

Preface

The presented proceedings contain the selected peer-reviewed full text papers from the 5th International Conference on Advanced Materials Science (ICoAMS 2022) describing the results of research and engineering achievements in biomass processing, biomaterials and environmental protection, including water treatment.

Preparation of multifunctional composite from coffee husk for antibacterial and catalytic applications, pyrolysis kinetic analysis of palm kernel shells, and biodegradable polymer material for biomedical applications are the main topics of the first chapter.

The technologies and materials applicable to environmental protection and water treatment are analysed in the second chapter. Here the reader will find the results of the preparation of a zeolite-based composite membrane for water treatment, green synthesis of mesoporous zeolite X for enhancement in methylene blue adsorption from wastewater and analysis of the effect of the microwave-assisted method on antibiotic adsorption capacity of activated carbon from grapefruit.

This edition will be helpful to specialists in environmental engineering and biotechnologies.

From the Editors of the 5th International Conference on Advanced Materials Science (ICOAMS 2022)

It was our pleasure to welcome you to the 5th International Conference on Advanced Materials Science (ICOAMS 2022), held on August 24-25, 2022, at the Universitas Muhammadiyah Surakarta, Indonesia, in conjunction with the 1st International Summit on Knowledge Advancement (ISKA-2022), conducted at the University Muhammadiyah Malaysia (UMAM).

The conference presentations were held virtually this year, following the same format as last year, with the primary goal of bringing together academic scientists, engineers, and industry researchers to exchange and share their experiences and research findings on the major aspects of material sciences, as well as to address the practical challenges faced and the solutions adopted.

We hope that all exchanges were technically satisfying, and everyone took use of the occasion to network with other scholars from various countries.

ICOAMS 2022 was stimulating and informative with a keynote speaker Assoc. Prof. Ts. Dr. Umar Al-Amani Haji Azlan from Universiti Teknikal Malaysia Melaka, Malaysia, to whom we would like to express our gratitude for sharing her knowledge and insights of the application of natural fibre. We also would like to thank the organisation staff, the members of the programme committees and the reviewers.

They have put in a lot of effort assessing papers and offering authors helpful feedback on how to make their writing better. Additionally, we would like to thank the authors for sending their study findings to the conference.

We considered it a pleasure and a privilege to offer the best current advancements in the ICOAMS 2022 domains.

Chairman: Prof. Dr. Sarjito

Co-Chairman: Assoc. Prof. Dr. Waluyo Adi Siswanto

Co-Chairman: Assoc. Prof. Dr Mohammad Sukri Mustapa

Co-Chairman: Assoc. Prof. Dr.Tri Widodo Besar Riyadi

Co-Chairman: Assoc. Prof. Dr. Agus Dwi Anggono