

Preface

It is an honor for us to introduce you to the proceeding of the selected peer-reviewed papers presented at the Life Science, Materials, and Applied Chemistry symposium as part of The 7th International Conference on Science and Technology (ICST 2021), which was held in Yogyakarta, Indonesia, 7-8 Sept 2021.

The volume includes papers from universities, research institutes, and industrial sectors across the globe. Each contributed paper has been strictly peer-reviewed by dedicated reviewers. The reviewers are experts in the field from various countries. The proceedings present to the readers the latest research results that cover the specific areas of Life Sciences, Materials, and Applied Chemistry.

We wish to thank all the reviewers for the invaluable comments and suggestions and the organizing committee for arranging all the facilities needed for the successful conference. We do hope that the proceeding will contribute generously to the advance of science and technology, especially in the field of chemistry.

Editor

Dr.Eng. Ahmad Kusumaatmaja	(Universitas Gadjah Mada, Indonesia)
Dr. Ruchi Gupta	(University of Birmingham-United Kingdom)
Melati Khairuddean, Ph.D.	(Universiti Sains Malaysia, Malaysia)
Prof. Roto, Ph.D.	(Universitas Gadjah Mada, Indonesia)
Prof. Dr.Sc. Nobuyuki Ichikuni	(Chiba University, Japan)
Prof. Laurent Commeiras	(Aix-Marseille University, France)
Taufik Abdillah Natsir, Ph.D.	(Universitas Gadjah Mada, Indonesia)
Adhi Dwi Hatmanto, Ph.D.	(Universitas Gadjah Mada, Indonesia)
Dr. Muhammad Idham Darussalam Mardjan	(Universitas Gadjah Mada, Indonesia).

Committees

Chairman: Dr.Eng. Titis Wijayanto (Universitas Gadjah Mada, Indonesia)

Co-chairman: Wahyono, Ph.D. (Universitas Gadjah Mada, Indonesia)

Organizing Committee

Taufik Abdillah Natsir, Ph.D. (Universitas Gadjah Mada, Indonesia)

Dr. Tutik Dwi Wahyuningsih (Universitas Gadjah Mada, Indonesia)

Indriana Kartini, Ph.D. (Universitas Gadjah Mada, Indonesia)

Roto, Ph.D. (Universitas Gadjah Mada, Indonesia)

Dwi Siswanta, Ph.D. (Universitas Gadjah Mada, Indonesia)

Dr. Muhammad Idham D. Mardjan (Universitas Gadjah Mada, Indonesia)

Adhi Dwi Hatmanto, Ph.D. (Universitas Gadjah Mada, Indonesia)

Fajar Inggit Pambudi, Ph.D. (Universitas Gadjah Mada, Indonesia)

Dr.Sc. Robby Noor Cahyono, M.Sc. (Universitas Gadjah Mada, Indonesia)

Advisory Board

Prof. Franck Lavigne (Université Paris 1 Panthéon-Sorbonne, France)

Prof. Rohayu Che Omar (Universiti Tenaga Nasional, Malaysia)

Prof. Ben White (Erasmus University, Netherlands)

Dr. Abraham Cardenas Tristan (Universidad Autónoma de San Luis Potosí, Mexico)

Prof. Tomohiro Yokozeki (University of Tokyo, Japan)

Prof. Gil Nonato C. Santos (De La Salle University, Philippines)

drg. Ika Dewi Ana, M.Kes., Ph.D. (Universitas Gadjah Mada, Indonesia)

Prof. Widodo (Universitas Gadjah Mada, Indonesia)

Dr. I Wayan Mustika (Universitas Gadjah Mada, Indonesia)