



# CONFERENCE AGENDA

## WEB conference

ICSMM & ICCSE 2020

November 20-22, 2020

Time Zone: GMT+8

The 4<sup>th</sup> International Conference on Sensors, Materials and Manufacturing

The 9<sup>th</sup> International Conference on Chemical Science and Engineering

Co-organized by:



# TABLE OF CONTENTS

<b>Welcome Address</b>	<b>2</b>
<b>Committee</b>	<b>3</b>
<b>Guideline</b>	<b>5</b>
<b>Speaker</b>	<b>6</b>
<b>Agenda Overview</b>	<b>10</b>
<b>Detailed Overview</b>	<b>11</b>
<b>Author's Presentation</b>	<b>14</b>

# WELCOME ADDRESS

Dear distinguished delegates,

We sincerely appreciate your strong support for this on-line conference. Welcome to attend ICSMM & ICCSE 2020. With the evolving COVID-19 pandemic, the whole world has been under stress and countries have no choice but to impose tight border control. Considering this situation, we are creating a virtual environment where the attendees can present the papers and can participate in all the sessions and in all the activities that will be organized in a full immersive experience.

Presentations of Session 1-3 and 8-9 are from ICSMM, ICCSE, ICFMM, ICAMM and CCEA 2020 conference. Moreover, presentations of Session 4-7 are from ICSMR, ICMEN, ICFCM and ICDME 2020 conference. These conferences are combined to be held together online in order to create a better academic atmosphere. Hope you all could find this online conference meaningful and useful and hope all of you have a wonderful time during this conference.

Special thanks are extended to our colleagues in program committee for their thorough reviews of all the submissions, which are vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, organizing and helping the conference. Last but not least, our special thanks go to speakers as well as all the authors for contributing their latest researches to the conference.

This is a great challenge that we will live together to have a better world tomorrow! Stay safe and be healthy! We look forward to meeting you again next time!

ICSMM & ICCSE 2020  
Committee Group

# COMMITTEE

## **Advisory Committee**

Prof. Norbert Schwesinger, Technical University of Munich, Germany

## **Conference Chair**

Prof. Zongjin Li, University of Macau (UM), China

## **Conference Co-Chair**

Prof. Shen-Ming Chen, National Taipei University of Technology, Taiwan

## **Program Chairs**

Prof. Ashok Srivastava, Louisiana State University, USA

Prof. Edward Yi Chang, National Chiao Tung University, Taiwan

Prof. Yasuteru Shigeta, University of Tsukuba, Japan

## **Steering Committee**

Prof. Sergei Alexandrov, Beihang University, China

## **International Technical Committee**

Prof. Songling Huang, Tsinghua University, China

Prof. Wenzhi Fu, Jilin University, China

Prof. Geyu Lu, Jilin University, China

Prof. Tingkai Zhao, Northwestern Polytechnical University, China

Prof. Hyoung Jin Choi, Inha University, South Korea

Prof. Faruk Elaldi, University of Baskent, Turkey

Prof. Khaled Abou-El-Hossein, Nelson Mandela University, South Africa

Assoc. Prof. Yu-Chung Chang, National Changhua University of Education, Taiwan

Dr. Qifeng Zhang, North Dakota State University, USA

Dr. Yang Xi, Newomics Inc., USA

Dr. Xiaoliang Zhu, Hitachi America Ltd. R&D, China

Assit. Prof. Vu Ngoc Pi, Nguyen Tat Thanh University, Vietnam

# COMMITTEE

## **International Technical Committee**

Prof. Parames Chutima, Chulalongkorn University, Thailand  
Assoc. Prof. Yulong Sun, Northwestern Polytechnical University, China  
Prof. Aleksander Muc, Cracow University of Technology, Poland  
Assist. Prof. Panida Charnkeitkong, Rangsit University, Thailand  
Prof. Yuzhou Wu, Huazhong University of Science and  
Technology, China & Max-Planck Institute for Polymer Research, Germany  
Prof. Yizhuo Han, Chinese Academy of Sciences, China  
Prof. M. Mosihuzzaman, Dhaka University, Bangladesh  
Prof. Muhammad Nasiruddin Khan, University of Karachi, Pakistan  
Prof. Ricardo Branco, University of Coimbra, Portugal  
Prof. Nurhidayatullaili Muhd Julkapli, University Malaya, Malaysia  
Prof. Jobrun Nandong, Curtin University, Malaysia  
Assoc. Prof. Syamsul Rizal Abd. Shukor, Universiti Sains Malaysia, Malaysia  
Assoc. Prof. Syamsul Rizal Abd Shukor, Universiti Sains Malaysia  
Assoc. Prof. AMAL AL-ABOUDI, University of Jordan, Amman, Jordan  
Assoc. Prof. Mohammad H. Semreen, Universiy of Sharjah, UAE  
Assoc. Prof. Ali Hafez Ali Mohamed El-Far, Damanhour University, Egypt  
Assoc. Prof. Vasileios J. Inglezakis, Nazarbayev University, Kazakhstan  
Dr. Yang Xi, Thinfilm Electronics Inc., United States  
Dr. Hao Wang, Northeastern University, China  
Dr. Hugo Miguel Silva, University of Minho, Portugal  
Dr. Kanchana Watla-iad, Mae Fah Luang University, Thailand  
Dr. Jin Shang, City University of Hong Kong, Hong Kong



