



The Society for Organic Petrology

NEWSLETTER

December 2023 | Volume 40/4 | ISSN 0743-3816



The 40th Annual TSOP Meeting, September 2024, ULAANBAATAR, MONGOLIA.

Photo by visitulaanbaatar.net

TOP NEWS

- Preparations for the 2024 TSOP meeting in Mongolia
- 2022-2023 Treasurer Report
- Change of application submission deadlines for Ward and Travel Awards
- TSOP Mentorship Program
- Maceral Madness
- 2023 Medal of Merit Award Winner: Michelle Johnston
- TSOP Member Contributions

TSOP PRESIDENT'S LETTER

Dear TSOP Members,

As I step into the role of President of TSOP, I am filled with a profound sense of gratitude and honor. This moment holds special significance for me, as my journey with TSOP began back in 2006 as a student volunteer at our annual meeting in Beijing. Since officially joining as a member in 2009, this society has been an integral part of my professional and personal growth. To now serve as the President is a privilege that I cherish deeply.

I extend my heartfelt thanks to our outgoing President, Kaydy Pinetown. Her leadership and wisdom have been a guiding light, especially through the challenging times in the past two years. She has set a high bar, and I am committed to continuing the legacy with the same dedication and vision. I would also like to express my appreciation to Grzegorz Lis, our outgoing councillor whose support and continued engagement have been invaluable to our society.

Our recent annual meeting in Greece was a landmark event, marking our first in-person gathering after the pandemic halted our physical meetings for three years. It was not just a gathering, but a poignant reminder of the strength and resilience of our community. Special thanks to the organizing committee led by Stavros and Kimon, whose dedication and hard work made this event a memorable and successful reunion for all of us.

It is my great pleasure to welcome our new Vice President, Magdalena Misz-Kennan, and our new Councillor, Sherry Zheng. Their fresh perspectives and energy are invaluable assets as we navigate the path ahead.

In the coming year, we will continue to host virtual seminars, a format that we wish to keep our global community connected. The mentorship program has been kicked off and those who would like to become a mentor and a mentee, please contact TSOP Councillor Carolina Fonseca at cmfonseca13@gmail.com for more information.

As we approach the end of another year, I want to extend my warmest wishes to each of you for a delightful holiday season and a peaceful 2024. May these times bring you joy, rest, and rejuvenation, as we gear up for another exciting year at TSOP.

With sincere thanks,

Lei Zhao, TSOP President 2023-2025



Dr. Lei Zhao
TSOP President 2023-2025

2024 TSOP ANNUAL MEETING



Stupa in central Mongolia (photo by Tim A Moore, 2022)

The 2024 TSOP meeting website containing detailed information about the conference venue and travel info will be finalized by the organizers around January 2024. Please visit our website soon for more up-to-date information.

[Meeting website is under construction](#)

Do not, and we mean do not, miss the opportunity to visit a unique culture, a captivating landscape and a place of historic significance. The **40th Annual Meeting of The Society for Organic Petrology** will be held in **Ulaanbaatar, Mongolia** in September 2024 and this will be your chance to see a part of the world that is truly amazing, and not just because of the geology.

This year's theme is "Decoding the shift: Organics and Critical Minerals in Future Energy". Those two significant geological entities hold great promise in Mongolia. Geopolitically well situated, Mongolia has a geology that is still being discovered. This is your chance to see emerging knowledge and hear from Mongolian experts on recent developments, both of the sedimentology of the basins as well as their tectonic histories.

Arrive early and participate in two possible workshops – the first one is on shale and will be given by Prof Marc Bustin and Dr Amanda Bustin (University of British Columbia, Canada) as well as a half-day contribution by John Hattner (NSAI). A second workshop is on critical minerals in coal, to be given by Prof Shifeng Dai (China University of Mining and Technology Beijing, China). Those not on the workshops can do a one-day cultural field trip – more on that to come.

Continued on page 4

2024 TSOP ANNUAL MEETING

The two days of technical sessions will highlight the current geologically focused events happening in Mongolia – exploration for alternative energy, critical minerals and using organics to interpret deep time. After the technical sessions, a four-night field trip is planned into the wilds of Mongolia.

This won't be a trip for the faint hearted and we'll be camping out two of those nights

The exact venue for the meeting in Ulaanbaatar is still being finalized, as are the details for the registration. Once this information is known and the website up, an email will be sent to all TSOP members.

