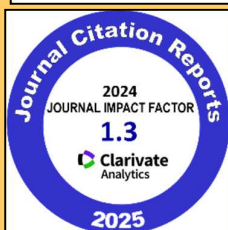


3.2 2024 CiteScore

48th percentile
Powered by Scopus

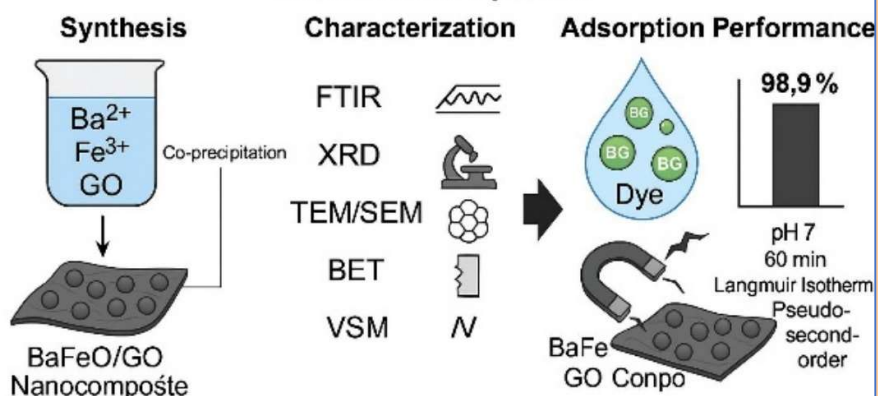


Bulletin of Chemical Reaction Engineering and...

Q3 Chemical Engineering (miscellaneous) best quartile

SJR 2024 0.31 powered by scimagojr.com

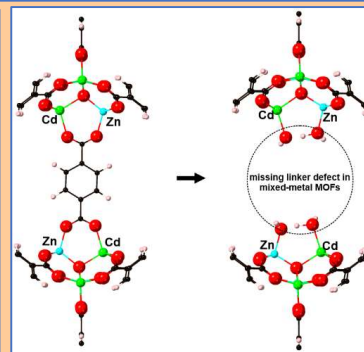
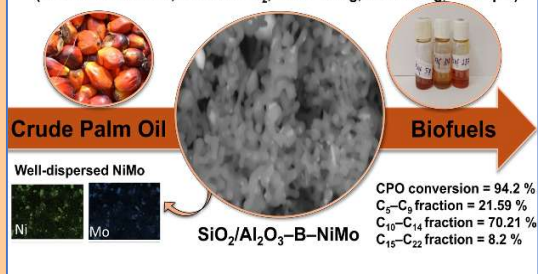
Efficient Adsorption of Brilliant Green Dye via BaFeO/Graphene Oxide Nanocomposites



Magnetically Separable • High Surface Area • Eco-friendly Dye Removal

Hydrocracking

(T = 350 °C for 2 hrs, P = 20 bar H₂, cat. = 0.5 g, CPO = 20 g, 1500 rpm)



Bull. Chem. React. Eng. Catal.

Vol. 20

No. 4

Pages: 582 - 756

Semarang, December 2025

e-ISSN: 1978-2993

Published by:

Masyarakat Katalis Indonesia – Indonesian Catalyst Society (MKICS)

The technical management of this journal is supported by BCREC Publishing Group jointly with Department of Chemical Engineering, Universitas Diponegoro.



EDITORIAL TEAM**EDITOR-IN-CHIEF**

Prof. Dr. I. Istadi, Department of Chemical Engineering, Universitas Diponegoro, Indonesia; E-mail: istadi@che.undip.ac.id;
(Scopus ID: [57192183616](#), WoS ID: [1581844](#))

ASSOCIATE / REGIONAL / HANDLING EDITOR FOR EUROPE AND AFRICA

Prof. Dr. Dmitry Yu. Murzin, Laboratory of Industrial Chemistry and Reaction Engineering, Abo Akademi University;
Turku/Abo, Finland (Scopus ID: [18037974700](#), WoS ID: [1716137](#))