# GUIDELINE

Time Zone **Beijing Time: GMT +8**

You're suggested to set up the time on your computer in advance.

Platform: ZOOM

## Zoom skill learning

1. The instructions about Zoom, please visit:

<https://support.zoom.us/hc/en-us/article/s/201362033-Getting-Started-on-Windows-and-Mac>

2. To get the Zoom Video Tutorials, please go to:

<http://www.icsmm.org/zoom/guidelines.html>

## Join Zoom Meeting Room

Formal & Test Speaker, Formal & Test Session 1-3, please join in

<https://zoom.com.cn/j/67037362121>

Meeting ID: 67037362121

Formal & Test Session 4-9, please join in

<https://zoom.com.cn/j/63765684366>

Meeting ID: 63765684366

## Environment requirement

1. Quiet Location
2. Stable Internet Connection
3. Proper lighting

## Equipment needed

1. A computer with an internet connection (wired connection recommended)
2. USB plug-in headset with a microphone (recommended for optimal audio quality)
3. Webcam: built-in or USB plug-in

## How to access the Zoom meeting room

1. Open Zoom app and create account firstly, then log in with your account.
2. Choose "JOIN A MEETING", and copy the Meeting ID directly and then click "JOIN" button.
3. Rename your name with this format **(Paper ID + Name)** entering the Zoom meeting room.

## Attention

1. To effectively control the time and avoid some unexpected situations, we advise you to record your presentation in advance as a backup. Each author has 12 minutes for presentation and 3 minutes for Q&A.
2. November 20, 2020 is for test presentation, please don't forget to test in order to guarantee the formal sessions goes smoothly.
3. The conference will be recorded, we will appreciate your proper behavior.
4. Please enter the meeting room 10 minutes in advance.

# SPEAKER

## Keynote Speaker



**Prof. Jiaping LIU, Southeast  
University, China**

刘加平教授(长江学者), 东南大学

**Biography:** Jiaping LIU, professor and PhD supervisor of Southeast University, China, expert with State Council special allowance, member of the British Concrete Society. He is the distinguished professor of the “Changjiang Scholar Program” granted by the Chinese Ministry of Education and was awarded the National Science Fund for Distinguished Young Scholars. He won the National “May Day Labor Medal” and the second National “Outstanding Engineer Award”. He is the chairman of the RILEM TC-CEC, the vice president of the Chinese branch of the American Concrete Institute (ACI), the vice chairman of the China Engineering Construction Standardization Association.

For more Biography, please visit:

<http://www.icsmm.org/speaker.html>

**Speech Title:** *Influence of Chemical Admixtures on Microstructure and Properties of Concrete – Recent advance*

**Abstract:** Recent advance on chemical admixtures and their influence on the concrete properties is summarized. In the first part, the effect of molecular structure and conformation of PCE on the compatibility and rheological properties of cementitious materials is discussed. Secondly, a novel starch-based material temperature rise inhibitor (TRI) is introduced, which brings a new approach to solve the thermal cracking issue by controlling the exothermic process during the cement hydration. In the third part, the effect of superabsorbent polymer (SAP) with different chemical structure on the properties of internally cured cementitious materials and related mechanism are discussed. Finally, a bioinspired underwater adhesive is designed and prepared by both cementitious materials and hydrogel, which shows remarkable underwater bonding performance. Advanced quantitative micro-analytical methods and computational modelling are helping us to understand the action mechanism of chemical admixtures and leading to the performance based molecular and microstructure design, which strongly promote the development and application of admixtures in cementitious materials.

# SPEAKER

## Keynote Speaker



**Prof. Zikang TANG, Director of  
Institute of Applied Physics and  
Materials Engineering  
University of Macau (UM), China**

汤子康教授, 澳门大学

**Biography:** Zikang Tang, currently is Chair Professor and Director of Institute of Applied Physics and Materials Engineering, University of Macau. Before he joined to University of Macau in Jan 2016, he has been working for Hong Kong University of Science and Technology, as professor in the Department of Physics. Prof. Tang is a pioneer in research on wide bandgap semiconductor photo-electronic physics and devices. With outstanding achievements in the field of zinc oxide ultraviolet lasing materials and devices, he won a State Natural Science Award (2nd class) in 2003.