So, get your travelling bags ready, clear your schedule for September 2024 and we'll see you in Ulaanbaatar!

- The Organising Committee for the 40th Annual TSOP Conference
Erdenetsogt Bat-Orshikh, Tim A Moore, Ridvan Karpuz, Joan S Esterle, Tushar Adsul

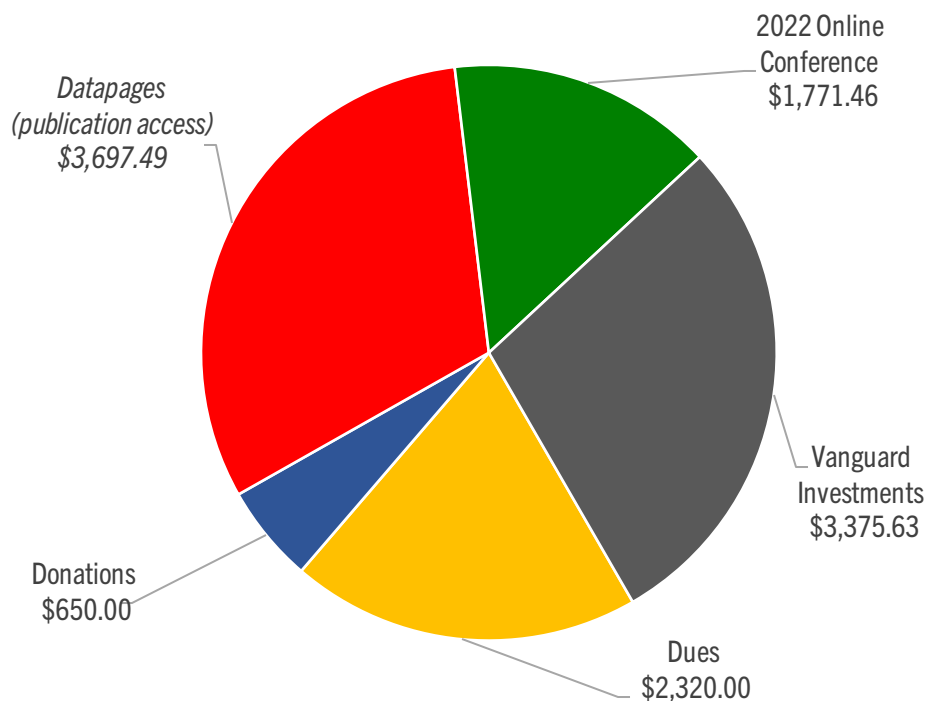
Date/Time	Sat, 14 September 2024	Sun, 15 September	Mon, 16 September	Tue, 17 September	Wed, 18 - Sun, 22 September
Morning	Cultural Field Trip	*Registration *Workshop 1: Shales, Prof Marc Bustin *Workshop 2: Critical Minerals, Prof Shifeng Dai	Technical Sessions	Technical Sessions	POST-CONFERENCE FIELD TRIP
Mid-Day		LUNCH	LUNCH	TSOP Buisness Lunch	
Afternoon		*Workshop 1: Shales, Prof Marc Bustin *Workshop 2: Critical Minerals, Prof Shifeng Dai	Technical Sessions	Technical Sessions Closing Remarks and Awards	
Evening	*Registration	*Registration *Ice Breaker *Outgoing Council Meeting	*Student Drinks Fuction *TSOP Conference Dinner	*Pre-field trip briefing with participants *In-coming Council Meeting	

TREASURER REPORT 2022-2023

Below please find the report regarding TSOP's income and expenses from September 2022 to September 2023. Please direct your questions about our finances to [TSOP Treasurer](#).

