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Proceeding

The 2nd International Conference of
the Indonesian Chemical Society 2013

IC  CS 2013

Research in Chemistry for Better Quality of Environmental

Universitas Islam Indonesia, Yogyakarta, Indonesia
October, 22 - 23th 2013

Abdul Kahar Muzakkir, Conference Hall
Universitas Islam Indonesia (UII), Yogyakarta.
Kampus Terpadu, Jl. Kaliurang KM 14,5 Sleman, Yogyakarta.

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October, 22-23th 2013

Preface

The international conference is an annual conference of the Indonesian Chemical Society (Himpunan Kimia Indonesia, HKI). In the year 2013, the mandate of the organizing committee was given to the HKI Yogyakarta branch and also supported by Department of Chemistry of Universitas Negeri Yogyakarta (UNY), Department of Chemistry of Universitas Gadjah Mada (UGM), Department of Chemistry of Universitas Islam Negeri Sunan Kalijaga (UIN Suka), National Nuclear Energy Agency (BATAN Yogyakarta), and Volcano Investigation and Technological Development Center (BPPTK Yogyakarta). For the year 2013, ICICS 2013 is hosted by Department of Chemistry, Faculty of Mathematics and Natural Sciences, Islamic University of Indonesia, Yogyakarta from October 22 – 23, 2013. This conference was also prepared to celebrate 70th anniversary of Universitas Islam Indonesia.

The Scientific Programme of ICICS2013 comprises the following:

- | | | |
|---|----|--------|
| 1. Invited Speaker | 11 | papers |
| 2. A total 256 paper for parallels sessions | | |
| a. Organic Chemistry | 32 | papers |
| b. Inorganic Chemistry | 43 | papers |
| c. Physical Chemistry | 37 | papers |
| d. Analytical Chemistry | 68 | papers |
| e. Education Chemistry | 23 | papers |
| f. Biochemistry | 43 | papers |

The breakdown of the presentation is as follows:

Session	Oral	Poster	Total
Invited Speaker	11	0	11
Organic Chemistry	25	7	32
Inorganic Chemistry	38	5	43
Physical Chemistry	31	6	37
Analytical Chemistry	61	7	68
Education Chemistry	22	1	23
Biochemistry	34	8	43
Total	222	34	256

Yogyakarta, 25th November 2013



Editors

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Welcoming Address by The Organizing Committee



Assalamu'alaikum Wr. Wb.

Honorable Rector of Universitas Islam Indonesia
The distinguished invited speakers, and
All participants of the ICICS 2013

Welcome you at the 2nd International Conference of the Indonesia Chemical Society 2013 (ICICS 2013) this morning here at the Auditorium Kahar Muzakkir Universitas Islam Indonesia, Yogyakarta. The international conference is an annual conference of the Indonesian Chemical Society (Himpunan Kimia Indonesia, HKI). In the year 2013, the mandate of the organizing committee was given to the HKI Yogyakarta branch and also supported by Department of Chemistry of Universitas Negeri Yogyakarta (UNY), Department of Chemistry of Universitas Gadjah Mada (UGM), Department of Chemistry of Universitas Islam Negeri Sunan Kalijaga (UIN Suka), National Nuclear Energy Agency (BATAN Yogyakarta), and Balai Penyelidikan dan Pengembangan Kegunungpian (BPPTK Yogyakarta). For the year 2013, the honor of hosting ICICS 2013 has been given to the Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Islam Indonesia, Yogyakarta. This conference was also prepared to celebrate 70th anniversary of Universitas Islam Indonesia.

The conference comprises both oral and poster presentation in English and Indonesian with optional post conference publication of full papers in English in the *Procedia Chemistry* (Elsevier, ISSN: 1876-6196) and *Proceeding Conference for Indonesian language*. There are 211 papers presented orally and 34 papers presented by poster covering wide-variety subjects of chemistry. We invited 6 Indonesian invited speakers, 2 Japan invited speakers, 1 Australian invited speakers, 1 Saudi Arabia invited speakers, and 1 Malaysian Invited speakers.

We hope you will enjoy a pleasant and valuable seminar at Universitas Islam Indonesia

Wassalamu'alaikum Wr. Wb.

