



**UNIVERSITAS MUHAMMADIYAH SEMARANG**  
**FAKULTAS ILMU KEPERAWATAN DAN KESEHATAN**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**SURAT TUGAS**  
**NOMOR: 865/UNIMUS.G/ST/2022**

Pimpinan Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang,  
dengan ini menugaskan :

No	Nama	Jabatan
1	Dr. Stalis Norma Ethica, M.Si	Dosen

Untuk mengikuti kegiatan Konferensi Internasional 2022 International Conference on  
Environmental Science and Green Energy diselenggarakan oleh Shenyang University of  
Technology dan IEEE sebagai **Invited Speaker**, yang akan dilaksanakan pada :  
Tanggal : 10 Desember 2022  
Tempat : Shenyang China (hybrid)

Demikian Surat Tugas ini diberikan untuk dilaksanakan dengan penuh tanggung jawab.



Semarang, 1 Desember 2022  
Dekan,

**Dr. Ali Rosidi, SKM, M.Si**  
NIK. 28.6.1026.021



# Certificate for Invited Speech

International Conference on Environmental Science and Green Energy  
(ICESGE 2022) in Virtual Mode

This is to certify that

Dr. Stalis Norma Ethica

actively attend the conference and deliver the following invited speech at  
ICESGE-22 in a video display mode

“Characteristics of Hydrolytic Indigenous Bacteria as Degradation Agent of  
Hospital Wastewater: A Case Study in Central Java”

Organizing Committee Chair

*Faniana S.H.*



# Invited Speaker | 特邀报告人

## Invited Speech I

**Speech Title:** Development Status and Suggestions of Sustainable Aviation Biofuel



**Mr. ZHOU Mu**

**Department of Airworthiness, Civil Aviation Management Institute of China, Beijing, China**

**Abstract:** Sustainable aviation biofuel (SABF) is a promising solution for aviation emission issues, but its sustainability and related technical standards need to be further studied. With sustainability and technical standards as key factors, this work firstly reviewed the mechanism of the Carbon Offset and Reduction Scheme for International Aviation and its impact on China; then introduced the International Civil Aviation Organization (ICAO) SABF greenhouse gas (GHG) emission value and emission reduction calculation method, analyzed the similarities and differences between ICAO and China's GHG emission reduction calculation, discussed the Chinese and international technical standards for aviation biofuel verification, briefly described the

application of aviation biofuel in and outside of China; finally reviewed the main challenges for fostering aviation biofuel in China, such as imbalance between demand and supply. To deal with these problems, some suggestions for SABF development were presented: Enhance integration between international and domestic carbon markets to accelerate the construction of aviation biofuel sustainability certification system, establish the minimum mixing ratio for SABF, etc.

## Invited Speech II

**Speech Title:** Cellulose/Polyvinylpyrrolidone-doped cadmium sulphide quantum dots and their applications



**Dr. Muhammad Ikram**

**Department of Physics, Government College University Lahore, Pakistan**

### Short Biography

Muhammad Ikram obtained Master degree (M. Phil Physics) from BZU Multan, Pakistan in 2010. He obtained his PhD degree in Physics from Department of Physics, Government College University (GCU) Lahore through Pak-US joint project between Department of Physics, GC U Lahore, Pakistan and University of Delaware, USA in 2015. In 2017, Ikram joined Department of Physics, GC University Lahore as Assistant Professor Physics in 2017. Ikram published over 150 manuscripts in international well reputed journal, 17 book chapters and three international books. Ikram received Seal of Excellence Marie Skłodowska-Curie Individual Fellowship in 2017 and 2020. His research work involves the synthesis and characterization of inorganic semiconductor nanomaterials, sensitive 2D materials for water treatment and optoelectronic applications.

**Abstract:** Facile and control sized cadmium sulphide (CdS) quantum dots (QDs) and cellulose nanocrystals grafted polyvinylpyrrolidone (CNC-g-PVP) doped CdS QDs were prepared via co-precipitation. Doped and Undoped CdS QDs exhibited excellent optical properties. The proposed method is effective in removing industrial polluted water and bactericidal treatments of organic contaminants such as methylene blue (MB). In order to determine the structural, optical, and morphological properties of the produced samples, a number of different characterization procedures were utilized. The X-ray diffraction (XRD) pattern confirmed the structure to be hexagonal, and there was no discernible shift in the spectrum as a result of the addition of 2, 4, or 6% doping. Doping causes a blueshift in the absorption pattern, which is described by the UV spectrophotometer. This shift leads to an increase in band gap energy (Eg). In comparison to the acidic medium, the findings of the catalytic activity (CA) against MB in basic and neutral media were impressive. In addition, the bactericidal potential of the doped sample (6%), which was tested against Staphylococcus aureus (S. aureus) and Escherichia coli (E. coli), both of which are Gram-positive bacteria, exhibited significantly higher inhibition zones. These zones measured 5.25 mm and 4.05 mm, respectively.

