

PROGRAM BOOK

UNS
UNIVERSITAS
SEBELAS MARET

INTERNATIONAL CONFERENCE Industrial, Mechanical, Electrical, and Chemical Engineering

icimece  **2017**

organized by:



UNS
UNIVERSITAS
SEBELAS MARET

and



九州大学
KYUSHU UNIVERSITY

| UNS Inn Surakarta, Indonesia | September 13th-14th 2017 |

PROGRAM BOOK

The 3rd International Conference on Industrial, Mechanical, Electrical, and Chemical Engineering (IC-IMECE 2017)

Design Cover and Layout by Jihan Fahrizal Ahmad

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Welcome Message

On behalf of the organizing committee, welcome to The 3rd International Conference on Industrial, Mechanical, Electrical and Chemical Engineering (IC-IMECE 2017) in Surakarta, Indonesia! The aims of the conference are to provide opportunities for the different areas delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration in the fields of Industrial, Mechanical, Electrical, Chemical Engineering and Interdisciplinary Engineering & Sciences. This year's conference thema, "*Green Technology for Energy Sustainability*" reflects our commitment to support reducing the human impact on the environment and create ways of sustainable development. We received abstracts from Australia, East Timor, India, Indonesia, Japan, Malaysia, PR China, South Korea, and Turkey. Thanks to authors for contributing to the success of this meeting, and of course for attending. Thank you for joining us, and enjoy your conference experience! We look forward to engaging with all of participant to produce a deep, thoughtful set of works that can guide our endeavors for the next future.

Sincerely,



Conference Chair

A handwritten signature in black ink, which appears to be "Adrian Nur", written over a horizontal line.

Dr. Adrian Nur



About ICEMECE

International Conference on Industrial, Mechanical, Electrical and Chemical Engineering (ICIMECE) is an annual international conference organized by Sebelas Maret University. This conference was formerly known as International Conference on Industrial, Mechanical, Electrical and Chemical Engineering (IMEC-E) which was first held on November 2015. The 1st International Conference on IMEC-E was joint conference with The 3rd International Conference on Electrical Vehicular Technology (The 3rd ICEVT - 2015). The 2nd ICIMECE was held on 6 - 7 October 2016 in Yogyakarta which was joint conference with Annual Conference on Industrial and System Engineering (ACISE). In this year, The 3rd ICIMECE conference will be held in Surakarta, Indonesia on September 13th – 14th 2017 and organized by Sebelas Maret University and Kyushu University.

The aims of the conference are to provide opportunities for the different areas delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration in the fields of Industrial, Mechanical, Electrical, Chemical Engineering and Interdisciplinary Engineering & Sciences. The conference is expected to be an effective platform for the three axis of triple helix namely ABG (Academic–Business–Government) forum, to share ideas and to present the works of scientists, engineers, educators and students.



Organization and Committees

Steering Committee

- Dr. Techn. Ir. Sholihin As'ad, M.T. (*Universitas Sebelas Maret*)
Prof. Hiroshi Takamatsu (*Kyushu University, Japan*)
Prof. Dr. Ir. Herri Susanto (*Institut Teknologi Bandung*)
Prof. Ir. Rochmadi, S.U., Ph.D. (*Universitas Gadjah Mada*)
Prof. Dr. Ir. Heru Setyawan, M.Eng (*Institut Teknologi Sepuluh Nopember*)
Dr. Eng. Agus Purwanto, S.T., M.T. (*Universitas Sebelas Maret*)
Dr. Myoung Jae Choi (*University of Science & Technology, Korea*)
Dr. Sharifah Maszura Binti Syed Mohsin (*Universiti Malaysia Pahang*)

Scientific Committees

- Prof. BB Saha (*Editor-in- chief of Evergreen - Kyushu University*)
Dr. Agung Tri Wijayanta (*Universitas Sebelas Maret*)
Anatta Wahyu Budiman, ST., PhD. (*Universitas Sebelas Maret*)
Dr. Budi Kristiawan, ST., MT. (*Universitas Sebelas Maret*)
Wakhid Ahmad Jauhari, ST., MT. (*Universitas Sebelas Maret*)
Dr. Sunu H. Pronolo, ST., MSc. (*Universitas Sebelas Maret*)
Mujtahid Kaavessina, ST., MT., Ph.D. (*Universitas Sebelas Maret*)
Prof. Jun Tanimoto (*Kyushu University*)
Dr. Anwaruddin Hisyam (*Universiti Malaysia Pahang, Malaysia*)
Prof. Akio Miyara (*Saga University, Japan*)
Assoc. Prof. Takahiko Miyazaki (*Kyushu University, Japan*)
Dr. Myoung Jae Choi (*University of Science & Technology, Korea*)
Dr. rer. nat. Wirawan Ciptonugroho (*Technische Universität Dortmund, German*)



Organization and Committees

Conference Chair

Dr. Adrian Nur, ST., MT.

Conference Co-Chair

Agung Tri Wijayanta, ST., M.Eng., Ph.D.

Dr. Muh. Hisjam, STP., MT.

Mujtahid Kaavessina, ST., MT., Ph.D.

M. Hamka Ibrahim, ST., M.Eng.

Secretary

Anatta Wahyu Budiman, ST., PhD.

Mulyono, ST., M.Si.

Winarno, S.IP

Treasury

Dr. Sperisa Distantina, ST., MT.

Dra. Nanik Indiasri

Inggih Wigati

Technical Program Chair

Dr. Joko Triyono, ST., MT.

Dr. Bambang Suhardi, ST., MT.

Ari Diana Susanti, ST., MT.

Chico Hermanu Brillianto A., ST., M.Eng.

Journal & Publication Chair

Dr. Budi Kristiawan, ST., MT.

Wahid Ahmad Jauhari, ST., MT.

Corporate Partnership Chair

Dr. Sunu H. Pronolo, ST., MSc.

Dr.Eng. Kusumaningdyah Nurul H., ST., MT

Acomodation

Fakhrina Fahma, STP., MT.

Ir. Endah R. Dyartanti, MT.

Consumption

Inayati, ST., MT., PhD.

Rahmaniyah Dwi Astuti, ST., MT.

Transportation

Ir. Arif Jumari, M.Sc.

Pringgo Widyo Laksono, ST., M.Eng.

Webmaster

Heru Susanto, ST.

Publicity

Dr. Margono, ST., MT

Feri Adriyanto, SSi., MSi., PhD.

Venue



Jl. Ir. Sutami No. 36 A
Ketingan 57126, Surakarta – Indonesia

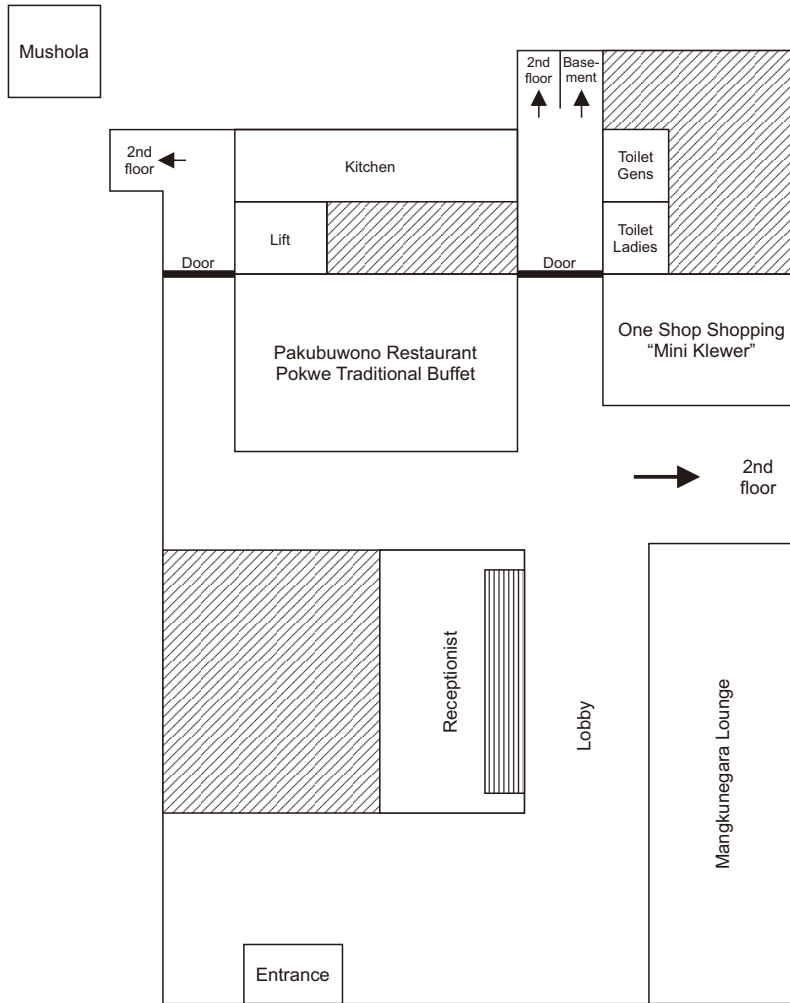
<http://www.unspusdiklat.com>

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Email. pusdiklatuns.marketing@gmail.com / pusdiklat.uns@gmail.com /

UNS Inn is set in Sebelas Maret University. All rooms are fitted with a flat-screen TV. Each room is equipped with a private bathroom. UNS Inn features free WiFi. You will find a 24-hour front desk at the property. The hotel also offers bike hire. Radya Pustaka Museum is 5 km from UNS Inn, while The Park Solo is 6 km away. The nearest airport is Adisumarmo Airport, 12 km from UNS Inn.

