



**THE SOCIETY FOR ORGANIC PETROLOGY**



# NEWSLETTER

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**The 37<sup>th</sup> Annual TSOP Meeting**

**Sofia, Bulgaria, 2021**



*The Aleksandr Nevsky Cathedral in Sofia, Bulgaria (photo from Ammos Chapple rferi.org)*

## The 37<sup>th</sup> Annual TSOP Meeting will be held in Sofia, Bulgaria in 2021.

**Stay Tuned for more details!**



### **The Society for Organic Petrology**

TSOP is a society for scientists and engineers involved in coal petrology, kerogen petrology, organic geochemistry and related disciplines. The Society organizes an annual technical meeting and field trips; sponsors research projects; provides funding for graduate students, and publishes a website, Facebook Page, quarterly newsletter, annual meeting program and abstracts and special publications. Members are eligible for discounted subscriptions to Elsevier journals *International Journal of Coal Geology* and *Review of Palaeobotany and Palynology*.

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#### **GUIDELINES:**

The TSOP Newsletter welcomes contributions from members and non-members alike. Readers are invited to submit items pertinent to TSOP members' fields of study. These might include meeting reports and reviews, book reviews, short technical contributions including those on geologic localities or laboratory methods, as well as creative works such as poems, cartoons and works of fiction. Photos, graphs and other illustrations are welcomed. Low-resolution images are discouraged, as they cannot be reproduced well in print. Articles are preferred in Microsoft Word, RTF or plain text formats.

#### **Contact the Editor:**

Rachel Walker [editor@tsop.org](mailto:editor@tsop.org)

#### **Membership Information:**

Please report any changes in address or contact information to Brett Valentine, TSOP Membership Chair:

[bvalentine@usgs.gov](mailto:bvalentine@usgs.gov)

Members can also update their own information by logging into the secure TSOP website:

[www.tsop.org/mbrsonly/](http://www.tsop.org/mbrsonly/)

The TSOP Newsletter is published quarterly by The Society for Organic Petrology and is distributed to all Society members as a benefit of membership.

Membership in the Society is open to all individuals involved in the fields of organic petrology and organic geochemistry. For more information on membership and Society activities, please see: [www.tsop.org](http://www.tsop.org)

For purposes of registration of the TSOP Newsletter, a permanent address is:

The Society for Organic Petrology  
c/o American Geological Institute  
4220 King St., Alexandria,  
VA 22302-1520 USA

#### **Newsletter Submission Deadlines**

December Issue: Dec. 10th, 2020

March Issue: March 10th, 2021

June Issue: June 10th, 2021

September Issue: Sept. 10th, 2021

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## President's Letter

Dear TSOP Members,

I last wrote to you from my living room sofa for the March 2020 Newsletter. I had no idea then that six months later I would still be working from a laptop in my living room, but ... I hope that the global challenge of Covid-19 has not touched you or your family in a harmful way, and that you are enjoying good health and finding productive ways to adjust to the new normal.

It goes without saying, but since recent events in the USA and elsewhere have focused the world's attention on issues of social justice, it should be stated that TSOP stands against racism and discrimination of all types. Our commitment is to be an inclusive community of all kinds of organic petrographers. We encourage and include organic petrographers of all ages and experience from all races, health, socioeconomic and relationship status, religion, culture, national origin, ethnicity, disability, gender, gender identity and sexual orientation. We only realize our goals as a community of scientists when all feel welcome and valued. TSOP has and will continue to strongly support policies of inclusion and non-discrimination. We accept the challenge, on behalf of all our members, to state and to live these values.

The 2020 TSOP election was an unprecedented success with voter turn-out of about sixty-three percent. Thanks to Ballot Committee Chair Bill Huggett and thanks to all who voted for the Secretary and Councilor positions and for approving changes to the TSOP bylaws. I would like to welcome to Council our new Secretary Brett Valentine and our new Councilor Stavros Kalaitzidis. I look forward to working with them in the years ahead. Also, I would like to thank departing Secretary Leslie (Jingle) Ruppert and departing Councilor Omid Ardakani for their dedicated service to TSOP over the last years. The approved changes to the TSOP bylaws will allow continuity in the position of the elected Treasurer. This is crucial to the overall financial health of TSOP and to allow for better connectivity in banking and facilitating the 'behind-the-scenes' processes which operate our membership database and webpages.

And for that, I would like to thank Treasurer Agnieszka who is the one responsible for ensuring these systems work together. In one example, as the technology has changed, Agnieszka has been continuously adapting and evolving the presentation that TSOP puts forward to the public through our website.

The TSOP membership overwhelmingly agreed with the bylaws change, with eighty-nine in favor and five votes opposed.

