

IJCER

p-ISSN 2549-9947  
e-ISSN 2614-1426

# INTERNATIONAL JOURNAL OF CHEMISTRY EDUCATION RESEARCH

VOLUME 02, ISSUE 02, 2018



Int. J. Chem. Educ. Res.  
Vol. 02 Iss. 02 PP 60-88  
2018

# International Journal of Chemistry Education Research

<http://journal.uii.ac.id/IJCER>

---

## Editors in Chief

Prof. Riyanto, S.Pd., M.Si., Ph.D. (Scopus ID: 23976748700)  
Department of Chemistry, Universitas Islam Indonesia

Krisna Merdekawati, S.Pd., M.Pd. (Scopus ID: 57193918654)  
Department of Chemistry Education, Universitas Islam Indonesia

---

## Editorial Board

Dr. Das Salirawati

Department of Chemistry Education, Yogyakarta State University

Prof. Dra. Sri Rahayu (Scopus ID: 57200105209)

Department of Chemistry, State University of Malang

Artina Diniaty, S.Pd.Si., M.Pd. (Scopus ID: 57193918063)

Department of Chemistry Education, Universitas Islam Indonesia

Beta Wulan Febriana, S.Pd., M.Pd. (Scopus ID: 57193918928)

Department of Chemistry Education, Universitas Islam Indonesia

Widinda Normalia Arlianty, S.Pd., M.Pd. (Scopus ID: 57193923344)

Department of Chemistry Education, Universitas Islam Indonesia

Lina Fauzi'ah, S.Pd., M.Sc. (Scopus ID: 57193921487)

Department of Chemistry Education, Universitas Islam Indonesia

Muhaimin, S.Si., M.Sc. (Scopus ID: 57189645787)

Department of Chemistry Education, Universitas Islam Indonesia

---

## International Editorial Board

Prof. Dr. Kamisah Osman (Scopus ID: 55589316800)

Universiti Kebangsaan Malaysia, Bangi, Malaysia

Prof. Ruey-an Doong (Scopus ID: 7006956479)

National Tsing Hua University, Taiwan

---

## Layout Editorial Board

Muhammad Miqdam Musawwa

Imam Sahroni

Istyarto Damarhati

---

## Editorial Office

Department of Chemistry Education

Faculty of Mathematics and Natural Sciences

Universitas Islam Indonesia, Yogyakarta, Indonesia

Kaliurang Street Km. 14.5, Sleman, Yogyakarta, 55584

Phone: +62 274 896439 ext 3011

Fax: +62 274 896439

Email: [ijcer@uii.ac.id](mailto:ijcer@uii.ac.id)

---

**International Journal of Chemistry Education Research (IJCER)** is a peer-reviewed journal which covering all aspect of education, including chemistry education, physic education, biology education and science education. The journal publishes original research papers, short communications, dissemination, and discussion of research, experience and perspective across a wide range of education, teaching, development, instruction, educational projects and innovations, learning methodologies and new technologies in education and learning. The IJCER journal is published in a year (semi-annual). IJCER journal is fully open access for scholarly readers.

# International Journal of Chemistry Education Research

<http://journal.uii.ac.id/IJCER>

---

## Table of Content

Volume 2 Issue 2, 2018

Development of Guided Inquiry Based Work Sheet with Class and Laboratory Activity on Chemical Bonding Topic in Senior High School <i>Zammiluni, Allizar Ulianas, Mawardi</i>	60 – 66
The Implementation of Pyrolysis of Waste Material to Bio-Oil in The KKN Course <i>Lutfia Isna Ardhayanti, Mai Anugrahwati, Rico Nurillahi, Ahmad Saeful, Khuswatun Khasanah, Diah Retno Wati</i>	67 – 70
Analysis of Understanding of First-Year Chemistry Education Students on Molecular Forces Topic <i>Muhammad Miqdam Musawwa, Beta Wulan Febriana, Widinda Normalia Arlianty</i>	71 – 76
Pyrolysis of Biomass Waste as The Project Based Learning in Community Assistance Course <i>Imam Sahroni</i>	78 – 83
Using Project-Based Learning in Improving Students' Critical Thinking Skills to Separate of Mixtures <i>Nurul Insani, Noor Fadiawati, Ratu Betta Rudibyani, M. Mahfudz Fauzi Syamsuri</i>	84 – 88

---



Department of Chemistry Education  
Faculty of Mathematics and Natural Sciences  
UNIVERSITAS ISLAM INDONESIA

Indexed by