## Invited Speech III

**Speech Title:** Green Energy Via Nanotechnology: Future Applications and Perspectives



**Prof. Dr. Mushtaq Ahmad**

**Biofuel and Green Energy Lab, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan**

### Short Biography

Professor Dr. Mushtaq Ahmad is currently working as Director QAU Botanical Garden and Herbarium (ISL), Director Technology Science Park (QAU) Chairman Department of Plant Sciences, Faculty of Biological Sciences, Quaid-i-Azam University Islamabad. Prof. Dr. Ahmad has over 770 publications (citations ±13008, h-index 56, i10-index 294) in diverse fields of Plant Sciences including 696 research publications, 23 international books, 20 chapters in books published largely by Elsevier, Springer, Taylor & Francis, Wiley etc. across the world including Asia, Europe, USA and Africa. He has successfully supervised/produced 32 PhD, 100 M.Phil. 55 M.Sc. and 10 BS research scholars in advanced areas of Plant Systematics & Biodiversity. He has also been awarded various national and international awards in recognition of his outstanding contributions in the field of science and technology including Top 2% influential scientist of the World (2020); Young Researcher Scholar Award by HEC (2019); Highly Cited Research Paper Award by Elsevier and Wiley (2019); Young scientist award by CAS - PIFI - China (2018), Young membership award by Pakistan Academy of Sciences, (2016); Productive scientist awards by PCST (2009 to date); TTS Performance based Awards (2010 to date); Post Doc. Fellowship by TWA Malaysia (2012); Best book award by HEC (2013); Best research paper award by HEC (2011); Gold Medal award by Pakistan Academy of Sciences (2011). He is the member of many international and national academic bodies. Prof. Ahmad has been awarded with many research grant projects funded by GBIF, BIFA (Japan-USA), NAS-USA, CAS-CF Mevlana-Turkey, PAS, HEC and TWAS. These research grants helped Prof. Ahmad to establish modern digital Herbarium (ISL), Botanical Garden, Technology Science Park, Melissopalynology, Aerobiology, Nutraceutical and Green Biofuel research laboratories. He has organized 12 and attended 75 International/National Conferences as Keynote speaker. He has been hosted a series of TV programs and YouTube Channel (Miracle Herbal Diversity) to aware Global and Pakistani communities, farmers linkages with

academia and industries to use plant biodiversity for socio-economic uplifting. He is the active advisory board member in flora of PAN-Himalaya (Asia) & also contributor medicinal plants naming (MPN), Kew-UK, IUCN member and PAS member. He is the recognized reviewer and editorial board member of many world reputed ISI Journals Book series. He is the expert member of DTRC, Selection Board, Board of Studies and Examiner in different universities and institutions in the country.

**Abstract:** The global energy land scape will change more in the next ten years than in the previous hundred. The world is moving towards greener energy obtained from renewable energy sources. Powering A sustainable and profitable energy via green nanotechnology will be a solution to build a greener and more sustainable future. Unt now, plants are still highly esteemed all over the world as a rich source of greener energy. Over the past few decades, researchers have focused on green energy, from botanical sources. Green chemistry, as a work philosophy, has contributed to the design and application of safer and green processes and products. This study provides overview for the green chemistry and green engineering principles that could be instrumental in sustainable biofuel process development. In the current scenario of ene security, the pursuit of alternative energy sources is very important to utilize the non-edible plant resources via phytochemical screening leads to renewable and cleaner energy. Decarbonization is mission-critical for the planet. A viable solution to present-day problems like fuel crises and environmental pollution is to move away from fos fuels towards renewable energy resources. The main focus of this project is on the biosynthesis via nanotechnology using advanced analytical techniques (TLC, HPLC, GC FT-IR, NMR, EDX, SEM) and biological techniques to isolate some novel bioactive phytochemical entities for future applications in cleaner energy production. Currently, academia, society, industry, and government are concerned about the application of greener and cleaner principles. The worldwide concern for the sustainable future requires balanced between legacy systems, emerging technologies, business, economy while better managing assets risk and carbon emissions.

#### Invited Speech IV

**Speech Title:** Characteristics of Hydrolytic Indigenous Bacteria as Degradation Agent of Hospital Wastewater: A Case Study in Central Java



**Dr. Stalis Norma Ethica**

**Postgraduate Department, Magister Study Program of Clinical Laboratory Science; Universitas Muhammadiyah Semarang  
Central Java, Indonesia**

#### Short Biography

Dr. Stalis Norma Ethica is a full-time lecturer and researcher with industrial laboratory experience. She focuses in the utilization of bacterial cells an enzymes as bioremediation, medicinal, and diagnostic agents, supported by encapsulation and genetic engineering technologies. She has been a fu time lecturer (assistant professor) in the Postgraduate Program of Magister of Clinical Medicine since 2019. The Indonesian Ministry of Research and Higher Technology funded her works on developing bioremediation agents for hospital wastewater from indigenous bacteria and developing antithrombosis and antibiofilm agents from marine bacterial enzymes.

**Abstract:** Hospital wastewater is a source of hazardous matters including toxigenic chemicals and pathogenic microorganisms. In the last few years, the initial steps in developing bioremediation agent to treat hospital wastewater have been initiated. The strategy was focused on degrading organic matters in order to improve BOD parameter of hospital wastewater and repressing the growth of pathogenic bacteria present in the waste by propagating the population of beneficial bacteria. Recent stu have been conducted to isolate and characterize hydrolytic indigenous bacteria from wastewater samples obtained from hospitals in the Central Java. In the process, it w found that hydrolytic indigenous bacteria demonstrated the desirable characteristics to be used as degradation agent. The characteristics include Low pathogenicity, abil to produce multiple hydrolytic enzyme production, ability to synergically work as consortium, ability to improve BOD (Biological Oxygen Demand) parameter, and versatil to be microencapsulated. Such characteristics make them a great candidate of bioremediation agent.

# **Characteristics of Hydrolytic Indigenous Bacteria as Degradation Agent of Hospital Wastewater: A Case Study in Central Java**

Dr. Stalis Norma Ethica, M.Si.

