

The Society for Organic Petrology

NEWSLETTER

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The 41th Annual TSOP Meeting, September 7-14 2025, Yogyakarta, Indonesia



Barges with large tonnage loaded with coal and other goods pass by on the Mahakam river, Samarinda City, Indonesia.
From https://en.wikipedia.org/wiki/Mahakam_River

TOP NEWS

- 2025 TSOP Student Virtual Seminar Series: *From color to isotope composition: What does peat tell us?*
- TSOP Member Contributions: *Reflectance as an indicator of biochar permanence*
- TSOP Mentorship Program

TSOP PRESIDENT'S LETTER

Dear TSOP Members,

With just one more message to come before I complete my term as TSOP President, I'm glad to connect with you again. As the academic year winds down in many parts of the world, and as some of you take a well-deserved summer break or enjoy a brief slowdown, I hope you are finding moments to pause and recharge.

In April, we hosted an online seminar as part of the TSOP-EAOG Seminar Series, delivered by Professor Henrik Ingermann Petersen, titled "CO₂ injection in depleted oil fields: an organic petrographic and geochemical approach". Many thanks to Henrik for an excellent and engaging talk. The series will continue later this year, with more exciting presentations to come. As a reminder, most of our virtual seminar presentations are available on our YouTube channel, so if you missed one, you are welcome to catch up there.

I'm also pleased to share that the Student Virtual Seminar Series will resume with an upcoming talk titled "From color to isotope composition: What peat tell us?", presented by Aulia Agus Patria from Akita University, Japan, scheduled for 10 July. Details have been shared via email, Facebook, and other social media platforms. Special thanks to the Student Committee, chaired by Itumeleng Matlala, for coordinating this event.

We will be sending out the ballot for TSOP's election in the coming months. I encourage everyone to participate, as your vote helps shape the future of our society. We have an excellent group of candidates who are eager to contribute.

Finally, a reminder to visit the website and registration portal for the 41st Annual TSOP Meeting if you haven't done so already. I look forward to seeing many of you in Indonesia this September.

Until then, I wish you a productive and refreshing summer season.

Best wishes,
Lei Zhao, TSOP President 2023-2025



Dr. Lei Zhao
TSOP President

From color to isotope composition: What peat tell us?

TSOP is pleased to invite all members and anyone with an interest in understanding the peatland formation to attend the upcoming Student Seminar Series, where **Aulia Agus Patria**, a PhD candidate from Akita University, Japan, will showcase his research, ideas, and innovations. Aulia will take us through his PhD project, particularly delving into records of paleoenvironmental and palaeoecological dynamics of tropical peatlands from the northwest Kapuas coastal wetlands, Indonesia. The link to the online meeting via Microsoft Teams is:

Meeting ID: 355 367 145 987

Passcode: 7mY2Gj2E

Event Time: Wednesday, July 10 2025, 9:00 AM – 10:30 EDT (USA)



2025 TSOP-student virtual series

From color to isotope composition: what peat tell us?

Event time: Wednesday, 10 July 2025,
9:00 AM – 10:30 EDT (USA) /
9:00 -10:30 PM Perth (Australia)
Microsoft teams

