

9th Joint Conference on Chemistry

12-13 November 2014
Semarang, Indonesia

Programme Booklet

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Welcome Letter

Assalamualaikum warahmatullahi wa barakatuhu.

On behalf of the Chemistry Consortium in Central Java, Indonesia and the JCC Committee, I would like to welcome you all to the 9th Joint Conference on Chemistry to be held from 12 to 13 November 2014 in Semarang, Indonesia. The JCC is an annual conference organized by the consortium of Chemistry Department of four universities in Central Java: Diponegoro University (UNDIP), Semarang State University (UNNES), Sebelas Maret University (UNS) and Jenderal Soedirman University (UNSOED); since 2006. Since the environmental problems continue to rise globally, "Green Chemistry" is chosen as the theme for the 9th JCC.



This conference will provide an interactive international forum to provide for sharing and exchange information on the latest research on Chemistry and related sciences, to enhance the capacities for creating innovation system, to contribute in the formulation of global strategies in advancing science role as well as developing policy initiatives in community, to stimulate future collaborations among industries, researchers, governments and other stakeholders who apply science and technology for better live. The participants of the 9th JCC are up to 200 coming from various countries extending from Indonesia, Malaysia, Singapura, Thailand, Philipina, Australia, Japan, South Korea, Iran, Rusia, Nigeria and Turkey.

I would like take this opportunity to thank for the hardwork of committee from Department of Chemistry UNDIP and the consortium member. In addition, the conference committee acknowledges the technical and financial support of Chemistry Department, FSM - UNDIP; PT. Indotech Scientific and CV Setia Abadi

I look forward to meeting you all at the 9th JCC in Semarang, and encourage you to engage with those presenting their work as oral and poster presentations. Should you have extra time, I hope that you can extend your stay and enjoy the exotic of Central Java. Central Java is the island's cultural, geographic, and historic heartland. Universities, dance schools, pottery, handicrafts, textiles and carving, give to the region a rich culture and interesting shopping. This is also the place of the famous Javanese temples of Borobudur. Dieng plateau and Suku temple are worth a visit as well as the wonderful Karimunjawa island.

Thank you for your participation,

Dr. Agustina L. N. Aminin

9th Joint Conference of Chemistry Chair

Chemistry Department, Faculty of Science and Mathematics, Diponegoro University



9th Joint Conference on Chemistry

Welcome Letter from Head of Chemistry Department, Diponegoro University

Dear 9th Joint Conference on Chemistry 2014 participant,

It will be a great pleasure for us to welcome you to the Grand Candi Hotel within two days, for the 2014 edition of the Joint Conference on Chemistry, the yearly conference, under the umbrella of Consortium of Chemistry Department of four universities in Central Java: Diponegoro University (UNDIP), Semarang State University (UNNES), Sebelas Maret University (UNS) and Jenderal Soedirman University (UNSOED). It is an exciting time for our consortium as we continue to grow.

We hope that you will enjoy the scientific programme with 10 plenary talks by internationally renowned experts, 10 invited speakers, 82 regular oral sessions and 80 poster sessions. I would also like to thank each of you for attending our conference and bringing your expertise to our gathering.

Dr. Khairul Anam

Head of Chemistry Department, Diponegoro University, Semarang

Welcome Letter from Head of Chemistry Department, Jenderal Soedirman University

Assalamu'alaikum warahmatullahi wa barakatuhu.

Praise is only for Allah SWT has bestowed the health and opportunity so that the activities of the International Conference on Chemistry, University of Diponegoro can take place smoothly and well according to plan.

Deepest appreciation goes to our seminar organizers all over this successful event and we would like to thank you profusely for the father / mother who was willing to take the time to participate in this activity.

Finally, hopefully this event of great benefit both in terms of sharing research between universities and research in order to knit the fabric of cooperation in times to come.

