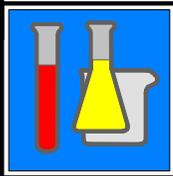




**THE SOCIETY FOR ORGANIC PETROLOGY**



# NEWSLETTER

Vol. 34, No. 2

June, 2017

ISSN 0743-3816

## 34<sup>th</sup> TSOP Annual Meeting

September 21 – 27, 2017  
Calgary, Canada



(Walcott Quarry. Photo by Rachel Walker)

# TSOP Annual Meeting

September 21 – 27, 2017  
Calgary, Canada

Please see pages 8 – 16 for details!

**Abstract Submission ends June 30<sup>th</sup>!**  
**Early Bird Registration ends July 15<sup>th</sup>, 2017**  
<https://tsop2017.wordpress.com/>

**Local Organizing Committee:**

**Co-Chairs:** Hamed Sanei, Judith Potter

**Treasurer:** David L. Marchioni

**Website:** Jillian Verbeurgt, Mark Obermayer

**Technical Sessions:** Hamed Sanei, Lavern Stasiuk, Jennifer Galloway

**Duncan G. Murchison Symposium:** Fari Goodarzi, Judith Potter

**Short Course Coordinator:** Judith Potter

**Field Trip Coordinators:** David Marchioni, Bill McDougall, Jennifer Galloway, Judith Potter

**Student activities:** Danielle Kondla

**Registration:** Julito Reyes

**Invitations and visas:** Dennis Jiang, Omid Ardakani, Katherine Clark, Mastareh Liseroudi, Sarah Saad and Dane Synnott

## The Society for Organic Petrology

TSOP is a society for scientists and engineers involved with 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 web site, a quarterly Newsletter, membership directory, annual meeting program and abstracts, and special publications. Members may elect not to receive the printed Newsletter by marking their dues forms or by contacting the Editor. Members are eligible for discounted subscriptions to the Elsevier journals *International Journal of Coal Geology* and *Review of Palaeobotany and Palynology*. Subscribe by checking the box on your dues form, or using the form at [www.tsop.org](http://www.tsop.org). Contact Paul Hackley [phackley@usgs.gov](mailto:phackley@usgs.gov) if you do not receive a bill or have any other problems with a subscription. For the best prices on subscriptions to AGI's *Earth*, see their web site at [www.geotimes.org/current](http://www.geotimes.org/current).

TSOP is a Member Society of AGI and an AAPG Associated Society.

## The Society for Organic Petrology Newsletter

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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  
e-mail: [drachelwalker@gmail.com](mailto:drachelwalker@gmail.com)

### Address Changes

Please report any changes in address or contact information to: Paul Hackley, TSOP Membership Chair,  
[phackley@usgs.gov](mailto:phackley@usgs.gov)

Members can 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

September Issue: Sept. 5<sup>th</sup>, 2017

December Issue: Dec. 5<sup>th</sup>, 2017

March Issue: March 5<sup>th</sup>, 2018

## CONTENTS

TSOP Membership .....	4
Institutional/Corporate Memberships .....	4
New Significant Publications.....	4
TSOP Support for USGS Library.....	4
New TSOP Members .....	5
2017 Annual TSOP Meeting.....	8
2017 Ohio Valley Organic Petrographers Annual Meeting Report.....	18
Call for Papers for Special Issue of IJCG .....	19
Calendar of Events.....	20

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## TSOP MEMBERSHIP

Although TSOP membership payments are due on or before **January 1<sup>st</sup>** each year, you can check whether your membership is up-to-date by signing into your account on the **Members Only** section of the TSOP website.

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.

Don't forget, when you prepay your dues four years in advance at the regular rate of \$25/yr., we will give you the fifth year free!

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

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## Institutional/Corporate Memberships



We'd like to make members aware that membership in TSOP is also open to any organization having an active scientific interest in organic petrology or related fields. TSOP especially encourages institutions to join at the special **institutional rate of \$75/yr** and help support the goals of the Society. See the website for details: [www.tsop.org/join\\_TSOP.html](http://www.tsop.org/join_TSOP.html)

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## TSOP is on Facebook!

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

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## New Significant Publications

This is a new section that will be added to the newsletter starting with the September 2017 issue. TSOP members can submit information about their new publications in fields relevant to the society.

Members who wish to submit their paper details should provide:

- The full paper reference information (authors, year, paper title, journal name, volume, pages and,
- Online access links to the digital edition of the paper( if available) and,
- No more than two sentences describing the subject of your paper and why you think this paper is important to the TSOP membership.

All submissions can be sent to the TSOP Editor at [drachelwalker@gmail.com](mailto:drachelwalker@gmail.com)

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## TSOP Support for U.S. Geological Survey Library

Recently the TSOP Council signed a letter along with other geoscience organizations asking the U.S. Congress to maintain funding for the U.S. Geological Survey's (USGS) Library. The USGS Library is one of the world's largest and most important Earth and natural resources libraries. The funding cuts proposed would result in the closure of at least 3 of the 4 library locations and the elimination of 75% of the library employees. Much of the collection would be placed in an archive. This would prohibit the public from accessing most of the library materials. TSOP Council supports the preservation of the USGS Library and its current funding level.