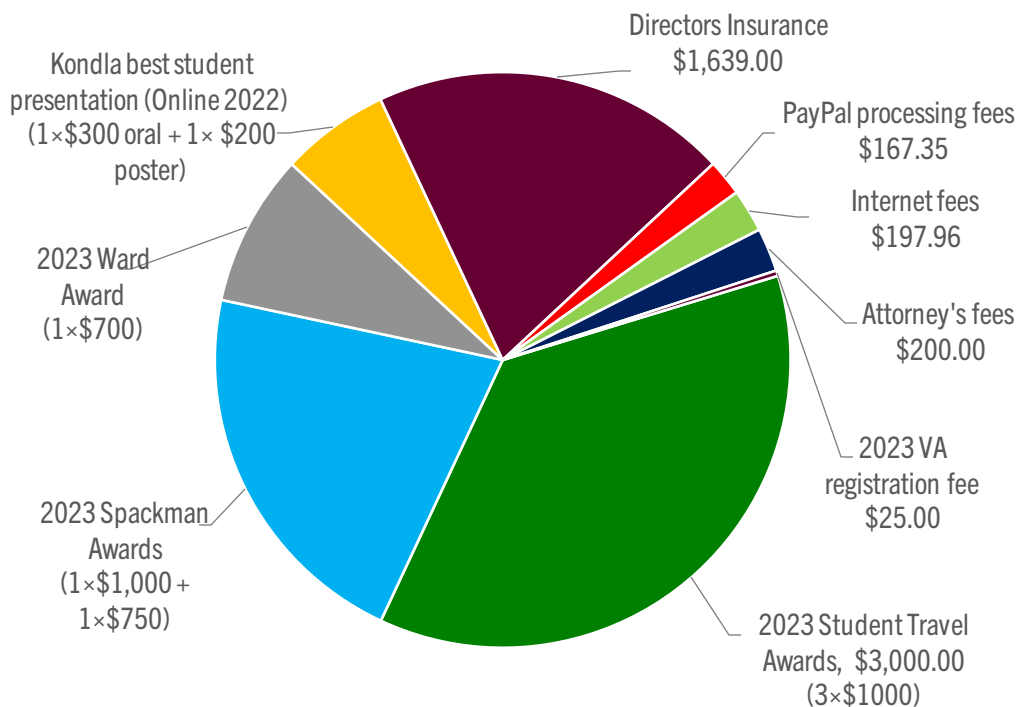
TSOP INCOME: \$11,814.58

September 1, 2022 – September 8, 2023



TSOP EXPENSES: \$8,179.31

September 1, 2022 – September 8, 2023



CHANGE OF THE APPLICATION SUBMISSION DEADLINES

As travel arrangements, including potential visa application, are required to attend the TSOP annual meeting, the TSOP council has decided to change the submission deadlines for the **COLIN WARD EMERGING STUDENT RESEARCHER AWARD** and **STUDENT TRAVEL AWARD** to **March 31**. Please note the change, as the selection of awardees will start earlier than in previous years. Please visit our website for more information.

[Ward Award](#)

[Travel Award](#)

TSOP MENTORSHIP PROGRAM

The Society for Organic Petrology (TSOP) mentorship program is dedicated to helping organic petrologists in successfully managing different challenges, particularly in the earlier stages of their careers, by facilitating the transition of knowledge and experience across generations and providing support and advice where appropriate.

The TSOP mentorship program enables students, early-career researchers, or any organic petrologist to connect with seasoned worldwide experts, educators, and scientists in the field and vice versa. It empowers organic petrologists in training or those at the start of their scientific/academic/industrial careers, i.e., the mentees, to determine or strengthen their focus and develop to their full potential. Simultaneously, it allows mentors to reflect upon and strengthen their mentoring skills, as well as make a valuable contribution to the discipline knowledge base and advancing the science in general.

How the mentorship program works:

Participation in the mentorship program requires both a successful application and a successful match. Mentoring is the pairing of people who want to learn and grow with those people who are willing and proficient at imparting knowledge and skills, in addition to providing guidance and support. The essence of 'pairing' is to match the needs of the mentee with the strengths and experience of the mentor. Mentoring relationships involve a balance of nurturing and supporting on the one hand, together with stretch and challenge on the other. The goals of mentoring will vary between mentoring partnerships; however, it should generally be a proactive and positive experience.

Areas of mentoring include, but are not limited to skills development, career advice, developing research interests, advice on designing a successful research project, publishing research, and advice on work-life balance (to promote success and prevent burnout).

Continued on page 7

The successfully matched mentor-mentee pairs are contacted and an agreement between the mentor and mentee on participation officially marks the beginning of the one-year program duration.

To begin with, the mentor and mentee mutually define their roadmap for the coming year. In return, the TSOP Councilor requests an assessment of the partnership at three and twelve months and a final report on the experience from both the mentor and mentee for publication (with permission) in the TSOP Newsletter. A guide for Mentors and Mentees will be provided at the time of matching.

The successfully matched mentor-mentee pairs are contacted and an agreement between the mentor and mentee on participation officially marks the beginning of the one-year program duration.