For more Biography, please visit:

<http://www.icsmm.org/speaker.html>

**Speech Title:** *Perovskite Microdisk for Coherent Light Emission*

**Abstract:** To Be Added



## Keynote Speaker



**Prof. Shen-Ming Chen, National  
Taipei University of Technology,  
Taiwan**

陈生明教授,台北科技大学

**Biography:** Prof. Shen-Ming Chen (h-index > 60) received his PhD degrees in chemistry from National Taiwan University, Taipei, Taiwan. He was a visiting postdoctoral fellow with the Institute of Inorganic Chemistry, Friedrich-AlexanderUniversity Erlangen-Nuremberg, Germany in 1997. He joined Department of Chemical Engineering, National Taipei Institute of Technology, Taipei, Taiwan in 1985. He had been an associate professor of Department of Chemical Engineering, National Taipei Institute of Technology, Taipei, Taiwan from 1991 to 1997.

For more Biography, please visit:

<http://www.icsmm.org/speaker.html>

**Speech Title:** *Synthesis and Fabrication of Carbon Allotropes (Graphene, Carbon nanotubes) Supported Metal Sulphides Nanocomposites for the Applications of Electrochemical Sensor, Biosensor, and Energy Storage Devices*

**Abstract:** The biomolecules in the excess level and over usage in humans is usually hazardous, causes many side effects, major illness, and sometimes leads to death. On other hand, energy crisis is one of the most urgent and critical issues in our modern society. Currently, there is an increasing demand for efficient, low-cost, light-weight, flexible and environmentally benign, small, medium, and large-scale energy storage devices, which can be used to power smart grids, portable electronic devices, and electric vehicles. Therefore, it is essential to discover the new electrode materials with high efficiency for the electrochemical detection of biomolecules and energy storage applications. In recent years, mixed 2D layered metal sulphides have been focused elicited research interest in worldwide owing to their environment benignity, stronger electronic conductivity and higher electrochemical properties than single-component metal sulphides. In addition, carbon based materials has been considered as an excellent platform for the preparation of nanocomposite due to its attractive properties including effective surface area, unique structures, mechanical and thermal stability, outstanding charge-transfer characteristics which enhances the electrocatalytic.

# SPEAKER

## Keynote Speaker



**Prof. Guoxing Sun, University of  
Macau (UM), China**

孙国星教授，澳门大学

**Biography:** Dr. Guoxing Sun is a chemist and received his doctoral degree from The Hong Kong University of Science and Technology for a work on interaction between organic-inorganic phases in cement/polymer composites in January 2015. During his postdoc phase he extended these activities to cement-released nanoparticles for polymeric nanocomposite enhancement, which has been patented and published on SCI journals such as Nature Communications and Journal of Materials Chemistry A. He had worked in The Nano and Advanced Materials Institute Limited (Hong Kong) as a research engineer from September 2015 to January 2017, and then joined in Institute of Applied Physics and Materials Engineering of University of Macau as an assistant professor.

## Speech Title: *Application of Polymer Nanocomposites*

**Abstract:** The speaker will use two examples of industrialized technology inventions to describe how to effectively combine and apply the two different disciplines of chemistry and civil engineering to the research and development of various composite materials. (1) Use cement as raw material to produce nanoparticles (size <5 nm), and use them to prepare a series of hydrogels with super elasticity, adsorption and water swelling properties, and develop their applications in engineering, electronics, biological materials, environment and other fields. (2) Low-cost, nanoparticle-stabilized foam that can keep stable for years, which could be used to mix with cement paste to prepare lightweight, high-strength, fire-resistant and thermally insulated foam cement. The product was widely used in fabricated lightweight wall panels for energy-efficient buildings