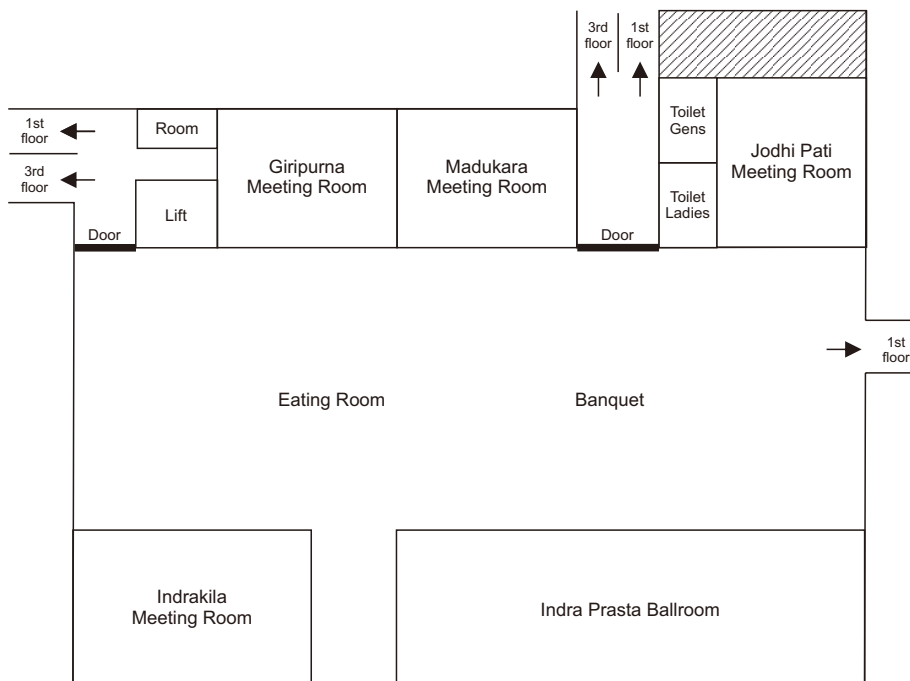
First Floor

Lobby & Receptionist
 Mangkunegara Lounge
 Pakubuwono Restaurant
 One Shop Shopping "Mini Klewer"
 Mushola



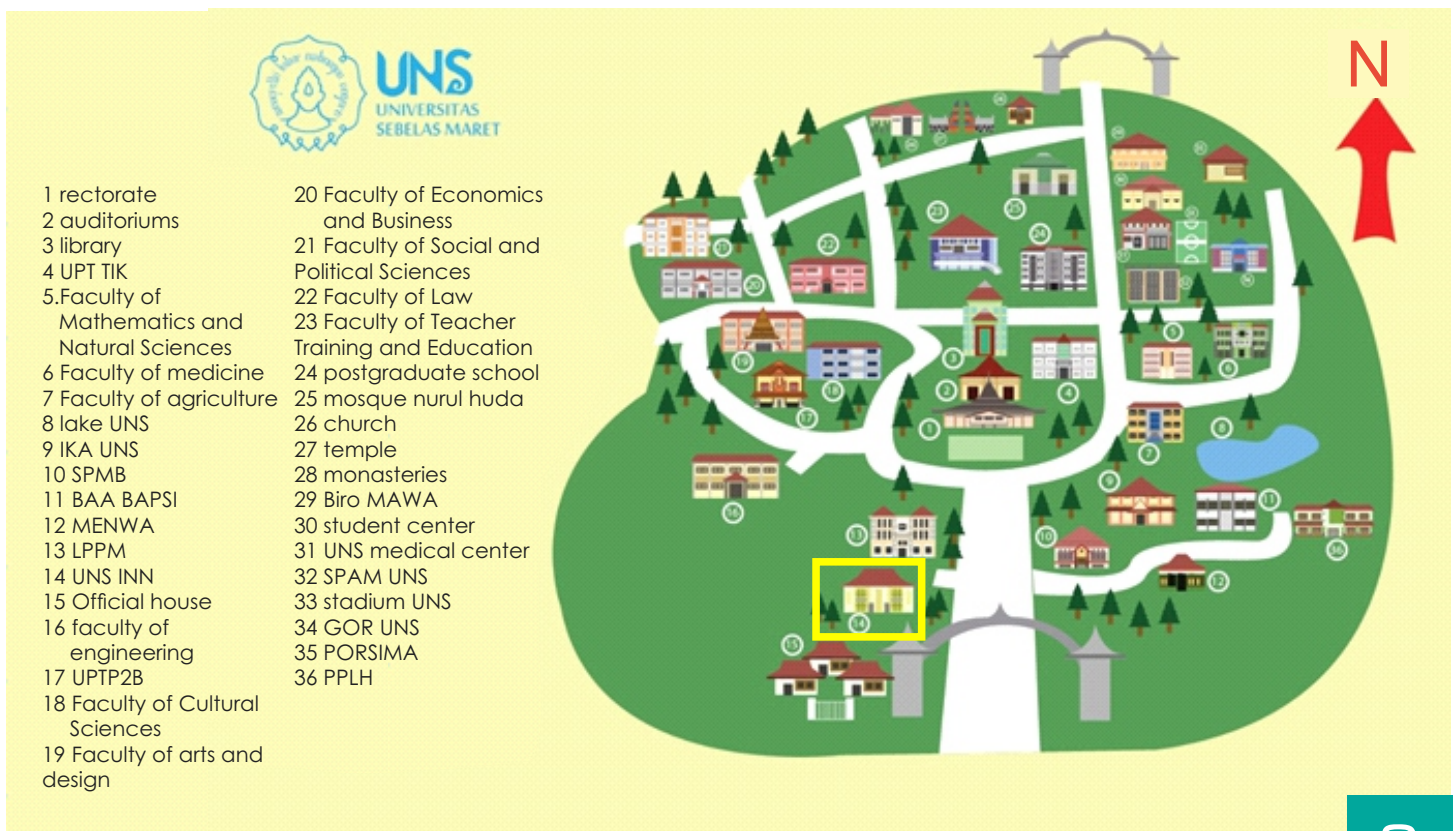
Second Floor

Madukara Meeting Room
 Indrakila Meeting Room
 Giripurna Meeting Room
 Jodhi Pati Meeting Room
 Indra Prasta Ballroom



Overall Map

Being more than four decades of age, UNS continues to strive and stand to answer the enchanted mandate: to elevate the nation's intellectual life. Various activities have been carried out and many accomplishments have been achieved. UNS has grown and developed into one of the outstanding universities in Indonesia. Furthermore, UNS is on its way to develop as a leading university in education, research and community services, both in national level—in line with the earlier developed colleges— and in international level as a competent institution to act autonomously as a world class university. Currently, UNS is constantly developing itself to compete in acceleration development program in the field of: a) access for equity and expansion; b) improvement of quality, relevance and competitiveness; and c) improvement of governance, accountability and public image.





Keynote Speaker



Prof. Jun Fukai
(Kyushu University)

- **Field of Specialization** : Transport Phenomena, Heat Transfer, Thermal Energy Storage, Efficient use of energy, Numerical Simulation
- **Research Interests** : Measurement of thermal conductivity of hydrogen under high pressure and high temperature, Thin film formation using Inkjet method, Storage and transportation of thermal energy, Interfacial Transport phenomena, Rapid solidification of molten metal droplets impinging on a flat surface



Keynote Speaker

Prof. Dato' Dr. Rosli bin Mohd. Yunus
(Universiti Malaysia PAHANG)



- PhD. (Chemical Engineering), University of Wales, Swansea UK
- M.Sc. (Chemical Engineering), University of Wales, Swansea UK
- B.Sc. (Chemical Engineering), North Carolina State University, USA
- Dip. In Industrial Chemistry, UiTM

AREA OF SPECIALIZATION

- Membrane Separation Processes (Microfiltration, Ultrafiltration, Reverse Osmosis, Nanofiltration, Assisted Filtration)
 - Ultrasonic Assisted Processes (Membrane filtration, Solid-Liquid Extraction, Azeotropic Distillation)
 - Microwave Assisted Processes (Demulsification of Crude Oil, Accelerated Extraction of Essential Oil)
- Waste to Wealth/Green Tech (Recovery of Base Oil from Spent Lubricant, Ultrasonic Solvent Extraction of Oil from Spent Adsorbent, Production of Green Brick, Production of Emulsion Fuel)



Keynote Speaker



Prof. Aya Hagishima
(**Kyushu University**)

- As educational activities, Prof. Hagishima has the chair of lectures of fluid dynamics and heat transfer engineering for undergraduate students at the department of energy science and engineering, school of engineering, and lectures of micro-climatology for graduate students at the department of energy and environmental engineering, interdisciplinary graduate school of engineering and sciences.
- Her research activities can be categorized in the following academic fields; urban climatology, wind engineering and building environmental engineering.