Wassalam

M. Chasani, M.Si

Head of Chemistry Department, Jenderal Soedirman University

9th Joint Conference on Chemistry



Welcome Letter from Head of Chemistry Department, Semarang State University

Assalamualaikum warahmatullahi wa barakatuh

Our honorable guest and seminar participant,

All praises to Allah SWT who gives us abundance blessing and allow us to organize this grand event for Indonesian chemists here in the 9th Joint Conference on Chemistry 2014.

We would like to show high appreciation to the keynote speakers, speakers, participants and guests who delight to come and participate in this seminar. We also like to show gratitude to the committee of 9th joint conference on chemistry who organize and conduct this event.

We believe this seminar will create ideal environment for all chemist, educator, researcher, and practicing in the field of chemistry to communicate and share the ideas to each other. We also believe that all the ideas and result which is presented in this forum shows sophistication in the field chemistry.

In the end we hope you enjoy the seminar and we hope that our effort will give great contribution to solve problems in chemistry and education in the future.

Dra. Woro Sumarni, M. Si

Head of Chemistry Department, Semarang State University



9th Joint Conference on Chemistry

Welcome Letter from Head of Chemistry Department, Sebelas Maret University

Dear Distinguished Delegates, Colleagues and Guests,

On behalf of the Chemistry Department, Sebelas Maret University, we proudly present the 9th Joint Conference on Chemistry, which is organized by the consortium of Chemistry Department of four universities from Central Java on November 12-13, 2014.

As citizens of today's modern world, we have to contribute to developments and the latest discoveries in knowledge and technology especially in "Green Chemistry". Therefore, the conference was projected to facilitate the discussion of green chemistry for sustainable development. Many papers in this proceeding discuss of green chemistry, including green synthesis processes, catalysis, environmentally benign solvents, energy storage, biofuels, green chemistry education, policies, and many other interesting topics.

Knowing that committee has selected outstanding speakers from prestigious institutions, we believe that all of the participants will enjoy the discussion of issues covered by the topic of this conference. We hope all participants find the beneficial environment for academic pursuits and for new ideas to blossom; for strengthening ties between peoples and countries and for initiating new interactions and collaborations.

We would like to thank the organizers, the plenary speakers and the researchers for their hard work and full commitment. For all of the participants, we are thankful for your cooperation, contribution and very valuable support for this event.

Finally, as this conference is held annually, we are looking forward to the 10th Joint Conference on Chemistry that will be held on September, 2015 at Sebelas Maret University, Surakarta. We hope that it will be a more interesting and enjoying conference.

Thank you.

With our best wishes,

Dr. Eddy Heraldy

Head of Chemistry Department, Sebelas Maret University



Conference Organisers

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Eddy Herald, *Chemistry Department, Sebelas Maret University*
M. Chasani, *Chemistry Department, Jenderal Soedirman University*
Woro Sumarni, *Chemistry Department, Semarang State University*

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Uyi Sulaeman, *Chemistry Department, Jenderal Soedirman University*
Dadan Hermawan, *Chemistry Department, Jenderal Soedirman University*



Onsite Information

Registration Desk

The conference registration desk will be located in the Ground Floor of the Grand Candi Hotel. The registration desk will be open from 6.30 on Wednesday, 12 November and will remain open for queries and registration for the duration of the conference.

Badges and Security

For security reasons and for catering purposes, please wear your conference badge throughout the conference. The colour coding for the badge-holder strips is as follows:

Blue : Plenary and Invited Speakers

Green : Organising Committee

Clear : Delegates

Replacements for lost badges are available from the registration desk. Please write your name in your program booklet, and do not leave either your booklet or your delegate bag unattended at the conference at any time—for example, on your seat in the meeting room during breaks. Replacements for lost booklets or bags will unfortunately not be available.

Conference Session Locations

The conference sessions will be held in the Ballroom, and Meeting rooms. Please see the full program for individual session, presentation, poster session, and catering times.