Mentors

As a mentor, you will help to guide and strengthen the next generation of organic petrologists, thus helping to ensure the development and growth of this scientific field.

Mentees

As a mentee in this program, you have the chance to interact with an experienced professional in the field of organic petrology and ask for advice on specific projects or professional and personal development.

Application to the mentorship program:

Application is possible throughout the entire year by e-mail to **Carolina Fonseca (cmfonseca13@gmail.com)**, TSOP Councilor

- Mentors should provide a short bio and a sentence explaining the type of mentorship they are willing to offer. Mentors from academia, government research and industry are accepted. Mentors do not need to be TSOP members but should be active in their fields of research.
- Mentees need to provide a short paragraph expressing their expectations from the program, what type of mentorship they prefer, as well as areas of interest.

WE NEED YOUR INPUT!

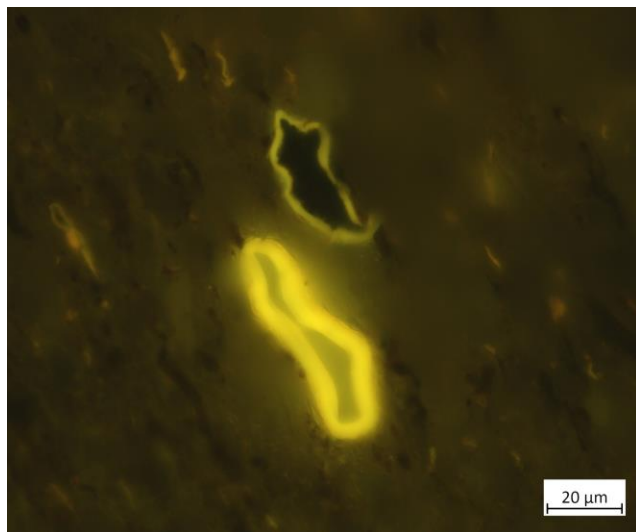
Dear Society Members,

We invite you to contribute to our newsletter! We value your input and would love to hear about your recent achievements, experiences, or any noteworthy events within our TSOP community. Your contributions will help us create a vibrant and engaging newsletter that reflects the diversity and vitality of our society. Additionally, for more information and updates, be sure to visit our [Facebook](#) and [LinkedIn](#) pages and our [website](#), where you can find additional content, connect with fellow members, and stay updated on the latest news and developments within our community. Together, we can make our newsletter and social media platforms a hub of information and connection for our society. We look forward to hearing from you and continuing to build a strong and thriving community together. Please submit items you would like to share to the TSOP Editor **Biao Fu** (please contact at fubiao1223@gmail.com).



MACERAL MADNESS ON FACEBOOK

"Maceral Madness: Welcome to the World of Tiny Wonders through the Lens" is a photo contributing series on [TSOP's Facebook](#) page where cool maceral pictures are shared by TSOP community. If you would like to make a submission please contact [Grzegorz Lis](#).





Michelle Johnston

Medal of Merit is the oldest Award of the Canadian Energy Geoscience Association, having been awarded every year since 1952 for the best peer reviewed paper on a geological subject related to the petroleum geology, or the geology of energy generation and extraction of Canada. **Michelle Johnston** was one of the winners for the 2023 Medal of Merit Award. Detailed information on the paper is shown as follows:

Hydrocarbon charge and petroleum system evolution of the Montney Formation: A multidisciplinary case study of the Blueberry sub-play in Northeast British Columbia, Canada. Bulletin of Canadian Energy Geoscience 2022; 69 (1): 21–50.

The paper was selected because it is a great example of multi-disciplinary geoscientific integration to generate a new hypothesis on origin, migration and characterization of hydrocarbons in the Montney Formation, with clear implications for exploration and exploitation.