## New TSOP Members



**Wayne Knowles**

Welcome back Wayne Knowles! Wayne's first experience in organic petrology was at Shell UK Ltd. in 1988 where he received extensive training in both London and The Hague. He gained twelve years of hands-on experience working the UK North Sea within the Shell geochemistry department. Following Shell, he worked as a consultant in the UK from 2001-2006, and then off to Houston to work for Humble Geochemical/Weatherford Laboratories on oil/gas shale plays within the Americas. Wayne's particular interest is in bitumen and pyrobitumen reflectance and its relation to in-situ thermal maturity.

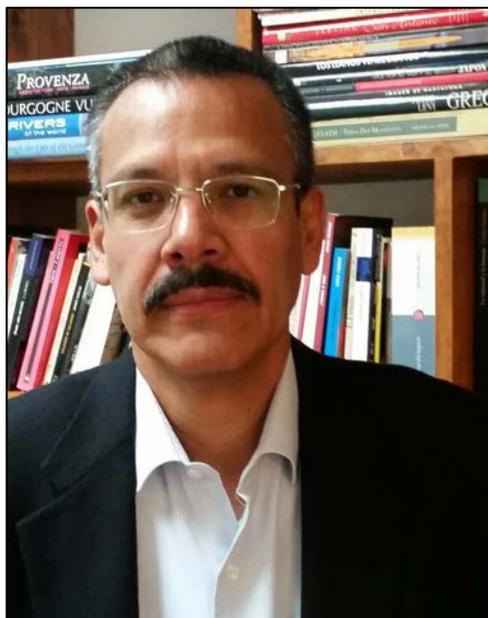
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**Steve Brennan**

Steve's first introduction to organic petrology was in June 2016 through the ICCP training course in Potsdam, Germany. His purpose in taking the course was to learn fundamental concepts to support his PhD research at the University of Auckland where he characterizes the geophysical properties of New Zealand's coal source rocks. As part of that research he is creating a database which compares geophysical properties (acoustic wave velocities) with coal properties (vitrinite reflectance, maceral groups). The maceral analysis portion of his work is conducted jointly with researchers at GNS Science. Steve holds an undergraduate degree from Florida State University (2013) and his MSc is from the Colorado School of Mines (2016).

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**Jose Manuel Grajales-Nishimura**

Dr. Grajales-Nishimura is a researcher at the Institute of Geology of the National University of Mexico (UNAM). His research group is working on the petroleum system of the Salina Basin of southern Mexico with one objective to characterize the Upper Jurassic source rocks. His interests in The Society for Organic Petrology are to learn more about procedures used to characterize source rocks, through the organic petrology literature and from participating in the TSOP annual meeting. His research group also intends to promote the interest of some graduate students from UNAM in organic petrology.

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**Zain Abdi**

Zain's PhD project, under the supervision of Dr. Sue Rimmer (Southern Illinois University), will research the three Bakken Members using organic petrology (kerogen typing; maceral identification), geochemistry, and stable carbon isotopes to produce a depositional model. The model produced will show N-S and E-W transects with variable maceral compositions. The purpose of his project is to redefine the two-dimensional understanding of the Bakken Formation by including depth and geographic extent when identifying the organic matter in the three Members. Zain holds an undergraduate degree in Earth & Environmental Science (2012) and an MSc in petroleum geology (2014) from UT Arlington.

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**Wu Li**

Dr. Wu Li earned his doctorate in Geoscience in 2015 from the China University of Mining and Technology for a study entitled “Coal vitrinite macromolecular structure evolution and control mechanism of the energy barrier in hydrocarbon generation”. As part of his PhD program he spent a year as a visiting fellow in the School of Chemical Engineering at the University of Queensland under Geoff Wang. He also holds undergraduate (2009, geological engineering) and postgraduate (2011, mineral resource prospecting and exploration) degrees from the China University of Mining and Technology. Presently, he is a Lecturer in coal geology, coalbed methane and coal organic geochemistry at the China University of Mining and Technology, Xuzhou, China.

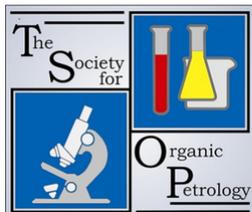
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**Theophile Mugerwa**

Theophile obtained his MSc in Geology from Annamalai University, India, in 2015. His thesis was based on exploration techniques for lignite deposits. He also holds a Postgraduate Diploma in Petroleum exploration from the same university. Upon finishing his MSc with First Class, he was appointed as a Petroleum Geologist in Rwanda Natural Resources where he evaluated the source rocks for hydrocarbon exploration. Theophile currently is working on his PhD in Petroleum Geosciences and is concentrating on organic petrography and mineralogy of peat deposits in Rwanda.

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## Invitation to the 34<sup>th</sup> annual TSOP Meeting in Calgary, Canada Sept 21-27, 2017



The Organizing committee is pleased to invite members to Calgary, Canada for the 34<sup>th</sup> Annual meeting of TSOP and CSOP to be held at the Hyatt Regency Hotel, downtown Calgary from Sept 21-27<sup>th</sup>, 2017.