Lunch, Dinner and Refreshments

The registration fee includes the following catering arrangements:

Catering Arrangements	Dates	Times
Refreshment Breaks	12-13 November	Please see the full program for timings
Lunch	12-13 November	Please see the full program for timings
Gala Dinner	12 November	19.00 – 21.30

Mid-session refreshments and lunch will be served in the Ballroom Foyer with the posters. There will be the opportunity to view the posters and meet with the presenters during the refreshment breaks and lunch breaks.

Gala Dinner

The Gala Dinner will take place on Wednesday, 12 November from 19:00 at Grand Candi Hotel Restaurant.



Poster Sessions

The poster sessions will take place in the the Ballroom Foyer. Poster presenters should refer to the program booklet which poster number has been allocated to them. The organisers request that poster presenters stand by their boards during the poster presentation session for queries and discussion. Please see scheduled times in the full program.

Language

The language of the conference will be English.

Speakers

Please upload your presentation in the room you are speaking in. Please ensure all presentations are loaded in the meeting room by the end of the break prior to the session you are due to present in at the very latest.

Certificates of Attendance and Presentation

Certificates of Attendance and Presentation are available in the closing time of conference.

Conference Project Lead

Agustina Lulustyaningati Nurul Aminin, 9th Joint Conference on Inorganic Membrane

Tel: +62-81322911326 or email: agustina_ina@undip.ac.id





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9th Joint Conference on Chemistry Program

Semarang, 12-13 November 2014

Wednesday, 12 November 2014		
06.45-08.00	Registration Opens	
08.00-08.45	Opening ceremony	
08.45-09.00	Coffeebreak	
09.00-09.40	Plenary Speaker 1 [Plen-1] Dr. M.A.K. Martoprawiro Chair: Agustina L.N. Aminin	
09.40-10.20	Plenary Speaker 2 [Plen-2] Prof. Joe Diniz da Costa Functionalised Silica Membranes for Gas and Liquid Processing Chair: Adi Darmawan	
10.20-11.00	Plenary Speaker 3 [Plen-3] Prof. Keiji Tanaka Physical Properties of Polymer Solids: from Bulk to Surface Chair: Retno Ariadi Lusiana	
11.00-11.40	Plenary Speaker 4 [Plen-4] Dr. Nasser Safari Porphyrin-Based Photosensitizers for Green Oxidation of Substrates with Molecular Oxygen and Sunlight Chair: Indriana Kartini	
11.40-12.40	Lunch Break	
12.40-13.20	Parallel Invited Speakers – 1 Chair: Ridla Bakri	
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> [Inv-1] The Conversion of Carbon Dioxide Using Heterogeneous Catalysts from Rice Husk Prof. Farook Adam </td> <td style="width: 50%; vertical-align: top;"> [Inv-2] Evaluation of Chemical Constituents and Bioactivity Properties of <i>Terminalia muelleri</i> Benth. as Natural Medicine Dr. Khairul Anam </td> </tr> </table>	[Inv-1] The Conversion of Carbon Dioxide Using Heterogeneous Catalysts from Rice Husk Prof. Farook Adam
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13.20-14.00	Parallel Invited Speakers – 2 Chair: Samuel Budi Wardhana Kusuma	
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> [Inv-3] New trends in microextraction techniques – The role of biopolymers Prof. Marsin Sanagi </td> <td style="width: 50%; vertical-align: top;"> [Inv-4] The Self-assembly Process of Phospholipids: Experimental and Theoretical Approaches Dr. Dwi Hudyanti </td> </tr> </table>	[Inv-3] New trends in microextraction techniques – The role of biopolymers Prof. Marsin Sanagi
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14.00-14.40	Plenary Speaker 5 [Plen-5] Dr. Xu Qing-Hua Plasmon Coupling Enhanced Two-photon Photoluminescence and Their Applications Chair: Sigit Priatmoko	
14.40-15.20	Poster session 1 + coffee break	



