



THE SOCIETY FOR ORGANIC PETROLOGY



NEWSLETTER

Vol. 31, No. 1

March, 2014

ISSN 0743-3816

31st TSOP Annual Meeting Sydney, Australia



Photo courtesy of Colin Ward

September 27th to October 3rd, 2014

TSOP 31st Annual Meeting
September 27th – October 3rd, 2014

Abstract Submission and Registration available now!

We are pleased to announce that arrangements are well underway for the 31st Annual Meeting of the Society for Organic Petrology which will take place in Sydney, Australia, from 27th September to 3rd October 2014.

The meeting provides an opportunity to showcase international research on different aspects of organic petrology and related fields in a relaxed and welcoming atmosphere.

Details for the meeting can be found on our website at <http://wp.csiro.au/tsop2014>. Abstracts and registration forms can now be submitted. Feel free to advertise this event widely and don't hesitate to contact us if you have any questions.

We look forward to welcoming you to Sydney!

Kind regards,
TSOP 2014 Organising Committee



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. Contact Paul Hackley 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 *Geotimes*, see their web site at www.geotimes.org/current

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

The Society for Organic Petrology Newsletter

ISSN 0743-3816, published quarterly
© 2014 The Society for Organic Petrology (TSOP)

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
225 S. East St, Suite 144
Indianapolis, Indiana, 46202, USA
e-mail: drachelwalker@gmail.com

Address Changes

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

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

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

CONTENTS

2014 TSOP Annual Meeting – Call for Papers	4
2014 Spackman Award	5
2014 Castaño Award	5
TSOP Dues Change.....	6
Institutional/Corporate Memberships.....	6
New TSOP Members	6
Directory of Geoscience Depts.....	7
Prof William Spackman	8
In Memoriam: Duncan Murchison	8
2013 Spackman Update – Rita Susilawati	9
Calendar of Events.....	11
2014 TSOP Annual Meeting Ad	12



Newsletter Submission Deadlines

June Issue: June 5th, 2014
September Issue: September 5th, 2014
December Issue: December 5th, 2014
March Issue: March 5th, 2015

CALL FOR PAPERS

31st Annual TSOP Meeting

Sydney, Australia

September 27 – October 3, 2014

Planning is now well advanced for the 31st Annual Meeting of the Society, which will be held in Sydney, Australia, from September 27 to October 3, 2014. The meeting will be held at the Rydges World Square Hotel, in the city's entertainment precinct, located close to restaurants, theatres, museums and other attractions, including Darling Harbour and Chinatown. As well as the hotel itself, a range of other accommodation options is also available nearby.

A Call for Papers has been launched on the meeting web site (<http://www.tsop.org>), covering themes that include:

- Organic petrology for unconventional gas
- Microbiology of organic-rich rocks
- Fugitive emissions and CO₂ storage
- Coal behaviour during utilisation
- New techniques in organic petrology and geochemistry

The program is intended for people from a broad spectrum of areas in organic petrology and organic geochemistry, including researchers and practitioners in both the coal and petroleum industries as well as those with more academic interests in natural organic matter. Participation by students is especially encouraged.

Titles and abstracts of proposed papers should be lodged through the web site by **31st May, 2014**. As with other TSOP meetings, authors will also be invited, after the meeting, to submit full papers covering their work for publication in a special issue of the International Journal of Coal Geology devoted to the conference.

The full meeting program includes:

- **Saturday, September 27:** Short course on “Application of Coal Petrology”, presented by Claus Diessel and Walter Pickel.
- **Sunday, September 28:** Pre-meeting field trip covering coal and coal seam gas geology in the Southern Coalfield of the Sydney Basin. As well as magnificent coastal scenery, this trip will allow

participants to visit a coal seam gas extraction plant, examine outcrops of Late Permian coal seams and associated strata, and travel over the spectacular engineering structure of the Sea Cliff Bridge.

- **Monday, September 29:** Short course on “Digital Core Analysis - Theory and Applications for Unconventional Reservoir Assessment”, presented by Alexandra Golab (Lithicon) and Andrew Fogden (ANU). This will focus on three-dimensional X-ray micro-CT imaging of coal, shale and organic-rich rocks, and its integration with other systems to evaluate features such as porosity and fracture networks.
- **Tuesday, September 30 and Wednesday, October 1:** Technical sessions, along with the traditional TSOP Business Lunch and the Conference Dinner.
- **Thursday, October 2 and Friday, October 3:** Field trip covering the Early Permian strata of the Hunter Coalfield, in the northern Sydney Basin, including a visit to an open-cut coal mine, inspection of a coal seam gas analysis laboratory, and a visit to one of the world-renowned wineries in the region.