Short Biography

Michelle Johnston is currently an independent contractor based in Colorado providing organic petrography services, primarily within the oil and gas sectors, with areas of experience in dispersed organic matter and coal geology, coal petrology, and organic petrology. She received her Bachelor's in Biology with a minor in Environmental Science from Bellarmine University in 2011, and her Master's in geological sciences with a focus in organic petrography from the University of Kentucky in 2013. While in Graduate School, she was an Antoniette Lierman Medlin Award recipient in 2012 from the Geological Society of America Coal Geology Division for her work in petrographic assessments of Eastern Kentucky coals. During this time, Michelle was also a visiting organic petrography student at the University of Witwatersrand in Johannesburg, South Africa, assisting with organic matter characterization for efficient coal utilization in association with Dr. Nikki Wagner. Immediately following graduation, Michelle worked as an organic petrographer for the Center of Applied Energy Research as a Vitrinite Reflectance analyst, as well as co-project contributor and organic petrographer for Morehead State University's EPSCoR-funded project examining microbial diversity in Cenozoic lignite coals for the Department of Physics, Earth Science and Space Systems Engineering. She joined ConocoPhillips, LTD. in 2014 as an in-house organic petrographer conducting organic matter characterization, thermal maturity analyses, and organic petrography-geochemistry integration for unconventional source systems for seven years.

Organic petrology and chemistry in forensic studies of solid waste sites: A brief overview of Hower et al., 2023, Int. J. Coal Geology (volume 278, article no. 104360)



Jim Hower, PhD, Distinguished Fellow
University of Kentucky
Center for Applied Energy Research
2540 Research Park Drive, Lexington, KY 40511
Email address: james.hower@uky.edu

The production, refining, transportation, utilization, and the disposal of post-utilization wastes has resulted in the planned and unplanned development of hazardous waste sites in many countries. In the US, there are thousands of contaminated sites primarily contaminated with coal, petroleum, and chemicals. Just within Kentucky, the sites include the Paducah Gaseous Diffusion Plant (uranium enrichment), the Maxey Flats nuclear disposal site, and the A.L. Taylor site (the so-called Valley of the Drums, a source of heavy metal, volatile organic compounds, plastics, and PCBs). Of particular interest to TSOP members, the solid and semi-solid materials at some of the sites can include coal, coal- and petroleum-derived coke, fly ash, slag, and tar, all of them mixed with soil, sediments, and plants growing at the site. Proper remediation requires a thorough knowledge of chemistry of liquids and solids and the nature and proportion of the solids. All of this requires a toolkit using both organic petrology, organic chemistry, and other disciplines with a reliance on coal, coke, and fly ash petrology; metallography; wood anatomy; paleobotany; palynology; mycology; and the identification of saturated hydrocarbons, PAHs, and biomarkers.

The mixed nature of many waste sites means that there may be limitations on specifically identifying the sources of a component, for example, coal-derived coke vs. petroleum coke vs. fly ash coke. The tools at hand also mean that petrographers can discern multiple coal sources within a single rank, identify incomplete combustion, examine the weathering of coal and coke, among many other fine-resolution aspects. Similarly, coal-derived tars differ from petroleum-distillate tars. Biomarkers can help to discern distinct geological origins of petroleum feedstocks and an understanding of the relationship between specific geochemical biomarker patterns and coal rank is promising.

As petrographers and chemists, solid waste sites are not something we design (or, at least, should be designing). Rather, they are research opportunities brought to us, often in the guise of a consulting or expert-witness job. While the petrographer or chemist might not have all of the tools in the toolkit, where necessary, it may be important to seek out the experts with the necessary skills to solve the problem. As members of TSOP, we should recognize that such studies are a valuable application of our knowledge of organic petrology and chemistry.

In the end, the adage “expect the unexpected” certainly applies to the studies of hazardous waste sites. By the time the site becomes the subject of litigation and remediation, the people responsible for the creation of the sites are lost to history or have skedaddled down the road. There may be no one else but the petrographer and chemist to tell the story of how half of a shirt button (below) ended up in a tar-laden mix of coal and coke.

Exploring the World of Organic Petrology: A Memorable Experience at TSOP 2023 at the University of Patras, Greece



Tushar Prakash Adsul
Indian Institute of Technology, INDIA
Email address: tpadsul@gmail.com

Embarking on the journey to the TSOP 2023 meeting at the University of Patras, Greece, was akin to delving into a vibrant scientific community dedicated to the fascinating field of organic petrology. This transformative experience unfolded against the backdrop of meticulous planning and execution by the organizing committee and chairs, whose unwavering commitment ensured a seamless and enriching conference. The setting was not merely a venue for academic discourse but a dynamic arena that fostered intellectual exchange, collaboration, and the forging of lasting connections. The conference program was a tapestry of knowledge woven from diverse threads of talks, each unveiling cutting-edge research and pioneering works. The plethora of topics illuminated the expansive nature of organic petrology, challenging preconceived notions and sparking new avenues of thought. The talks were more than presentations; they were gateways to deeper understanding, revealing the intricate connections within this multidimensional field. Amidst this intellectual enthusiasm, the opportunity to meet and engage with renowned figures in organic petrology was a defining feature of the conference. These encounters, whether in formal sessions or casual conversations, provided insights into the forefront of research and served as an inspiration for aspiring researchers like myself.

