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## Publications

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2025

Prosiding seminar internasional

### **Effects of liquid fraction recirculation during microwave-assisted hydrothermal carbonization on properties of coffee parchment**

RAUDAH , ROSDANELLI HASIBUAN , IRVAN , ERNI MISRAN

2024

Jurnal internasional bereputasi

### **Physico-chemical characteristics of coffee parchment and its combustion residue to delineate the components required for gasification catalyst**

RONDANG TAMBUN , ADI SETIAWAN , IRVAN , FATIMAH , ZAHRA FONA

2018

Jurnal internasional

### **The Effect of Organic Loading Rate Variation on Digestion of Tofu Wastewater using PVC Rings as Growth Media in a Hybrid UASB Reactor**

FATIMAH , MUHAMMAD TURMUZI , IRVAN , NYIMAS YANQORITHA

2025

Jurnal internasional bereputasi

### **Recirculated Process-Derived Liquid as an In-Situ Modifier for Fabricating Acidic Coffee Parchment Hydrochar as a Potential Biodiesel Catalyst**

RAUDAH , ROSDANELLI HASIBUAN , IRVAN , ERNI MISRAN

2021

Jurnal internasional bereputasi

### **Waste management optimization in banda aceh: Towards a zero-waste city**

ERMAN MUNIR , IRVAN

2021

Jurnal internasional bereputasi

### **Effect of selected bacteria from biogas sludge on the growth and nutrition of upland rice**

NOVILDA ELIZABETH MUSTAMU , ZULKIFLI , MARIANI BR SEMBIRING , IRVAN

2024

Jurnal internasional bereputasi

### **Physico-chemical characteristics of coffee parchment and its combustion residue to delineate the components required for gasification catalyst**

ZAHRA FONA , IRVAN , RONDANG TAMBUN , FATIMAH , ADI SETIAWAN

2022

Prosiding seminar internasional

### **Utilization of effluent biodigester as a bioactivator for the decomposition of**

## rice husk (*Oryza sativa*) into compos

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Jurnal internasional bereputasi

### **Recirculated Process-Derived Liquid as an In-Situ Modifier for Fabricating Acidic Coffee Parchment Hydrochar as a Potential Biodiesel Catalyst**

ROSDANELLI HASIBUAN , IRVAN , ERNI MISRAN , RAUDAH

2024

Jurnal internasional bereputasi

### **Effect of hydraulic retention time and effluent recycle ratio on biogas production from POME using UASB-HCPB fermentor assisted with ultrafiltration membrane at mesophilic condition**

BAMBANG TRISAKTI , RIVALDI SIDABUTAR , IRVAN

2021

Jurnal internasional bereputasi

### **Isolation Of Nitrogen-Fixing Bacteria From Digestive Sludge Of Palm Oil Mill Waste On Ultisols Soil**

ZULKIFLI , IRVAN , NOVILDA ELIZABETH MUSTAMU , MARIANI BR SEMBIRING

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Jurnal nasional terakreditasi

### **Seedling Growth Evaluation of Rehabilitated Mangrove and Carbon Estimation of Two Types of Mangroves in Perlis, Langkat, North Sumatra**

MOHAMMAD BASYUNI , IRVAN , JULIA SYAHRIANI HASIBUAN , AHMAD HISYAM PULUNGAN , Itchika Sivaipram , ASTRID FAUZIA DEWINTA

2014

Jurnal nasional

### **Pengaruh waktu tinggal terhadap reaksi hidrolisis pada pra-pembuatan biogas dari limbah cair pabrik kelapa sawit**

DR IRIANY, IR, MSC , IRVAN

2024

Jurnal internasional bereputasi

### **CO<sub>2</sub> absorption using aqueous potassium carbonate (K<sub>2</sub>CO<sub>3</sub>) promoted by piperazine (PZ) in packed column reactor**

BAMBANG TRISAKTI , TAUFIQ BIN NUR , HANI SUHASTIFA RAMBE , IRVAN , MUHAMMAD SIGIT CAHYONO , MUHAMMAD NOVIANSYAH ARIDITO

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### **Characterization of Biomass Ash From Direct Combustion of Coffee Parchment and the Potential Application as Gasification Catalyst**

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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**