# AGENDA OVERVIEW

Formal & Test Speaker, Formal & Test Session 1-3

Meeting ID: 67037362121

Formal & Test Session 4-9

Meeting ID: 63765684366

FRIDAY 20 NOVEMBER, 2020		SATURDAY 21 NOVEMBER, 2020		SUNDAY 22 NOVEMBER, 2020
10:00-10:50 Test Speakers & Committee	14:45-15:25 Test Session 5	08:50-09:00 Opening Remarks	15:30-17:15 Session 2	09:00-10:30 Session 8
10:50-11:00 Break	15:25-15:35 Break	09:00-09:10 Welcome Address	17:15-17:25 Break	10:30-10:40 Break
11:00-11:40 Test Session 1	15:35-16:00 Test Session 6	09:10-09:55 Speech 1	17:25-18:40 Session 3	10:40-12:25 Session 9
11:40-11:50 Break	16:00-16:10 Break	09:55-10:40 Speech 2	13:20-14:50 Session 4	
11:50-12:25 Test Session 2	16:10-16:35 Test Session 7	10:40-10:50 Morning Break	14:50-15:00 Break	
12:25-13:30 Break	16:35-16:45 Break	10:50-11:35 Speech 3	15:00-17:00 Session 5	
13:30-13:55 Test Session 3	16:45-17:15 Test Session 8	11:35-12:20 Speech 4	17:00-17:10 Break	
13:55-14:05 Break	17:15-17:25 Break	12:20-13:20 Lunch Break	17:10-18:25 Session 6	
14:05-14:35 Test Session 4	17:25-18:00 Test Session 9	13:20-15:20 Session 1	18:25-18:35 Break	
14:35-14:45 Break		15:20-15:30 Break	18:35-19:50 Session 7	

# DETAILED AGENDA

## Test Session at a Glance

**FRIDAY  
20 NOVEMBER, 2020**

Test Speaker &  
Session 1-3

Meeting ID:  
67037362121  
Meeting Link:  
[https://zoom.com.cn/j/  
67037362121](https://zoom.com.cn/j/67037362121)

Test Session 4-9

Meeting ID:  
63765684366  
Meeting Link:  
[https://zoom.com.cn/j/  
63765684366](https://zoom.com.cn/j/63765684366)

Time	Item & Speaker
10:00-10:50	Test Speakers & Committee
10:50-11:00	Break
11:00-11:40	Session 1: Metalology and Metalworking
11:40-11:50	Break
11:50-12:25	Session 2: Advanced Manufacturing Technology and Industrial Engineering
12:25-13:30	Break
13:30-13:55	Session 3: Material Chemistry and Chemical Engineering
13:55-14:05	Break
14:05-14:35	Session 4: Membrane Science and Chemical Engineering
14:35-14:45	Break
14:45-15:25	Session 5: Composite Materials and Building Materials
15:25-15:35	Break
15:35-16:00	Session 6: Mechanical Manufacturing and Automation
16:00-16:10	Break
16:10-16:35	Session 7: Advanced Material Processing and Characterization
16:35-16:45	Break
16:45-17:15	Session 8: Functional Materials, Devices and Structure Design
17:15-17:25	Break
17:25-18:00	Session 9: Electrode Materials and Electrochemistry

# DETAILED AGENDA

## Formal Session at a Glance

<p><b>SATURDAY</b> <b>21 NOVEMBER, 2020</b></p> <p>Meeting ID: 67037362121 Meeting Link: <a href="https://zoom.com.cn/j/67037362121">https://zoom.com.cn/j/67037362121</a></p> <p><b>Keynote Speech Chair:</b> <b>Prof. Zongjin Li</b></p>	Time	Item & Speaker
	08:50-09:00	Opening Remarks Prof. Zongjin Li
	09:00-09:10	Welcome Address Prof. Shen-Ming Chen
	09:10-09:55	Speech 1 Prof. Jiaping LIU Speech Title: <i>"Influence of Chemical Admixtures on Microstructure and Properties of Concrete – Recent Advance"</i>
	09:55-10:40	Speech 2 Prof. Zikang TANG "TO BE ADDED"
	10:40-10:50	Morning Break
	10:50-11:35	Speech 3 Prof. Shen-Ming Chen Speech Title: <i>"Synthesis and Fabrication of Carbon Allotropes (Graphene, Carbon nanotubes) Supported Metal Sulphides Nanocomposites for the Applications of Electrochemical Sensor, Biosensor, and Energy "</i>
	11:35-12:20	Speech 4 Prof. Guoxing Sun Speech Title: <i>"Application of Polymer Nanocomposites"</i>
	12:20-13:20	Lunch Break



# DETAILED AGENDA

## Formal Session at a Glance

### **SATURDAY 21 NOVEMBER, 2020**

Formal Session 1-3

Meeting ID:

67037362121

Meeting Link:

<https://zoom.com.cn/j/67037362121>

Formal Session 4-7

Meeting ID:

63765684366

Meeting Link:

<https://zoom.com.cn/j/63765684366>

Time	Item
13:20-15:20	Session1: Metalology and Metalworking
15:20-15:30	Break
15:30-17:15	Session2: Advanced Manufacturing Technology and Industrial Engineering
17:15-17:25	Break
17:25-18:40	Session3: Material Chemistry and Chemical Engineering
13:20-14:50	Session4: Membrane Science and Chemical Engineering
14:50-15:00	Break
15:00-17:00	Session5: Composite Materials and Building Materials
17:00-17:10	Break
17:10-18:25	Session 6: Mechanical Manufacturing and Automation
18:25-18:35	Break
18:35-19:50	Session 7: Advanced Material Processing and Characterization