Parallel session 1

	Analytical Chem (1) Chair: Hiroshi Kitagawa	Physical Chemistry (1) Chair: Nasser Safari	Material (1) Chair: Keiji Tanaka	Material (2) Chair: Joe da Costa	Organic Chemistry (1) Chair: Pimchai Chaiven
5.20-15.35	[O-1] Application of Infrared and UV-Vis Spectroscopy in Combination with Chemometrics as a Tool for the Discrimination of Some Zingiberaceae Plants M. Rafi	[O-2] New Green Approach To Fenton's Chemistry Using Spent Tea Leaves and Coffee Grounds as Raw Material Claudio Kendi Morikawa	[O-3] Surface Reactivity of Metal and Metal Oxide Nanoparticle in Aqueous Solution Anna Godymchuk	[O-4] Sensitization of Xantho-phylls-Chlorophyllin Mixtures on Titania Solar Cells Indriana Kartini	[O-5] Chemical Constituent of DCM Extract and Base-Neutral Fraction of <i>Voacanga foetida</i> Leaves from Three Locations of Lombok Island Surya Hadi
15.35-15.50	[O-6] Determination of Lead in Songkhla Seaweed by Bismuth-Modified Electrode Pipat Chooto	[O-7] Adsorption of Aqueous Cd(II) and Pb(II) Ions Over Doum Palm Activated Carbon Umar Ibrahim Gaya	[O-8] Performance of Meso-porous Carbon Synthesized From Fructose with Zinc Borosilicate Activator In Adsorption of Large Molecule Tutik Setianingsih	[O-9] Synthesis and Characterisation of $La_{1-y}Sr_yCo_{0.8}Fe_{0.2}O_3$ and $La_{1-y}Ba_yMnO_3$ ($0.0 \leq y \leq 0.4$) Dense Membranes Hamzah Fansuri	[O-10] Hyptolide Administration on Breast Adenocarcinoma Female C_3H Mice as Immuno stimulatory (In Vivo Study) Meiny Suzery
15.50-16.05	[O-11] Chemical Species of Metallic Elements in the Aquatic Environment of An Ex-Mining Catchment Mohd Jamil Maah	[O-12] Phase Diagram of the System of Water, Cyclohexane and Nonionic Surfactant Deski Beri	[O-13] Preparation of Organic Polymer-Based Monoliths for Bioapplications Akhmad Sabarudin	[O-14] Synthesis and Characterization of the Zn(II) Complex with Dimethyl Pyridine-2, 6-Dicarboxylate Fahimah Martak	[O-15] Performance of Tetraphenyldisilane Sulfonic Acid Catalyst on Transesterification and Esterification of Crude Palm Oil and Fatty Acids Nimpan Bangun
16.05-16.20	[O-16] Application of Cone Shaped Membrane-Liquid Phase Microextraction for Analysis Nitrosodipropylamine in Salted Fish Yanuardi Raharjo	[O-17] Membrane Electrolyte Assembly in Operating Polymer Electrolyte Fuel Cell: Small-Angle Neutron Scattering Study Using Deuterium Gas for Contrast Variation Method Ananda Putra	[O-18] Modification of Ni/Zn-HZSM-5 Double Promoted Catalyst To Produce Biofuel from Cerbera manghas Oil Danawati Hari Prajitno	[O-19] Synthesis and Characterization of Nanoscale Zero-Valent Iron Supported on Mesoporous Silica Atyaf Khalid Hammed	[O-20] Evaluation of Anti Parkinson's Activity of Indonesian Velvet Bean Extract in Haloperidol-Induced Mice Ratnaningsih E Sardjono