ASSOCIATE / REGIONAL / HANDLING EDITOR FOR ASIA-PACIFIC AND AMERICA

Prof. Dr. Bunjerd Jongsomjit, Department of Chemical Engineering, Chulalongkorn University, Bangkok, Thailand, Thailand
(Scopus ID: [6603065177](#))

Prof. Dr. R. Rodiansono, Department of Chemistry, Lambung Mangkurat University, Indonesia (Scopus ID: [55785853800](#), WoS
ID: [397246](#))

INTERNATIONAL ADVISORY EDITORIAL BOARDS

Prof. Dr. Sebastien Leveneur, INSA Rouen Normandie,
UNIROUEN, Normandie Univ, LSPC, UR4704, Rouen, F-
76000, France (Scopus ID: [18836607200](#))

Prof. Dr. Joongjai Panpranot, Department of Chemical
Engineering, Faculty of Engineering, Chulalongkorn
University, Bangkok, Thailand (Scopus ID: [6602147398](#))

Prof. Dr. Ho-Shing Wu, Dept. of Chemical Engineering &
Material Science, Yuan-Ze University, Taiwan, (Scopus ID:
[7405581723](#), WoS ID: [1320968](#))

Prof. Dr. Suresh Sagadevan, Nanotechnology & Catalysis
Research Centre, University of Malaya, Kuala Lumpur,
50603, Malaysia (Scopus ID: [57215091647](#))

Prof. Dr. Nurul Asikin-Mijan, Department of Chemical
Sciences, Faculty of Science and Technology, Universiti
Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul
Ehsan, Malaysia (Scopus ID: [56413037100](#))

Prof. Dr. Hadi Nur, Head of Integrated Laboratory,
Universitas Negeri Malang (UM) E-mail:
hadi.nur@gmail.com, Indonesia (Scopus ID: [6602169746](#); WoS
ID: [1243523](#))

Prof. Dr. Y.H. Taufiq-Yap, Centre of Excellence for
Catalysis Science and Technology, Faculty of Science,
Universiti Putra Malaysia, Malaysia (Scopus ID:
[56272773200](#))

Prof. Dr. Valeria Di Sarli, Institute for Research on
Combustion - National Research Council of Italy (CNR), Italy
(Scopus ID: [16021366800](#))

Prof. Dr. Didik Prasetyoko, Department of Chemistry,
Faculty of Mathematics and Natural Sciences, Institut
Teknologi Sepuluh Nopember, Surabaya, Indonesia (Scopus
ID: [6507890461](#))

Prof. Dr. Is Fatimah, Department of Chemistry, Islamic
University of Indonesia, Kampus Terpadu UII, Yogyakarta,
Indonesia (Scopus ID: [35104706400](#))

Prof. Dr. Nor Aishah Saidina Amin, Faculty of Chemical
and Natural Resources Engineering, Universiti Teknologi
Malaysia, Malaysia, (Scopus ID: [35489910900](#), WoS ID:
[1094527](#))

ASSISTANT EDITORS

Teguh Riyanto, Department of Chemical Engineering, Universitas Diponegoro, Indonesia (Scopus ID: [57208816811](#); WoS ID:
[659132](#))

Raka Sindu Wardoyo, Rumah Jurnal LPPM, Universitas Diponegoro, Indonesia
Wahyu Setiadi, Universitas Diponegoro, Indonesia

Prof. Dr. Jose E. Castanheiro, Dept. of Chemistry,
University of Evora, Portugal (Scopus ID: [6506163997](#))

Prof. Dr. Sibudjing Kawi, Dept. of Chemical and Biochemical
Engineering, National University of Singapore, Singapore,
(Scopus ID: [7006257898](#))

Prof. Dr. Rafael Molina, Estado Sólido Catálisis Ambiental,
Departamento de Química, Facultad de Ciencias, Universidad
Nacional de Colombia, Colombia, (Scopus ID: [7202381846](#))