Postgraduate Department, Magister Study Program of Clinical Laboratory Science  
Universitas Muhammadiyah Semarang, Central Java, Indonesia

Hospital wastewater is a source of hazardous matters including toxigenic chemicals and pathogenic microorganisms. In the last few years the initial steps in developing bioremediation agent to treat hospital wastewater have been initiated. The strategy was focused on degrading organic matters in order to improve BOD parameter of hospital wastewater and repressing the growth of pathogenic bacteria present in the waste by propagating the population of beneficial bacteria. Recent studies have been conducted to isolate and characterise hydrolytic indigenous bacteria from wastewater samples obtained from hospitals in the Central Java. In the process, It was found that hydrolytic indigenous bacteria demonstrated the desirable characteristics to be used as degradation agent. The characteristics including: Low pathogenicity, ability to produce multiple hydrolytic enzyme production, ability to synergically work as consortium, ability to improve BOD (Biological Oxygen Demand) parameter, and versatility to be microencapsulated. Such characteristics make them a great candidate of bioremediation agent.

Keywords: Hospital wastewater, hydrolytic bacteria, indigenous bacteria, bioremediation agent

# Keynote Speaker | 主旨报告人

## ICESGE 2022 is sincerely inviting plenary speakers!

Joining as one of the plenary speakers in ICESGE 2022, you can attend this conference for free, including the conference documents, ticket during the conference. If you would like to join us, please send us your CV, including your recent photo by email: [icesge@icesge.net](mailto:icesge@icesge.net) (<http://icesge@icesge.net>)

### Keynote Speech I

**Speech Title:** Study on preparation and properties of nonisocyanate polyurethane



**Prof. Li Sanxi**

**Former Vice President of Shenyang University of Technology, China**

#### Short Biography

Prof. Li has published more than 100 research papers and authorized more than 20 patents. He was awarded the Shenyang Top Ten Outstar Young Intellectuals in 2001 and the Shenyang May 4th Medal. The first prize of Liaoning "Youth Science and Technology Award" was awarded in 2002. Awarded an excellent expert and outstanding professional and technical personnel in Shenyang in 2003. Awarded as one of the top 100 scientific and technological innovators in Shenyang in 2005. Elected as a member of the Bureau of the Eleventh Liaoning Provincial People's Congress in 2008. Elected as the deputy Chairman of the Liaoning Provincial Committee of the Democratic League on July 6th, 2017

**Abstract:** This abstract will be available on presentation.

### Keynote Speech II

**Speech Title:** Research Advances in the Efficient Catalysts for the Combustion of Soot Particles from Engine Exhausts



**Prof. Zhao Zhen**

**Institute of Catalysis for Energy and Environment;**

**Dean of School of Chemistry and Chemical Engineering, Shenyang Normal University, China**

#### Short Biography

Dr. Zhao is a Changjiang Scholar, Distinguished Professor at Shenyang Normal University, Director of the Institute of Energy and Environmental Catalysis at Shenyang Normal University, and PhD supervisor at China University of Petroleum (Beijing). He is the Director of the Liaoning University Energy and Environmental Catalysis Engineering and Technology Research Center, the Director of the International Joint Energy and Environmental Catalysis Research Center of China Association for Science and Technology (CAST), and the Deputy Director of the Catalysis Committee of the Chinese Rare Earth Society, among other positions. He has been selected as a Distinguished Professor of the "Changjiang Scholar Award Program" of the Ministry of Education, a national candidate for the "Hundred Million Talents of the New Century", an expert of the "Special Allowance of the State Council", a Liaoning Outstanding Science and Technology Worker. He has been selected as a professor of the "Changjiang Scholars Programme of China" by the Ministry of Education, an expert of "The new century talents project", "State Department special allowance experts" as a Liaoning Outstanding Science and Technology Worker, etc.

He has undertaken 17 national projects, such as the key R&D program project of the Ministry of Science and Technology, 863 project, National Natural Science Foundation of China (NSFC) major research program integration. He has published more than 500 articles with more than 17,000 citations and an h-index is 69 (Scopus), and has been listed as one of the most highly cited scholars in China by Elsevier for eight consecutive years from 2014 to 2021, and received the "Rare Earth Resource Utilization Science & Technology Award" in 2018. In addition, he won the First Prize of the China Rare Earth Science and Technology Award, the First Prize of Basic Research Results of the Chinese Chemical Society, and the First Prize of Teaching Achievement of Liaoning University in 2020. In addition, he won the Innovation Award of "Hou Debang Chemical Technology Award" in 2021. He also received the International Union of Pure and Applied Chemistry (IUPAC) Award for Outstanding Contribution to New Materials and Their Synthesis in 2019.

**Abstract:** This abstract will be available on presentation.

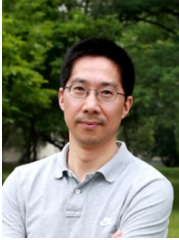
### Keynote Speech III

**Speech Title:** Preparation of Heterogeneous Composites and Their Energy Storage Properties

### Prof. Yang Gang

**Dean of the College of Materials Engineering, Changshu Institute of Technology, China**

#### Short Biography



Prof. Dr. Yang received his Ph.D. degree from School of Chemistry and Chemical Engineering, Nanjing University in 2005, and worked on lithium battery materials during his postdoctoral work at MIT from 2007 to 2008. From 2010 to 2012, he worked as a collaborative researcher in the Department of Physics, University of Aveiro, Portugal on the safety of lithium batteries.

He was selected as the leader of Jiangsu Province's "Youth and Blue Project", the cultivation target of Jiangsu Province's "Six Talent Summit" and Jiangsu Province's "333 Project". In 2016, he won the second prize of Jiangsu Provincial University Science and Technology Research Achievement Award.

He is engaged in researching electrode materials for lithium/sodium batteries, intrinsic safety of materials, and the safe recycling of lithium batteries.