### **SUNDAY 22 NOVEMBER, 2020**

Formal Session8,9

Meeting ID:

63765684366

Meeting Link:

<https://zoom.com.cn/j/63765684366>

Time	Item
09:00-10:30	Session 8: Functional Materials, Devices and Structure Design
10:30-10:40	Break
10:40-12:25	Session 9: Electrode Materials and Electrochemistry

# AUTHOR'S PRESENTATION

## Session 1-- Metallogy and Metalworking

**13:20-15:20, Nov. 21 (Beijing Time GMT+8)**

**Session Chair: TBA**

**Meeting ID: 67037362121**

**Meeting Link: <https://zoom.com.cn/j/67037362121>**

<b>13:20-13:35</b>	<b>ME20-303</b>	Numerical Analysis of Microstructure Anomalies during Laser Welding Nickel-based Single-crystal Superalloy Part I: Alloying Aluminum Redistribution Zhiguo Gao, Anyang Institute of Technology, China
<b>13:35-13:50</b>	<b>CS20-1001E</b>	Numerical Analysis of Microstructure Anomalies during Laser Welding Nickel-based Single-crystal Superalloy Part II: Minimum Dendrite Tip Undercooling Zhiguo Gao, Anyang Institute of Technology, China
<b>13:50-14:05</b>	<b>SG2-005-A</b>	Heavily Cold Drawn Iron Wires: Role of Nano-lamellae in Enhancing the Tensile Strength Hanchen Feng, Southeast University, China
<b>14:05-14:20</b>	<b>CS20-1008</b>	Defects Reduction in Spheroidal Graphite Iron Casting Process of a Jackscrew Manufacturer Supachart Muangyai, Chulalongkorn University, Thailand
<b>14:20-14:35</b>	<b>SG2-007-A</b>	Evolution of Cementite in Cryogenic Cold-drawing of Pearlitic Steel Wires Dasheng Wei, Southeast University, China
<b>14:35-14:50</b>	<b>M5029</b>	High Stock Removal Hard Turning of Hardened 52100 Steel with High Pressure Coolant Applied Xiaozhong Song, The Timken Company, USA

<b>14:50-15:05</b>	<b>M5024</b>	Model of Weld Beads Geometry Produced on Surface Temperatures by Wire and Arc Additive Manufacturing (WAAM) Supasit MANOKRUANG, G-SCOP, France
<b>15:05-15:20</b>	<b>M5025-A</b>	Surface Quality and Industrial Application of Additive Manufactured 17-4PH Stainless Steel Parts Kyung-Tae Yang, Sungkyunkwan University, South Korea

# AUTHOR'S PRESENTATION

## Session 2-- Advanced Manufacturing Technology and Industrial Engineering

**15:30-17:15, Nov. 21 (Beijing Time GMT+8)**

**Session Chair: TBA**

**Meeting ID: 67037362121**

**Meeting Link: <https://zoom.com.cn/j/67037362121>**

<b>15:30-15:45</b>	<b>M5023</b>	Part quality prediction in multistage machining processes with fixtures based on locating surfaces using dual quaternions Filmon Yacob, KTH Royal Institute of Technology, Sweden
<b>15:45-16:00</b>	<b>SG2-008</b>	Manufacturing and Characterization of Open-Cell Aluminum Foam Produced via Infiltration of Leachable Space Holder Ziad El Sayed, Alexandria University, Egypt
<b>16:00-16:15</b>	<b>M5030</b>	Optimization of machining parameters based on VERICUT three-axis milling Xiaolei Li, Southwest Forestry University, China
<b>16:15-16:30</b>	<b>M5031-A</b>	An investigation of the squeak annoying noise for vehicle door weatherstrips Sanghyun Lee, Sungkyunkwan University, South Korea
<b>16:30-16:45</b>	<b>CS20-1005</b>	Dip Degreasing Stage Improvement in Car Body Pretreatment Process by Six Sigma Jadesupa Palrungsri, Chulalongkorn University, Thailand

<b>16:45-17:00</b>	<b>M5032</b>	Applying Value Stream Mapping in Packaging Industry: A Case Study Orapadee Joochim, King Mongkut's Institute of Technology Ladkrabang, Thailand
<b>17:00-17:15</b>	<b>CS20-1006</b>	Weight-loss Percentage Improvement of PVC Artificial Leather Products in Automotive part industry by Six Sigma Ruttanaporn Leruk, Chulalongkorn University, Thailand