Prof. Dr. Arief Widjaja, Dept. of Chemical Engineering,
Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
(Scopus ID: [13003143800](#))

Prof. Dr. Mostafa Barigou, School of Chemical Engineering,
University of Birmingham, United Kingdom, (Scopus ID:
[7003356054](#))

Prof. Dr. Anh-Tuan Vu, School of Chemical Engineering,
Hanoi University of Science and Technology, Hanoi, Viet Nam
(Scopus ID: [16240229300](#))

Assoc. Prof. Dr. Jinhang Dai, College of Environment and
Resources, Chongqing Technology and Business University
Chongqing, 400067, China (Scopus ID: [57145739300](#))

Assoc. Prof. Dr. Ghalia A. Gaber, Chemistry Department,
Faculty Of Science (GIRLS), Al-azhar University, P.O. BOX:
11754, Yousef Abbas Str., Nasr City, Cairo, Egypt (Scopus
ID: [57215186835](#))

Dr. Samuel Eshorame Sanni, Department of Chemical
Engineering, Covenant University, P.M.B 1023, Ogun State,
Ota, Nigeria (Scopus ID: [57211047073](#))

Dr. Aydin Hassani, Department of Materials Science and
Nanotechnology Engineering, Faculty of Engineering, Near
East University, 99138 Nicosia, TRNC, Mersin 10, Turkey
(Scopus ID: [37047239400](#))

Prof. Dr. Yayuk Astuti, Department of Chemistry, Faculty of
Natural Sciences and Mathematics, Universitas Diponegoro,
Indonesia (Scopus ID: [57100033100](#))

International Diversity of Editors/Editorial Board: 25 Editors in 15 countries/Regions.
Indonesia (11); Malaysia (5); Finland (1); Thailand (2); French (1); Italy (1); Portugal (1); Colombia (1); United Kingdom (1); Singapore (1); Egypt (1);
Turkey (1); Nigeria (1); China (1) / Taiwan (1).
Gender Diversity Distribution of the Editors: 25% woman; 75% man.

FOCUS AND SCOPE

Bulletin of Chemical Reaction Engineering & Catalysis, an international journal, provides a forum for publishing the novel technologies related to the catalyst, catalysis, chemical reactor, kinetics, and chemical reaction engineering. Scientific articles dealing with the following topics in chemical reaction engineering, catalysis science, and engineering, catalyst preparation method and characterization, novel innovation of chemical reactor, kinetic studies, etc. are particularly welcome. However, articles concerned on the general chemical engineering process development are not covered and out of the scope of this journal.

This journal encompasses *Original Research Articles*, *Review Articles* (only selected/invited authors), and *Short Communications*, including: fundamentals of catalyst and catalysis; fundamentals of chemical reaction engineering; kinetics studies of chemical reaction engineering; materials and nano-materials for catalyst; photocatalyst and photocatalysis; chemistry of catalyst and catalysis; applied chemical reaction engineering; applied catalysis; applied biocatalysis; applied bio-reactor; membrane bioreactor; chemical reactor design (not process parameter optimization); catalyst regeneration; catalyst deactivation; surface chemistry of catalyst; bio-catalysis; enzymatic catalytic reaction (not process parameter optimization); kinetic studies of enzymatic reaction (not process parameter optimization); the industrial practice of catalyst; the industrial practice of chemical reactor engineering; application of plasma technology in catalysis and chemical reactor; and advanced technology for chemical reactors.

The manuscript articles should be submitted by online in MS Word / Open Office / PDF file format to Editorial Office through **Online Submission interface** at: <https://journal.bcrec.id/index.php/bcrec>. The Author must read the author guidelines of this journal first before submitting a manuscript.

PUBLICATION INFORMATION

Bulletin of Chemical Reaction Engineering & Catalysis (e-ISSN: 1978-2993).

Short journal title (abbreviation): ***Bull. Chem. React. Eng. Catal.***

Commencement of publication: January 2008.

