Preface

Dear Distinguished Authors and Guests,

It was a great pleasure to welcome all participants in the 2020 9th International Conference on Advanced Materials and Engineering Materials (ICAMEM 2020) held in Bangkok, Thailand 3-5, July, 2020.

Since the first ICAMEM in Shenyang, China (2011), a series of ICAMEM has been held in Asia: the 2nd, Beijing, China (2012), the 3rd, Singapore (2013), the 4th, Ningbo & Hong Kong, China (2014), the 5th, Hong Kong, China (2016), the 6th, Singapore (2017), the 7th, Bangkok, Thailand (2018), the 8th, Hong Kong, China (2019).

The aim of 9th ICAMEM2020 is to gather professors, researchers and scholars all over the world. ICAMEM2020 will provide leading academy and industry scientists a platform to communicate recent advances in Advanced Materials and Engineering Materials Research and an opportunity to establish multilateral collaborations.

The papers were selected after the peer-review process by conference committee members and international reviewers. The submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the conference.

On behalf of the organizing committee, the editor would like to acknowledge the technical comments from the reviewers and thank all of the authors for their contributions to this proceeding book.

With our warmest regards,

Conference Organizing Chair
Prof. Peng-Sheng Wei
National Sun Yat-Sen University, Kaohsiung, Taiwan
April 24, 2020

Committee

Conference Secretary

Summer Wang, X-Academy

Program Committee

Prof. Peng-Sheng Wei, National Sun Yat-Sen University, Kaohsiung, Taiwan
Katsuyuki Kida, University of Toyama, Japan
Koshiro Mizobe, University of Toyama, Japan
Yung Ting, Chung Yuan Christian University, Taiwan
Dr. Hui-Mi Hsu, National Ilan University, Taiwan
Ana Almerich Chuliá, Universitat Politecnica de Valencia, Spain
Togay Ozbakkaloglu, The University of Adelaide, Australia
Jingwei Zhao University of Wollongong, NSW 2522, Australia
Ahmed Hamza H. Ali, Assiut University, Egypt
Javad A. Esfahani, Ferdowsi Univ. of Mashhad
Siamak Hosseinzadeh, Young Researchers and Elite Club, West Tehran Branch, Islamic Azad University, Tehran, Iran
Chong Kok-Keong, Universiti Tunku Abdul Rahman, Malaysia
Chew Kuew Wai, Universiti Tunku Abdul Rahman, Malaysia
Mohd Shahir Bin Kasim, Universiti Teknikal Malaysia Melaka, Malaysia
Edwin Goh Boon Hoe, University of Nottingham Malaysia Campus
Azzura Binti Ismall, Universiti Tun Hussein Onn Malaysia, Malaysia
Zawati harun Universiti Tun Hussein Onn Malaysia, Malaysia
Norshuhaila Mohamed Sunar, Universiti Tun Hussein Onn Malaysia, Malaysia
Gunalan Vasudevan (Ts), Tunku Abdul Rahman University College
Beddiaf Zaidi, University of Batna, Algeria
Junwei Gu,University of Northwestern Polytechnical, China
Engr. Aqib Mashood Khan, Nanjing university of aeronautics and astronautics, China.
Stefan Talu, University of Cluj-Napoca, Romanian
Osman Adiguzel, Department of Physics, Firat University
Yasin Polat, Nevşehir Hacı Bektaş Veli University, Turkey
Charafeddine Jama, Université de Lille, France
Ghulam Hasnain Tariq, Khawaja Fareed University of Engineering & Information Technology, Pakistan
Satish Sajja, V R Siddhartha Engineering College Vijayawada
Dr. N. Ethiraj, Dr. M.G.R Educational and Research Institute, Madhuravoyal, Chennai
Md. Shafiul Ferdous, Khulna University of Engineering and Technology (KUET)
Kazem Reza Kashyzadeh, Peoples' Friendship University of Russia (RUDN)
Grzegorz Woroniak, Bialystok University of Technology, Poland
Dr. Ashish Kumar, Chemistry Department, Lovely Professional University, India
Dr. R. Kumutha, Anna University Chennai, India
Iman Bagherpour, Islamic Azad University, Shiraz, Iran
Dr. Khaled Habib, Materials Science &Photo-Electronics Lab, Kuwait

Sponsor

X-Academy

X-academy dedicates to organize worldwide academic conference. X-academy cooperate with IEEE (Institute of Electrical and Electronics Engineers), IEEE Harbin (Dalian) Section CIS Chapter and top university from in and out China by arranging and holding slap-up conferences on electrical engineering and automation, computer science, information technology, mechanic, materials, manufacturing engineering etc.. It creates and offers opportunities for experts, researchers and scholars from all over the world to present their technological advances and research results.