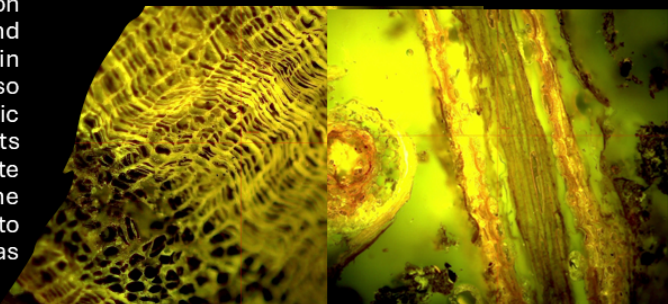
Meeting ID: 355 367 145 987

Passcode: 7mY2Gj2E

This study will present a multi-proxy (i.e., physical, biological and chemical) record of paleoenvironmental and paleoecological dynamics of tropical peatlands from the northwest Kapuas coastal wetlands, Indonesia. The precise color quantification was obtained from the image analysis based on the CIELAB (International Commission on Illumination L*a*b*) system to determine the peat physical description and properties. In addition, the coupling of organic petrology and isotopic composition ($\delta^{13}\text{C}_{\text{org}}$ and $\delta^{15}\text{N}_{\text{tot}}$) of peat to elucidate the origin and formation pathways of macerals in coal deposits was also employed. Of particular interest was to examine whether an organic matter (i.e., maceral composition and preservation type) and its isotopic composition could be the potential proxy for paleoclimate reconstruction within a global context. Therefore, we complement the study of modern peat using physical, biological, and chemical proxy to contribute to the discussion/perspective of the origin of macerals as well as their potential proxy as paleoclimate recorders.



Aulia Agus Patria (PhD candidate)
Akita University, Japan



REFLECTANCE AS AN INDICATOR OF BIOCHAR PERMANENCE

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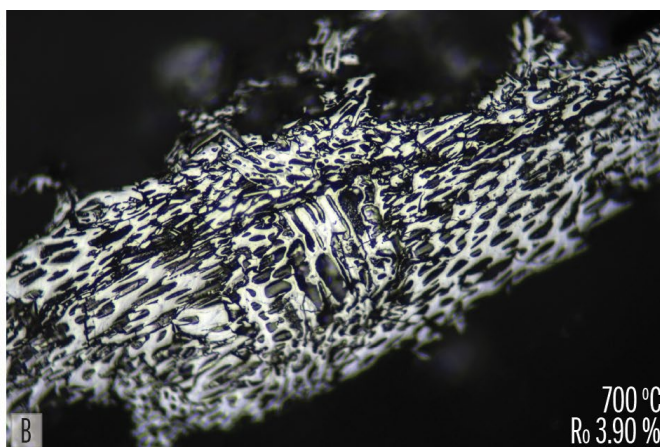
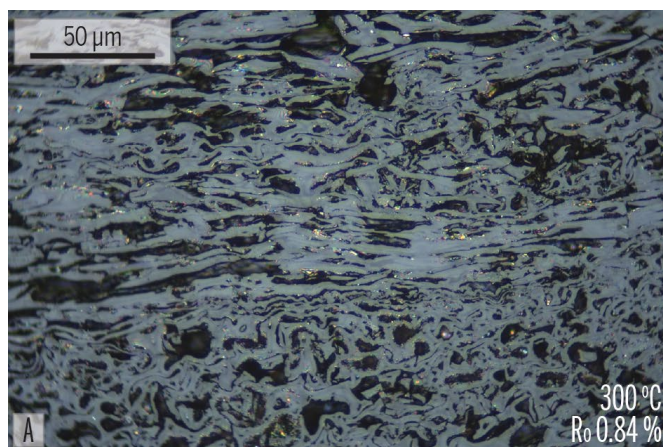
[CLICK HERE TO VISIT THE PUBLICATION](#)

Biochar, a carbon-rich product of biomass pyrolysis, holds considerable potential for carbon sequestration, soil amendment, and environmental remediation. Its effective application, however, hinges on understanding biochar permanence and on employing robust methodologies to reliably assess its stability and reactivity.

This study investigates the relationship between reflectance and the chemical composition (elemental ratios and organic functional groups) of biochar produced from sycamore wood, wheat straw, and peanut shells across well-controlled pyrolysis temperatures ranging from 300 °C to 700 °C, aiming to assess the potential of biochar reflectance as an indicator of biochar permanence.

The results demonstrate strong correlations between biochar reflectance and H/C and O/C molar ratios and show that the reflectance increases systematically with pyrolysis temperature. A strong correlation between the elemental O/C ratio and the FTIR-derived ratio of oxygenated groups to aromatic carbon across different pyrolysis temperatures provides additional valuable insights for predicting biochar stability.