For year 2026, 4 issues will be scheduled for publication with 14-17 articles per issue (Volume 21, Issue 1 (April), Issue 2 (August), Issue 3 (October), and Issue 4 (December)).

Bulletin of Chemical Reaction Engineering & Catalysis, initialized as BCREC, is published freely open access of fulltext PDF articles via journal website (<https://journal.bcrec.id/index.php/bcrec>).

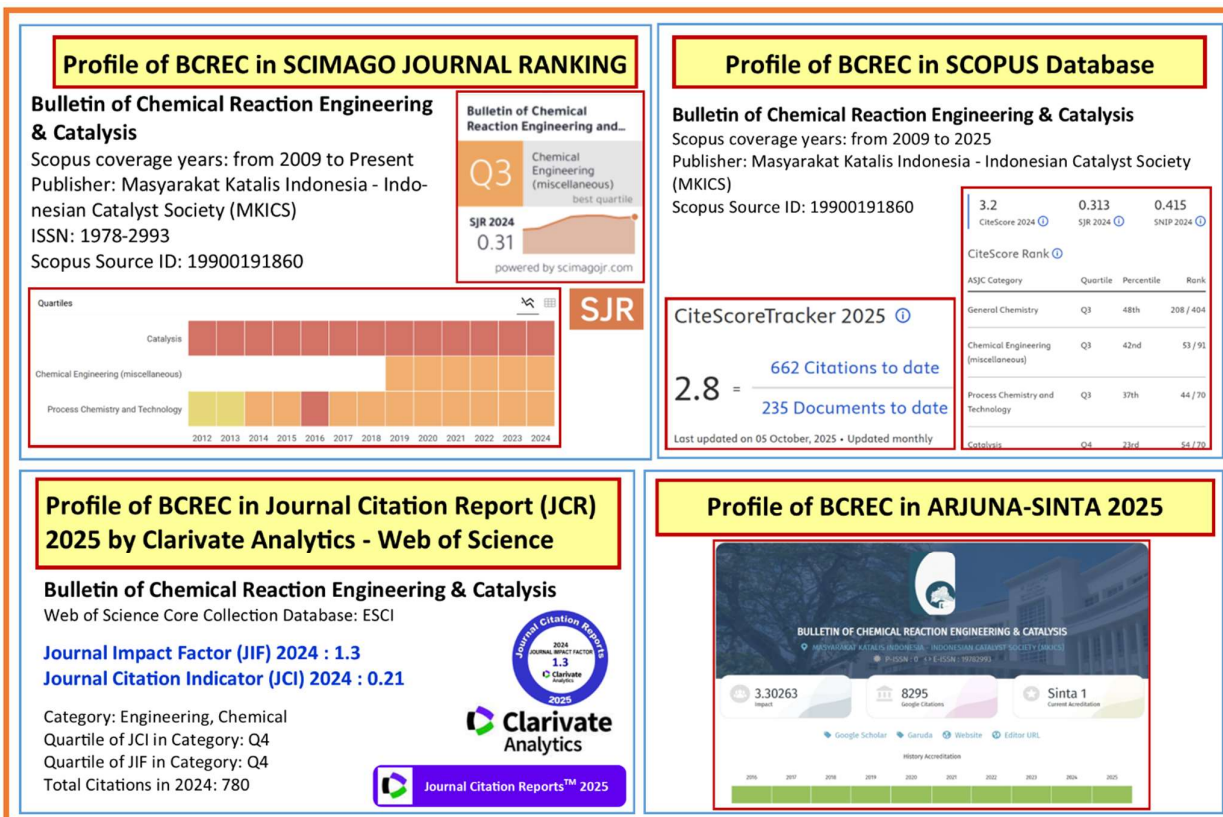
The BCREC journal is published by *Masyarakat Katalis Indonesia* - Indonesian Catalyst Society (MKICS) (<https://mkics.bcrec.id>). The technical management of this journal is supported by BCREC Publishing Group (<https://bcrec.id>) and jointly with Department of Chemical Engineering, Universitas Diponegoro.