**Abstract Submission is open until June 30<sup>th</sup> and Early Bird Registration is open until July 15<sup>th</sup>.**

Conference Theme: *Organic matter in energy systems, with a focus on conventional and unconventional petroleum systems. The program includes an optional 1-day, Pre-meeting field trip, 1 short course, 2 days of technical sessions including a Symposium in honor of Prof. D.G. Murchison and an optional 1 or 3-day post-meeting field trip.*

Full details are available on the TSOP meeting website <https://tsop2017.wordpress.com/> by clicking the Meeting website. To register, click on the registration and abstract submission tab, set up a personal profile and check the boxes for activities you wish to take part in and proceed to payment options to complete the registration process.

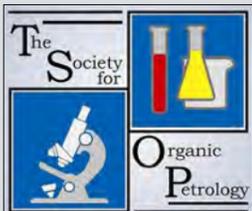
Members are responsible for their own hotel bookings, with the exception of the post meeting field trip. The Hyatt Regency is the official conference hotel and offers TSOP special conference room rates. Use the accommodations tab for more information and a direct link to book directly.

All activities are scheduled in or depart from the Hyatt Regency hotel, with the exception of the Pre-meeting field trip. Registrants arriving on Sept 20<sup>th</sup> for the pre-meeting field trip should book into the Wyndham Garden Inn, Calgary Airport for one night (Sept 20<sup>th</sup>) and thereafter at the Hyatt Regency (Sept 21-25<sup>th</sup>). The direct link to the Wyndham hotel reservations desk is also available by selecting the accommodations tab. For all hotel bookings use the booking reference **TSOP2017** to get special room rates.

Block bookings have been made in advance for the 3-day post-meeting field trip are included in the fees- there is no need to book accommodations individually. Members wishing to attend the 1-day post-meeting field trip who wish to return to the Hyatt on the night of Sept 25<sup>th</sup>, should indicate this to hotel at the time of booking and they will be eligible for the same special room rate paid offered for Sept 21-24<sup>th</sup>.

We look forward to seeing you in Calgary in September, 2017.

Judith Potter and Hamed Sanei  
Co-Chairs, TSOP 2017 Calgary Organizing Committee



# TSOP Annual Meeting: Calgary, Canada



The Canadian Society for Coal Science and Organic Petrology (CSCOP) is pleased to invite TSOP members to **Calgary, Alberta, Canada** for the 34<sup>th</sup> Annual Meeting.

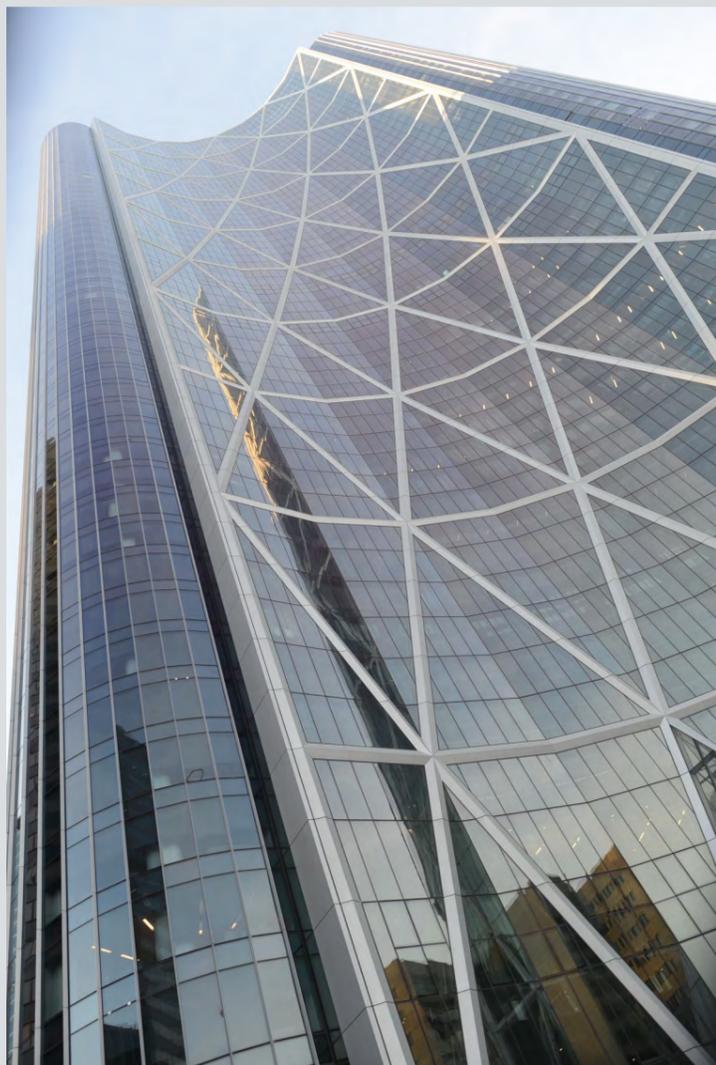


Photo by Hamed Sanei

The theme of the conference will be ***Organic matter in energy systems, with a focus on conventional and unconventional petroleum systems***

