

Preface

The 9th International Symposium on Applied Chemistry (ISAC) in conjunction with the 5th International Conference on Chemical and Material Engineering (ICCME) 2023

The present Proceedings contains the papers presented at the 9th International Symposium on Applied Chemistry (ISAC) in conjunction with the 5th International Conference on Chemical and Material Engineering (ICCME) 2023, held in hybrid mode on 6-8 December 2023 at the Graha Widya Bakti, KST BJ Habibie, Serpong, Indonesia. The symposium is organized by the Research Center for Chemistry, National Research and Innovation Agency (BRIN), Indonesian Researcher Union (Perhimpunan Periset Indonesia)-South Tangerang, and Department of Chemical Engineering Diponegoro University. This conference aims to gather academics, scientists, and professionals from several disciplines of applied chemistry.

By carrying the theme “*Chemical Research and Innovation and Innovation for Sustainable Future*”, the ISAC-ICCME 2023 brought together well over 100 presenters and participants from diverse background such as university lecturer, researcher, and student. The scientific program consisted of plenary and parallel sessions with various topics including analytical and environmental chemistry, biomass and bioprocess engineering, computational and theoretical chemistry, design process and chemical engineering, food chemistry and processing, materials chemistry and catalysis, organic and natural product chemistry, polymer and macromolecular chemistry, surface chemistry and nanoparticles. This meeting provides a forum for exchange of information and share of experiences on all aspects of applied chemistry related researches as well as aims to initiate scientific cooperation and international collaboration among the research institutions.

During the paper submission and review process, more than one hundred papers have been received to be considered to be presented at ISAC-ICCME 2023, and fifty seventh articles were selected to be published in the Environment, Energy and Earth Sciences (E3S) Web of Conferences Proceeding. The manuscripts selection was based on the peer review with independent reviewers. Forty eight expert referees were involved in reviewing the submitted papers.

We really appreciated all the attention and support given for the success of the ISAC-ICCME 2023 and would like to express our deep gratitude to everyone who has taken part in this event:

- The scientific reviewers the assistance to maintain the publication quality and provide thoughtful recommendations to the authors;
- The honored keynote speakers Prof. Dr. Holger Schonherr (University of Siegen, Germany), Prof. Prof. Dr. Gilles Ausias (Universiet de Bretagne Sud, France), Noriho Kamiya (Kyushu University), Prof. Dr. Yenny Meliana (National Research and Innovation Agency of Indonesia (BRIN)), Prof. Dr. Eng. Suherman (Diponegoro University), Prof. Dr. Misri Gozan (University of Indonesia), Prof. Iryanti Fatyasari Nata, Ph.D, and Dr. Ahmad Ilyas bin Rushdan (Universiti Teknologi Malaysia);
- The distinguished invited speakers Prof. Dr. Ing. Silviana (Diponegoro University), Prof. Didi Dwi Anggoro, Ph.D (Diponegoro University), Dr. Mohd Asmadi bin Mohammed yusuf (Universiti Teknologi Malaysia), Dr. Syed Shah Najib Noorulhaq (Dept of Chemistry Yeshwant Mahavidyalaya Nanded, India), Sr. Endarto Yudo Wardhono (University of Sultan Ageng Tirtayasa), Dr. Sudaryanto (National Research

and Innovation Agency of Indonesia (BRIN)), Roni Maryana, Ph.D (National Research and Innovation Agency of Indonesia (BRIN));

- All the participants for their contributions on this event;
- The committee members for the tremendous efforts, commitment, and hard work in accomplishing the symposium and proceedings.

We also grateful for all supports and suggestions that came to us. We are looking forward to the next symposium that will be held in 2024.

Sincerely,

Prof. Didi Dwi Anggoro Ph.D and Dr. Sudiarmanto

The 9th International Symposium on Applied Chemistry (ISAC) and the 5th International Conference on Chemical and Material Engineering (ICCME) 2023 Chairman

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