The BCREC journal has been indexed and abstracted by: Elsevier Products (Scopus, Compendex / Engineering Village), Web of Science (Emerging Source Citation Index) by Clarivate Analytics with Journal Impact Factor (JIF), Chemical Abstract Services (CAS), CABI, ASEAN Citation Index (ACI), DOAJ, Digital Dimensions, and other reputable indexers.

Fulltext PDFs of this journal have been distributed around the world by EBSCO Publishing (Academic Search Complete, Academic Search Premiere, and Academic Search R&D packages) and ProQuest Databases started from Volume 4 Number 1 Year 2009 to present.

JOURNAL METRIC ANALYSIS (2025)

* Scopus ID	: 19900191860
* SJR Scimago (2024)	: 0.313 (Q3)
* SNIP (2024)	: 0.415
* CiteScore Scopus (2024) / Percentile	: 3.2 (Q3) / 48 th
* Journal Impact Factor (JIF) 2024 (JCR 2025)	: 1.3 (Q3)
* Journal Citation Index (JCI) 2024 (Web of Science)	: 0.214 (Q3)



INDEXING AND ABSTRACTING

Bulletin of Chemical Reaction Engineering & Catalysis (e-ISSN: 1978-2993) has been covered (indexed and abstracted) by following indexing services:

1. Scopus - (Elsevier)
2. EI-Compendex - Engineering Village
3. Scimago Journal Ranking (SJR)
4. Emerging Source Citation Index (ESCI) (by Web of Science - Clarivate Analytics)
5. Dimensions - Digital Science
6. ASEAN Citation Index (ACI)
7. SINTA 1 (Accredited Grade S1)
8. ProQuest (Fulltext) Databases
9. EBSCO (Fulltext) Databases
10. Chemical Abstract Service
11. Google Scholar
12. Directory of Open Access Journal (DOAJ)
13. ResearchGate
14. ROAD ISSN (1978-2993)
15. WorldCat OCLC
16. CiteULike
17. Mendeley
18. SHERPA/RoMEO -
19. CrossRef Member
20. Index Copernicus
21. CABI Direct
22. SCIRUS - for scientific information
23. ULRICHSWEB Global Serial Directory
24. Garuda, Kemdikbud Republic of Indonesia

For detail please visit here: <https://journal.bcrec.id/index.php/bcrec/pages/view/indexing>.

TABLE OF CONTENTS, Vol. 20 Issue 4 Year 2025

This issue (BCREC Volume 20 Issue 4 Year 2025) has been finalized and launched at 25th October 2025 and available online for the regular issue of 26th December 2025. All articles in this issue (15 original research articles) includes 62 Authors from 9 countries/regions of origin (Viet Nam (26), Indonesia (30), India (1), Saudi Arabia (4), Japan (1), Iraq (3), United States (1), Egypt (1), and Kazakhstan (1)):