**Meeting dates: Sept 21-27<sup>th</sup>, 2017**

## Important Dates

Sept. 21<sup>st</sup>: Pre-meeting  
Field Trip

Sept. 22<sup>nd</sup>: Short course

Sept. 23-24<sup>th</sup>: Technical  
Sessions

Sept. 25-27<sup>th</sup>: Post-meeting  
Field Trip



Photo by Hamed Sanei

## Sept 21: Pre-meeting Field Trip

A one-day trip to view outcrops of the coal-bearing Lower Cretaceous Horseshoe Canyon Formation, producing subbituminous coal from several mines and the target zone for extensive CBM/CSG production. The coal-bearing, non-marine sandstone, siltstone, shale and mudstone are well exposed in the Drumheller valley of south central Alberta, a unique area known as the “Badlands”.



Photo by Tyrrell Museum



Photo by Hamed Sanei



Photo by Hamed Sanei



Photo by Tyrrell Museum

This trip will also include a visit to the world-famous Royal Tyrrell Museum of Paleontology <http://www.tyrrellmuseum.com> home to one of the finest dinosaur collections and dinosaur research facilities in the world as well as the Burgess Shale [www.burgess-shale.bc.ca](http://www.burgess-shale.bc.ca) and a behind-the-scenes tour by resident paleontologists.



Photo by Hamed Sanei



Photo by Jillian Verbeurgt

## Sept 22: Short Course

This full-day course will present a comprehensive examination of organic petrography specifically applied to North American shale plays, discussing reflectance analysis, fluorescence microscopy, SEM and other micro-spectrometry approaches to characterization of organic matter in shale reservoirs.

Petrographic applications will be integrated with observations from programmed pyrolysis to interpret thermal maturity, present-day and original organic matter type, and development of organic porosity. Pros and cons of organic petrographic approaches to shale reservoir characterization will be reviewed in the tight oil plays including the Bakken, Eagle Ford and Niobrara, and shale gas and condensate plays such as the Barnett, Duvernay, Haynesville-Bossier, Marcellus, Utica, and Woodford.

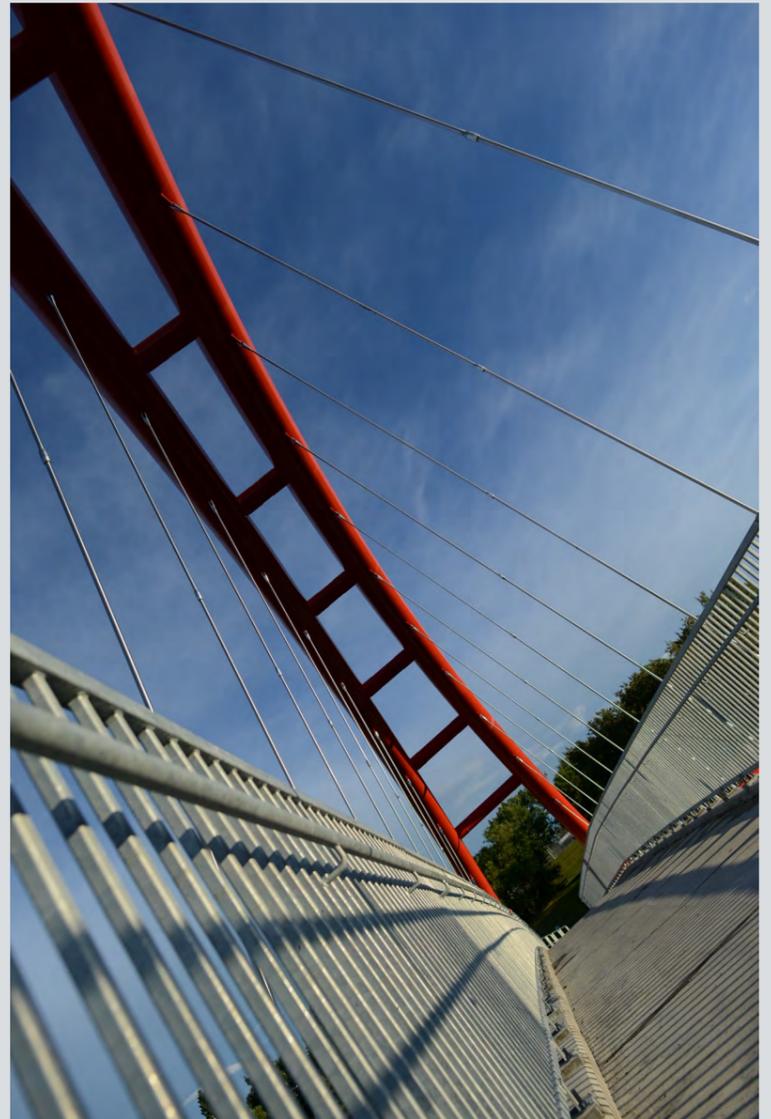


Photo by Hamed Sanei



Photo by Hamed Sanei

**Presenters: Paul Hackley, USGS Reston, Va and Brian Cardott, Oklahoma Geological Survey.**

## Sept 23-24: Technical Sessions

Oral and Poster presentations on Organic matter in the Biosphere and Geosphere focusing on Characterization of OM for resource and environmental assessment and focusing on organic petrology and geochemistry, organic porosity, the role of organic matter in conventional and unconventional petroleum systems, coal seam gas/CBM.



