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Rivaldi Sidabutar, S.T., M.T. was born in Sibolga on July 27, 1996. Currently, he is a Chemical Engineering lecturer at the Universitas Sumatera Utara. He completed his master's degree in Chemical Engineering at the Universitas Sumatera Utara in 2020.

Publications

2026
Jurnal internasional bereputasi

Influence of biochar mass on solids removal efficiency and biochar transformation during anaerobic digestion of palm oil mill effluent

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Jurnal internasional bereputasi

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Prosiding seminar internasional

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Pengembangan Sistem Penyulingan Bahan Bakar Bioetanol dari Sampah Organik Pertanian di Desa Sempajaya, Kecamatan Berastagi, Kabupaten Karo

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RISMA FAZILLAH , ROSDANELLI HASIBUAN , JULIZA HIDAYATI , MUHAMMAD THORIQ AL FATH. , DINI WAHYUNI , RIVALDI SIDABUTAR , YURNALIZA

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Pengurangan Nilai COD pada Effluent Fermentor Biogas UASB-HCPB dengan Memanfaatkan Mikroalga Chlorella vulgaris

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MICHAEL , NISAUL FADILAH DALIMUNTHE , MUHAMMAD THORIQ AL FATH. , THIODORUS MARVIN TJANDRA , RIVALDI SIDABUTAR , SANG KOMPIANG WIRAWAN

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Design and fabrication of UASB-HCPB reactor assisted UF membrane for POME treatment to produce biogas

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Treatment of effluent from the upflow anaerobic sludge blanket-hollow centered packed bed fermentor by utilizing Chlorella vulgaris in a fed-batch system

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Effect of Cutting Size in the Composting Process of Oil Palm Empty Fruit Branches (EFB) Using Active Organic Liquid Fertilizer (AOLF) as Co-Composting

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Removal of H2S from Rich Solution in Absorption Process by Utilizing

Thiobacillus.sp

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Development of Biogas Plant and Mushrooms Grumpy in a Biomass Waste Utilization Facility at Tadukan Raga Village, STM Hilir District, Deli Serdang Regency

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Karakteristik Sifat Fisik Membran Elektrolit Polimer Berbasis Kitosan Larva Black Soldier Fly/Polivinil Alkohol/Poliakrilonitril dengan Penambahan Ammonium Klorida

MUHAMMAD THORIQ AL FATH. , RIVALDI SIDABUTAR , NISAUL FADILAH DALIMUNTHE

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Jurnal nasional

Pemberdayaan Masyarakat Melalui Budidaya Maggot Dengan Sisa Sampah Organik Sebagai Alternatif Pakan Ikan Di Desa Sempajaya, Kecamatan Berastagi, Kabupaten Karo

SHEYLIN WIMORA LUMBAN TOBING , MERSI SURIANI SINAGA , MUHAMMAD HENDRA S GINTING , RIVALDI SIDABUTAR

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Pengaruh Laju Alir Biogas dan Ukuran Partikel Pembentuk Pelet terhadap Penyisihan Karbon Dioksida (CO_2) dalam Biogas dengan Proses Adsorpsi - Desorpsi Menggunakan Adsorben Berbasis Zeolit Alam untuk Peningkatan Kualitas Biogas

RIVALDI SIDABUTAR , IRVAN , BAMBANG TRISAKTI

2020
Prosiding seminar internasional

Comparison of mass balance and oil quality in plant refinery I and IV

BAMBANG TRISAKTI , IRVAN , RIVALDI SIDABUTAR

2020
Prosiding seminar internasional

Effect of Recycle Ratio on Methanogenesis Anaerobic Digestion of Palm Oil Mill Effluent (POME) in a Stirred Tank Reactor Assisted by Ultrafiltration Membrane into Biogas in Transition Conditions

AMIR HUSIN , BAMBANG TRISAKTI , RIVALDI SIDABUTAR , IRVAN

2020
Prosiding seminar internasional

Effect of sulphuric acid (H_2SO_4) and sodium hydroxide (NaOH) addition to prevent silica scaling in geothermal power plant projection pipes at PLTP X

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2020
Prosiding seminar internasional

Effect of sulphuric acid (H_2SO_4) and sodium hydroxide (NaOH) addition to

prevent silica scaling in geothermal power plant projection pipes at PLTP X

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2020
Prosiding seminar internasional