The findings point to pyrolysis temperature as the dominant factor influencing biochar longevity and reinforce the suggestion that biochars with reflectance values above 2.0 % are non-reactive and are expected to be stable in the environment for a very long time. The results highlight biochar reflectance as a rapid and effective proxy for predicting biochar permanence, supporting its utility in carbon sequestration and environmental management.



INTERLABORATORY STUDY 2: COMPONENT IDENTIFICATION OF SOLID BIOMASS FUELS USING REFLECTED LIGHT MICROSCOPY

A. Drobniak, M. Mastalerz, Z. Jelonek, I. Jelonek, M.N. Acda, T. Adsul, N. Malenšek Andolšek, L. Animal, O.H. Ardakani, T. Ataide, D. Batbold, M. Bhat, T. Congo, B.S. Donohoe, M. Du, O.A. Ehinola, D. Flores, C. Fonseca, S. Ghosh, P. Gonçalves, P.C. Hackley, J.C. Hower, L. Jargal, M. Johnston, S. Kalatzidis, S. Kędzior, W. Knowles, S. Kumar, J. Kuś, G. Lis, K. Lis, B. Liu, B. Liu, Q. Luo, A. Mencarelli, D. Mishra, M. Misz-Kennan, N. Mitillo, R. Muzyka, J.L. Nedzweckas, J. O'Keefe, S. Omodeo Salé, L. Oyunjargal, J. Park, A. Agus Patria, R. Pearson, H.I. Petersen, G. Predeanu, G. Ranjin, J. Reyes, J. Ribeiro, G. de la Rosa Rodríguez, A. Rudra, M. Sajdak, M. Sanders, G. Siavalas, P. Sosnowski, A. Varma, M. Wojtaszek-Kalaitzidi, M. Wolszczak, Z. Xu, A. Zdravkov, L. Zhao, M. Zielińska, K. Ziemianin

[CLICK HERE TO VISIT THE PUBLICATION](#)

As nations transition toward sustainable energy systems, biomass has become a vital component of global energy portfolios. Derived from organic materials such as wood, agricultural residues, forestry byproducts, and organic waste, biomass is a renewable energy source with significant environmental and economic benefits. Responsible biomass energy production can improve waste management, reduce emissions of greenhouse gases, and mitigate environmental pollution. However, as the diversity of biomass-derived fuels increases, robust quality assessment methods are essential to ensure their efficiency, safety, and minimal environmental impact.

Reflected light microscopy (RLM) is one such technique with the potential to complement conventional physico-chemical analyses by enabling a rapid identification of material constituents and impurities. To refine this methodology and evaluate the reproducibility of solid biomass component identification using RLM, an interlaboratory study (ILS) was conducted. The study involved the recognition of 58 components across 45 photomicrographs, with the participation of 65 scientists and students from 25 countries.

The participants faced high difficulty identifying some of the marked components, and as a result, the percentage of correct answers ranged from 19.0 % to 98.3 %, with an average correct identification rate of 62.7 %. The most challenging aspects of the identification process included distinguishing between woody and non-woody (agro) biomass, accurately identifying petroleum-derived materials, and differentiating agro biomass from inorganic matter.

The results suggest that while RLM is an important tool for characterizing solid biomass, further development of methodology guidelines and training are necessary to enhance its effectiveness. Future research should prioritize preparing detailed, image-rich, microscopic morphological descriptions of biomass fuel components, which could improve the accuracy and reliability of using RLM in biomass fuel characterization.

PASSING OF RUDI SCHWAB

We are deeply saddened to share the passing of Rudi Schwab, a long-time and dedicated member of TSOP. Rudi was more than just a steadfast supporter of our society – he was a valued colleague and a dear friend to many. His contributions to science and TSOP were truly immeasurable. His presence and warmth will be greatly missed by all who had the privilege of knowing him.