Photo by Hamed Sanei

One of the technical sessions will be a symposium dedicated to the memory of Professor Duncan G. Murchison, 1928-2013.

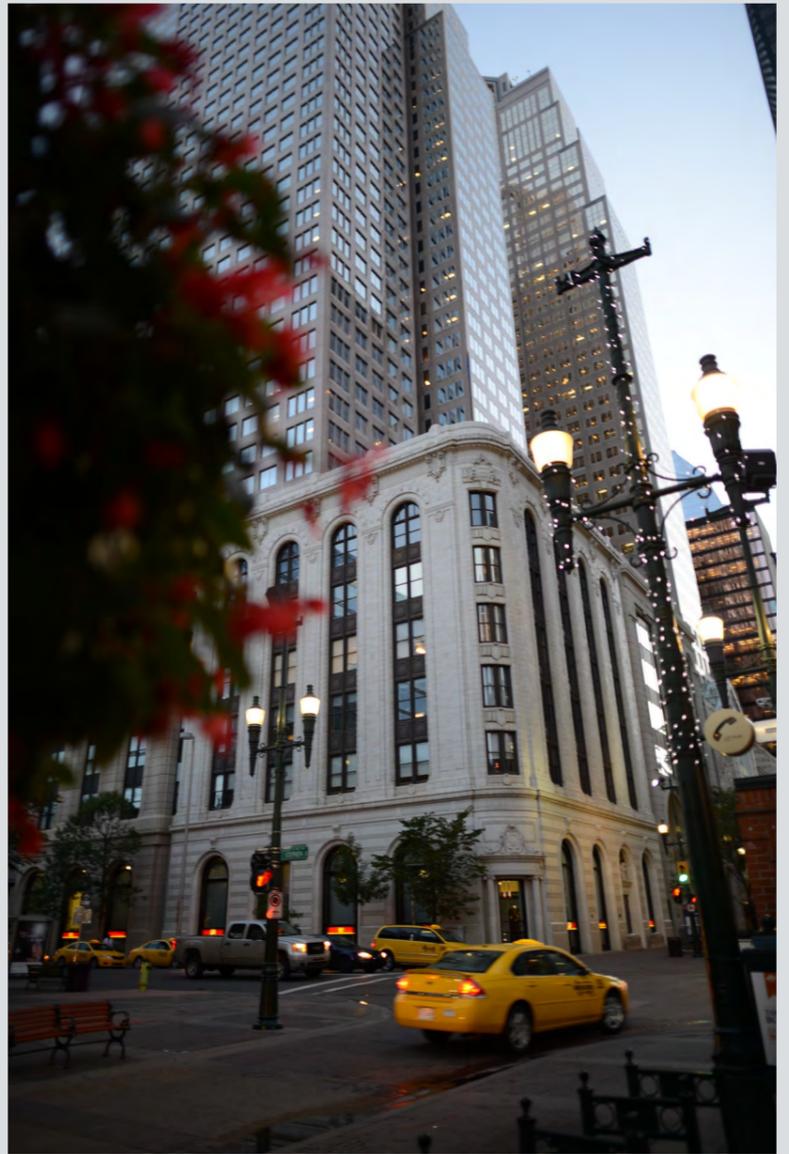


Photo by Hamed Sanei

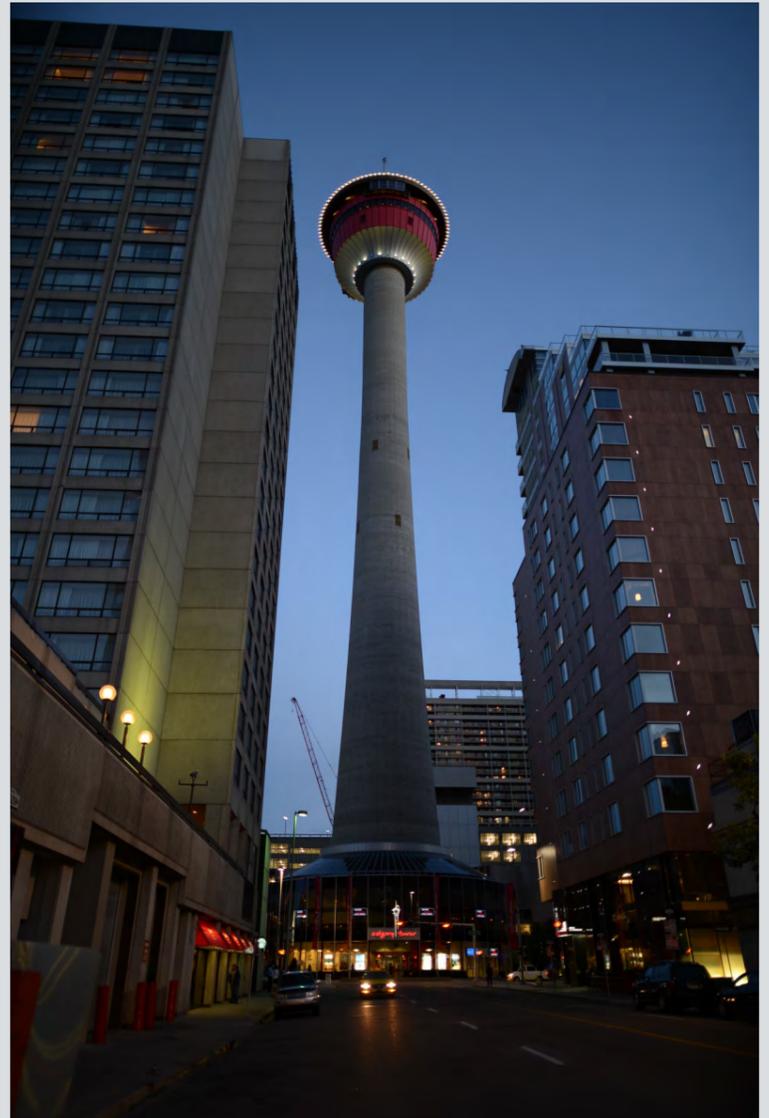


Photo by Hamed Sanei

Call for Abstracts is open until June 30<sup>th</sup>, 2017.

## Sept-25-27: Post-meeting Field Trip

There are three options for a post-meeting field trip. Options 1 and 2 are a three-day tour to view coals and source rocks of the Western Canada Basin. The highlight of the tour is a guided hike to the famous Burgess Shale at Mount Stephen, British Columbia, a world heritage site and one of the few sites in the world where Lr. Cambrian, soft-bodied marine fauna are preserved in the Burgess Shale Formation.



Photo by Hamed Sanei

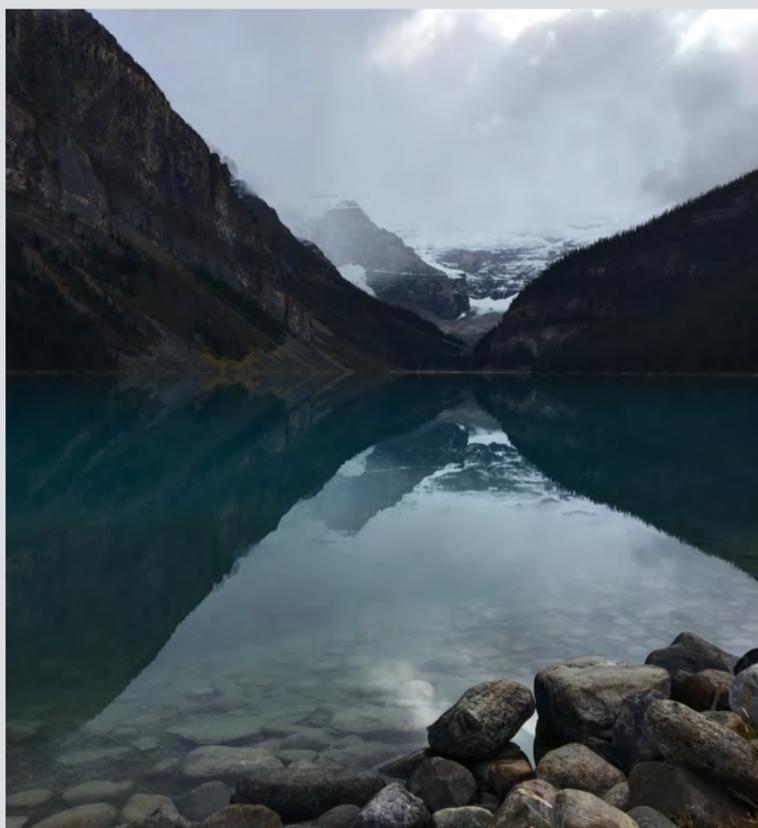


Photo by Jillian Verbeurgt

The group will depart by bus from Calgary on the morning of Sept 25th, stopping at Jura Creek to view the type section of the Mississippian Exshaw formation, an organic-rich petroleum source rock as well as Jura-Cretaceous semi-anthracites and the coal mining museum in Canmore. Participants will stay overnight and dine at a local inn in Field (renowned for its excellent cuisine) in prep for an early morning departure.



Photo by Burges Shale Foundation

Owing to the limited availability of spaces and physical requirements, there will be a choice of a guided hikes:

Option 1: Burgess Shale to view the unique Burgess Shale fauna exposed in the famous Walcott Quarry on Mount Stephen (max 12).

Option 2: Mount Stephen Fossil Beds to view lower Cambrian fossils including large trilobites (max 12).



Photo by Hamed Sanei



Photo by Jillian Verbeurgt

Both offer spectacular views of the Rocky Mountains in interior British Columbia and experienced and knowledgeable guides provided by the Burgess Shale Foundation. While this is a unique opportunity to visit these restricted geological sites, the organizing committee must emphasize that these are full day-hikes to high elevations; both options involve long and strenuous hikes and should only be undertaken if you are physically fit and adequately equipped for the trip.

The final day features a less strenuous tour through the Alpine terrain of BC/ Alberta including a stop at the beautiful Chateau Lake Louise.