Combination of CSTR and membrane process in treating palm oil mill effluent (POME)

BAMBANG TRISAKTI , IRVAN , RIVALDI SIDABUTAR

2018
Prosiding seminar internasional

Automation of Temperature Sensor in Biogas Production from Palm Oil Mill Effluent (POME)

T HUSAINI , RIVALDI SIDABUTAR , BAMBANG TRISAKTI , IRVAN

2018
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ADSORPTION - DESORPTION SYSTEM FOR CO2 REMOVAL IN BIOGAS USING NATURAL ZEOLITE - BASED ADSORBENT

IRVAN , RIVALDI SIDABUTAR , DR IRIANY, IR,MSC , SERI MAULINA , BAMBANG TRISAKTI

Researches

2026

Penelitian Optimalisasi Bahan Baku Biodiesel Berbasis Minyak Sawit Dalam Mendukung B40 Dan Menjaga Keseimbangan Pangan, Ekspor Dan Energi

IR H NAZARUDDIN MATONDANG MTPHD , BAMBANG TRISAKTI , MUHAMMAD RIEZKY ANINDHITYA LAKSMANA , RIKA AMPUH HADIGUNA , IRVAN , IRWAN BUDIMAN , MEILITA TRYANA SEMBIRING , RIVALDI SIDABUTAR

2025
Penelitian Dana Lokal Perguruan Tinggi

PERANCANGAN DAN UJI KINERJA PACKED ABSORPTION COLUMN DALAM PROSES ABSORPSI CO2 PADA BIOGAS BERBASIS PALM OIL MILL EFFLUENT (POME) MENGGUNAKAN PELARUT K2CO3 BERPENGAKTIF GLISIN

SHEYLIN WIMORA LUMBAN TOBING , DR.TASLIM, IR, MSC , RIVALDI SIDABUTAR

2025
Penelitian Dana Lokal Perguruan Tinggi

Potensi Produksi Biodiesel dari Minyak Hasil Ekstraksi Mikroalga Chlorella vulgaris Berbantuan Gelombang Mikro (Microwave- Assisted Extraction) untuk Mendukung Ketahanan Energi Nasional

DR.TASLIM, IR, MSC , FARIDA HANUM , RIVALDI SIDABUTAR

2024

Pembuatan Patch Edible Film Sebagai Sistem Penghantar Obat Jerawat Dengan Penambahan Ekstrak Lidah Buaya (Aloe vera)

MUHAMMAD THORIQ AL FATH. , NISAUL FADILAH DALIMUNTHE , RIVALDI SIDABUTAR

2024
Kerjasama Luar Negeri dan Publikasi Internasional

Solusi Gas Berkelanjutan: Inovasi dalam Produksi Biogas dan Proses Pemurnian Biometana

FATIMAH , FARIDA HANUM , MAYA SARAH , RIVALDI SIDABUTAR , ANNISA NURUL IZZA , DOLY RIDZKI PANGARIBUAN

2024
Penelitian Fundamental

Pengembangan Prototipe Komposter Silinder Tandan Kosong Kelapa Sawit (TKKS) menggunakan Pupuk Cair Organik Aktif (PCOA) sebagai Co-Composting untuk Menghasilkan Kompos Komersil

BAMBANG TRISAKTI , IRVAN , RIVALDI SIDABUTAR

2023
Penelitian Dana Lokal Perguruan Tinggi

Pengolahan Effluent Fermentor Biogas UASB-HCPB dengan Memanfaatkan Mikroalga Chlorella vulgaris pada Sistem Fed-Batch

BAMBANG TRISAKTI , OKTA BANI , RIVALDI SIDABUTAR , RENATA AMBARITA , GLORIA CLARITA SINAMO , JUAN AKMAL NASUTION , JOHANNES SIREGAR

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Upgrading Biogas melalui Absorbsi CO2 menggunakan K2CO3 Berpengaktif Monosodium Glutamat pada Reaktor Packed Column

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2023
Penelitian Dana Lokal Perguruan Tinggi

FABRIKASI BIOBATERAI DENGAN MEMBRAN ELEKTROLIT POLIMER BERBASIS KITOSAN LARVA BLACK SOLDIER FLY (Hermetia illucens)/PVA/PAN DENGAN PENAMBAHAN AMMONIUM KLORIDA (NH4Cl)