He has published more than 140 SCI-indexed papers in well-known international journals (cited more than 3000 times), applied for 21 national invention patents (14 authorized), and 1 achievement transformation. In addition, he has presided over the National Natural Science Foundation of China, the Natural Science Foundation of Jiangsu Province, the Major Achievement Transformation Project of Jiangsu Province, the Major Natural

Science Project of Jiangsu University, and more than ten projects entrusted by enterprises.

**Abstract:** This abstract will be available on presentation.

#### Keynote Speech IV

**Speech Title:** Sustainability- Recycling Material in Plastic Parts and CO2 Emission Reduction



#### Prof. Zhang Linnan

**Vice Dean of the College of Environmental Chemistry, Shenyang University of Technology, China**

#### Short Biography

Jan 2012 - Jun 2012: Visiting Scholar of the Department of Life and Environmental Chemistry, Oregon State University, USA.

July 2006 - September 2008: Postdoctoral Fellow, School of Environment, Peking University, China.

Research Areas: Pollutant separation and resource recovery, recycling and reuse technology, and solid waste pollution control technology. So far, he has published 30 SCI-indexed papers, including 10 along with the first author and corresponding author, 18 EI-indexed; additionally, 7 times presented at international conferences. In addition, he has been responsible for preparing technical guidelines for cleaner production in two industries of circuit board and electroplating in Shenzhen and authorized 4 invention patents.

**Abstract:** Introducing the recycling plastic material into components is one major measure in this working package. Currently recycling plastic material is new to both BMW/BBA and injection suppliers. Partial plastic material suppliers declare that they are capable of the massive production of recycling material. But the whole certification system is not complete yet. Therefore, we need to work together with suppliers to give some audience and direction if necessary.

#### Keynote Speech V

**Speech Title:** Application of Brucite on Improving the Fire Safety of Polymer Materials



#### Assoc. Prof. Wang Song

**Shenyang University of Technology, China**

#### Short Biography

Associate Professor, Member of the Liaoning Chemical Society, Liaoning Non-metallic Mineral Industry Association, Liaoning Energy Research Society and Liaoning Environmental Protection Industry Association. A professional in polymer new materials development, energy materials development, carbon dioxide comprehensive utilization technology. He has supervised and taken part in over 20 research projects, published over 50 papers, received four awards, and authorized over 10 invention patents.

Representative Research: Effect of oleic acid on improving flame retardancy of brucite in low-density polyethylene composite. *Journal of Applied Polymer Science*, 2021, 151862. Preparation of DOPO-derived magnesium phosphate whisker and its synergistic effect with ammonium polyphosphate on the flame retardancy and mechanical property of epoxy resin. *Journal of Applied Polymer Science*, 2022, e53430.

**Abstract:** As a natural inorganic flame retardant, brucite is widely used in the industrial production of flame-retardant materials. Using brucite as raw material to produce flame-retardant products with high added value is an important work in the field of development and utilization of brucite. This report briefly introduces some research progress in this field in recent years.

#### Keynote Speech VI

**Speech Title:** Seaweed Farming Development to Improve Food Security and Environmental Mitigation



#### Prof. Dr. Ambo Tuwo

**Department of Marine Science and Multitrophic Research Group, Faculty of Marine Science and Fisheries, University of Hasanuddin, Makassar, Indonesia**

#### Short Biography

Prof. Dr. Ambo Tuwo was born in Makassar on November 18, 1962. He earned a bachelor's degree in Fisheries in 1986 at Hasanuddin University, Makassar. He obtained a master's degree in Coastal Resource Management from the Universite de Bretagne Occidentale, Brest, France in 1990. He obtained a Doctorate degree in Marine Ecology from the Universite de Bretagne Occidentale in 1993. He has held the position of Full Professor in Marine Ecology since 2000. Prof. Ambo Tuwo has been a permanent lecturer at the Faculty of Marine and Fisheries Sciences, Hasanuddin University since 1987. He has been a visiting lecturer at several universities in Japan, Canada, Australia, Jamaica, and the Philippines. As a lecturer, he teaches several courses at the undergraduate, master and doctoral levels, namely: Marine Biology, Marine Ecology, Coastal and Marine Ecology, Aquatic Ecology, Tropical Aquatic Ecology, Fish Population Dynamics, Philosophy of Science, Principles of Environmental Science, Contemporary Marine Issues, Coastal and Marine Resource Management, Integrated Ecosystem Management, Ecotourism Fundamentals, Coastal and Marine Ecotourism, and Management of Natural Tourism Areas.

Prof. Ambo Tuwo has been a team of experts on several coastal and marine resource management activities at government agencies and institutions and international

institutions, such as the Regional Development Planning Agency of South Sulawesi Province, Indonesia. Environmental Impact Management Agency for South Sulawesi Province, Indonesia, Environmental Agency for South Sulawesi Province, Indonesia, Coral Reef Evaluation and Management Program (COREMAP), Marine and Coastal Resources Management Program (MCRMP); Island Sustainability Livelihood and Equity Program (ISLE-CIDA-Canada), Sea Cucumber Program of FAO Rome. He was an advisor to the Governor of South Sulawesi and the Mayor of Makassar. In addition, he was a Senior Advisor to Bomar Food Industry and several management consulting firms. Email: ambotuwo62@gmail.com (mailto:ambotuwo62@gmail.com).