# AUTHOR'S PRESENTATION

## Session 3-- Material Chemistry and Chemical Engineering

**17:25-18:40, Nov. 21 (Beijing Time GMT+8)**

**Session Chair: Prof. Shen-Ming Chen, National Taipei University of Technology, Taiwan**

**Meeting ID: 67037362121**

**Meeting Link: <https://zoom.com.cn/j/67037362121>**

- |                    |                  |  |
|--------------------|------------------|--|
| <b>17:25-17:40</b> | <b>CS20-1004</b> | In-Situ synthesis of SiO <sub>2</sub> Nanoparticles by Sol-Gel Method on Cotton Fabrics and Investigation of Their Physical and Chemical Properties<br>Rattanaphol Mongkhorrattanasit, Rajamangala University of Technology Phra Nakhon, Thailand          |
| <b>17:40-17:55</b> | <b>CS20-202</b>  | Research Progress on Numerical Simulation of Two-phase Flow in the Gas-solid Fluidized Bed<br>Shujie Sun, Qingdao University of Science and Technology, China  |
| <b>17:55-18:10</b> | <b>CS20-211E</b> | The Impact of Surface Characteristics of Slightly Soluble Cu (II) and Ni (II) Compounds on their Electroflotation Extraction from Concentrated Solutions of Electrolytes<br>V A Brodskiy, D. Mendeleev University of Chemical Technology of Russia, Russia |
| <b>18:10-18:25</b> | <b>SG2-006-A</b> | Evolution of Cementite in Cryogenic Cold-drawing of Pearlitic Steel Wires<br>Dasheng Wei, Southeast University, China  |
| <b>18:25-18:40</b> | <b>M2008-A</b>   | Growth Behaviors of the Crystal layer during Static Layer Melt Crystallization and its Real-time Thermal Conductivity<br>Suping Ding, Tianjin University, China  |

# AUTHOR'S PRESENTATION

## Session 4-- Membrane Science and Chemical Engineering

**13:20-14:50, Nov. 21 (Beijing Time GMT+8)**

**Session Chairs:** Prof. Shyh-shin Hwang, Chien-hsin University of Science and Technology, Taiwan

**Meeting ID:** 63765684366

**Meeting Link:** <https://zoom.com.cn/j/63765684366>

- |                    |                   |  |
|--------------------|-------------------|--|
| <b>13:20-13:35</b> | <b>CM20-503</b>   | Swelling Behaviour and Water Vapour Transmission Rates of Gellan gum/Collagen Film containing Gatifloxacin as Dressing Materials<br>Aznatul Jannah Abu Bakar, Universiti Malaysia Terengganu, Malaysia   |
| <b>13:35-13:50</b> | <b>ME20-104-A</b> | Textile Wastewater Treatment Using a New Type of BiOBr-derived Photocatalytic Membrane: A Comparison with Current State-of-the-art Filtration Technology<br>Chi-Wing Tsang, Technological and Higher Education Institute of Hong Kong, Hong Kong |
| <b>13:50-14:05</b> | <b>ME20-101</b>   | Fluorine-free Durable Superhydrophobic Surfaces Fabricated via a Simple Spraying Method<br>Zhiyong Xu, Soochow University, China   |
| <b>14:05-14:20</b> | <b>CM20-603</b>   | Straightforward Synthesis of Cost Effective, Flexible, and Hydrophobic Polyaniline-Chitosan (PAni-Cs) Films Produced with Lactic Acid as Solvent<br>Bianca Rae Pasela, Mapua University, Philippines   |
| <b>14:20-14:35</b> | <b>CM20-604</b>   | Cure Characteristics and Mechanical Properties of Rubber Compound Reinforced with Activated Carbon from Coconut Husks as Alternative to Carbon Black<br>Mitch Irene Kate Oyales, University of the Philippines Diliman, Philippines              |

**14:35-14:50**    **CM20-506**    Development of Sunscreen from Fisheries Waste by  
Sardinella fimbriata Fish Bones  
Mohd Zul Helmi Rozaini, Universiti Malaysia  
Terengganu, Malaysia