The recognition bestowed upon me through the TSOP Student Travel Award and the Colin Ward Emerging Student Researcher Award was a humbling validation of my dedication to the field. It underscored the society's commitment to nurturing and supporting the next generation of scholars, fostering an environment where talent can flourish. Assuming the role of the TSOP Student Affairs Committee Chair was a responsibility I embraced with passion. This position allowed me to actively contribute to society's initiatives and provided a unique outlook to witness the collaborative efforts shaping the future of TSOP. Participation in TSOP council meetings offered insights into the strategic decisions guiding the society, emphasizing the collective commitment to advancing the objectives of TSOP globally. Beyond the confines of conference halls and meeting rooms, the region's culinary delights added an extra layer of enjoyment to the proceedings. The gourmet experiences, infused with local flavors and culinary expertise, complemented the academic endeavors, fostering a sense of community among attendees. A standout feature of the conference was the enriching field trip to Delphi, where geological history came to life against the backdrop of ancient ruins. This hands-on experience provided a tangible connection to the subject matter discussed in conference sessions, offering a holistic understanding beyond theoretical concepts.

As the conference drew to a close, the air was filled with anticipation for the next meeting in Mongolia. The prospect of exploring new intellectual and geographical horizons fueled excitement and commitment to the continued pursuit of excellence in organic petrology. The conference in Patras was not merely a chapter but a pivotal milestone in my academic journey, leaving an indelible mark through the knowledge gained, the connections forged, and the promise of future endeavors. In the grand setting of scientific exploration, TSOP 2023 at the University of Patras was a vibrant and enriching experience, weaving its influence into the ongoing narrative of my academic and professional development.

Depositional environments of coal in the Miocene Warukin Formation and Eocene Tanjung Formation, South Kalimantan, Indonesia



Hafidz Noor Fikri

Lambung Mangkurat University, INDONESIA

Montanuniversität Leoben, AUSTRIA

Email address: hafidz@ulm.ac.id

Indonesia's coal is of foremost significance to the economy of Indonesia, as evidenced by the country's steam coal exports, which rank fourth in the world. The Barito Basin on the island of Borneo is one of the largest coal-producing basins in Indonesia. Coal seams in the Barito Basin and the adjacent Asem Asem Basin are found in the Eocene Tanjung and the Miocene Warukin formations. Despite of the great economic significance, detailed knowledge of the factors controlling Eocene and Miocene peat-forming depositional environments has not been yet available.

Therefore, the main aim of the research is to determine the depositional environment of coal seams in the Tanjung and Warukin formations based on bulk coal data (ash yield and sulphur content), organic petrological data from a total of 169 samples, and detailed organic geochemical data from sample sub-sets (~80 samples).

Eocene coals are from the TAJ Pit-1D mine (from base to top: seams D, C, and B), while Miocene coals are from the Tutupan (from base to top: seams T110, T210 and T300) and Jumbang mines (seam BL1; [Fig.1](#)). The TAJ Pit-1D and the Tutupan mine are located in the Barito Basin, while the Pit Jumbang mine is located in the Asem Asem Basin.