Congratulations to 2020 TSOP Dal Swaine Award winner Dr. Sergey Arbuzov and co-authors for their paper '*Geochemistry, mineralogy and genesis of rare metal (Nb-Ta-Zr-Hf-Y-REEGa) coals of the seam XI in the south of Kuznetsk Basin, Russia*' published in *Ore Geology Reviews*. The Dal Swaine Award recognizes the best refereed paper each year in coal and hydrocarbon source rock geochemistry. And congratulations to 2020 TSOP Ralph Gray Award winner Dr. Amélie Cavelan and co-authors for their paper 'Effect of organic matter composition on source rock porosity during confined anhydrous thermal maturation: *Example of Kimmeridge-clay mudstones*' published in the *International Journal of Coal Geology*. The Ralph Gray Award recognizes the best refereed paper in coal and organic petrology. Notes on the awards and the full citation can be found on TSOP's awards webpage: <https://www.tsop.org/awards.html>.

Thanks also to Award committee chairs Ioannis (Giannis) Oikonomopoulos and Omid Ardakani, respectively, and to the committee members for their hard work in selecting the best papers.

So, I will miss you this month at the cancelled annual meeting, but I look forward to seeing everyone in 2021 in Sofia. Be well and stay safe in this challenging time,



Paul Hackley, TSOP President 2019-2021



## TSOP Membership Dues



TSOP dues payments are due on or before **December 31<sup>st</sup> each year**. We encourage you to check your dues status and make your payment so that you can continue your TSOP membership and support the society and its work.

TSOP dues are currently set at:

### Individuals:

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

### Students:

- \$15 per year

### Institutional/Corporate:

- \$75 per year

You can use our convenient online dues payment system to pay dues by credit card, check (US Members), or money order.

You can login at [www.tsop.org/mbrsonly/](http://www.tsop.org/mbrsonly/) and select 'Online dues payment'

or go to [www.tsop.org/dues](http://www.tsop.org/dues) and access the online form without logging in.

Thank you for your interest and support of TSOP and we look forward to a renewal of your TSOP membership.



[www.facebook.com/OrganicPetrology](http://www.facebook.com/OrganicPetrology)



TSOP is an AAPG Affiliated Society. Abstracts from annual meetings are available through [AAPG Datapages](http://AAPG Datapages).



## Oldest Known Coal Fire

Mt. Wingen, New South Wales, Australia. It is estimated that Mt. Wingen, also known as *Burning Mountain* is the oldest known continuous coal fire. It is estimated that it has been burning for 6,000 years. The Aboriginal people named the area wingen, which means 'fire' in the local tribal language. The fire progresses approximately one meter per year through the coal seam that lies 30 meters underground.

## Re-Activation of TSOP's Liaison Committee

Joe Curiale

TSOP Council established the TSOP Liaison Committee in 1996 in order to establish professional and scientific interactions with other technical organizations, societies, or groups. Over the years formal relationships have existed with the American Association of Petroleum Geologists (AAPG, a relationship that still exists) and the American Geological Institute (AGI, a relationship that is no longer active).

The role of the Liaison Committee has diminished greatly over the past several years, and TSOP Council has recently decided to re-activate the Committee. A few months ago, Council invited me to become the Chair of the Committee, and I was honored to accept. The purpose of this article is to discuss the Committee – its purpose and its plans.

My acceptance of this Chair position was influenced by my interest in TSOP since its formation in the 1980s. As a petroleum geochemist, I have often felt that the interaction between organic petrography and organic geochemistry was not nearly as strong as it should be. And I suspect that other members of TSOP feel there are other specialties which also should have a stronger link with TSOP.

Establishing strong professional and scientific interactions with other groups is a mandate of TSOP (TSOP Bylaws, Article III, section 5). The Liaison Committee has been re-activated to assist in carrying out this mandate. I envision this Committee's activities and objectives to include several items.

- To maintain regular communications with other professional societies. These communications would stress the common technical objectives shared among TSOP and these societies. Some of the societies under consideration include:
  - American Association of Petroleum Geologists (AAPG)
  - Geological Society of America (GSA) – including its Sedimentary Geology and other scientific divisions
  - The Palynological Society (AASP-TPS)
  - Geochemical Society (GS) – including its Organic Geochemistry division
  - European Association of Organic Geochemists (EAOG)
  - International Committee for Coal Petrology (ICCP)
  - European Association of Geochemistry (EAG)
  - American Geological Institute
  - Houston Organic Geochemistry Society (HOGS)
  - American Chemical Society (ACS) – including its Energy & Fuels, Geochemistry, and other scientific divisions
  - American Geophysical Union (AGU) – including its multiple topic groups
  - Society for Sedimentary Geology (SEPM)

- To assist in cross-pollinating the interests of TSOP members with the interests of members of these other professional societies. One example was noted above – raising the awareness among organic petrographers and organic geochemists of the strong overlap of these disciplines. Another example is enhancing the impact TSOP and its members have on the many sub-disciplines of geology included in meetings and publications of AAPG and GSA.
- To explore additional opportunities for joint sessions involving TSOP and other appropriate professional societies at technical meetings.
- To coordinate timing of TSOP's annual convention with the annual conventions/conferences of these other societies, in order to prevent "timing collisions" among relevant society gatherings.
- To raise awareness in other professional societies of the advantages of TSOP membership, and thus potentially expand TSOP's membership roster (as well as to encourage participation by TSOP members in these other societies).