# AUTHOR'S PRESENTATION

## Session 5-- Composite Materials and Building Materials

**15:00-17:00, Nov. 21 (Beijing Time GMT+8)**

**Session Chairs: Dr. Chi-Wing Tsang, Technological and Higher Education Institute of Hong Kong, Hong Kong**

**Meeting ID: 63765684366**

**Meeting Link: <https://zoom.com.cn/j/63765684366>**

- |                    |                 |  |
|--------------------|-----------------|--|
| <b>15:00-15:15</b> | <b>ME20-103</b> | Synthesis and Characterization of Microcellular Injection Molded Polyolefin/Polycaprolactone Composites<br>Shyh-shin Hwang, Minghsin University of Science and Technology, Taiwan  |
| <b>15:15-15:30</b> | <b>CM20-607</b> | Effect of Fiber Loading on the Chemical, Structural and Mechanical Properties of 3D Printed Polylactic Acid/Abaca Microcrystalline Cellulose Composites<br>Cyron L. Custodio, Industrial Technology Development Institute, Philippines |
| <b>15:30-15:45</b> | <b>CM20-611</b> | Enhanced Mechanical Properties of Carbon Nanotube-Reinforced Magnesium Composites Fabricated by Spark Plasma Sintering<br>Hideaki Tsukamoto, Hosei University, Japan   |
| <b>15:45-16:00</b> | <b>ME20-202</b> | Comparison on the Tribological Properties of Roller and Guide Tribo-pair Used in Antenna Deployable Structure<br>Tao Feng, China Academy of Space Technology (Xi'an), China  |
| <b>16:00-16:15</b> | <b>CM20-612</b> | Simulation of Accelerated Ageing Conditions on Ballistic Resistance of Dyneema® Polyethylene Composites<br>Ahmed Adnan, National University of Science and Technology, Pakistan  |

- 16:15-16:30 CM20-608** The effect of Biaxial Interlocking Block to the masonry wall properties under uniaxial compression load  
Fauziah Aziz, University Technology Mara, Malaysia
- 16:30-16:45 CM20-610** Evaluation Carbonation Service Life of Mortar-coated Concrete Considering Global Warming  
Xiao-Yong Wang, Kangwon National University, South Korea
- 16:45-17:00 CM20-609** Physical Properties of Cement-Sand Brick made by Kenaf Core: Discovering the optimal formulation  
Nurul Aini Salehuddin, Universiti Teknologi MARA, Malaysia



# AUTHOR'S PRESENTATION

## Session 6-- Mechanical Manufacturing and Automation

**17:10-18:25, Nov. 21 (Beijing Time GMT+8)**

**Session Chairs:** Assist. Prof. Mostafa Omid Bidgoli, Badroud Branch, Azad University, Iran

**Meeting ID:** 63765684366

**Meeting Link:** <https://zoom.com.cn/j/63765684366>

- |                    |                 |   |
|--------------------|-----------------|---|
| <b>17:10-17:25</b> | <b>ME20-203</b> | Effect of an Internal Impact Balance Mechanism on the Perceptible Recoil of Machine Gun<br>Liu Qiang, Nanjing University of Science and Technology, China   |
| <b>17:25-17:40</b> | <b>ME20-204</b> | An Improved Design of the Engine Bench Test Tool for the Dual Mass Flywheel (DMF)<br>Fan Dong, Dongfeng Motor Corporation Technical Center, China   |
| <b>17:40-17:55</b> | <b>ME20-205</b> | Information Modelling Method of As-built Process Data<br>Sheng Dai, Beihang University, China   |
| <b>17:55-18:10</b> | <b>ME20-209</b> | Line Width Mathematical Model in Fused Deposition Modelling for Precision Manufacturing<br>Jingchao Jiang, National Key Laboratory of Science and Technology on Vessel Integrated Power System, China |
| <b>18:10-18:25</b> | <b>ME20-206</b> | Product Information Units Modeling Oriented to Digital Twin<br>Qiangwei Bao, Beihang University, China  |

# AUTHOR'S PRESENTATION

## Session 7-- Advanced Material Processing and Characterization

**18:35-19:50, Nov. 21 (Beijing Time GMT+8)**

**Session Chairs: Prof. Hideaki Tsukamoto, Hosei University, Japan**

**Meeting ID: 63765684366**

**Meeting Link: <https://zoom.com.cn/j/63765684366>**

- |                    |                    |  |
|--------------------|--------------------|--|
| <b>18:35-18:50</b> | <b>ME20-102</b>    | Moiré Nanolithography Based on Ultrathin Anodized Aluminium Oxide Membranes<br>Chengchun Zhao, TopMembranes Technology Ltd., China   |
| <b>18:50-19:05</b> | <b>CM20-504</b>    | Influence of Recorded Pattern on Background Interference impact in Magnetic Recording<br>Nuttapon Chaiduang Sri, King Mongkut's Institute of Technology Ladkrabang, Thailand             |
| <b>19:05-19:20</b> | <b>ME20-208</b>    | Experimental Characterization of the AA7075 Aluminium Alloy using Hot Shear Tensile Test<br>Trunal Bhujangrao, TECNALIA, Parque Científico y Tecnológico de Gipuzkoa, Spain              |
| <b>19:20-19:35</b> | <b>CM20-507E-A</b> | Severe Plastic Deformation of a Hypereutectic Al Alloy Obtained by Selective Laser Melting<br>Jairo Alberto Muñoz Bolaños, National University of Science and Technology "MISIS", Russia |
| <b>19:35-19:50</b> | <b>CM20-502-A</b>  | Lubricin (PRG4) self-assembled layer exhibits size-selective property in Surface-Enhanced Raman Spectroscopy for specific molecule detection<br>Mingyu Han, Deakin University, Australia |

