

BULLETIN

PERSATUAN GEOLOGI MALAYSIA

EDITOR: JOY JACQUELINE PEREIRA



Bulletin of the
GEOLOGICAL SOCIETY OF MALAYSIA

May 2026

No. 81



Buletin Persatuan Geologi Malaysia

Bulletin of the Geological Society of Malaysia

The Bulletin of the Geological Society of Malaysia (ISSN 0126-6187; e-ISSN 2637-109X), is a peer-reviewed open access interdisciplinary journal which publishes Earth Science research that addresses not only trending research areas but also high quality application topics. The scope of published articles covers engineering geology, environmental geology, geochemistry, geomorphology, geophysics, hydrogeology, mining geology, paleontology, petroleum geology, regional geology, sedimentology, stratigraphy, structural geology and tectonics.

The Bulletin supports researchers primarily focusing on Asia/SE Asia, but is not limited to this region, and publishes research papers of both scientific and technical nature that are of current interest and have potential impact on activities such as oil & gas exploration, mining, environmental issues, earthquakes, hazard assessment, disaster risk reduction and climate change adaptation. The Bulletin also promotes geological interest on subjects of a conservation nature such as geoheritage and geotourism.

The Bulletin is published twice a year (May and November) by the Geological Society of Malaysia (GSM). Digital copies are distributed to all members of the Society and can be downloaded from GSM's website. Printed copies are available at RM80.00 per copy (price exclusive of postage).

The Bulletin is indexed in the following abstracting and indexing services and databases: Scopus, MyJournal, MyCite, Ebsco, ASEAN Citation Index and AAPG Datapages.

GSM is committed to upholding standards of ethical behaviour at all stages of the publication process and we recommend the Committee on Publication Ethics (COPE) Best Practice Guidelines (<http://publicationethics.org/resources/guidelines>).

All articles published by the Bulletin are licensed under the Creative Commons Attribution 4.0 International License. No fee is imposed on authors for publishing in the journal.

For submission instructions please refer to the inner back page. For GSM membership, subscription and any enquiry concerning GSM and the Bulletin please contact:

Geological Society of Malaysia,
c/o Department of Geology, Universiti Malaya,
50603 Kuala Lumpur, Malaysia
Tel: 603-79577036 Fax: 603-79563900
Email: geologicalsociety@gmail.com

Editor

Joy Jacqueline Pereira (Universiti Kebangsaan Malaysia, Malaysia)

Assistant Editors

Baba Musta (Universiti Malaysia Sabah, Malaysia)

Meor Hakif Amir Hassan (Universiti Malaya, Malaysia)

Mohammed Hail Hakimi (Taiz University, Yemen)

Editorial Board

Alfredo Lagmay (University of the Philippines, The Philippines)

Azman A. Ghani (Universiti Malaya, Malaysia)

Felix Tongkul (Universiti Malaysia Sabah, Malaysia)

François Jean-Pierre Gérard Bache (PETRONAS, Malaysia)

Harry Doust (Vrije Universiteit Amsterdam, The Netherlands)

Huasheng Huang (Sun Yat-sen University, China)

Ibrahim Komoo (Universiti Kebangsaan Malaysia, Malaysia)

Peter R. Parham (Universiti Teknologi Malaysia, Malaysia)

Rajib Shaw (Keio University, Japan)

Robert Hall (University of London, UK)

Vanessa J. Banks (British Geological Survey, UK)

Editorial Management Committee

Ng Tham Fatt, Nur Iskandar Taib, Lim Choun Sian, Muhammad Hatta Roselee, Elvaene James, Nazatul Athirah Abdul Khalil, Wan Aida Wan Zahari, Anna Lee

Reviewers

Arindam Chakraborty, Charles Makoundi, Dony Adryansyah, Frederick Francis Tating, Habibah Jamil, Nur Iskandar Taib, Jonathan Brown, Lim Choun Sian, Mohd Basril Iswadi Basori, Mohd Rozi Umor, Mohd Talha Anees, Najmiah Rosli, Norsyafina Roslan, Nur 'Aishah Zarime, Rahman Yaccup, Ryan Vogwill, Selva Marimuthu, Sorja Kesuma, Tim Breiffeld, Vijay Anand S.