**Abstract:** The ever increasing demand for food due to an increase in the human population may cause, one day, food will become scarce. Food scarcity can occur when additional food resources are not found. Agricultural land cannot be expanded continuously, so additional food resources are needed, which can be maintained elsewhere especially in non-paddy or non-land areas. Seaweed can be a future food source. Seaweed has been cultivated for tens or hundreds of years. Seaweed is a fishery commodity that is not technically complicated to cultivate such seaweed cultivation can be carried out by people in developing countries whose low-medium levels of knowledge and work skills. There are four essential roles for seaweed for the present and the future: to strengthen food security, improve environmental mitigation, improve people's welfare, and support sustainable development. Solid food security, a sustainable environment, and better social welfare are the fundamental essence of sustainable development. By this reason, this presentation aims to analyze in a holistic-integral manner the Seaweed Farming Development to Improve Food Security and Environmental Mitigation using the Subject, Object, and Method Analysis Method (S-O-M Analysis). The main developing problems are (1) high population growth and limited food resources; and (2) limited agricultural lands. Related problems that develop are (1) water scarcity, (2) environmental degradation, and (3) energy shortage. The related paradigms are sustainable development, livelihoods, and equity. Meanwhile, the influential strategic environmental conditions are global warming, climate change, and hunger. The implementation concept to improve food security and environmental mitigation: (1) domestication of wild seaweed; (2) develop multitrophic cultivation; (3) develop seaweed as sea vegetables and other food products; (4) use of seaweed as animal feed; and (5) promote and develop seaweed as raw material for renewable energy production. There are four strategic formulations for Seaweed Farming Development to Improve Food Security and Environmental Mitigation, namely: (1) infrastructure improvements to increase the accessibility of marine farming areas through development, rehabilitation, regulation, and legislation; (2) Improve social and economic conditions and marine areas by development, empowerment, regulation, and legislation; (3) Promote sustainable coastal and marine development by development, rehabilitation, regulation and legislation; and (4) Seaweed industry development by research and development, empowerment, regulation, and legislation.

### Keynote Speech VII

**Speech Title:** Impacts of Digital Transformation on Alternative and Green Energies



**Prof. Dr. İlhami COLAK**  
**IEEE Senior Member**  
**Department of Electrical and Electronics Engineering, Faculty of Technology, Gazi University, Turkey**  
**Nisantasi University, Turkey**

#### Short Biography

Prof. Dr. İlhami COLAK was born in 1962 in Turkey. He received his diploma in Electrical Engineering from Gazi University, Turkey in 1985. Then he received his MSc in Electrical Engineering in the field of Speed Control of Wound Rotor Induction Machines Using Semiconductor Devices at Gazi University in 1991. After that he received his MPhil at Birmingham University in England by preparing a thesis on High Frequency Resonant DC Link Inverters in 1991. Finally, he did his PhD at Aston University in England on Mixed Frequency Testing of Induction Machines Using Inverters in 1994. He became an assistant professor, an associate professor and a full professor in 1999 and 2005 respectively.

He has published more than 155 journal papers, 236 conference papers, and 7 books in different subjects, including electrical machines, drive systems, machine learning reactive power compensation, inverter, converter, artificial neural networks, distance learning automation and alternating energy sources.

More than 266 of his papers have been cited in SCI. His papers have received more than 2714 citations by 2310 papers. His Thomson Reuters h-index is 26 and average citation per paper is 10.2.

He published 329 papers in SCOPUS. h-index is 33. His 329 papers have received 4277 citations from 3592 documents.

He supervised 23 MSc students and 14 PhD students. He is a senior member of IEEE, member of IES, IAS, PELS and PES. Last twenty years, he has been concentrated his studies on renewable energy and smart grids by publishing papers, journals ([www.ijrer.org](http://www.ijrer.org)) ([www.ijsmartgrid.org](http://www.ijsmartgrid.org)) and organizing international IEEE sponsored conferences ([www.icrera.org](http://www.icrera.org)), ([icSmartGrid.org](http://icSmartGrid.org)). He also spent around 3 years at European Commission Research Centre (JRC) in Netherlands. He served as the head of department, dean and vice rector at Gazi University, Istanbul Gelisim University and Nisantasi University. He is currently a full professor at Nisantasi University.

Professor COLAK achieved a great success of 10% by being included in the "World's Most Influential Scientists" 2% list, which was created by USA Stanford University considering the "Works of the Year 2020".

**Abstract:** This abstract will be available on presentation.

### Keynote Speech VIII

**Speech Title:** Towards synergism of cavitation phenomenon and advanced chemical treatment processes for degradation of environmental pollutants



**Assoc. Prof. Dr. Grzegorz Boczkaj**  
**Faculty of Civil and Environmental Engineering, Gdansk University of Technology, Poland**

#### Short Biography

Grzegorz Boczkaj (h-index: 37, >4500 citations) is an associate professor at the Faculty of Civil and Environmental Engineering, Gdansk University of Technology (GUT), Poland. He obtained a PhD (2012, with honors) in chemical technology (chemical engineering) at GUT and a habilitation in technical analytics (2017). He is the leader scientist of research group working on new developments in the field of environmental science, separation technology, chemical engineering as well as analytical chemistry. He was a project manager (principal investigator) of several research projects (in total above 1,5 mln \$). Currently, he is the head of two research projects financed by the National Science Centre (NCN, Poland) – the first focused on new developments based on the application of Deep Eutectic Solvents (DESs) and the second focused on wastewater treatment and chemical transformations taking place under advanced reduction processes. He has published over 150 journal articles, book chapters, and technical reports. He is one of the most active scientists on ResearchGate, with RGscore (2022) exceeding 120. According to Publons he was recognized as one of the top peer reviewers in several categories.



