Using Flat-Plate Finned Collector and Forced Convection for Potato Drying

FATIMAH , ERNI MISRAN

Researches

2016

PEMANFAATAN KARBON AKTIF DARI LIMBAH BIOMASSA DALAM PEMBUATAN MEMBRAN HIBRIDA NAFION/KARBON AKTIF UNTUK PROTON EXCHANGE MEMBRANE FUEL CELL (PEMFC)

ERNI MISRAN , SERI MAULINA

2021

Penelitian Fundamental

Produksi Ultrafiltrasi Membran Serat Nanoselulosa dari Tandan Kosong Sawit/Polivinil Alkohol (PVA) dengan Metode Elektrospinning

ERNI MISRAN

2019

Penelitian Fundamental

Produksi Ultrafiltrasi Membran Serat Nanoselulosa dari Tandan Kosong Sawit/Polivinil Alkohol (PVA) dengan Metode Elektrospinning

ERNI MISRAN

2020

Penelitian Fundamental

Produksi Ultrafiltrasi Membran Serat Nanoselulosa dari Tandan Kosong Sawit/Polivinil Alkohol (PVA) dengan Metode Elektrospinning

ERNI MISRAN

2025

Sintesis Membran Komposit Berbasis Poliamida dan Limbah Abu Boiler Kelapa Sawit untuk Mengurangi Kandungan Asam Lemak Bebas Pada Minyak Goreng Bekas

ERNI MISRAN , KELVIN HADINATAN , MAYA SARAH , MUHAMMAD FARID ALWY , PHILIP KWEK

2020

Penelitian Unggulan Perguruan Tinggi

Aplikasi Karbon Aktif Batang Pisang Sebagai Counter Electrode dan Ekstrak Antosianin Ketan Hitam Sebagai Zat Warna pada Pembuatan Dye Sensitized Solar Cell (DSSC)

ERNI MISRAN

2025

OPTIMASI EKSTRAKSI SILIKA DARI BOTTOM ASH BERBANTUKAN ULTRASOUND DENGAN RESPONSE SURFACE METHODOLOGY (RSM) DAN APLIKASINYA PADA SINTESIS MEMBRAN KOMPOSIT PVA-SILIKA UNTUK PEMURNIAN CRUDE GLYCEROL

ERNI MISRAN , KELVIN HADINATAN , MAYA SARAH

Community Services

2024

Pengelolaan Lingkungan Sehat, Bersih dan Nyaman dengan Penerapan Teknologi Proses Pengolahan Sampah Menjadi Produk Komersial Untuk Meningkatkan Pendapatan Masyarakat serta Penguatan Upaya Kesehatan Kerja Petani Pembibitan Tanaman Holtikultura di Desa Klambir Kecamatan Pantai Labu Kabupaten Deli Serdang

ERNI MISRAN , ROSDANELLI HASIBUAN

2021

Ipteks Bagi Masyarakat

Pemberdayaan Ibu Rumah Tangga Di Lingkungan LKP Girly Mode Melalui Keterampilan Tenun Ikat Shibori Serta Peningkatan Pengetahuan Terkait Zat Warna dan Buangannya

ERNI MISRAN , SERI MAULINA

2016

Ipteks Bagi Masyarakat

Pemanfaatan Asap Cair Hasil Pirolisis Limbah Pelepah Kelapa Sawit untuk Peningkatan Kualitas Bahan Olah Karet (BOKAR) Kelompok Petani Karet di Desa Sekoci, Kabupaten Langkat

ERNI MISRAN , SERI MAULINA , MAYA SARAH

2020

Peningkatan Mutu dan Efisiensi Produksi serta Pengembangan Usaha Pengolahan Bawang Hitam pada UMKM Gempar Tunggal

ERNI MISRAN , KERISTA SEBAYANG

2015

Ipteks Bagi Masyarakat

IbM Kelompok Petani Karet di Kabupaten Labuhan Batu Utara

ERNI MISRAN , HALIMATUDDAHLIANA , SERI MAULINA

2019

Aplikasi Teknologi Pencampuran dan Pengemasan untuk Pengembangan Usaha Rumah Tangga Pembuatan Sabun Mandi Cair

ERNI MISRAN , SERI MAULINA , MAYA SARAH

Intellectual Property Rights

2017

Paten nasional

METODE PEMBUATAN KARBON AKTIF DARI LIMBAH KULIT MARKISA SEBAGAI ADSORBEN

ERNI MISRAN

2017

Paten nasional

PROSES PEMURNIAN GLISEROL KASAR SATU TAHAP MENGGUNAKAN ADSORBEN DARI LIMBAH ABU LAYANG BATUBARA

ERNI MISRAN

2017

Paten nasional

Pelet Kelinci Berbasis Ekstrak Bonggol Nanas

GALIH ARI WIRAWAN SIREGAR , MARUF TAFSIN , NEVY DIANA HANAFI , USWATUN HASANAH , KENNIE CENDEKIA DESNAMRINA , RINI HARDIYANTI , ERNI MISRAN , RAHMA YURLIANI , RIZKA RAMADHANI

2017

Paten nasional

FORMULASI BIODETERGEN PADA KOMBINASI SURFAKTAN PALMITOYL-MEA DAN SAPONIN DARI EKSTRAK DAUN KEMBANG SEPATU (*Hibiscus rosa-sinensis* L.) DENGAN PENAMBAHAN ENZIM LIPASE

ERNI MISRAN , ZUHRINA MASYITHAH