Printed in Malaysia by
Nets Printwork Sdn. Bhd., No. 56, Jln. PBS 14/4,
Taman Perindustrian Bukit Serdang, 43300 Seri Kembangan,
Selangor

BULETIN

PERSATUAN GEOLOGI MALAYSIA

KANDUNGAN / CONTENTS

- 1 - 3 An assortment of research findings on economic geology, hydrogeology, stratigraphy and tectonics (Editorial Note)
JOY JACQUELINE PEREIRA
- 5 - 19 Ion-adsorption clay-type rare earth elements in the Western Belt of Peninsular Malaysia: A study on the influence of tin-bearing S-type granites
FAKHRUDDIN AFIF FAUZI, ARDA ANASHA JAMIL, NORAN NABILLA NORAZLAN, MUHAMMAD AZMAN ASERI, AZMI ABU BAKAR, ISZAYNUDDIN ABD HAMID, YONG ADILAH MUSTAFA, ABDUL HADI ABDUL RAHMAN, MOHD ZAHAR IBRAHIM, TAMILARASI GANASAN
- 21 - 29 Platinum group mineral identification in river sediments along the tributaries of Sungai Kapuakan, Ranau
MOHAMAD YUSOF BIN KAMARUZZAMAN, BABA MUSTA, MUHAMMAD SUFI BIN MUSA, JAYAWATI FANILLA SAHIIH BINTI MONTOI
- 31 - 41 Physico-chemical condition and origin of Au mineralisation at Me Xi deposit, Central Truong Son Belt, Vietnam: Insight from fluid inclusion studies
TRUONG XUAN LE, KHIN ZAW, HAI THANH TRAN, KHANG QUANG LUONG, DU KHAC NGUYEN, BAN XUAN TO
- 43 - 56 Groundwater potential assessment for Penang mainland, Malaysia using remote sensing and GIS
BASHIR AGHA-MUSA, ISMAIL AHMAD ABIR, KHIRI ABUBAKR KHALF, ABUBAKAR FAHAD
- 57 - 70 Hydrogeological challenges in drilling fractured hardrock aquifer in Kedah
PRAKASINI D., VIJAYAN V.R., ZAMANI A.S., ALVYN C.M.
- 71 - 83 Baseline study of surface and groundwater quality in response to groundwater recharge potential
LAKAM ANAK MEJUS, ISMAIL BIN TAWNIE, AZRUL NORMI BIN IDRIS, MOHD MUZAMIL BIN MOHD HASHIM, MOHAMAD SYAHIRAN BIN MUSTAFFA, ENGPU FAHMI BIN ENGPU CHIK
- 85 - 98 Application of magnetic anomaly data for depicting hydrogeological model of fractured aquifer: A case study from Kutasari, Purbalingga, Indonesia
SEHAH, ABDULLAH NUR AZIZ, HARTONO, FIQRI RAMADHANI SALIHAMIDZI, MUHAMMAD REDIKO, R. FARZAND ABDULLATIF, LUSIA SILFIA PULO BOLI
- 99 - 115 The history of fluvial to coastal plain sand deposition and the Cycles of Sarawak
PETER LUNT, MOHAMMAD NAZRUL, KHAIROOL ANWAR LAKSAMANA
- 117 - 128 Pemantauan dinamik tektonik dan analisis pergerakan sesar aktif di Ranau, Sabah, Malaysia (Monitoring of tectonic dynamics and analysis of active fault movement in Ranau, Sabah, Malaysia)
BAILON GOLUTIN, ISMAIL ABD RAHIM

EDITOR: JOY JACQUELINE PEREIRA



Bulletin of the
GEOLOGICAL SOCIETY OF MALAYSIA

Copyright:

Copyright 2026 by the Authors. Licensee Geological Society of Malaysia.
The articles in the journal are open access articles distributed under the terms and conditions of the
Creative Commons Attribution (CC-BY) License 4.0.

PERSATUAN GEOLOGI MALAYSIA Geological Society of Malaysia

Council 2026/2027

President :	Meor Hakif Amir Hassan
Vice President :	Tanot Unjah
Secretary :	Ling Nan Ley
Assistant Secretary :	Elanni Md Affandi
Treasurer :	Lim Choun Sian
Editor :	Joy Jacqueline Pereira
Immediate Past President :	Mohd Hariri Arifin
Councillors :	Abdul Hadi Abdul Rahman Arindam Chakraborty Hamzah Hussin Lin Chin Yik Mohamad Shaufi Sokiman Mohammad Yasir Bin Mohammad Said Suraya Hilmi Hazim Tan Boon Kong

The Geological Society of Malaysia was founded in 1967 with the aim of promoting the advancement of geoscience, particularly in Malaysia and Southeast Asia. The Society has a membership of about 700 local and international geoscientists.

Published by
Geological Society of Malaysia
c/o Department of Geology, Universiti Malaya, 50603 Kuala Lumpur
Tel: 603-79577036 Fax: 603-79563900
Email: geologicalsociety@gmail.com
<https://www.gsm.org.my/>

This publication
is financed by the
Society's Publication Fund

Printed by
Nets Printwork Sdn. Bhd., No. 56, Jalan PBS 14/4, Taman Perindustrian Bukit Serdang,
43300 Seri Kembangan, Selangor