OKTA BANI , VIKRAM ALEXANDER , JUAN AKMAL NASUTION , PUTRI KHODIJAH , RIVALDI SIDABUTAR , IRVAN , BAMBANG TRISAKTI

2018

Artikel ilmiah

### **The integrating of zero waste principles from national to local regulations: Case study of Banda Aceh, Indonesia**

IRVAN , ERMAN MUNIR

2022

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### **SYNTHESIS, CHARACTERIZATION, AND APPLICATION OF ZNO/ZSM-5 AS CATALYST IN THE CRACKING PROCESS OF PALM METHYL ESTERS**

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## **Advanced method for clean water recovery from batik wastewater via sequential adsorption, ozonation and photocatalytic membranePVDF-TiO<sub>2</sub>/rGO processes**

IRVAN , Tutuk Djoko Kusworo

2023

Jurnal internasional bereputasi

## **Variations of Organic Loading Rate on Tofu Wastewater Degradation using Upflow Anaerobic Sludge Blanket Reactor by Modified Stover-Kincannon Model**

FATIMAH , MUHAMMAD TURMUZI , IRVAN

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## **Effects of liquid fraction recirculation during microwave-assisted hydrothermal carbonization on properties of coffee parchment**

RAUDAH , ROSDANELLI HASIBUAN , IRVAN , ERNI MISRAN

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## **One-Pot Synthesis of 3D ZnO@ g-C<sub>3</sub>N<sub>4</sub>: A Multifunctional Composite for Efficient Photocatalysis and Advanced Membrane-Assisted Dye Purification**

R Y PERRY BURHAN , Tutuk Djoko Kusworo , IRVAN , CININTA NARESWARI , NILA DAMAYANTI , Mohd Hafiz Dzarfan Othman , TRIYANDA GUNAWAN , LUKMAN ATMAJA , ARDI NUGROHO YULIANTO

2023

Jurnal nasional terakreditasi

## **Gasification of Coffee Parchment as Potential Method for Coffee Agro-Industry Waste Utilization**

ZAHRA FONA , IRVAN , RONDANG TAMBUN , FATIMAH , ADI SETIAWAN , Muhammad Hadiansyah , Zein Ramadani

2023

Jurnal nasional terakreditasi

## **Pemanfaatan Tandan Pisang Kepok sebagai Sumber Alkali pada Pembuatan Sabun Cair**

ROSDANELLI HASIBUAN , IRVAN

2023

Jurnal nasional terakreditasi

## **Gasification of Coffee Parchment as Potential Method for Coffee Agro-Industry Waste Utilization**

FATIMAH , ZAHRA FONA , RONDANG TAMBUN , IRVAN

2019

Buku referensi

## **Pemanfaatan Tandan Kosong Kelapa Sawit Sebagai Media Jamur dan Biogas di Kab. Deli Serdang**

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2024

Jurnal internasional bereputasi

## **Review on Advance Catalyst for Biomass Gasification**

IRVAN , ZAHRA FONA , ADRIANA , RONDANG TAMBUN , FATIMAH , ADI SETIAWAN

2018

Artikel ilmiah

## **Implementation of zero waste concept in waste management of Banda Aceh City**

ERMAN MUNIR , IRVAN

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# Variations of Organic Loading Rate on Tofu Wastewater Degradation using Upflow Anaerobic Sludge Blanket Reactor by Modified Stover-Kincannon Model

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## Researches

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Penelitian Fundamental

### **Upgrading Biogas melalui Absorpsi CO<sub>2</sub> menggunakan K<sub>2</sub>CO<sub>3</sub> Berpengaktif Monosodium Glutamat pada Reaktor Packed Column**

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2018

Penelitian Unggulan Perguruan Tinggi

### **PEMBUATAN MEMBRAN UNTUK PROTON EXCHANGE MEMBRANE FUEL CELL(PEMFC) DENGAN MEMANFAATKAN LIMBAH BIOMASSA SEBAGAI SUMBER KARBON AKTIF DAN LIMBAH PLASTIK POLIETILEN**

ERNI MISRAN , IRVAN , MAYA SARAH

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## Community Services

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2022

Ipteks Bagi Masyarakat

### **Pemberdayaan Masyarakat Pesisir Desa Perlis Deli Langkat melalui Kegiatan Restorasi Mangrove, Penyediaan Air Bersih, dan Peningkatan Produk Olahan**

MOHAMMAD BASYUNI , JULIA SYAHRIANI HASIBUAN , ASTRID FAUZIA DEWINTA , IRVAN

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