I look forward to working together with you on these objectives, and encourage you to get in touch if you would like to be a part of this effort ([joecuriale1@gmail.com](mailto:joecuriale1@gmail.com); 832-940-8013).

All TSOP members will soon receive a questionnaire to gauge their current membership and participation in other professional societies, as well as their interest in helping with the efforts of the Liaison Committee. We look forward to responses to that questionnaire – these responses will guide the activities and focus the objectives of this Committee.

Thank you,  
Joe Curiale  
TSOP Liaison Committee



## Environmental implications of the quality of charcoal briquettes and lump charcoal used for grilling

### PROJECT SPONSORED BY THE SOCIETY FOR ORGANIC PETROLOGY RESEARCH GRANT

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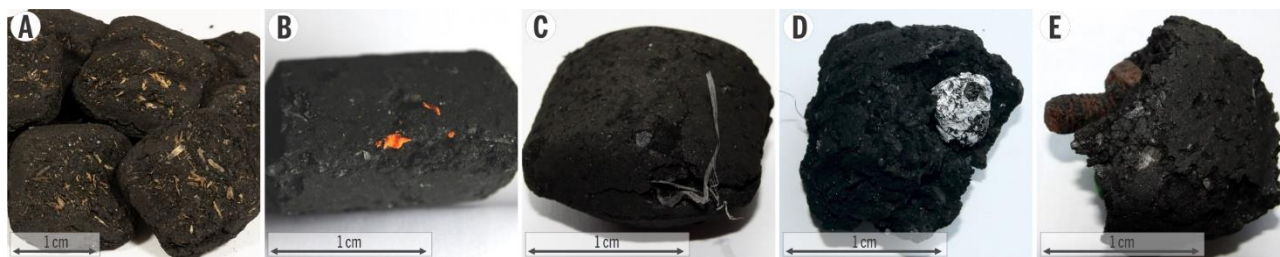
*Manuscript published in Science of the Total Environment 747 (2020) 141267*

<https://doi.org/10.1016/j.scitotenv.2020.141267>

Numerous studies have been conducted to assess air pollution and human health risks arising from exposure to outdoor cooking, but limited standards have been implemented around the world to assure fuel quality. While charcoal briquettes and lumps are a popular fuel choice for grilling, almost no data specifying their properties are available to consumers. Because the properties of fuels affect the flue gases, it is critical to understand how the quality of grilling briquettes and lumps translates not only into the quality of the grilled food, but, even more importantly, how their emissions impact human safety and the environment.

The main purpose of this study is to investigate the impacts of the quality of charcoal briquettes and lumps on potentially harmful emissions during grilling. To analyze their quality, we used reflected light microscopy to identify a range of contaminants, including biomass, mineral matter, coal, coke, metal, rust, plastics, glues, and synthetic resins, in 74 commercially available products made in Poland, the United States of America, Ukraine, Germany, Belarus, the Czech Republic, and the Republic of South Africa. Our data show that majority of the products analyzed do not meet the existing quality standard EN 1860-2:2005 (E) of less than 1% contaminants, some of these products contain up to 26.6% of impurities.

The amount of contaminants correlates with particulate matter, as well as CO and CO<sub>2</sub>. The contribution of biomass is especially significant because it can be used to predict harmful particulate matter emissions during grilling. The relationship between the composition of charcoal briquettes and lump charcoal and their emissions is particularly strong during the first 15 to 20 min after ignition (when emissions are the highest), therefore, this initial stage is especially unsafe to consumers, and staying away from the grill during this time is recommended.



*Figure 1. Charcoal briquettes with very high contents of impurities visible megascopically. A – briquettes having a high content of biomass (6.1 % by volume based on petrographic analysis), B – briquette containing a piece of plastic, C – briquette containing a piece of plastic foil, D – briquette containing a piece of metal (aluminium foil from candy), E – briquette containing a metal screw.*