MUHAMMAD THORIQ AL FATH. , NISAUL FADILAH DALIMUNTHE , RIVALDI SIDABUTAR

2022
Penelitian Unggulan Perguruan Tinggi

Integrasi Produksi Biogas Berbasis POME Menggunakan Reaktor UASB-HCPB Kombinasi Membran Ultrafiltrasi dan Upgrading Biogas dengan Teknologi Bioscrubber

BAMBANG TRISAKTI , IRVAN , RIVALDI SIDABUTAR , RAISSA PASSA , DEBORA KRISTINA SIMBOLON , JOSUA F MANURUNG

2022
Penelitian Dosen Pemula

Recycle Absorben melalui Degradasi CO2 dari Rich Solution dengan Memanfaatkan Chlorella vulgaris

BAMBANG TRISAKTI , OKTA BANI , RIVALDI SIDABUTAR , MUHAMMAD RIZKY PULUNGAN , MUHAMMAD RIZKY ANSHARI GIRSANG , OSAMA HARAHAP

Community Services

2025
Ipteks Bagi Masyarakat

Penguatan Kemandirian Ekonomi Masyarakat Desa Tadukan Raga Dengan Teknologi Kompor Konversi Sampah Menjadi Bahan Bakar Terbarukan Melalui Pendekatan Diseminasi Internasional

HIMSAR AMBARITA , BAMBANG TRISAKTI , FARIDA HANUM , RIVALDI SIDABUTAR , Peer Mohamed

2026

Kuliah Umum bagi mahasiswa program studi Manajemen Informatika, Teknik Komputer dan Komputerisasi Akuntansi, AMIK MEDICOM

CHINDY ELSANNA REVADI , HENDRIK VOICE SIHOMBING , FADHILA , SHEYLIN WIMORA LUMBAN TOBING , SARAH PATUMONA MANALU , RIVALDI SIDABUTAR , MERSI SURIANI SINAGA

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Ipteks Bagi Masyarakat

ECO --WASTE STOVE : Teknologi Konversi Limbah Kayu Menjadi Energi Ramah Lingkungan Berbasis Circular Economy .

CHINDY ELSANNA REVADI , MUTHIAH PUTRILAN SYAMNAH HARAHAP , RIVALDI SIDABUTAR

2025
Ipteks

Penguatan Ekonomi Sirkular Desa Sempajaya pada Produksi Bioetanol Berbasis Limbah Organik Pertanian Melalui Focus Group Discussion dan Diseminasi Internasional

BAMBANG TRISAKTI , FARIDA HANUM , IRVAN , RIVALDI SIDABUTAR

2025

ECO-WAVE MAG TEKNOLOGI RAMAH LINGKUNGAN UNTUK PENGERINGAN MAGGOT BERBASIS CIRCULAR ECONOMY

MUHAMMAD THORIQ AL FATH. , GINA CYNTHIA RAPHITA HASIBUAN , MUHAMMAD HENDRA S GINTING , RIVALDI SIDABUTAR

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Ipteks Bagi Masyarakat

ECO-WASTE STOVE : Teknologi Konversi Limbah Kayu Menjadi Energi Ramah Lingkungan Berbasis Circular Economy

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Pemberdayaan Masyarakat dalam Integrasi Pengolahan Limbah Perkebunan Menjadi Produk Bernilai Melalui Budidaya Jamur Merang dan Maggot BSF di Desa Tadukan Raga Kabupaten Deli Serdang

MUHAMMAD THORIQ AL FATH. , NISAUL FADILAH DALIMUNTHE , ILHAM PERKASA BAKO , RIVALDI SIDABUTAR , LUKE GILBERT BUYSANG , RADIA VELLA , VANNESS

2024

PENGEMBANGAN HEXAGONAL ROTARY DRYER MENJADI INTERGRATED OF PEELER, WASHER, AND DRYER (IPWD) BERBASIS INTERNET OF THINGS (IoT) SEBAGAI UPAYA PENINGKATAN KUALITAS KOPI SEBAGAI KOMODITAS UNGGULAN DI DESA SEMPA JAYA, KECAMATAN BERASTAGI, KABUPATEN KARO