**Abstract:** Advanced Chemical Treatment processes are based on Advanced Oxidation Processes (AOPs) or Advanced Reduction Processes (ARPs). A reactive radical species generated under specific conditions provide high effectiveness of degradation of emerging organic pollutants. Such processes can be aided by cavitation phenomenon. Plenty of effective processes were developed for water and wastewater treatment [1-3].

The paper presents an overview of recent developments in the field of cavitation based AOPs and ARPs. A significant recent developments of our research group will be highlighted in respect to effective degradation of several pollutants present in water, industrial effluents and fuels [4-7].

#### Literature

1. K. Fedorov, et al., (2022) Chem. Eng. J. 432, 134191.
2. G. Boczkaj, A. Fernandes, (2017) Chem. Eng. J. 320, 608.
3. M. Gągol, A. Przyjazny, G. Boczkaj, (2018) Chem. Eng. J. 338, 599.
4. K. Fedorov, M. Plata-Gryl, J. Khan, G. Boczkaj, (2020) J. Hazard. Mater. 397, 122804.
5. K. Fedorov, X. Sun, G. Boczkaj, (2021) Chem. Eng. J. 417, 128081.
6. M. Gągol, E. Cako, K. Fedorov, R. Soltani, A. Przyjazny, G. Boczkaj, (2020) J. Mol. Liq. 307, 113002.
7. E. Cako, R. Soltani, X. Sun, G. Boczkaj, (2022) Chem. Eng. J. 439, 35354.



### Conference Introduction

International Conference on Environmental Science and Green Energy (ICESGE 2022) will take place in the Shenyang, China, from 25th to 27th November 2022.

ICESGE 2022 aims to promote the integration and innovation of areas in energy development and environmental science.

ICESGE 2022 is organized by the School of Environment and Chemical Engineering, Shenyang University of Technology and technical supported by Engineering Technology Development and Innovation Society (ETDIS). It is to provide an outstanding forum for researchers, practitioners, policy makers, and users to exchange ideas, techniques and tools, raise awareness, and share experience related to all practical and theoretical aspects of the above fields. ICESGE 2022 includes plenary lectures, keynote speakers, invited speakers, eminent personalities from around the world, and contributed papers presentations.

### Call for Paper and Topics

- Topic A: Alternative Energy and the Environment
- Topic B: Sustainable/Renewable Energy
- Topic C: Assessments of the Condition of Ecosystems and Environmental Quality
- Topic D: Behaviour of and Impacts of Pollutants in Atmosphere, Soil and Water
- Topic E: Management of Ecosystems, Environment and Water Resources
- Topic F: Modelling and Regional Environmental Assessments (Includes Global Change) Modeling
- Topic G: Treatment/ Restoration of Ecosystems, Environment and Water resources

### Publication and Indexing

Submissions will be reviewed by the conference technical committees based on originality, relevance to conference, structure and readability. Accepted and presented papers will be published in conference proceedings, which will be indexed by SCOPUS, Ei Compendex (CPX), CPCI-S, Google Scholar, etc.

### Conference Chairs

- Prof. Jiyan Liang, School of Environment and Chemical Engineering, Shenyang University of Technology, China
- Prof. Linnan Zhang, School of Environment and Chemical Engineering, Shenyang University of Technology, China
- Prof. Shi Fa-Nian, School of Environment and Chemical Engineering, Shenyang University of Technology, China
- Dr. Yinyan Guan, School of Environment and Chemical Engineering, Shenyang University of Technology, China
- Dr. Yu-Hang Zhang, School of Environment and Chemical Engineering, Shenyang University of Technology, China

For More Information: <https://www.icesge.net/Committee/>

### Important Dates

- Submission Deadline (Full Paper): July 30th, 2022
- Notification: August 20th, 2022
- Conference Date: November 25-27, 2022

### Submission Instruction and Methods

1. Language.  
English is the official language of the conference. Therefore, the paper should be written and presented only in English.
2. Full paper (Publication & Presentation).  
Full paper submission is required if you consider publishing your paper.
3. Abstract (Presentation Only).  
If you only consider making a presentation at ICESGE 2022 without paper publication, you can submit an abstract.
4. Welcome to submit online!  
<https://easychair.org/conferences/?conf=icesge2022>  
Should you have any questions, please contact us  
Email: [icesge@icesge.net](mailto:icesge@icesge.net)

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- Email: [icesge@icesge.net](mailto:icesge@icesge.net)
- Tel: +86-536-7321883
- With the requirements from authors, now the WeChatis open; welcome to join us.



### Organizer



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Stalis Norma Ethica &lt;norma@unimus.ac.id&gt;

## [Keynote Speaker] Preparation for attending ICESGE-22 in virtual mode, during December 09th-11th, 2022

6 messages

Sherry Chu <icesge@icesge.net>  
To: Stalis Norma Ethica <norma@unimus.ac.id>

Fri, Nov 18, 2022 at 9:48 AM

Dear Dr. Stalis Norma Ethica,

This is the conference secretary Sherry Chu of ICESGE-22(International Conference on Environmental Science and Green Energy).

I appreciate you accepting our invitation to attend ICESGE-22 and deliver a keynote speech, entitled **"Characteristics of Hydrolytic Indigenous Bacteria as Degradation Agent of Hospital Wastewater: A Case Study in Central Java"**. It will be held virtually via ZOOM due to local COVID-19 circumstances on December 09th-11th, 2022(**9:00-17:30, GMT+8**).

Kindly check and confirm the following profile of yourself due to appear in the conference program/schedule, which will be released to all participants no later than the end of November. Kindly notify any amends, and No changes will be available after **November 21, 2022**.