17.10-17.25	[O-36] Method Development and Validation for Lead (Pb) Analysis in Natural Honey from East Kalimantan Bohari Yusuf	[O-37] Catalytic properties of bimetallic Ni-M/AlOH (M = Sn, In, Nb, Ag, Zr, and Ga) on selective hydrogenation of furfural Rodiansono	[O-38] Effects of Organosolvent Method Into the Preparation of Nanocellulose Derived from Empty Fruit Bunch (EFB) of Palm Oil Tree of Malaysia Brian Brandon Bernard Jr	[O-39] Development and Characterization of Polymer Electrolyte Membranes Based on Sulfonated Bunch Press Fibre Cellulose and Phosphoric Acid Irfan Gustian	[O-40] Isolation and Characterization of Nanocellulose Based from Brown Seaweed Sargassum Sp. in An Acidic Condition Florinna Tan
19.00-21.30	Conference Dinner				

Thursday, 13 November 2014	
08.00-08.40	Plenary Speaker 6 [Plen-6] Dr. David G. Churchill Heavier Group 16-based Organic Molecular Probes for Neurodegenerative Disease Research Chair: Witri Wahyu Lestari
08.40-09.20	Plenary Speaker 7 [Plen-7] Prof. Hiroshi Kitagawa Functional Materials on the Basis of Elements Strategy Chair: Yayuk Astuti
09.20-09.30	Coffeebreak
09.30-10.10	Plenary Speaker 8 [Plen-8] Prof. Pimchai Chaiyen Mechanism and Biocatalysis of Flavin-Dependent Oxygenases Chair: Chanif Mahdi
10.10-10.50	Plenary Speaker 9 Prof. Hitoshi Miyasaka [Plen-9] Design of Functional Metal-Organic Frameworks Toward the Synergistic Control of Electron, Spins, and Chemical Interactions Chair: Teguh Endah Saraswati
10.50-11.50	Parallel Invited Speakers 3 Chair: Amin Fatoni
	[Inv-5] High Performance Liquid Chromatography Method for the A-Mangostin Analysis Dr. Dadan Hermawan
	[Inv-6] Preparation and Characterization of Inclusion Complex of Xanthone with Sulfonatocalix[4]Arene Dr. Triana Kusumaningsih
	[Inv-7] Enzyme in Organic Synthesis Prof. Supartono
11.50-12.50	Lunch Break



fractions of tin and lead were extremely high. More than 90% of the total concentrations of arsenic and chromium existed in the residual fraction. Concentrations of copper and zinc mainly occurred in the residual fraction (more than 60%), while lead and tin presented mostly in the non-residual fractions in surface water. For all of the six dissolved elements, the less-labile species formed the predominant fraction in their speciation patterns. The speciation patterns of particulate elements show that most of the concentrations of zinc, copper, chromium and arsenic were found in the reducible fraction, whereas lead and tin were mainly associated with the organic fraction.

Keywords: particulate metals, dissolved metals, anodic stripping, sequential leaching, fractions

[O-12]

Phase Diagram of the System of Water, Cyclohexane and Nonionic Surfactant

Deski Beri^{1,*}, Ali Amran¹, Roby Harfianto¹, Winda Yevita Dewi¹, Ananda Putra¹

Laboratory of Material Science, Department of Chemistry, Faculty of Mathematics and Science,
Padang State University, Indonesia, 25131

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Abstract

Phase diagram of the system of water, cyclohexane, and nonionic surfactant is attracted much interest, because it is very useful to probe the association structure of the surfactant. Our worked have succeeded to describe microemulsions, lamellar liquid crystals and hexagonal liquid crystals structures for the system of water in pH is 1 and 5; cyclohexane and nonionic surfactant (tween-20, tween-40, tween-60 and tween-80). For the system of water in pH is 1 and 5, cyclohexane and tween-20 and tween-40, we got two kinds of phases, there were lamellar liquid crystal (LLC) and microemulsions (ME), whereas, for the system of water in pH is 1 and 5, cyclohexane and tween-60 and tween-80, we got three kinds of phases, there were lamellar liquid crystal (LLC), hexagonal liquid crystal (HLC) and microemulsion (ME). In fact, the increase number of surfactant chains would increase the area of liquid crystal area in LLC and HLC.

Keywords: Association Structure, HLC, LLC, Microemulsions, Phase Diagram