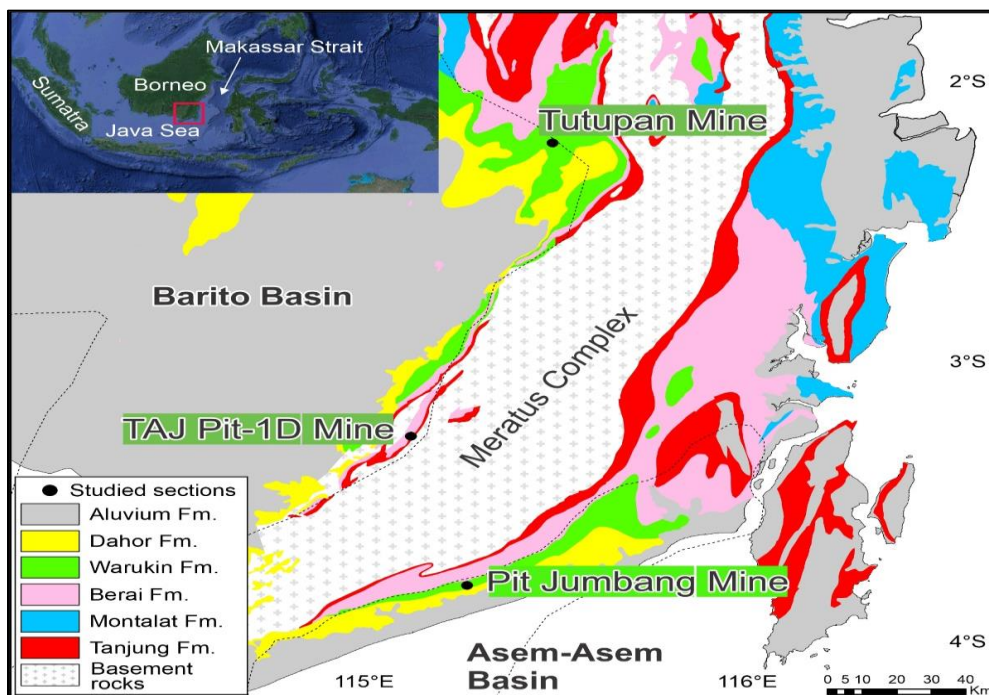


Fig.1 Location of the studied with the base map is the regional geologic map of the Barito and Asem-Asem basins.

Continued on page 13

Based on vitrinite reflectance, the Eocene coals are more mature (~0.56 %Rr) than Miocene coals (Tutupan: ~0.39 %Rr; Jumbang: ~0.34 %Rr). Ash yields and sulphur contents together with biomarker data show that Eocene coal in the Tanjung Formation accumulated in rheotropic to ombrotrophic mires. Miocene coal from the Warukin Formation at the Tutupan mine accumulated in a kerapah (inland) ombrotrophic mire (seams T110 and T210) or in a rheotropic-ombrotrophic mire (seam T300). Seam BL1 in the Jumbang mine coal in the Asem Asem basin of the Warukin Formation shows an ombrotrophic basinal (coastal) mire. Local brackish influence is indicated by elevated sulphur contents (<1.5 wt.%) in a lower bench of the BL1 seam (BL1L).

While all coals are characterized by high liptinite contents (14.9-49.1 vol.%), petrographic analysis shows remarkable differences in maceral composition between Eocene and Miocene coals. Leaf-derived macerals cutinite and fluorinite are more abundant in Eocene (~6.0 vol.%) than in Miocene coal (~4.5 vol.%), but rootlet-derived suberinite dominants in Miocene coal (Miocene: ~2.6 vol.%; Eocene: ~0.5 vol.%). The high percentage of funginite reflects high fungal activity in Miocene and Eocene mires, both in ombrotrophic and rheotropic conditions. Resinite is present in high amounts in all coal seams.

Organic geochemical parameters (e.g., the terrestrial-aquatic ratio) record a cyclic change of mire environments during deposition of the two lower seams in the Tutupan mine (T110 and T210), which is tentatively related to Milankovich-type cycles (earth's axial precession). The di-/tri terpenoids ratio shows that gymnosperms were largely absent in the Eocene peat-forming vegetation and occurred in very low (BL1 seam) or low amounts in Miocene mires.

Resinite in Miocene coals was produced, at least partly, by dammar resin producing dipterocarpaceae. As dipterocarpaceae were not present in the palm/fern-dominated Eocene vegetation, resinite in Eocene coals must have a different source.

References

- 1 Fikri, H. N., Sachsenhofer, R. F., Bechtel, A., & Gross, D. (2022). Coal deposition in the Barito Basin (Southeast Borneo): The Eocene Tanjung Formation compared to the Miocene Warukin Formation. *International journal of coal geology*, 263, 104117.
- 2 Fikri, H. N., Sachsenhofer, R. F., Bechtel, A., & Gross, D. (2022). Organic geochemistry and petrography in Miocene coals in the Barito Basin (Tutupan Mine, Indonesia): Evidence for astronomic forcing in kerapah type peats. *International journal of coal geology*, 256, 103997.
- 3 Fikri, H. N., Sachsenhofer, R. F., Bechtel, A., & Gross, D. (2023). Organic geochemistry and petrography of Miocene ombrotrophic coals in the tropical Asem-Asem Basin (Kalimantan, Indonesia): Comparison to coeval subtropical coals in the Eastern Alps. *Austrian Journal of Earth Sciences*, 116(1), 85-107.