Keynote Speaker

Prof. Yoshinori Itaya
(Gifu University)



Research fields

R&D on upgrading technologies of low-rank energy resources are performed to establish environmental-friendly energy system. The main topics are:

- High temperature gasification of low rank carbonaceous resources like biomass and lignite
- Refrigeration and heating-up from low temperature waste heat by absorption heat pump system
- Combined decomposition and functional materials production by microwave plasma
- Upgrading of low rank carbonaceous resources by hydrothermal treatment process
- Cleaning of gas yielded in gasification by activated cokes
- Self-energy closed system for upgrading and recycle of sludge
- Thermal radiation heat transfer mechanism in high temperature multiphase processes
- Drying-induced shrinkage mechanism of molded materials and accurate control

Keynote Speaker



Associate Prof. Agus Purwanto
(Sebelas Maret University)

- Dr. Eng. (Chemical Engineering), Hiroshima University, Japan
- M.Sc. (Chemical Engineering), Sepuluh Nopember Institute of Technology, Indonesia
- B.Sc. (Chemical Engineering), Sepuluh Nopember Institute of Technology, Indonesia

Field of Specialization: material characterization, advanced material, thin film and nanotechnology

The main topics are :

- Li-Ion Battery Fabrication based on LiFePO₄ nanoparticle for National Electric Car
- Development of visible light-photocatalyst nanomaterial for organic pollutant degradation
- Fabrication of nitrogen doped TiO₂ nanostructured photoanode for high efficiency dye sensitized solar cells (DSSC)



Invited Speaker

1. Associate Prof. Uju (Bogor Agricultural University / IPB)

Seaweed Processing, Ionic Liquid, Membrane Technology, Bioenergy

2. Associate Prof. M. Aziz (Tokyo Institute of Technology)

Energy system, Process Engineering, Mechanical Engineering, Heat Transfer, Micro Machining

3. Dr. Sumarno (Sepuluh Nopember Institute of Technology)

Polymer, supercritical fluid, hydrothermal

Tentative Conference Program						
Day 1, Wednesday, September 13, 2017						
Time						
08.00 - 09.00	Registration					
09.00 - 09.45	Opening Ceremony at Indraprastha Hall					
09.45 - 10.00	Coffee Break					
10.00 - 12.00	Plenary Session I at Indraprastha Hall Moderator : Dr. Agung Tri Wijaya (Sebelas Maret University) KS-01 : Prof. Jun Fukai (Kyushu University) KS-02 : Prof. Dato' Dr. Rosli bin Mohd. Yunus (Universiti Malaysia PAHANG) KS-03 : Prof. Aya Hagishima (Kyushu University)					
12.00 - 13.00	Lunch					
13.00 - 15.00	Parallel Session I					
	Indraprastha Hall (ME)	Madukara Room (CE)	Indrakila Room (CE)	Giripurna Room (EE)	Jodhipati Room (IE)	Mangkunegaran Room (U)
13.00 - 13.20	IS-02	CE-03, CE-14, CE-15	13.00 - 13.20	13.00 - 13.40	13.00 - 13.40	13.00 - 13.30
13.20 - 13.45	ME-01, ME-02	CE-10, CE-18, CE-31	13.20 - 13.45	13.40 - 14.20	13.40 - 14.20	13.30 - 14.10
13.45 - 14.25	ME-03, ME-04, ME-05	CE-06, CE-11, CE-13	13.45 - 14.25	14.20 - 15.00	14.20 - 15.00	14.10 - 14.50
14.25 - 15.05	ME-06, ME-07, ME-08	CE-07, CE-08, CE-09	14.25 - 15.05	15.00 - 15.40	15.00 - 15.40	14.50 - 15.30
15.00 - 15.30	Coffee Break					
15.30 - 17.30	Parallel Session II					
	Madukara Room (CE)	Indrakila Room (ME)	Giripurna Room (ME)	Jodhipati Room (IE)	Mangkunegaran Room (ME)	
	15.30 - 16.10	15.30 - 16.10	15.30 - 16.10	15.30 - 16.10	15.30 - 16.10	15.30 - 16.10
	CE-04, CE-05, CE-36	ME-09, ME-10, ME-11	ME-18, ME-19, ME-20	IE-09, IE-10, IE-11	ME-27, ME-28, ME-29	

Program Schedule

19.00 - 21.00	Gala Dinner										
Day 2, Wednesday, Thursday, 14, 2017											
Registration											
08.00 - 09.00	Registration										
Plenary Session II at Indraprastha Hall Moderator : Dr. Inayati (Sebelas Maret University) KS-04 : Prof. Yoshinori Itaya (Gifu University) KS-05 : Associate Prof. Agus Purwanto (Sebelas Maret University)											
10.15 - 10.30	Coffee Break										
Parallel Session I											
10.30 - 12.30	Indraprastha Hall (ME)	Madukara Room (CE)	Indrakila Room (ME)	Giripurna Room (ME)	Jodhipati Room (IE)	ME-30, ME-31, ME-32	ME-21, ME-22, ME-23	16.10 - 16.50	16.10 - 16.50	16.10 - 16.50	ME-33, ME-34, ME-35
10.30 - 11.10	ME-15, ME-16, ME-17	IS-01	ME-45, ME-46, ME-47	ME-54, ME-55, ME-56	IE-17, IE-18, IE-19						
11.10 - 11.50	ME-39, ME-40, ME-41	CE-23, CE-27, CE-30	ME-48, ME-49, ME-50	ME-57, ME-58, ME-59	IE-20, IE-21						
11.50 - 12.30	ME-42, ME-43, ME-44	CE-12, CE-22, CE-33	ME-51, ME-52, ME-53		IE-22, IE-23						
12.30 - 13.30	Lunch										
13.30 - 16.30	UNS TOUR										



ABSTRACT

KS-01	Jun Fukai	Kyusu University	Potential Ability of Zeolite to Generate High-Temperature Vapor using Waste Heat
KS-02	Dato Rosli	Universiti Malaysia PAHANG	
KS-03	Aya Hagishima	Interdisciplinary Graduate School of Engineering Sciences (IGSES), Kyushu University, Fukuoka 816-850, Japan	Green Infrastructures and Urban Sustainability
KS-04	Yoshinori Itaya*, Akira Suami, Nobusuke Kobayashi	Environmental and Renewable Energy Systems Division, Graduate School of Engineering, Gifu University, Gifu 501-1193, Japan	Non-Slag Co-Gasification of Biomass and Coal in Entrained-Bed Furnace
KS-05	Agus Purwanto	Sebelas Maret University	Production of High Performance Cylinder Type LiFePO ₄ Battery: Material Processing and Manufacturing Strategies
IS-01	Uju ^{1,2*} , Agung Tri Wijayanta ³ , Masahiro Goto ^{4,5} and Noriho Kamiya ^{4,5,6}	¹ Dept. Aquatic Products Technology, Bogor Agricultural University, Indonesia ² Surfactant and Bioenergy Research Center, Bogor Agricultural University, Indonesia ³ Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Indonesia ⁴ Dept. Applied Chemistry, Kyushu University, Japan ⁵ Center for Future Chemistry, Kyushu University, Japan ⁶ Division of Biotechnology, Center for Future Chemistry, Kyushu University, Japan	High Yield Hydrolysis of Seaweed Waste Biomass Using Peracetic Acid and Ionic Liquid Treatments

IS-02	Muhammad Aziz*, Takuya Oda, Takao Kashiwagi	Institute of Innovative Research, Tokyo Institute of Technology, 2-12-1 Ookayama, Meguro-ku, Tokyo 1528550, Japan	Carbon-Free Hydrogen Production from Low Rank Coal
IS-03	Sumarno	Chemical Engineering Department, Faculty of Industrial Technology, Institut Teknologi Sepuluh Nopember, Surabaya, East Java, Indonesia 60111	Increase Drug Release and Recovery by Complex Inclusion Processes in Supercritical Carbon Dioxide
CE-01	Erfina Oktariani ¹ , Rita Istikowati ² , Hendro Sat Setijo Tomo ³ , Rafliansyah Rizal ¹ , Yosea Pratama ¹	¹ Department of Polymeric Chemical Engineering, Polytechnic of STMI Jakarta, Jakarta 10510, Indonesia ² Department of Garment Production Engineering, Community Academy of Textile and Textile Product Industry of Surakarta, Surakarta 57126, Indonesia ³ Laboratory of Technology of Polymer, Agency for the Assessment and Application of Technology, Tangerang 15134, Indonesia	Multi Response Optimization of Sheet Forming of Kenaf- Polypropylene Composites Using Grey Based Fuzzy Algorithm
CE-02	Yusuke Egawa*, Syoma Hamada, Hisahiro Einaga	Department of Molecular and Material Science, Interdisciplinary Graduate School of Engineering Science, Kyushu University, Fukuoka, Japan	Contribution of catalytic activity of CeO ₂ in nonthermal plasma
CE-03	Anita Cahyaningrum, Fajar Firstya Adam, Prida Novarita Trisanti, Sumarno*, Firman Kurniawansyah	Chemical Engineering Department, Faculty of Industrial Technology, Sepuluh Nopember Institute of Technology, Surabaya, 61111, Indonesia	Glycerol Hydrogenolysis To 1,2 Propanediol Using Cu/ZnO Catalyst By Catalytic Transfer Hydrogenation

CE-04	Inayati*, Rifka Intan Puspita, Vika Latiffiana Fajrin	Chemical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Extraction of Pectine from Passion Fruit Rind (<i>Passiflora Edulis</i> Var. <i>Flavicarpa Degener</i>) for Edible Coating
CE-05	Yuliusmana*, Afdhal Hanafia, Mega Puspitasaria	^o Chemical Engineering Department, Faculty of Engineering, University of Indonesia, Depok City-West Java 16425, Indonesia	Utilization of Durian Shell Waste as Raw Material Preparation of Activated Carbon with MgO Modified as Adsorbent of CO and Hydrocarbons
CE-06	Yuliusman, Mega Puspitasari, Afdhal Hanafi, Gibranadhi	Chemical Engineering Department, Faculty of Engineering, University of Indonesia, Depok 16424, Indonesia	Utilization of Plastic Waste as Raw Material Preparation of Activated Carbon to Adsorps CO and HC on Vehicle Emission
CE-07	Ari Diana Susanti ^{1,2*} , Wahyudi Budi Sediawan ² , Sang Kompiang Wirawan ² , Budhijanto ²	¹ Department of Chemical Engineering, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Department of Chemical Engineering, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta 55281, Indonesia	Isolation of Oryzanol from Rice Bran Oil in Adsorption Column : Effect of Volumetric Rate
CE-08	Sang Kompiang Wirawan*, Ivone Marselina Nugraha, Asdi Restana	Chemical Engineering Department, Faculty of Engineering, Universitas Gadjah Mada	Kinetics and Equilibrium of Free Fatty Acid (FFA) Adsorption in Crude Palm Oil (CPO) Using A Sustainable Resin Technology
CE-09	Afrizal Luthfi Anggara, Sayoga Arifagalih Hidayatullah, Sang Kompiang Wirawan*	Chemical Engineering Department, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta 55284, Indonesia	Regeneration Study and Mathematical Modelling of Free Fatty Acid Adsorption in Crude Palm Oil Using Anion Resin