Rudi with his wife Krystyna Tokarska and his beloved camera, which he was rarely seen without at TSOP meetings.

TSOP MENTORSHIP PROGRAM

Are you a student who needs a mentor? Are you a senior scientist who wants to help guide and strengthen the next generation of organic petrologists?

If so, we are excited to invite you to join The Society for Organic Petrology (TSOP) Mentorship Program!



Whether you're a student, early-career researcher, or an organic petrologist in training, our program offers you the opportunity to engage in personalized one-on-one mentorship sessions with leading experts, educators, and scientists in the field of Organic Petrology.

Our esteemed mentors include renowned figures such as Prof. Brian Cardott (University of Oklahoma), Prof. Hamed Sanei (Aarhus University), Prof. Henrik Petersen (Geological Survey of Denmark and Greenland), Prof. Longyi Shao (China University of Mining & Technology), Prof. Shifeng Dai (China University of Mining & Technology), and Dr. Thomas Gentzis (Core Laboratories).

Participating in this program will give you invaluable insights, help clarify your career goals, and provide access to an exclusive network of professionals. It's a unique opportunity to refine your focus, develop your skills, and reach your full potential in the field.

If you're interested, please contact TSOP Councilor Sherry (Xiaowei) Zheng at zhengxiaowei1103@outlook.com, or visit our website at <https://tsop.org/mentorship.html>.

UPCOMING EVENTS AND DEADLINES



September 7-14, 2025

41st TSOP Annual Meeting – Yogyakarta, Indonesia



September 17-24, 2025

76th ICCP Annual Meeting – Beijing, China



July 6-11, 2025

Goldschmidt Conference – Prague, Czech Republic



September 7-11, 2025

32nd International Meeting on Organic Geochemistry
Porto, Portugal



TBA, 2026

42nd TSOP Annual Meeting – TBA, China



TBA, 2027

Join 43rd TSOP & 78th ICCP Annual Meeting
Johannesburg, South Africa



TBA, 2028

44th TSOP Annual Meeting – Sosnowiec, Poland

ABOUT TSOP

The Society for Organic Petrology (TSOP) is a non-profit organization for scientists and engineers involved with coal petrology, kerogen petrology, organic geochemistry, and related disciplines. The Society organizes an annual technical meeting, provides funding for students' research, and travels and sponsors research projects. TSOP is an AAPG-affiliated society. Please find us on [Facebook](#), join the [LinkedIn](#) group, and visit our [website](#) to learn about our history, bylaws, goals, events, and membership.



TSOP incorporated as a non-profit organization in the state of Virginia, USA, in 2008. Following application in June, 2009, the US Internal Revenue Service granted recognition of 501(c)(3) tax-exempt status on February 9, 2010. Classified as a public charity, TSOP is exempt from U.S. Federal income tax, and U.S. contributions to TSOP are tax deductible (section 170 of the Code). TSOP is also qualified to receive tax deductible bequests, devises, transfers, or gifts (sections 2055, 2106, or 2522 of the Code).

TSOP NEWSLETTER SUBMISSIONS

TSOP publishes a quarterly newsletter that is available free of charge. Articles, reports on meetings, photos, events, or job postings are welcome. Items for the newsletter may be submitted to the TSOP Editor [Biao Fu](#).

TSOP Newsletter Submission Deadlines:

December Issue: December 5th,
March Issue: March 5th
June Issue: June 5th
September Issue: September 5th

TSOP MEMBERSHIP DUES

TSOP dues payments are due on **December 31st each year**. Please use the quick links below to check your membership status and make your payment. Please direct your questions to TSOP Treasurer [Agnieszka Drobnia](#).

Professionals:

- \$25 per year or
- \$100 for 5 years (5 years for the price of 4!)

Students: \$15 per year

Institutional/Corporate: \$75 per year

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