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

QUICK LINKS

[Contact TSOP council](#)

[Join TSOP](#)

[Pay your dues](#)

[Make a donation](#)

[Check membership status](#)

[TSOP meetings abstracts](#)

[Upcoming events](#)

[TSOP YouTube channel](#)

[Petrology labs](#)

2023 JOHN CASTAÑO HONORARY MEMBERSHIP AWARD



The John Castaño Honorary Membership Award highest honor of The Society for Organic Petrology, provided for in its Bylaws, is Honorary Membership. It is awarded to persons distinguished in a scientific discipline of significance to the Society, in recognition of their contributions in research, service to TSOP, or education.

The 2023 John Castaño Award was given to:

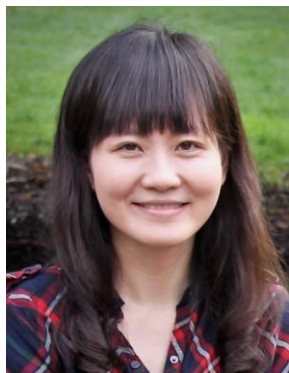
Sue Rimmer

Southern Illinois University – Carbondale, USA



Sue Rimmer was absent from the ceremony due to illness and Joan Estate (Right) being presented for her with the Castaño Award at the 2023 TSOP Luncheon.

2023 JOHN C. CRELLING DISTINGUISHED SERVICE AWARD



The John C. Crelling Distinguished Service Award recognizes the contributions of members who have provided distinguished service to TSOP as a Society, typically in committee or elected Council positions, over multiple years.

The 2023 John C. Crelling Award was given to:

Lei Zhao

China University of Mining and Technology Beijing, China

2023 THE RALPH GRAY AWARD



The Ralph Gray Award is a TSOP award for the best refereed paper in coal and organic petrology. The award was established by TSOP Council in early 2009 and with the permission of the Gray family, the award was named after Ralph Gray (1923-2009), a petrologist with wide-ranging experience and interests, particularly well-known for his work in industrial applications.

The 2023 Ralph Grey Award was given to:

Silurian wildfire proxies and atmospheric oxygen

by Glasspool IJ, Gastaldo R A. *Geology*, 2022, 50(9): 1048-1052.
<https://doi.org/10.1130/G50193.1>

2023 DAL SWAINE AWARD



The Dal Swaine Award is TSOP award given for the best published paper in inorganic or organic geochemistry and/or mineralogy of coal or hydrocarbon source rocks.

The 2023 Dal Swaine Award was given to:

Effects of contact metamorphism on the lithium content and isotopic composition of kerogen in coal

by Z. Teichert, C.F. Eble, M. Bose, L.B. Williams
Chemical Geology 602, 120885.

2023 THE SPACKMAN AWARD - Graduate Student Research Grants

Apply for Spackman Award

*Application submission
deadline May 31, 2024*



Hafidz Noor Fikri
*Lambung Mangkurat University, INDONESIA
Montanuniversität Leoben, AUSTRIA*



Jiawei Feng
China University of Mining and Engineering, CHINA

2023 COLIN WARD EMERGING STUDENT RESEARCHER AWARD

Apply for Ward Award

*Application submission
deadline March 31, 2024*



Tushar Prakash Adsul
Indian Institute of Technology (Indian School of Mines), INDIA

2023 STUDENT TRAVEL AWARD

Apply for Travel Award

*Application submission
deadline March 31, 2024*



Tushar Prakash Adsul
Indian Institute of Technology (Indian School of Mines), INDIA



Zhiheng Zhou
Aarhus University, DENMARK



Anji Liu
Aarhus University, DENMARK

2023 DANIELLE KONDLA OUTSTANDING STUDENT PRESENTATION AWARD

*BEST STUDENT ORAL PRESENTATION AT THE
39TH TSOP ANNUAL MEETING IN PATRAS, GREECE*

Anji Liu
Aarhus University, Denmark

*BEST STUDENT POSTER PRESENTATION AT THE
39TH TSOP ANNUAL MEETING IN PATRAS, GREECE*

Itumeleng Matlala
University of Johannesburg, South Africa