Riyanto, Ph.D.



Opening Speech from the Rector of Universitas Islam Indonesia



Assalamu'alaikum Wr. Wb
The distinguished invited speakers, and
All participants of the ICICS 2013

Firstly, I would like to express my great appreciation to the Department of Chemistry UII as one of the organizers of the program The 2nd International Conference of the Indonesian Chemical Society 2013 (ICICS 2013) with the theme "Research in Chemistry for Better Quality of Environmental". I am proud that this interesting event is being organized and held in Yogyakarta.

As the biggest and the oldest private university in Yogyakarta, University Islam Indonesia is committed to the excellence in research and teaching. Recently, we are preparing UII as one of the world class universities.

Knowing that committee has selected outstanding speakers from various prestigious institutions. I believe that all of the participants will enjoy the discussion of issue covered by the topic of this seminar. Scientist have shown that the environment's condition is increasingly critical, and human industrial activities are largely to blame. In fact that environmental damage is a crisis we caused together, therefore, a responsibility we all share together. We are deeply concerned with the issues and opportunities in the internationalization of sciences for better life, sciences have to make better quality of environmental.

Finally, I would once again like to thank the organizer for organizing this event, and to thank all the participants attending this ICICS 2013 event as well as delivering their scientific presentations. I do really hope that you can enjoy this seminar and have excellent stay in Yogyakarta.

Wassalamu'alaikum Wr. Wb

Prof. Dr. Edy Suandi Hamid, M.Ec.
Rector of Universitas Islam Indonesia

Remarks by the Chairman of the Indonesian Chemical Society (Himpunan Kimia Indonesia, HKI)



Indonesian Chemical Society (Himpunan Kimia Indonesia, HKI) is an independent, nonprofit organization founded in February 1962 to facilitate communication among Indonesian chemists and other professionals from chemistry related fields, and to promote the advancement of science, education, and application of chemistry to support the better life of mankind. HKI organize activities to enhance communication and collaboration among chemists in various institutions in Indonesia, to disseminate new knowledge and research results in chemistry and related fields, to improve the knowledge and

skills of chemists working in schools, universities, industries, research institutes, and other sectors, to nurture a scientific temper on school children to ensure strong capabilities of future chemists that are needed for humankind, and other activities that support its missions. HKI holds various academic conferences, publishes several journals, supports the development of scientific information systems in Indonesian; organize training for chemists in various sectors, etc.

The 2013 International Conference of the Indonesian Chemical Society will be the 2nd event in the ICICS conference series, started in 2012, that brings together individuals involved in chemistry-related fields (chemistry, pharmacy, environmental science, chemical engineering, molecular biology, material science, education chemistry, etc.) or institution in chemistry-related sectors. The First International Conference of the Indonesian Chemical Society 2012 is organized by East Java Branch of HKI in collaboration with chemistry departments at several universities in East Java: ITS, UB, UIN Maliki, UM, UMC, Unair, Unej, and Unesa.

ICICS 2013 will be organized by the Indonesian Chemical Society Yogyakarta branch. The international conference was supported by the Indonesian Chemical Society (Himpunan Kimia Indonesia, HKI), Department of Chemistry of Universitas Negeri Yogyakarta (UNY), Department of Chemistry of Universitas Gadjah Mada (UGM) and Department of Chemistry of Universitas Islam Negeri Sunan Kalijaga (UIN Sunan Kalijaga). For the year 2013, the honor of hosting ICICS-2013 has been given to the Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Islam Indonesia (UII), Yogyakarta, Indonesia.

Congratulations to the ICICS 2013 committee for this conference.

Dr. Muhamad Abdulkadir Martoprawiro
Chairman of the Indonesian Chemical Society

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2. Head of the Indonesian Chemical Society Yogyakarta Branch
3. Rector of Islamic University of Indonesia
4. Rector of Gadjah Mada University
5. Rector of Yogyakarta State University
6. Rector of State Islamic University of Sunan Kalijaga
7. Head of Geological Agency of Indonesia
8. Head of National Nuclear Energy Agency of Indonesia

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