Option 3: For those wishing for a less strenuous tour of some beautiful mountain venues, a one-day, post-meeting sightseeing excursion to the Canadian Rockies, including Banff, Lake Louise, Emerald Lake is scheduled on Monday, Sept 25<sup>th</sup> (max 50).



Photo by Burges Shale Foundation

## Conference Hotel: Hyatt Regency, Downtown Calgary

<https://calgary.regency.hyatt.com/>



The Hyatt Regency provides superior accommodations and conference and meeting room facilities. It showcases Western Canadian Art and Culture and is situated in the heart of downtown Calgary, with restaurants, theatres, galleries, museums, shopping, and famous landmarks like the Calgary Tower all within

walking distance; the University of Calgary, Research Park, the Geological Survey of Canada, the Saddledome, Stampede Park, Canada Olympic Park and other interesting locations, sights and landmarks can all be accessed by rapid transit from the downtown.

The Hyatt Regency has airporter service to and from the Calgary International Airport. It is approximately a 20 minute taxi ride to downtown from the airport

All functions associated with the conference will take place in the Hyatt Regency Hotel so please help the organizing committee meet their contracted room reservation obligations by staying at the conference hotel and book early to be assured of the negotiated room rates.



Members can contact the hotel directly to reserve accommodations for booking and will receive preferred conference guestroom rates. The negotiated rate is Can\$213.00 per night for single/double occupancy which includes high-speed internet and a breakfast buffet in Thompsons restaurant. The negotiated guestroom rate will be available until September 1<sup>st</sup>, 2017.

Booking at conference rates: <https://aws.passkey.com/go/TSOP2017Conference>

**Registration: will be available on-line, through the conference website**

**Early Bird Rate: February 15<sup>th</sup>—July 15<sup>th</sup>, 2017**

**Rate goes up after July 15th!**

**Local Organizing Committee:**

Co-Chairs: Hamed Sanei, Judith Potter

Treasurer: David L. Marchioni

Website: Mark Obermayer, Jillian Verbeurgt

Technical Sessions: Hamed Sanei, Lavern Stasiuk, Jennifer Galloway

Duncan G. Murchison Symposium: Fari Goodarzi, Judith Potter

Short Course Coordinator: Judith Potter

Field Trip Coordinators: David Marchioni, Bill McDougall, Jennifer Galloway, Judith Potter

**Ohio Valley Organic Petrographers Annual Meeting Report**  
**April 11, 2017**  
**Carbondale, IL, USA**

**Report by Sue Rimmer**

The annual Ohio Valley Organic Petrographers meeting was held at Southern Illinois University Carbondale on April 11, 2017. We had 23 enthusiastic participants, including students from SIUC, UK, and Morehead State. This meeting provided a great venue for student presentations in particular, and allowed for great feedback on all of the talks in an informal setting. Talks covered a range of topics from coals to source rocks (speakers shown in bold):

**Jen O'Keefe**, K. Gardiner, T. Demchuk, C. Denison:

Preliminary organic petrography and paleoecology of new exposures of Upper Wilcox Group Coals, Texas.

**Juan Teng**:

Identification of deformed coals combining multiple geophysical logs: A case study on Southern Qinshui Basin, North China.

**James C. Hower**, John G. Groppo, Kevin R. Henke, Uschi M. Graham, Madison M. Hood, Prakash Joshi, Dorin V. Preda:

Ponded and landfilled fly ash as a source of rare earth elements: Notes on the study of ash from a Kentucky power plant.

**Jack Crelling**, Sue M. Rimmer, Ken B. Anderson, and William Huggett:

Intriguing structures and textures in resinite from Hiawatha Seam, Utah (Poster).

**Maria Mastalerz**, Cortland Eble, Phil Ames and Agnieszka Drobniak:

Application of palynology and petrography in the correlation of the Pennsylvanian Brazil and Staunton formation coals in the eastern part of the Illinois Basin.

**Madison M. Hood**, Ross K. Taggart, Ryan C. Smith, Heileen Hsu-Kim, John G. Groppo, Kevin R. Henke, Uschi M. Graham, James C. Hower:

Rare earth element distribution in fly ash derived from the Fire Clay (Kentucky) coal.

**Cortland Eble**:

An enigmatic coal occurrence at the base of the Ohio Shale (Late Devonian) in eastern Kentucky.