CE-10	Aira KAMITO ^{1,4} , Xiaolei XU ^{2,4} , Yoshiaki TAKAHASHI ³ , Norihiro IKEDA ^{1*}	¹ Department of Molecular and Material Sciences, IGSES, Kyushu University, Fukuoka 816-8580, Japan ² Department of Chemistry, Faculty of Science, Kyushu University, Fukuoka 819-0395, Japan ³ Institute for Materials Chemistry and Engineering, Kyushu University, Fukuoka 816-8580, Japan ⁴ Department of Environmental Science, ICAS, Fukuoka Women's University, Fukuoka 813-0003, Japan	Consideration on the viscosity change of the aqueous solution of threadlike micelle by means of phase diagram of micelle formation
CE-11	Khanam MARZIA ^{1*} , Tomonori OHBA ² , Takahiko MIYAZAKI ¹ , Hyun-Sig KIL ¹ , Seong-Ho YOON ¹ , Jin MIYAWAKI ¹ , Shigeru KOYAMA ¹	¹ Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, 6-1 Kasuga-koen, Kasuga, Fukuoka 816-8580, Japan ² Graduate School of Science, Chiba University, 1-33 Yayoi, Inage, Chiba 263-8522, Japan	Performance Study of Adsorption Cooling System by Employing Spherical Activated Carbon-Methanol Pair
CE-12	Dwi Ni'maturrohmah ¹ , Desy Maharani ¹ , Ossama Ruzicka ² , Ulfa Hardila Gitasari ² , Egy Adhitama ³ , Teguh Endah Saraswati ^{1*}	¹ Chemistry Department, Faculty of Mathematic and Natural Science, Sebelas Maret University, Surakarta 57126, Indonesia ² Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ³ Research and Technology Department, Studi Ilmiah Mahasiswa, Sebelas Maret University, Surakarta 57126, Indonesia	Electrochemical Synthesis and Characterization of Copper-Graphene Composite

CE-13	Ari Purnomo ^{1*} , Misbahudin Alhanifi ¹ , Chususn Khozimah ¹ , Umami Az Zuhra ¹ , Bellatrik Rahma Putri ² , Andri Cahyo Kumoro ¹	¹ Chemical Engineering Department, Faculty of Engineering, Diponegoro University, Semarang 50275, Indonesia ² Environmental Engineering Department, Faculty of Engineering, Diponegoro University, Semarang 50275, Indonesia	Synthesis of Hydrophobic Zeolite From Rice Husk Ash as Adsorbent in Production Fuel Grade Ethanol
CE-14	Ernesto Silitonga	Civil Engineering Department, Faculty of Engineering, State University of Medan, Medan 20221, Indonesia	Effect of Pozzolanic Binder Addition on Stabilization of Heavy Metal Contaminated Dredged Sediment on Its Reutilization on Road Construction
CE-15	Musfiq Amrulloh ¹ , Egy Adhitama ^{1,2} , Anif Jamaluddin ^{1*} , Ahmad Fauzi ¹	¹ Physics Education Department, Sebelas Maret University, Surakarta 57126, Indonesia ² Research and Technology Department, Studi Ilmiah Mahasiswa, Sebelas Maret University, Surakarta 57126, Indonesia	The Development of Low-cost CNC-based Batik Plotter
CE-16	Sperisa Distantina*, Mujtahid Kaavessina, Fadilah, Amellia Setyani Putrie, Inas Novianti	Chemical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Jl. Ir. Sutami 36 A Surakarta 57126, Indonesia	Carboxymethyl Konjac Glucomannan from Konjac Flour: The Effect of Media and Temperature on Carboxymethylation Rate
CE-17	Dyah H. Wardhani*, Farida D. Hapsari, Kazenina M. Suryana, Nita Aryanti, Aji Prasetyaningrum	Chemical Engineering Department, Faculty of Engineering, Diponegoro University, Semarang, Indonesia	Physicochemical Properties of Matrix Combination of Glucomannan-Alginat

CE-18	Mohammad Tawheed Kibria*, Tatsushi Nomitsu, Takeshi Nakagawa, Seigi Mizuno	Department of Molecular and Material Sciences, Kyushu University, 6-1 Kasuga Koen, Kasuga, Fukuoka 816-8580, Japan	Interfacial Magnetic Dead Layer in Fe/Iron Silicide Surfaces
CE-19	Anisa Nurraudah*, Nurruddin Mahmud Zinki, Warih Purwendah, Satria Aji Wicaksono and Haryono	Chemistry Education Department, Faculty of Teacher Training and Education, Sebelas Maret University, Surakarta 57126, Indonesia	Characterization, Modeling and Replication of Blue Morpho Didius Butterfly Wings In Situ as TiO ₂ Nanoparticles Biotemplate in order to Optimize the Dye-Synthesized Solar Cells (DSSCs) Work
CE-20	Mujtahid Kaavessina*, Sperisa Distantina, Esa Nur Shohih, Christianus Denny Sudarsana	Chemical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Utilization of Low Molecular Weight Poly Lactic Acid as A Matrix in Smart Urea Fertilizer
CE-21	Dyah H. Wardhani*, Heri Cahyono, M. F. H. Dwinanda, Putri R. Nabila, Nita Aryanti, Noer A. Handayani and Dina R. Pangestufi	Chemical Engineering Department, Faculty of Engineering, Diponegoro University, Semarang, Indonesia	Effect of KOH as Deacetylation Agent on Physicochemical Properties of Glucomannan
CE-22	Adrian Nur ^{1*} , Arif Jumari ¹ , Anatta W. Budiman ¹ , Nazriati Nazriati ² , Fauziatul Fajarah ² , Stella Febiantii Puspitaningtyas ¹ , Suci Cahyaningrum ¹	¹ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Chemistry Department, Faculty of Mathematics and Science, State University of Malang, 65111 Malang, Indonesia	The Time Electrolysis on Electrosynthesis of Hydroxyapatite with Bipolar Membrane

CE-23	Endah R Dyartanti ^{1,2*} , I Nyoman Widiasta ¹ , Agus Purwanto ² , and Heru Susanto ¹	¹ Department of Chemical Engineering, Diponegoro University, Semarang, Indonesia ² Department of Chemical Engineering, Universitas Sebelas Maret, Surakarta, Indonesia	Effects of PVP Addition on Properties and Morphology of PVDF/ZnO Polymer Electrolyte Membranes for Lithium Ion Batteries
CE-24	P. N. Trisanti, Sena Setiawan H.P., Elysa Nura'ini, and Sumarno	Chemical Engineering Department, Faculty of Industrial Technology, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia	Preparation of Microcrystalline Cellulose (MCC) from Sawdust of Sengon Wood by using Ultrasound-Assisted (Alkaline) Delignification and Hydrothermal Process
CE-25	Fadilah Fadilah*, Sperisa Distantina, Santi T. Wijayanti, Rahmawati Andayani	Chemical Engineering Department, Faculty of Engineering, SebelasMaret University, Surakarta 57126, Indonesia	Study on the Carboxymethylation of Glucomannan from Porang
CE-26	Mujtahid Kaavessina ^{1*} , Sperisa Distantina ¹ , Achmad Chafidz ² , Aditya Utama ¹ , Venisa Mega Puteri Anggraeni ¹	¹ Chemical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Department of Chemical Engineering, Universitas Islam Indonesia, Yogyakarta, Indonesia	Blends of Low Molecular Weight of Poly Lactic Acid (PLA) with Gondorukem (Resina colophonium) as A Plasticizer
CE-27	Anggraini Beta Citra Dewi ¹ , Dwi Aries Himawanto ²	¹ Environmental Studies, Postgraduate Program, Sebelas Maret University, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Pyrolysis of Solid Wastes to Produce Alternative Liquid Fuels

CE-28	Happy Mulyani ^{1*} , Gregorius Prima Indra Budianto ¹ , Margono ² , Mujtahid Kaavessina ²	¹ Chemical Engineering Department, Faculty of Engineering, Setia Budi University, Surakarta 57126, Indonesia ² Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Influence of pH Adjustment Into Kinetic Parameters in Tapioca Wastewater Treatment Using Activated Sludge Batch Reactor System
CE-29	Windhu Griyasti Suci, Margono*, Mujtahid Kaavessina	Chemical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	A Preliminary Study of Performance Saccharomyces cerevisiae Immobilized Using Grafted Bioflocculant in Bioethanol Production
CE-30	Bregas Siswahjono Tatag Sembodo ¹ , Hary Sulistyo ² , Wahyudi Budi Sediawan ² , Moh. Fahrurrozi ^{2*}	¹ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Chemical Engineering Department, Faculty of Engineering, Gadjah Mada University, Yogyakarta 55281, Indonesia	Effect of Sodium Carbonate Catalyst Weight on Production of Bio-Oil Via Thermochemical Liquefaction of Corncocks in Ethanol-Water Solution
CE-31	Miftahul Anwar ^{1,*} , Kartiko Nugroho ¹ and Teguh Endah Saraswati ¹	¹ Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Chemical Department, Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta 57126, Indonesia	Wood Charcoal-based Anti-Corrosion Coating Layer using Flame Thermal Spray Method