*Dr. Stalis Norma Ethica M.Si. is a full-time lecturer and researcher with industrial laboratory experience. She focuses in the utilization of bacterial cells and enzymes as bioremediation, medicinal, and diagnostic agents, supported by encapsulation and genetic engineering technologies. She has been a full-time lecturer (assistant professor) in the Postgraduate Program of Magister of Clinical Medicine since 2019. The Indonesian Ministry of Research and Higher Technology funded her works on developing bioremediation agents for hospital wastewater from indigenous bacteria and developing antithrombosis and antibiofilm agents from marine bacterial enzymes.*

**In addition**, you need to prepare the Slide/PPT for your speech.

- Each invited speech has a time limit of 45 mins, including 5 mins for setup and Q&A.
- The presentation PPT could be designed as you like with the requirements below:
- The conference logo should be added to each PPT slide;
- Title, speaker's name and affiliation information should be indicated in the first Slide;
- Each Slide should be concise, uncluttered and readable from a distance; include only keywords and phrases for visual reinforcement.

Please upload the well-designed TTP via email [icesge@icesge.net](mailto:icesge@icesge.net) before **November 25, 2022**. It would be available on the conference website after pre-review and confirmation; if you do not want to post it

publicly, please inform us.

The logo and one slide Template is attached for your reference.

If you are unable to join the online meeting due to time zone differences or other reasons, please record a video of your speech showing your face with high resolution as vivid as a face-to-face presentation, and we will assist you in playing it during the conference.

- The Video uploaded should be in the format of .mp4, and the time duration should be no less than 40 mins;
- The Video submission deadline is **November 30, 2022**; you can send the video(Sharing link) via conference contact email address at [icesge@icesge.net](mailto:icesge@icesge.net)

A brief Guideline for using ZOOM to record one video is attached for your reference.

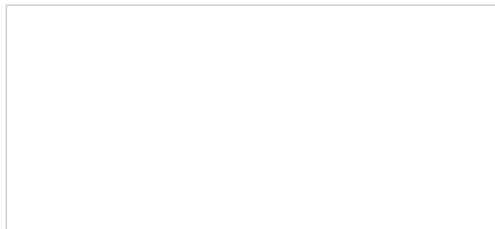
Please get in touch with us and get feedback within 24 hours if you have any problems. We hope everything is good for you, your family, and your friends.

Best Regards,

Conference Secretary of ICESGE-22

Name: Ms. **Sherry Chu**

E-mail: [icesge@icesge.net](mailto:icesge@icesge.net)



发件人: Stalis Norma Ethica <[norma@unimus.ac.id](mailto:norma@unimus.ac.id)>

发送日期: 2022-01-03 14:05:54

收件人: Sherry Chu <[icesge@icesge.net](mailto:icesge@icesge.net)>

主题: Re: Re: Looking forward to your participation

Dear Ms. Sherry Chu,

Thank you for your email. I have just finished writing the title and abstract for the coming speech. Please find them attached, and please let me know if they are suitable for the ICESGE conference scope.

Thank you for your cooperation.

Best Regards,

**Stalis Norma Ethica**

Scopus ID, ORCID ID, Researchgate ID

Magister Program of Clinical Laboratory Science

Universitas Muhammadiyah Semarang

Semarang, Central Java, Indonesia 50273

On Tue, Dec 21, 2021 at 4:38 PM Sherry Chu <[icesge@icesge.net](mailto:icesge@icesge.net)> wrote:

Dear Dr. Stalis Norma Ethica,

Thank you for your exciting reply and welcome to you to join as reviewer/keynote speaker.

We have released your information to the conference's website. If you have any questions, please do not hesitate to contact me. <https://www.icesge.net/Speakers/>

I would appreciate it if you could send your speech' abstract and title to us as soon as you can, so that we will post them on conference's website like other speakers.

We are so thankful to you that would advertise our conference on your study program website.

For your convenience, I prepare the following information for referring.

International Conference on Environmental Science and Green Energy (ICESGE 2022) will take place in the Shenyang, China, from 25th to 27th November 2022, which is sponsored by School of Environment and Chemical Engineering, Shenyang University of Technology; Engineering Technology Development and Innovation Society(ETDIS).

ICESGE 2022 aims to promote the integration and innovation of areas in energy development and environmental science. As we all know, the field of energy development and environmental science has not only helped the development in various fields in science and technology but also contributes the improvement of the quality of human life to a great extent.

It is to provide an outstanding forum for researchers, practitioners, policy makers, and users to exchange ideas, techniques and tools, raise awareness, and share experience related to all practical and theoretical aspects of above fields. ICESGE 2022 includes plenary lectures, keynote speakers, invited speakers and eminent personalities from around the world in addition to contributed papers presentations.

### **Proceedings Publication**

Submissions will be reviewed by the conference technical committees based on originality, relevance to conference, structure and readability. Accepted and presented papers will be published in conference proceedings, which will be submitted to SCOPUS, Ei Compendex (CPX), CPCI-S, Google

Scholar, etc. for indexing.

### **Journals Publication**

Extended papers will be published in following Journals.