# AUTHOR'S PRESENTATION

## Session 8-- Functional Materials, Devices and Structure Design

**09:00-10:30, Nov. 22 (Beijing Time GMT+8)**

**Session Chairs: TBA**

**Meeting ID: 63765684366**

**Meeting Link: <https://zoom.com.cn/j/63765684366>**

- |                    |                    |  |
|--------------------|--------------------|--|
| <b>09:00-09:15</b> | <b>CS20-1007</b>   | Maximization of Natural Frequencies for Functionally Graded Plates<br>Aleksander MUC, Cracow University of Technology, Poland  |
| <b>09:15-09:30</b> | <b>M2002-A</b>     | Development of Stretchable Conductive Materials for 3-Dimensional Printed In-Mold Electronics<br>Sang Yoon Lee, Korea Institute of Industrial Technology (KITECH), South Korea       |
| <b>09:30-09:45</b> | <b>CS20-1002-A</b> | Exploring Macrophage Gene Sensors Sensitive to Direct Current Electric Field<br>Li huijuan, Northwestern Polytechnical University, China   |
| <b>09:45-10:00</b> | <b>M2003-A</b>     | Development of Flash Lamp Based Lift-off Technology for Ultra-Thin Polyimide Flexible Electronics<br>Seong Hyun Jang, Korea Institute of Industrial Technology (KITECH), South Korea |
| <b>10:00-10:15</b> | <b>SG2-002</b>     | Double Rough Surface Contact Model and Finite Element Simulation based on Fractal Theory<br>Wenwu Wang, Yanshan University, China  |
| <b>10:15-10:30</b> | <b>M5009-A</b>     | Dynamic Behavior of Carbon Nanotubes/Fiber/Polymer Composite Shells with a cutout<br>Ashish Maharjan, Andong National University, South Korea  |

# AUTHOR'S PRESENTATION

## Session 9-- Electrode Materials and Electrochemistry

**10:40-12:25, Nov. 22 (Beijing Time GMT+8)**

**Session Chairs: TBA**

**Meeting ID: 63765684366**

**Meeting Link: <https://zoom.com.cn/j/63765684366>**

- |                    |                   |   |
|--------------------|-------------------|---|
| <b>10:40-10:55</b> | <b>CS20-209-A</b> | Structure Reorganization-Controlled Electron Transfer of Bipyridine Derivatives as Organic Redox Couples<br>Yang Lyu, Beihang University, China   |
| <b>10:55-11:10</b> | <b>M5027</b>      | A First-principle Study of Fe-doped $\text{Co}_3\text{O}_4$ on N-doped Graphene as Electrocatalyst<br>Chunying Wang, Tianjin University, China  |
| <b>11:10-11:25</b> | <b>M5028-A</b>    | High Performing Freeze-casted Titanium Porous Layers for PEM Water Electrolysis<br>Syed Shabbar Hassan Shah, University of Science and Technology, South Korea                          |
| <b>11:25-11:40</b> | <b>CS20-1011</b>  | Aluminum-Air Battery with Buckypaper Air Cathode<br>Yosuke Ito, Ritsumeikan University, Japan   |
| <b>11:40-11:55</b> | <b>CS20-210-A</b> | Effect of Side Chain on the Electrochemical Performance of Poly (Ether Ether Ketone) based Anion-exchange Membrane: A Molecular Dynamics Study<br>Si'an Chen, Beihang University, China |
| <b>11:55-12:10</b> | <b>M5026</b>      | MOF-derived Fe/Mn Bimetallic Carbon Nanocomposites for High-performance Supercapacitors<br>Yaoyang Yu, Harbin Institute of Technology, China  |
| <b>12:10-12:25</b> | <b>CS20-211-A</b> | The Influence of Alkaline Polymer Electrolyte on the Performance of Bipolar Polymer Electrolyte Membrane Fuel Cell<br>Yan Xiang, Shanfu Lu, Beihang University, China                   |

MACAU

Thank you for your attendance!  
Hope we could meet next time!!