**Bei Liu**, Schieber Juergen, Maria Mastalerz:

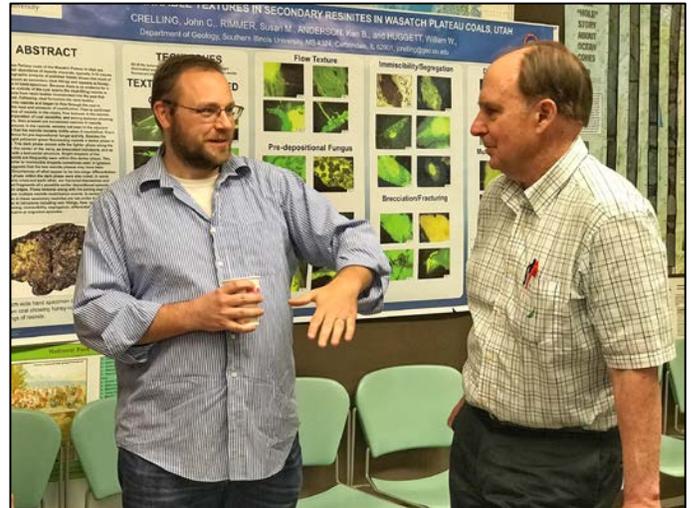
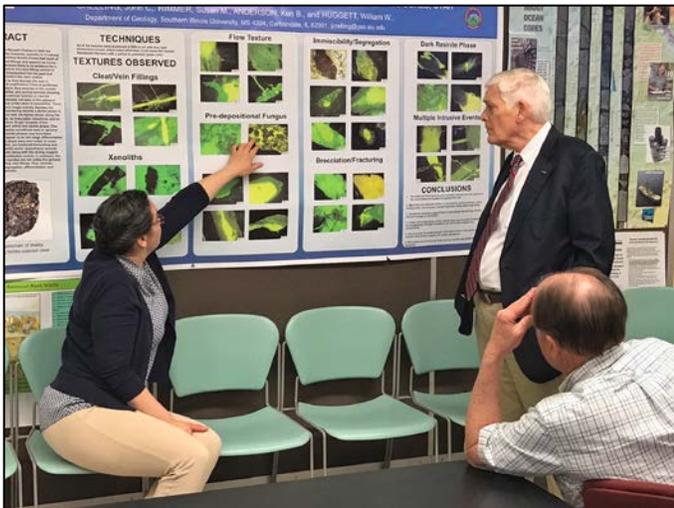
SEM petrography of organic matter in the New Albany Shale and its implication for porosity development with thermal maturity.

**Morgan Black, Clayton Gullett**, J. Willis, J. O'Keefe J., C. Mason, R. Perkins, S. Williams:

Preliminary results of the SOSS project: organic petrography and palynology of the Sunbury Shale.



Ohio Valley Organic Petrologers 2017 Meeting Group Photo



Attendees discussing papers presented at the 2017 Ohio Valley Organic Petrologers Meeting

## Call for papers for Special Issue “Critical Elements in Coal and Coal Ash and their Recovery” of International Journal of Coal Geology

Elements including rare earth elements (REE) and other critical elements such as Ge, Ga, Nb, V, Mo, U, etc. play an important role in many aspects of 21st-century life. Shortages of these critical elements have elevated interest in rare metals in coal and coal combustion products from being a mere curiosity to investigations of the feasibility of the use of coals and coal products as sources of these metals.

We wish to invite you to contribute a manuscript to a special issue of the International Journal of Coal Geology devoted to the geology and chemistry of rare earth elements (including scandium and yttrium) and other critical elements, in coal and coal-bearing rocks; the REE+Y+Sc chemistry of coal combustion and gasification products; and methods and products of the processing and extraction of the latter materials. Guest editors for "Critical Elements in Coal and Coal Ash and their Recovery" will be Athanasios Karamalidis (Department of Civil & Environmental Engineering, Carnegie Mellon University), Allan Kolker (U.S. Geological Survey), and Jim Hower (Center for Applied Energy Research, University of Kentucky).

In preparing your manuscript, please follow the journal guidelines. Manuscripts will be published shortly after acceptance and all manuscripts will be linked by Elsevier's Virtual Special Issue (VSI) function. In this manner, individual papers could be spread across several published issues (rather than waiting for all to be ready and publishing in a single issue), and individual articles for the VSI have an identifier that connects them to the special issue.

**Please submit your manuscript by 31 December, 2017** on the journal's EVISE site. In the submission process, you will be prompted to select the special issue.

Thank you in advance for your contribution to "Critical Elements in Coal and Coal Ash and their Recovery".

Athanasios Karamalidis, Allan Kolker, and Jim Hower



## CALENDAR OF EVENTS

2017

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

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

	August 13-18, 2017 <a href="#">Goldschmidt Conference</a> - Paris, FRANCE
	September 3-9, 2017 <a href="#">69th ICCP Annual Meeting</a> - Bucharest, ROMANIA
	September 5-8, 2017 <a href="#">2017 Pittsburgh Coal Conference</a> - Pittsburgh, PA, USA
	September 11-15, 2017 <a href="#">World Multidisciplinary Earth Science Symposium (WMESS)</a> - Prague, CZECH REPUBLIC
	September 17-22 <a href="#">28th International Meeting on Organic Geochemistry (IMOG)</a> - Florence, ITALY
	September 21-27, 2017 <a href="#">34th TSOP Annual Meeting</a> - Calgary, CANADA
	October 8-14, 2017 <a href="#">Course in Coal Science</a> - Xuzhou, China
	October 10-12 <a href="#">International Meeting of Sedimentology 2017</a> - Toulouse, FRANCE
	October 15-18, 2017 <a href="#">AAPG-SEG 2017 International Convention &amp; Exhibition</a> - London, UK
	October 22-25, 2017 <a href="#">2017 GSA Annual Meeting</a> - Seattle, WA, USA