CE-32	Anatta Wahyu Budiman ^{1*} , Myoung Jae Choi ² , Adrian Nur ¹	¹ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Environmental Resource Research Center, Korea Research Institute of Chemical Technology, 141 Gajeong Ro, Yuseong Gu, Daejeon 34414, South Korea	Catalytic Performance of heterogeneous Rh/C3N4 for Methanol Carbonylation
CE-33	Fransisca A.Paramita ¹ , Metty Lelian ² , Arif Jumari ^{1*} , Agus Purwanto ¹ , Adrian Nur. ¹ , and Endah R.Dyartanti ^{1,2}	¹ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Chemical Engineering Department, Faculty of Engineering, Diponegoro University, Semarang, Indonesia	The Synthesis of Tin from Tin Slag by Electrolysis Method
CE-34	Reni Desmiarti ^{1*} , Ariadi Hazmi ² , Primas Emeraldi ² and Munas Martynis ¹	¹ Chemical Engineering Department, Universitas Bung Hatta, 25147, Padang, Indonesia ² Electrical Engineering Department, Andalas University, 25166, Padang, Indonesia	Behavior of Microorganisms in Drinking Water Treatment by Inductively Coupled Plasma System: Investigation Based on Model Evaluation
CE-35	Satoshi Takeichi ^{1*} , Kazuki Kudo ¹ , Kazutoshi Nakashima ¹ , Ken-ichiro Sakai ² , and Tsuyoshi Yoshitake ¹	¹ Dept. of Appl. Sci. for Electr. and Mat., Kyushu Univ., Kasuga, Fukuoka 816-8580, Japan ² Nat. Inst. of Tech., Kurume Coll., Dept. of Cont. and Inf. Sys. Eng., Kurume, Fukuoka 830-8555, Japan	Magnetic Properties of Fe3Si/N-doped Carbon/Fe Trilayered Films

CE-36	Dwi Ardiana Setyawardhani ^{1,2,*} , Hary Sulistyo ² , Wahyudi Budi Sediawan ² , Mohammad Fahrurrozi ²	¹ Chemical Engineering Department, Sebelas Maret University, Jl. Ir. Sutami 36 A Surakarta ² Chemical Engineering Department, Gadjah Mada University, Jl. Grafika 2 Kampus UGM, Yogyakarta	Adsorption of Saturated Fatty Acid in Urea Complexation : Kinetics and Equilibrium Studies
EE-01	Muhammad Hamka Ibrahim ^{1*} , Bima Tri Prasetya ¹ , Anif Jamaluddin ² , Agus Purwanto ³	¹ Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Physics Department, Faculty of Mathematics and Natural Sciences, Sebelas Maret University, Surakarta 57126, Indonesia ³ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	A Framework of Real Time Battery and Environment Monitoring in Solar Power System
EE-02	M. H. Adhiguna ¹ , Suwolo ² , Ubaidillah ^{2*}	¹ Department of Electrical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia ² Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Data Acquisition Circuit for Work Method Analysis of FSAE Race Car
EE-03	Muhammad I. C. Nugroho, Awang N. I. Wardana, Kutut Suryopratomo	Nuclear Engineering and Physics Engineering Department, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta 55281, Indonesia	Automatic Formal Model Generator for Safety Instrumented System

EE-04	Igor M Farhan*, Chico Hermanu B.A.	Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Monitoring and Automation Control System for Green House Based On Internet of Things Technology
EE-05	Tri Widodo Besar Riyadi ¹ , Yoshrizal Hary Yulianto ² , Sarjito ² , Zhang Zheng ³ , Tang Li Ping ³	¹ Faculty of Engineering, Universitas Muhammadiyah Surakarta, Jl. A.Yani Tromol Pos 1 Pabelan Kartasura Surakarta 57102, Indonesia ² Postgraduate Program of Mechanical Engineering Department, Universitas Muhammadiyah Surakarta, Jl. A.Yani Tromol Pos 1 Pabelan Kartasura Surakarta 57102, Indonesia ³ Mechanical Engineering Department, Wuxi Institute of Technology, PR China	Evaluation on a Digitized CAD Model of 3D Scanner
EE-06	Chico Hermanu B A ¹ , Muhammad Nizam ¹ , Agung Nur Probahudono ² , FX Rian Wicaksono ¹	¹ Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Department of Economics, Faculty of Economics and Business, Sebelas Maret University, Surakarta 57126, Indonesia	Study on Energy Efficient Public Street Lighting in Surakarta City Indonesia
EE-07	Chico Hermanu Brillianto Apribowo	Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Optimal Power Flow With Optimal Placement TCSC Device Using Genetic Algorithm-Taguchi Method On 500 kV Java-Bali Electrical Power System

EE-08	Chico Hermanu B A ¹ , Zainal Abidin ²	¹ Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Electrical Engineering Department, Faculty of Engineering, Tanjungpura University, Pontianak 78121, Indonesia	Bat Algorithm Approach for Optimal Power Flow with TCSC Devices
EE-09	Naji Abdalaziz Ali ^{1,*} , Muhammad Nizam ² , Dwi Aries Himawanto ³ , Hery T.W. ¹	¹ P. G. Student of Mechanical Engineering, Sebelas Maret University, Indonesia ² Department of Electrical Engineering, Sebelas Maret University, Indonesia.	Performance Of Low-Cost Fast Battery Charger Based On Fuzzy Logic Control Technique
EE-10	Muhammad Nizam, F.X. Rian Wicaksono	Department of Electrical Engineering, Sebelas Maret University, Indonesia.	TCSC control on Electric arc Furnaces for Power Quality Improvement Using Artificial Neural Network (ANN)
EE-11	Abid Alim Mustaqim, Andryawan Jaya Purnama, Arif Nuruddin, Henry Probo Santoso, Meiyanto Eko Sulistyio	Program Studi Teknik Elektro, FT, Universitas Sebelas Maret, Indonesia.	Hybrid Smart Home System Control based on Internet of Things (IoT)

IE-01	Apriani Soepardi ^{1,2,*} , Pratikto ¹ , Purnomo Budi Santoso ² , Ishardita Pambudi Tama ²	¹ Industrial Engineering Department, Faculty of Industrial Technology, University of National Development "Veteran" Yogyakarta 55584, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Brawijaya University, Malang 65145, Indonesia ³ Industrial Engineering Department, Faculty of Engineering, Brawijaya University, Malang 65145, Indonesia	Interpreive Structural Modelling for Technology-related Barriers to Energy Efficiency Improvement in Indonesia Steel Industry
IE-02	Nancy Oktyajati, Muh. Hisjam, Wahyudi Sutopo*	Master Program of Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Dynamic Simulation Model of Soybean in Central Java to Support Food Self Sufficiency: A Supply Chain Perspective
IE-03	Sintya Ratnasari*, Muh. Hisjam, Wahyudi Sutopo	Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Supply Chain Risk Management in Newspaper Industry: House of Risk Approach
IE-04	Carina Intan Permatasari*, Wahyudi Sutopo, Muh. Hisjam	Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Modeling and Sales Forecasting Newspaper with ARIMA: A Case Study
IE-05	Viny Sartika*, Muh. Hisjam, Wahyudi Sutopo	Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Supply Chain Risk Management of Newspaper Industry: A Quantitative Study
IE-06	Dwi Ratna Wulansari*, Wahyudi Sutopo, Muh. Hisjam	Master Program of Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Use Of Importance And Performance Analysis (IPA) To Evaluate Effectiveness Of The Forward Auction Market Agro Commodities : A Case Study

IE-07	Iqbal Wahyu Saputra*, Wahyudi Sutopo, Roni Zakaria	Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	A Business Strategy Formulation for Commercializing University-created Technology: A university spin-offs
IE-08	Fakhrina Fahma*, Roni Zakariya, Yunita	Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia	A Framework for Designing Readiness SMEs Assessment Models of Indonesian National Standard (SNI) Adoption
IE-09	Hoedi Prasetyo ^{1*} , Yohanes Sugianto ²	¹ Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Mechatronic Departement, Politechnic ATMI Surakarta, Surakarta 57145, Indonesia	Design of A Lead Time Monitoring Device on Job Shop Manufacturing
IE-10	Intan Dewi Melinda, Wakhid Akhmad Jauhari	Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	A Critical Spare Part Inventory Control Based on Hazard Function Approach: A Case Study in the Garment Industry
IE-11	Wakhid Ahmad Jauhari ¹ , Anindya Rachma Dwicahyani ^{1*} , Oktivandri Hendaryani ¹ , Nugthoh Arfawi Kurah ²	¹ Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Mathematics Department, Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta 57126, Indonesia	Managing a closed-loop supply chain inventory system with learning effects
IE-12	Wahyu Widhiarso ¹ , Cucuk Nur Rosyidi ²	¹ Student Magister Industrial Engineering Department, ² Industrial Engineering Department Sebelas Maret University, Surakarta, Indonesia	Multi Objective Optimization Model for Minimizing Production Cost and Environmental Impact in CNC Turning Process