- [1] Hoang, L. H., Quynh, H. G., Nghi, M. H., Phuong, N. T. T., Duong, N. T. H., & Long, N. Q. (2025). Green Synthesis of Chitosan-Assisted ZnO Nanoparticles and Their Photocatalytic Application in ZnO/TiO₂ Composites for Isopropanol Degradation. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 582-593. <https://doi.org/10.9767/bcrec.20431>
- [2] Nguyen, T. H., Nguyen, T. H., Vu, A., & Minh, T. L. (2025). Photocatalytic Degradation of Methyl Orange Using TiO₂ - Coated Cordierite Substrates: A Comparison of Dip-Coating and Spray-Coating Methods. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 594-606. <https://doi.org/10.9767/bcrec.20400>
- [3] Ulfa, M., Rohmah, I. S., & Anggreani, C. N. (2025). Driving Photocatalytic Efficiency through Controlled Cobalt–Iron and Cobalt–Nickel Ratios for Methylene Blue Degradation. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 607-623. <https://doi.org/10.9767/bcrec.20410>
- [4] Minh, N. V., Vinh, N. X., Nhan, L. M., Thang, B. V., & Thomas, D. (2025). Charge Transport Kinetics in Fluorine-Doped Tin Oxide/Titanium Dioxide/Cadmium Sulfide/Cadmium Selenide Doped with Copper(II)/Zinc Sulfide Photoanode. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 624-630. <https://doi.org/10.9767/bcrec.20455>
- [5] Pasupulety, N., Alamoudi, M. A., & Al-Zahrani, A. A. (2025). A Study on IIIA Group Metals (B or Ga or Tl) Doped Mo₂C-HZSM-5 Catalysts for Methane Dehydroaromatization. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 631-639. <https://doi.org/10.9767/bcrec.20477>
- [6] Saridewi, N., Zulys, A., & Bakri, R. (2025). Green Synthesis of Cu-BDC Nanosheets for Methylene Blue Degradation. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 640-649. <https://doi.org/10.9767/bcrec.20458>
- [7] Phuc, D. H., Tung, H. T., Duy, L. D., & Nhan, L. M. (2025). Enhancement of Charge Transfer in Quantum Dot–sensitized Solar Cell Photoanodes by Supporting rGO Layers. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 650-660. <https://doi.org/10.9767/bcrec.20366>
- [8] Ulfa, M., & Lestari, S. (2025). Design of Bi-and Tri-metal Oxide Photocatalysts via Gelatin-Directed Mesoporous Silica Hard Templating for Advanced Dye Degradation. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 661-671. <https://doi.org/10.9767/bcrec.20460>
- [9] Nurdina, R. A., Kamiya, Y., Hatmanto, A. D., Pambudi, F. I., Suyanta, S., & Nuryono, N. (2025). Ultrasonic-Assisted Transesterification of Tripalmitin Using Limestone-Derived CaO Catalyst. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 672-682. <https://doi.org/10.9767/bcrec.20456>
- [10] Saed, U., Ali, A., Saoud, A., & Zeitoun, Z. (2025). Enhanced Adsorption of Brilliant Green Dye Using Barium Ferrite/Graphene Oxide Nanocomposites. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 683-693. <https://doi.org/10.9767/bcrec.20453>
- [11] Hasanudin, H., Nakashima, M., Asri, W. R., Novia, N., Hadiyah, F., Maryana, R., Al Muttaqii, M., & Rinaldi, N. (2025). Effect of Aluminium Loading on SiO₂/Al₂O₃-NiMo Catalysts Synthesized via KHP-template for Crude Palm Oil Hydrocracking. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 694-708. <https://doi.org/10.9767/bcrec.20483>
- [12] Bui, T. D., Nguyen, Q. L., Cuong, N. V., & Nguyen, T. T. (2025). Effect of Surface Stabilizers on the Optical Characteristics of ZnSe.ZnS.Mn.ZnS Nanocrystals. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 709-722. <https://doi.org/10.9767/bcrec.20454>
- [13] Toshtay, K. (2025). Partial Hydrogenation of Sunflower and Soybean Oil Over Zirconia Supported Platinum Catalyst. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 723-735. <https://doi.org/10.9767/bcrec.20412>
- [14] Pambudi, F. I., Kunarti, E. S., Cahyono, R. N., & Agusti, N. N. (2025). Missing Linker Defects in Heterometallic (Zn/Cd)-MOF-5: A First-Principles Study of Structural Properties and Gas Interaction. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 736-749. <https://doi.org/10.9767/bcrec.20464>
- [15] Mursal, M., Malahayati, M., Ismail, I., Irahmani, I., & Jalil, Z. (2025). Tailoring Bandgap and Crystallinity of TiO₂ via Mg Doping for Enhanced DSSC Photoanode Performance. *Bulletin of Chemical Reaction Engineering & Catalysis*, 20(4), 750-756. <https://doi.org/10.9767/bcrec.20473>