**One:** Energy Engineering ISSN: 1546-0118

Ei Compendex and Scopus indexing

**Two:** Journal of Petroleum Exploration and Production Technology

Scopes: Towards sustainability in the petroleum industry: initiatives, technologies, innovation and industry dynamics

Ei Compendex, SCOPUS and Science Citation Index Expanded

**For more details:** <https://www.icesge.net/>

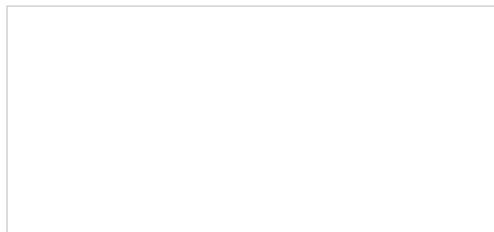
Best Regards,

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Conference Secretary of ICESGE-22

Name: Ms. **Sherry Chu**

E-mail: [icesge@icesge.net](mailto:icesge@icesge.net)



发件人: Stalis Norma Ethica <[norma@unimus.ac.id](mailto:norma@unimus.ac.id)>

发送日期: 2021-12-20 13:01:53

收件人: Sherry Chu <[icesge@icesge.net](mailto:icesge@icesge.net)>

主题: Re: Looking forward to your participation

Dear Sherry Chu,

Thank you for your email and invitation to join ICESGE, I have visited the website and it is a very intriguing forum. Concerning the role, I will be very focused on quite a few projects in 2022, so will not suit the co-chair. However, for the reviewer/keynote speaker I would not mind, it is just my environment concern is more about bioremediation of hospital wastewater using bacteria. So, as long as the work is related to that topic, I believe I could contribute. Plus, if you want me to help share the event, I could advertise it on our study program website <https://pasca.unimus.ac.id>.

I hope this is as you expected. Attached is my CV.

Best regards,

**Stalis Norma Ethica**

[Scopus ID](#), [ORCID ID](#), [Researchgate ID](#)

[Magister Program of Clinical Laboratory Science](#)

Universitas Muhammadiyah Semarang

Semarang, Central Java, Indonesia 50273

On Sat, Dec 18, 2021 at 3:00 PM Sherry Chu <[icesge@icesge.net](mailto:icesge@icesge.net)> wrote:

Dear Dr./Prof. Stalis Norma Ethica,

We apologize if you received this letter by mistake or against your will.

It is just for an academic invitation and entirely up to you to accept or not.

I am delighted to inform you the International Conference on Environmental Science and Green Energy (ICESGE 2022) will be held in Shenyang, China, from Nov. 25-27, 2022.

It is organized by School of Environment and Chemical Engineering, Shenyang University of Technology and technically supported by Engineering Technology Development and Innovation Society(ETDIS).

Our aims are to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of environmental science and green energy.

It also provides a premier interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of environmental science and green energy.

Given your outstanding academic achievement and excellent international reputation, we are delighted to officially invite you to join the ICESGE 2022 as the Co-chair/reviewer/keynote speaker to promote its international influence and visibility.

**Benefits for joining us**

Refresh your knowledge, broaden your horizons

Free to tour around Shenyang after the conference

Gain relevant research experience and potential collaboration opportunities

Enjoy a discount on your conference registration fee

Be a potential candidate for the Technical Program Committee Chair for the next conference

For more information on ICESGE <https://www.icesge.net/>

As covid-19 is still ambiguous and unpredictable, online mode is a better choice for attending the conference.

Please send your CV, including your affiliation and photo, if you are interested in joining us.

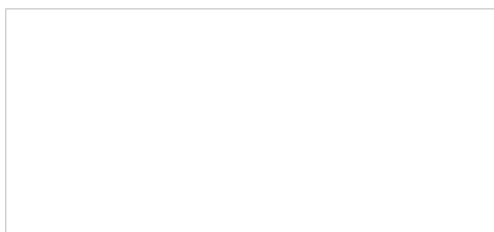
Looking forward to your reply.

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Conference Secretary of ICESGE-22

Name: Ms. **Sherry Chu**

E-mail: [icesge@icesge.net](mailto:icesge@icesge.net)



#### 从网易企业邮箱发来的云附件



ICESGE-22\_KN\_Speech\_slide\_template.pptx

186.63K | 永不过期



Presentation\_recording\_with\_ZOOM.pdf

889.37K | 永不过期



ICESGE logo.png

29.94K | 永不过期





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**Stalis Norma Ethica** <norma@unimus.ac.id>  
To: Sherry Chu <icesge@icesge.net>

Sun, Nov 20, 2022 at 9:20 PM

Dear Sherry Chu,

Thank you for the information. I apologise for late reply. I am fine with the profile.

Yes I am preparing my ppt, and likely will be in video format mp4 too aside of ppt, in case that on the day of conference I may have to travel to Lombok Island.

I will try my best to send it to you by Nov 25 2022.

Best regards  
Dr. Stalis Norma Ethica

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**Sherry Chu** <icesge@icesge.net>  
To: Stalis Norma Ethica <norma@unimus.ac.id>

Tue, Nov 22, 2022 at 12:56 PM

Dr. Stalis Norma Ethica,

Thank you so much for your confirmation and notification.

We are looking forward to your PPT and video.

Best Regards,  
Conference Secretary of ICESGE-22  
Name: Ms. **Sherry Chu**  
E-mail: [icesge@icesge.net](mailto:icesge@icesge.net)

发件人: Stalis Norma Ethica <norma@unimus.ac.id>

发送日期: 2022-11-20 22:20:11

收件人: Sherry Chu <icesge@icesge.net>

主题: Re: [Keynote Speaker] Preparation for attending ICESGE-22 in virtual mode, during December 09th-11th, 2022

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**Stalis Norma Ethica** <norma@unimus.ac.id>  
To: Sherry Chu <icesge@icesge.net>

Fri, Nov 25, 2022 at 11:36 AM

Dear Sherry Chu,

Please find my ppt first for ICESGE 2022, I will be able to record in MP4 in the next few hours.  
I hope it is as you expected.

Very best regards,

 **ICESGE 2022 SNE.pptx**

**Stalis Norma Ethica**

Scopus ID, ORCID ID, Researcher ID

[Magister Program of Clinical Laboratory Science](#)

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