IE-13	Seamus Tadeo Marpaung, Cucuk Nur Rosyidi	Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Development of Daily Monitoring Tool in a Service Part Manufacturing Company
IE-14	Pringgo Widyo Laksono, Zenithia Intan Martomo	Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Analysis of Total Productive Maintenance (TPM) Implementation Using Overall Equipment Effectiveness (OEE) and Six Big Losses (Case study at Spinning II PT Apac Infi Corpora)
IE-15	Rahmaniyah Dwi Astuti ¹ , Muhammad Abdu Haq Navi ²	¹ Industrial Engineering Department, Sebelas Maret University, Surakarta 57126, Indonesia ² Work System Design and Ergonomic Laboratory, Industrial Engineering Department, Sebelas Maret University, Surakarta 57126, Indonesia	Designing Workload Analysis Questionnaire to Evaluate Needs of Employees
IE-16	Dian Cahya Nugraha ^{1*} , Iwan Iftadi ^{1,2} , Wakhid Ahmad Jauhari ¹	¹ Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Safety Sign Designs for Children by Considering Effect of The Colors Preferences: A Case Study
IE-17	Alief Regyan Wisnuadi, Eko Pujyanto, Retno Wulan Damayanti	Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Multiresponse Optimization of Process Parameters in Internal Grinding of Outer Ring using Taguchi and PCR-TOPSS Methods
IE-18	Retno Wulan Damayanti	Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Future Research of Quality Management – A Literature Review in the International Journal (2012 – 2017)

IE-19	Arkan Addien Al A'diat ¹ , Eko Liquiddanu ^{1,2} , Pringgo Widyo Laksono ¹ , Wahyudi Sutopo ^{1,2} , I Wayan Suletra ¹	¹ Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Rekayasa Industri dan Tekno Ekonomi, Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Fulfillment of GMP Standard, Halal Standard, and Applying HACCP for Production Process of Beef Floss in Small and Medium Enterprise in Jagalan
IE-20	Rizky Hanif Fauzi, Eko Liquiddanu, I Wayan Suletra	Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Improved Competitiveness of Small Medium Industry Batik Printing On Quality & Productivity With Value Chain Benchmarking (Case Study PT. X, PT. Y & PT. Z)
IE-21	Achmad Samudra Dewantara ¹ Dr. Eko Liquiddanu S.T., M.T. ² & Dr. Cucuk Nur Rosyidi S.T., M.T. ²	¹ Student of Industrial Engineering Program, Faculty of Engineering, Sebelas Maret University ² Staff Lecturer of Industrial Engineering Program, Faculty of Engineering, Sebelas Maret University	Fulfillment Of P-IRT And Halal Standards To Enter Modern Retail And HACCP Planning On Tofu Production Process
IE-22	Wiwik Budiawan ^{1*} , Susatyo Nugroho ² , Adelia Chandradevi ³	¹ Industrial Engineering Department, Faculty of Engineering, Diponegoro University, Semarang 50275, Indonesia	Driving Performance at Low Visibility (Case Study: Banyumanik-Bawen Toll Road)
IE-23	Tofiq Dwiki Darmawan ^{1*} , Ilham Priadythama ² , Lobes Herdiman ³	¹ Laboratory of Product Planning and Design, Industrial Engineering Department, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Laboratory of Industrial Engineering Design Practicum, Industrial Engineering Department, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Conceptual Design of Modular Fixture for Frame Welding and Drilling Process Integration Case Study: Student Chair in UNS Integrated Industrial Engineering Practicum

ME-01	Dominicus Danardono Dwi Prija Tjahjana*, Pradityasari Purbaningrum, Syamsul Hadi	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Study of the Influence of the Diameter Ratio and Blade Number to the Performance of the Cross Flow Wind Turbine by Using 2D Computational Fluid Dynamics Modeling
ME-02	B. D. Prasetyo, E. T. Maharani, G. Setyohandoko, Ubaidillah, and Syamsul Hadi	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Flow Analysis of Intake Manifold Using Computational Fluid Dynamics for Formula SAE Racecar
ME-03	F. R. Sinaga, K. E. Kurniawan, M. I. Fadhil, Ubaidillah	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Numerical Simulation of Several Impact Attenuator Design for A Formula SAE Car
ME-04	Sung Jin Kim ^{1*} , Yuji Sugihara ² , Tetsuya Kajiwaraz ² , Osama Eljama ² , Soichi Yamaguchi ²	¹ Department of Energy and Environmental Engineering, IGSES, Kyushu University, Kasuga 816-8580, Japan ² Department of Earth System Science and Technology, IGSES, Kyushu University, Kasuga 816-8580, Japan	Numerical Investigation on the Effects of Thermal Stratification and Surface Shear Stress on Open-Channel Flows
ME-05	Muhammad Ilham Maulana ^{1*} , Ahmad Syuhada ¹ , Saqib Arsalan ¹ , Muhammad Nawawi ²	¹ Mechanical Engineering of Syiah Kuala University, Darussalam-Banda Aceh 23111, Indonesia ² Fluids Group Istanbul Technical University, Turkey	Blade Number Impact On Turbulent Fluid Flow And Performance Of Archimedes Screw Turbine Using CFD
ME-06	Saut Kasdiarai Silalahi*, Irwan Setyowidodo, Am. Mufarrih	Mechanical Engineering Department, Faculty of Engineering, University of Nisantara PGRI Kediri, Kediri 64112 Indonesia	Analysis of Head Losses Consequent Section Diameter, Pipe Material and Flow Debit Using Contrast Test (Scheffe's Method) at 900 Elbow Join

ME-07	Indri Yaningsih ^{1,2,4*} , Agung Tri Wijayanta ² , Takahiko Miyazaki ^{3,4} , Shigeru Koyama ^{3,4}	¹ Interdisciplinary Graduate School of Engineering Sciences, Department of Energy and Environmental Engineering, Faculty of Engineering Sciences, Kyushu University, Fukuoka, Japan ² Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ³ Department of Energy and Environmental Engineering, Faculty of Engineering Sciences, Kyushu University, Fukuoka, Japan ⁴ Thermal Science and Engineering Division, International Institute of Carbon-Neutral Energy Research, Kyushu University, Fukuoka, Japan	V-cut twisted tape insert effect on heat transfer enhancement of single-phase turbulent flow heat exchanger
ME-08	Ubaidillah	Mechanical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret	Steering Characteristic of An Articulated Bus Under Quasi Steady Maneuvering
ME-09	Yoga Arob Wicaksono ¹ , Syamsul Hadi ² , D. Danardono D.P.T. ²	¹ Graduate School of Mechanical Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Influence of Omni-Directional Guide Vane On The Performance of Crossflow Rotor for Urban Wind Energy
ME-10	Ilham Satrio Utomo, D. Danardono	Mechanical Engineering Department, Faculty of Engineering, SebelasMaretUniversity, Surakarta57126, Indonesia	Experimental Studies Of Savonius Wind Turbines With Variations Sizes And Fin Numbers Towards Performance

ME-11	Sandi Susanto, D. Danardono D.P.T.*	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Experimental Tests Of The Effect Of Number Of Blade And Diameter Ratio Of Blade On The Performance Of Crossflow Wind Turbine
ME-12	Andreas Wibowo, Marcelinus R.C. Situmorang, D. Danardono D.P.T.*	Undergraduate School of Mechanical Engineering, Sebelas Maret University Surakarta, Surakarta, Indonesia	Experimental Study of Turbine and Guide Vanes Integrations to Enhanced The Performance of Crossflow Vertical Axis Wind Turbine
ME-13	Fahrudin, D. Danardono, Budi Santoso*	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Experimental Study of Separator Effect and Shift Angle on Crossflow Wind Turbine Performance
ME-14	Diniar Mungil Kurniawati*, Dominicus Danardono Dwi Prija Tjahjana, Budi Santoso	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Experimental Investigation on Performance of Crossflow Wind Turbine as Effect of Blades Number
ME-15	Imron Hamzah, Ari Prasetyo, Dominicus Danardono Dwi Prija Tjahjana ¹ , Syamsul Hadi ¹	Mechanical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Effect of Blades Number to Performance of Savonius Water Turbine in Water Pipe
ME-16	Achmad Tri Fadhila*, Irwan Setyowidodo, Am. Mufarrih	Mechanical Engineering Department, Faculty of Engineering, University of Nisantara PGRI Kediri, Kediri 64112 Indonesia	Analysis Effect of Exhaust's Temperature, Total of Peltier Element and Circuit Type for Thermoelectric Generator Output Voltage at Exhaust Internal Combustion Vehicle

ME-17	Arfi Singgih Prasajo ¹ , F. Imanullah ¹ , A. A. Wirawan ² , Ubaidillah ¹ , and Sukmajji Indro Cahyono ¹	¹ Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia ² Department of Industrial Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Experiment Evaluation of Impact Attenuator for FSAE Car Under Static Load
ME-18	A. A. Nugraha ¹ , M. A. Dharmawan ¹ , B. A. Naufal ² , Ubaidillah ¹ , and D.D.D.P. Tjahjana ¹	¹ Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia ² Department of Mechanical Engineering Education, Faculty of Teaching and Education, Universitas Sebelas Maret Surakarta, 57169 Kartasura, Sukoharjo, Indonesia	Aerodynamic Analysis Of Formula SAE Car
ME-19	B. A. Saputro, D. A. Triono, D. R. Pratama, Ubaidillah, and D.D.D.P. Tjahjana	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Static Load Simulation of Steering Knuckle for a Formula Student Racing Car
ME-20	B. W. Lenggana, A. P. Aridharma, B. P. P. Caesar, Ubaidillah	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Kinematic Steering of Formula Student Car
ME-21	H. C. Ramdhani, M. Z. Saputra, R. Ainursyah, Ubaidillah	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Seek Behavior in A Formula SAE Car Steering System

