

Preface

Chemistry is often regarded as the center of science, while material science is considered the mother of technology. This pair plays an important role in advancing the quality of life, environment, and welfare. The International Conference on Chemistry and Material Sciences (IC2MS) was organized to provide an international platform for promoting mutual exchange between scientists, discussing innovative ideas in scientific research, and proposing solutions to contemporary problems through the application of knowledge that stems from research works in chemistry and material science.

The first IC2MS was held in 2017, with more than 200 participants from Indonesia, Malaysia, Singapore, Thailand, Japan, Taiwan, Brunei Darussalam, and Australia, representing more than 40 universities/institutions. Since then, the conference has been organized biennially as a joint conference by Brawijaya University, Jember University, State University of Malang, and Universiti Teknologi Mara to build up a reputable academic habit and scientific community. The 2023 meeting was organized by its initial host, the Department of Chemistry, Faculty of Mathematics and Natural Sciences, Brawijaya University.

The presented collection of the selected papers from the 5th IC2MS (October 11-12, 2023) is divided into two chapters and dedicated to the latest research in pharmaceutical chemistry, biotechnologies, wastewater treatment and waste recycling. The edition will be particularly useful to chemical engineers and researchers whose activity is related to the mentioned fields of chemical science and chemical production.

Committee

International Scientific Committee

1. Yuniar Ponco Prananto, S.Si., M.Sc., Ph.D (Brawijaya University) – Indonesia
2. Prof. Dr.Sc. Anugrah Ricky Wijaya, MSc (State University of Malang) – Indonesia
3. Dr. Anak Agung Istri Ratnadewi, S.Si, M.Si (University of Jember) – Indonesia
4. Dr. Agustono Wibowo (Universiti Teknologi MARA) – Malaysia
5. Dr. Norshahidatul Akmar binti Mohd Shohaimi (Universiti Teknologi MARA) – Malaysia
6. Prof. Justin M. Chalker (Flinders University) – Australia
7. Prof. Masato Tominaga (Saga University) – Japan
8. Prof. Nobuyuki Matubayasi (Osaka University) – Japan
9. Prof. Duen-Ren Hou (National Central University) – Taiwan
10. Prof. Akhmad Sabarudin, Dr.Sc (Brawijaya University) – Indonesia
11. Prof. drh. Aulaniam, DES (Brawijaya University) – Indonesia
12. Prof. Dr. Warsito, MSi (Brawijaya University) – Indonesia
13. Prof. Dr. Ani Mulyasuryani, MS (Brawijaya University) – Indonesia

Local Organizing Committee

1. Dr. Qonitah Fardiyah, S.Si.,M.Si
2. Siti Mariyah Ulfa, S.Si., M.Sc., Dr.Sc
3. Ellya Indahyanti, S.Si.,M.Eng
4. Layta Dinira, S.Si., M.Si
5. Addriani Mardika Dewi, S.Si
6. Yoke Kusuma Arbawa, S.Kom., M.Kom.
7. Prof. Akhmad Sabarudin, S.Si., M.Sc., Dr.Sci (Coordinator)
8. Lukman Hakim, S.Si., M.Sc., Dr.Sc
9. Anna Safitri, S.Si., M.Sc., Ph.D (Coordinator)
10. Zubaidah Ningsih AS, S.Si.,M.Phil
11. Dr. Arie Srihardyastutie, S.Si.,M.Kes
12. Dr. Ika Oktavia Wulandari, S.Si., M.Si
13. Drs. Danar Purwonugroho, M.Si (Coordinator)
14. Darjito, S.Si., M.Si
15. Drs. Suratmo, M.Sc
16. Drs. Budi Kamulyan, M.Sc

Proceeding Editors

1. Dr.Sc. Lukman Hakim
2. Dr. Elvina Dhiaul Iftitah, S.Si., M.Si

HOST



CO-HOSTS



اَبُو سَيِّدِي تَيْكُو لَوِيْنِي مُبَارَا
UNIVERSITI
TEKNOLOGI
MARA