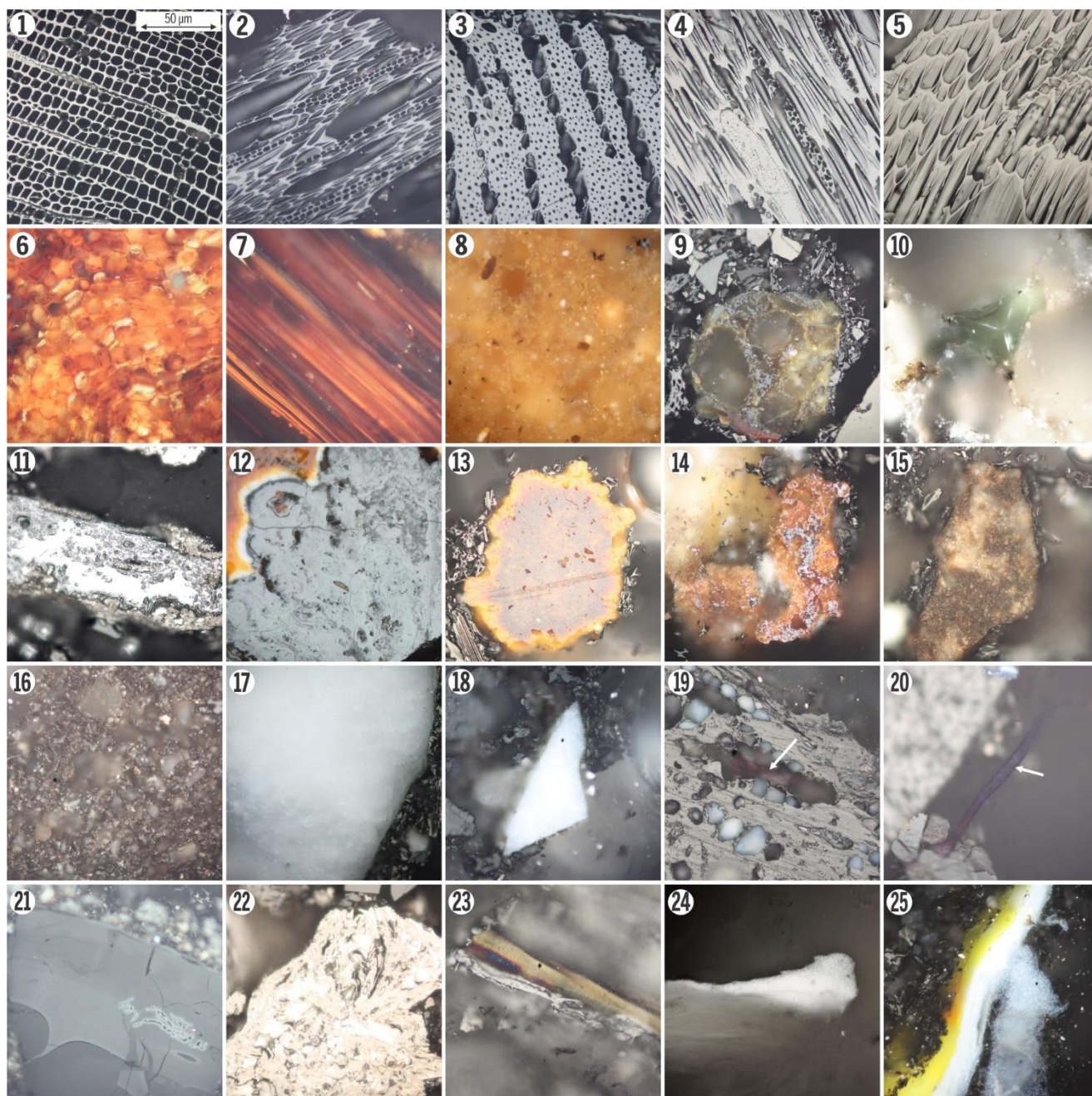


Figure 2. Photomicrographs of charcoal briquettes and charcoal lumps' components in reflected white light and oil immersion: charcoal (1-5), biomass (6-7), mineral matter (8-10), metal (11-12), rust (13-14), ash (15-16), plastic (17-20), coal (21), coke (22), petroleum product (23), glue (24), glue and synthetic resin (25). Scale bar is the same for all microphotographs.



## CALENDAR OF EVENTS 2020

Please send in meeting, short course and special event announcements to the Editor

<http://www.tsop.org/events.html>



### October 25-26, 2020

2020 Geological Society of America Annual Meeting  
Montréal, Québec, Canada

The 2020 GSA will be held online. See the link below for details:

<https://community.geosociety.org/gsa2020/home>

## CALENDAR OF EVENTS 2021



### May 23-26, 2021

AAPG 2021 Annual Convention & Exhibition  
Denver, Colorado, USA

[Visit the ACE 2021 website](#)



### June 21-15, 2021

14<sup>th</sup> ICCP Course: General Coal Geology & Organic Petrology  
Potsdam, Germany

[Visit the ICCP website](#)



### August 16-21, 2021

36<sup>th</sup> International Geological Congress  
Delhi, India

[Visit the IGC website](#)



### September 11-16, 2021

37<sup>th</sup> TSOP Annual Meeting  
Sofia, Bulgaria

**Watch for the meeting website!**