ME-22	H. Hazimi ¹ , A. E. P. Setiyawan ² , Ubaidillah ¹ , and Eko Pujiyanto ³	<p>¹Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia</p> <p>²Department of Mechanical Engineering Education, Faculty of Teaching and Education, Universitas Sebelas Maret Surakarta, 57169 Kartasura, Sukoharjo, Indonesia</p> <p>³Department of Industrial Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia</p>	Tensile Strength and Torsional Rigidity Analysis of FSAE Car's Chassis
ME-23	J. W. Wirawan, R. Aditra, R. A. Rahman, Ubaidillah, and Syamsul Hadi	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Design Analysis of FSAE Racecar Suspension System
ME-24	Agung Premono*, Sirojuddin, M Arif Rahman, Singgih Kristanto, Annisa NH, Riswandi, M Akbar W	Mechanical Engineering Department, Faculty of Engineering, State University of Jakarta, Jakarta, 12330, Indonesia	A Prototype of The Garbarata Vehicle to Enhance The Airport Services
ME-25	Adzin K N, Kholid Y E, Nugroho Agung P, Indah W, Yuyun E	Mechanical Engineering Education, Faculty of Teacher Training and Education of Sebelas Maret University	Test of timing performance of motorcycle self cancelling turn signal based ATmega328P microcontroller reviewed from speed

ME-26	IC Sukmaji ^{1*} , Anwar M ² , D Kuncoro ¹ and T Teguh	¹ Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Specific Power Consumption of Dynamic Driving Electric Bicycles for Green Campus Vehicle in Indonesia
ME-27	A. Masa'id, A. Firdaus, A. G. Permana, Ubaidillah, and Eko Pujiyanto	Department of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret Surakarta, 57126 Jebres, Surakarta, Indonesia	Noise Quality and Muffler Design of a Formula SAE Racecar
ME-28	Agung Sutrisno ^{1*} , Iwan Vanany ² , Indra Gunawan ³ , Mohammad Asjad ⁴	¹ Mechanical Engineering Department, Faculty of Engineering, Sam Ratulangi University, Manado 95115, Indonesia ² Industrial Engineering Department, Faculty of Engineering, Institut Teknologi Sepuluh Noverber, Surabaya , Indonesia ³ Entrepreneurship, Commercialization and Innovation Centre, The University of Adelaide, Adelaide 5005, Australia ⁴ Mechanical Engineering Department, Faculty of Engineering, Jamia Millia University, New Delhi 110025, India	Hybridization of Entropy and DEMATEL for Appraising Criticality of Waste Risk in Modified FMEA
ME-29	Tetsushi Ono, Aya Hagishima, Jun Tanimoto	The Department of Energy and Environmental Engineering, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Fukuoka 8168580, Japan	Statistical Analysis of Outdoor Temperature Influence on Occupants' Behavior of Air-Conditioning Usage in Dwellings

ME-30	Md Rauf Ul Karim Khan, Michitaka OHTAKI, and Reiji HATTORI*	Department of Applied Science for Electronics and Materials, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, 6-1 Kasuga-Koen, Kasuga City, Japan	Thermal Conductivity Measurement of Highly Conductive IGZO Thin-Film with 3ω Method for Characterizing Carrier Transport Properties
ME-31	Budi Santoso* and Dominicus Danardono Dwi Prija Tjahjana	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Improvement of Centrifugal Pump Performance through Addition of Splitter Blades on Impeller Pump
ME-32	Ahmad Syuhada*, Muhammad Ilham Maulana	Mechanical Engineering of Syiah Kuala University, Darussalam-Banda Aceh 23111, Indonesia	Heat Transfer Capability Of Solar Radiation In Colored Roof And Influence On Room Thermal Comfort
ME-33	Herman Saputro ^{1*} , Laila Fitriana ² , Danar S. Wijoyanto ¹ , F.A. Munir ³	¹ Department of Mechanical Engineering Education, Sebelas Maret University, Jl. Ahmad Yani No.200 Surakarta, Jawa Tengah, Indonesia ² Department of Mathematic Education, Sebelas Maret University, Jl. Ir. Sutarni 36A, Surakarta, Indonesia ³ Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka, 76100 Hang Tuah Jaya, Durian Tunggal Melaka Malaysia	Analysis of Flame Stabilization in Micro-combustors with Different Designs of Flame Holder
ME-34	Joni Prasetyo*, Dwi Husodo Prasetyo, SD Sumbogo Murti, Adiarso, Unggul Priyanto	Center for Energy Resources and Chemical Industry Technology, BPPT, Indonesia	Study on Performance of Blended Fuel PPO - Diesel at Generator

ME-35	Suditama ¹ , Budhi S.K ²	¹ Mechanical Engineering Department Engineering Faculty Medan Area University Medan, Indonesia ² Industrial Engineering Department Engineering Faculty Medan Area University Medan, Indonesia	The Measurement of Multi Component Material Properties as Phase Change Thermal Energy Storage Material
ME-36	Sofia Fitriana ^{1*} , Budi Kristiawan ¹ , Eko Surojo ¹ , Agung Tri Wijayanta ¹ , Takahiko Miyazaki ^{2,3} , Shigeru Koyama ^{2,3}	¹ Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Department of Energy and Material Sciences, Faculty of Engineering Sciences, Kyushu University, Fukuoka 816-8580, Japan ³ Thermal Science and Engineering Division, International Institute of Carbon-Neutral Energy Research, Kyushu University, Fukuoka 819-0395, Japan	Influence of Minimum Quantity Lubrication with Al ₂ O ₃ Nanoparticles on Cutting Parameters in Drilling Process
ME-37	Indri Yaningsih ^{1,2,*} , Muhammad Hamid Mahmood ¹ , Agung Tri Wijayanta ² , Takahiko Miyazaki ^{3,4} , Shigeru Koyama ^{3,4}	¹ Department of Energy and Environmental Engineering, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Fukuoka 816-8580, Japan ² Department of Mechanical Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ³ Department of Energy and Material Sciences, Faculty of Engineering Sciences, Kyushu University, Fukuoka 816-8580, Japan ⁴ Thermal Science and Engineering Division, International Institute of Carbon-Neutral Energy Research, Kyushu University, Fukuoka 819-0395, Japan	Experimental Study on Dehumidification Technology Using Desiccant Adsorption System

ME-38	Sudibitia Titio Koin ¹ , Teguh Triyono ² , Eko Surojo ²	¹ Student in bachelor program Mechanical Engineering Department, Sebelas Maret University ² Metallurgy Lecture in Mechanical Engineering Department	The Influence of Flame Hardening Process to Aluminium 7075 Series on the Mechanical Strenht and Micro Structur
ME-39	Febri Budi Darsono*, Teguh Triyono, Eko Surojo	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Effect of Case Hardening Treatment on Aluminium 7075 toward Its Hardness and Tensile Strength
ME-40	Lingga Arti Saputra*, Nurul Muhayat, Triyono	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The Effect of Zn Particle interlayer on Microstructure and Mechanical Properties of Friction Stir Spot Welded Aluminium alloy Joint
ME-41	E. I. Bhiftime ^{1*} , Natalino F. D. S. Guterres ² , I Gusti N. Suarsana ¹	¹ Department of Mechanical Engineering, Cenderawasih University, Kamwoiker Street, Jayapura - Papua 99351, Indonesia ² Department of Mechanical Engineering, Dili Institute of Technology, Ai-mutin Street, Dili 55718, East Timor	Investigation of wt.% Mg and Heat Treatment on the Mechanical Properties of Al ₁₀ Si Aluminium alloy Casting Product Prototype Car Chassis Materials
ME-42	Didik Djoko Susilo ^{1*} , Achmad Widodo ² , Toni Prahasto ² , Muhammad Nizam ³	¹ Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Diponegoro University, Semarang 50275, Indonesia ³ Electrical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Gear Fault Analysis Based On Acoustic Signal And Least Square Support Vector Machine

ME-43	E. I. Bhiftime ^{1*} , Natalino F. D. S. Guterres ² , I Gusti N. Suarsana ¹	¹ Department of Mechanical Engineering, Cenderawasih University, Kamwoker Street, Jayapura - Papua 99351, Indonesia ² Department of Mechanical Engineering, Dili Institute of Technology, Ai-mutin Street, Dili 55718, East Timor	Effect of wt.% Si on the Mechanical Properties of Aluminum alloy Base Materials Casting Product with Propeller Shaft Model
ME-44	E. I. Bhiftime ^{1*} , Natalino F. D. S. Guterres ² , J. S. Guterres ²	¹ Department of Mechanical Engineering, Cenderawasih University, Kamwoker Street, Jayapura - Papua 99351, Indonesia ² Department of Mechanical Engineering, Dili Institute of Technology, Ai-mutin Street, Dili 55718, East Timor	Corrosion and Microstructure of wt.% Silicon on the Casting Product Propeller Shaft Model of Al6063 Aluminum alloy
ME-45	Triyono, J. ^{1*} , Pratama, A. ¹ , Sukanto, H. ¹ , Nugroho, Y. ²	¹ Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Industrial Michael College, Surakarta, Indonesia	The Effect Of Heat Bed Temperature Of 3D Printer On Compression Strength And Hardness Of Bovine Hydroxyapatite
ME-46	Sofyan, B.T., Arisgraha, A., Alfando, M.A., Arandana, N.A.	Metallurgy and Materials Engineering Department, Faculty of Engineering, Universitas Indonesia, Kampus UI Depok 16424, Indonesia	Effects of Aluminum Addition to The Characteristics of Cu-28Zn Brass Produced by Gravity Casting
ME-47	Teguh Triyono, Eko Surojo, Dian Yogi	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Analisis of Effect Rotating Speed of Stirrer and Pouring Temperature on Stir Casting Proses in the Making of Aluminium Matrix Composite (AMC) with Silica Sand Reinforcement and Mg Enhancer on Tensile and Impact Strength