DR IRIANY, IR,MSC , SHEYLIN WIMORA LUMBAN TOBING , RONDANG TAMBUN , RIVALDI SIDABUTAR

2024

PENGELOLAAN LINGKUNGAN SEHAT, BERSIH DAN NYAMAN DENGAN PENERAPAN TEKNOLOGI PROSES PENGOLAHAN SAMPAH DAN BUDIDAYA JAMUR MERANG MENJADI PRODUK KOMERSIAL UNTUK MENINGKATKAN PENDAPATAN MASYARAKAT SERTA PENGUATAN UPAYA TEKNIK PEMBIBITAN DAN PERBANYAKAN TANAMAN BAGI PETANI TOGA DI DESA KELAMBIR KECAMATAN PANTAI LABU KABUPATEN DELI SERDANG

ERNI MISRAN , BAMBANG TRISAKTI , FARIDA HANUM , ROSDANELLI HASIBUAN , RIVALDI SIDABUTAR

2024

TEKNOLOGI KONVERSI LIMBAH KAYU SEBAGAI BAHAN BAKAR WOOD PELLET (PRODUCTIVE ENERGY FROM LOW-COST LUMBER EXTRACTION TECHNIQUES) PADA PROTOTIPE TUNGKU FUEL WOOD BAGI MASYARAKAT DI DESA TADUKAN RAGA, KECAMATAN STM HILIR, KABUPATEN DELI SERDANG

MUHAMMAD THORIQ AL FATH. , GINA CYNTHIA RAPHITA HASIBUAN , NISAUL FADILAH DALIMUNTHE , RIVALDI SIDABUTAR

2023

HEXAGONAL ROTARY DRYER UNTUK PENINGKATAN EFISIENSI PENGERINGAN BIJI KOPI DI DESA SEMPA JAYA, KECAMATAN BERASTAGI, KABUPATEN KARO

DR IRIANY, IR,MSC , DR.TASLIM, IR, MSC , RONDANG TAMBUN , RIVALDI SIDABUTAR

2023

PEMBERDAYAAN MASYARAKAT MELALUI BUDIDAYA MAGGOT DENGAN SISA SAMPAH ORGANIK SEBAGAI ALTERNATIF PAKAN IKAN DI DESA SEMPAJAYA, KECAMATAN BERASTAGI, KABUPATEN KARO

SHEYLIN WIMORA LUMBAN TOBING , MUHAMMAD HENDRA S GINTING , RIVALDI SIDABUTAR , MERSI SURIANI SINAGA

2022

Pemberdayaan Masyarakat Kelompok Pemerhati dan Pengguna Biogas di Desa tadukan Raga Kecamatan Sinembah Tanjung Muda Hilir Deli Serdang

BAMBANG TRISAKTI , KEULANA ERWIN , ALAM BAKTI , DESTANUL AULIA , IRVAN , RIVALDI SIDABUTAR

2018
Ipteks Bagi Wilayah Antara PT-CSR / PT-PEMDA-CSR

Pembangunan Pilot Plant (Bioreaktor, Jaringan Biogas, dan Kumbung Jamur) Fasilitas Pemanfaatan Limbah Non B3 Biomassa Menjadi Energi di Kabupaten

Deli Serdang

BAMBANG TRISAKTI , IRVAN , RIVALDI SIDABUTAR

Intellectual Property Rights

2026

Hak cipta nasional

Sistem Aplikasi Pengelolaan Limbah Tekstil Perkotaan Berbasis Ekonomi Sirkular melalui Integrasi Kesadaran Fast Fashion

SARAH PATUMONA MANALU , RONALD LEONARDO SIREGAR , FADHILA , RIVALDI SIDABUTAR , SHEYLIN WIMORA LUMBAN TOBING , CHINDY ELSANNA REVADI , HENDRIK VOICE SIHOMBING , MAICEL RIA DEBORA SINAGA , ADE CITRA NADHIRA , DEWI SARTIKA BR GINTING

2026

Paten nasional

SISTEM INTEGRASI ABSORPSI H2S DAN REGENERASI AIR MENGGUNAKAN Thiobacillus sp.-Azolla Microphylla UNTUK PEMURNIAN BIOGAS

IRVAN , BAMBANG TRISAKTI , RIVALDI SIDABUTAR , FARIDA HANUM

2025

Hak cipta nasional

Industri Petrokimia

RIVALDI SIDABUTAR , MUHAMMAD THORIQ AL FATH. , GINA CYNTHIA RAPHITA HASIBUAN