<p>ME-48</p>	<p>Lasikun¹, Dody Ariawan², Eko Surojo³, Joko Triyono⁴</p>	<p>¹Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ²School of Materials and Mineral Resources Engineering, Engineering Campus, Universiti Sains Malaysia, Malaysia ³Department of Mechanical and Industrial Engineering, Gadjah Mada University, Indonesia ⁴Departement of Biomedical Engineering Gadjah Mada University, Indonesia</p>	<p>Effect of Fiber Orientation on Tensile and Impact Properties of Zalacca Fiber/HDPE by Compression Molding</p>
<p>ME-49</p>	<p>Agil Fitri Pamungkas¹, Dody Ariawan², Eko Surojo³, Joko Triyono⁴</p>	<p>¹Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ²School of Materials and Mineral Resources Engineering, Engineering Campus, Universiti Sains Malaysia, Malaysia ³Department of Mechanical and Industrial Engineering, Gadjah Mada University, Indonesia ⁴Departement of Biomedical Engineering Gadjah Mada University, Indonesia</p>	<p>Influence of Fiber Length on Flexural and Impact Properties of Zalacca Midrib Fiber/HDPE by Compression Molding</p>

ME-53	Seno Darmanto ^{1,2*} , Heru SB Rochardjo ³ , Ragil Widyorini ⁴ , Jamasri ³	<p>¹Doctoral S3 of Department of Mechanical and Industrial Engineering, Faculty of Engineering, Universitas Gadjah Mada, 55281, Indonesia</p> <p>²Lecture of Department of Industrial Engineering, Vocation School, Universitas Diponegoro, Indonesia</p> <p>³Department of Mechanical and Industrial Engineering, Faculty of Engineering, Universitas Gadjah Mada, 55281, Indonesia</p> <p>⁴Department of Forest Product Technology, Universitas Gadjah Mada, 55281, Indonesia</p>	Effect of Advanced Ultrasonication on Fibrilating and Mechanical Properties of Snake Fruit (Sallaca) Frond Fiber
ME-54	Aries Prih Haryono ^{1,2} , Ubaidillah ³ , Dody Ariawan ³ , Kuncoro Diharjo ³	<p>¹Doctorate Student in Mechanical Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia</p> <p>²Department of Refrigeration and Air Conditioning, Politeknik Negeri Bandung, Bandung, Indonesia</p> <p>³Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia</p>	The Noise Absorption Performance of Sugarcan-Bagasse/PVAc-Glue Based Absorber
ME-55	Pramuko Ilmu Purboputro	Mechanical Engineering Department, Universitas Muhammadiyah Surakarta	Increasing Torque Capacity on a Clutch Made from Coconut Fiber Composite
ME-56	Tiwan, Arianto Leman S., Widarto, Aan Ardian	Mechanical Engineering Education Department, Faculty of Engineering, Yogyakarta State University, Yogyakarta 55281, Indonesia	Spiral Finned Crucible Pot

ME-50	Andy Permana ¹ , Eko Surojo ^{2*} , Nurul Muhayat ² , Wijang Wisnu Raharjo ²	¹ Graduate School of Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Effect of Gas Release in Hot Molding on Flexural Strength of Composite Friction Brake
ME-51	Harini Sosiati*, Yankeisna Auda Shofie, Aris Widyo Nugroho	Mechanical Engineering Department, Faculty of Engineering, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia	Changes in Tensile Properties of Kenaf/E-glass Reinforced Polypropylene (PP) Composites by Varying Fiber Content
ME-52	Mohammad Zainudin ¹ , Kuncoro Diharjo ^{2*} , Mujtahid Kaavessina ³ , Djoko Setyanto ⁴	¹ Doctoral Student in Mechanical Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia ³ Chemical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia ⁴ Mechanical Engineering Department, Faculty of Engineering, Atma Jaya Catholic University of Indonesia, Jakarta, Indonesia	The Properties Degradation of Exposed GFRP Roof

ME-57	Basuki ^{1,2,*} , Suyitno ¹ , Budi Kristiawan	¹ Mechanical Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Hasyim Asy'ari University, Jombang 61471, Indonesia	Absorbance and Electrochemical Properties of Natural Indigo Dye
ME-58	Pranowo ¹ , Agung Tri Wijayanta ²	¹ Informatic Engineering Department, Faculty of Industrial Technology, Universitas Atma Jaya Yogyakarta, Yogyakarta 55281, Indonesia ² Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	The DMLPG Method for Numerical Solution of Rayleigh-Benard Natural Convection in Porous Medium
ME-59	Muhammad Aziz	Institute of Innovative Research, Tokyo Institute of Technology, 2-12-1 Ookayama, Meguro-ku, Tokyo 1528550, Japan	Electric Vehicle Utilization for Ancillary Grid Services
U-01	Dominicus Danardono Dwi Prija Tjahjana*, Arnold Thamrin Halomoan, Dwi Aries Himawanto	Mechanical Engineering Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Wind Potential Assessment in Urban Area of Surakarta City

<p>U-02</p>	<p>Yukun Wang^{1*}, Yuji Sugihara², Guoyun Zhou³</p>	<p>¹Department of Energy and Environmental Engineering, IGSES, Kyushu University, Kasuga 816-8580, Japan ²Department of Earth System Science and Technology, IGSES, Kyushu University, Kasuga 816-8580, Japan ³Department of Civil and Environment Engineering, Nishinippon Institute of Technology, Kanda 800-0394, Japan</p>	<p>GIS Analysis of Spatial Pattern of Urban Heat Island in Fukuoka Metropolitan Area, Japan</p>
<p>U-03</p>	<p>Yoshiaki Takahashi^{1*}, Tei Saburi², Takashi Sasaoka¹, Sugeng Wahyudi¹, Akihiro Hamanaka¹, Shiro Kubota², Hideki Shimada¹, Yuji Ogata²</p>	<p>¹Department of Earth Resources Engineering, Faculty of Engineering, Kyushu University, Fukuoka 819-0395, Japan ²National Institute of Advanced Industrial Science and Technology, Ibaraki 305-8568, Japan</p>	<p>Proposal of a New Dynamic Strain Measurement System by Means of Digital Image Correlations Method</p>
<p>U-04</p>	<p>Dr. Eng. Kusumaningdyah, NH, ST, MT¹, Lia S. Purnamasari²</p>	<p>¹Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ²Urban-Rural Design and Conservation Laboratory, Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia</p>	<p>The Co-Design Approach in Creating Inclusive Public Space for Children Case Study of Kampung Layak Anak Project in Sangkrah and Gandekan, Surakarta</p>
<p>U-05</p>	<p>Dr. Eng. Kusumaningdyah N.H, ST, MT¹, Luthfia Fadhila Sani², Lia S. Purnamasari²</p>	<p>¹Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ²Urban-Rural Design and Conservation Laboratory, Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta</p>	<p>Space Usage Efficiency at Kali Pepe Riverbank Settlements Case Study of Kampung Pringgading, Surakarta</p>

U-06	Endah Tisnawati ¹ , Kusumaningdyah Nurul Handayani ^{2,3} , Lia S. Purnamasari ³	¹ Architecture Department, Faculty of Science and Engineering, University of Technology Yogyakarta, Yogyakarta 55164, Indonesia ² Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ³ Urban-Rural Design and Conservation Laboratory, Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Community Participations at the Riverbank Settlements A comparative study of kampungs in Surakarta and Yogyakarta
U-07	Ir. Maya Andria Nirawati M.Eng, Amalia Ji Darmastuti*, Agustinus Wisnu Wardana	Architecture Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta 57126, Indonesia	Alternative Use of Space in Slum Settlements Case study: Kampongs along Kali Pepe River in Surakarta
U-08	Ir. Ana Hardiana, MT ^{1,2} , Abyzhar Shobirin ¹ , Almira Husna R. ¹	¹ Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia ² Urban-Rural Design and Conservation Laboratory, Architecture Department, Faculty of Engineering, Sebelas Maret University, Surakarta 57126, Indonesia	Multifunctional Spaces in Slum Settlements and Their Relation to Activity Pattern Case Study of Kampung Sangkrah, Surakarta



ABSTRACT

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CE-28

The Influence of pH Adjustment into Kinetic Parameters in Tapioca Wastewater Treatment Using Activated Sludge Batch Reactor System

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The present investigation deals with the activated sludge batch reactor system of tapioca wastewater treatment with varying pH influent conditions in order to study about its influence into kinetic parameters of system. It was done by operating activated sludge batch reactor system during 8 hours in many tapioca wastewater conditions (pH 4.91, pH 7, pH 8). The COD and MLVSS of the activated sludge batch reactor system effluent were determined each 1 operation hour to generate data for kinetic parameters which expressing microbial growth and substrate utilization with considering inhibitions. Andrew Model showed there was no substrate inhibition in all of process variation of activated sludge batch reactor system of tapioca wastewater treatment. This showed that Monod Model is a more suitable for describing the organic removal kinetics in activated sludge batch reactor systems for handling tapioca wastewater. Furthermore, pH 8 was the best activated sludge batch reactor system condition indicated by the achievement of the best values of kinetic parameters such $\mu_{max} = 0.010457/\text{hour}$, $K_s = 255.0664 \text{ mg/L COD}$, and $Y = 2.92 \text{ mg VSS/mg COD}$.

Keywords: Activated sludge batch reactor system, pH Adjustment, Kinetic parameters, Tapioca wastewater

Note :