Sydney has a number of attractions apart from the meeting to make the trip worthwhile. A special Partners' Program is also included, with visits to the Royal Botanic Gardens, the Sydney Opera House, and a cruise across Sydney Harbour to the beach-side area of Manly, as a further encouragement for spouses and family groups.

Further information is available from the meeting website at <http://wp.csiro.au/tsop2014/> or through the TSOP website at <http://www.tsop.org>. Alternatively, contact:

- Kaydy Pinetown – kaydy.pinetown@csiro.au
- Colin Ward – c.ward@unsw.edu.au



2014 Graduate Student Grant Program Spackman Award

The Society for Organic Petrology (TSOP) invites applications for graduate student research grants, the Spackman Award. The purpose of the grants is to foster research in organic petrology (which includes coal petrology, kerogen petrology, organic geochemistry and related disciplines) by providing support to graduate students from around the world, who demonstrate the application of organic petrology concepts to research problems.

Size of the Spackman Award:

Monetary awards up to a maximum of \$1,000.00 US will be granted. TSOP will also provide Merit Awards, in the form of certificates redeemable for TSOP publications, to top-ranking applicants not receiving grants. The program awards a maximum of two grants each year. All applicants are invited to apply for a year's free Student Membership in TSOP.

Use of the Spackman Award:

Grants are to be applied to expenses directly related to the student's thesis program, such as fieldwork, laboratory analyses, etc. A portion (not to exceed 25%) of the funds may be used to attend TSOP Annual Meetings. Funds should *not* be used to purchase capital equipment, to pay salaries, tuition, room, or board during the academic year.

Funds must be spent by the end of the calendar year following granting of the award, and an account of expenditure with copies of receipts should be provided by the end of that year (December 31, 2015 for awards granted in 2014).

Review and Ranking of Applications:

A committee of at least three TSOP members (and/or external experts when needed) will review the pool of applications. The reviewers will be drawn from people having no association with the host institution of any applicant. Each reviewer will independently rank each proposal according to established merit criteria, using the Application Evaluation Form included in the application packet. The cumulative score from all of the reviewers will be used to determine the final ranking of the applications. Winners will be notified prior to the

2014 Annual Meeting, and all applicants will be informed by e-mail of the final status of their applications.

Application Deadline:

TSOP Spackman Award application deadline is May 19, 2014. Grants will be awarded in September, 2014.

Detailed information and an application form are under "Students" on the TSOP web site:

www.tsop.org/grants.htm Application packages may also be obtained from:

Prof Colin Ward
Chair, TSOP Research Committee
School of Biological, Earth and Environmental Sciences
University of New South Wales
Sydney, NSW, 2052
Australia

E-mail: c.ward@unsw.edu.au

John Castaño Honorary Membership Award Call for Nominations

Deadline: May 31, 2014

TSOP members are invited to nominate the scientist of your choice for the 2014 John Castaño Honorary Membership Award, The Society for Organic Petrology's highest honor (www.tsop.org/honmem.htm). The award acknowledges distinction in a scientific discipline of significance to the Society, in recognition of contributions in research, service to TSOP, or education.

The John Castaño Honorary Membership conveys life membership in the Society. It is named in honor of John Castaño, one of our most active Houston-based founding members. John served as inaugural Vice-President, and later, as President of TSOP. He was an organizer of three TSOP meetings in the Houston area, and was made an Honorary Member in 1995. John served TSOP in many capacities until his death in 1997; a memorial article was published in the June 1997 issue of the TSOP Newsletter.

If you would like to suggest a candidate for the 2014 Castaño Honorary Membership Award, **please submit a letter of recommendation and a brief vita of the nominee to [Dr. Shifeng Dai \(China University of Mining and Technology, D11, Xueyuan Road, Haidian District, Beijing 100083, P.R. CHINA; E-mail: daishifeng@gmail.com\)](mailto:daishifeng@gmail.com) by May 31, 2014.** It is suggested that supporting letters of recommendation from colleagues and other scientists accompany the package. Emphasis should be placed on the significance of the nominee's work.

Nominations will be reviewed by the Castaño Award Committee and results will be announced at the Annual Meeting. The selection process is confidential and nominees do not have to be former or current TSOP members.

The committee evaluates research, service and educational impact on the following criteria:

- Research contributions include work that demonstrates a high degree of originality and serves to advance the science of organic petrology or related disciplines. Nominees must possess a sustained international record of professional publication and achievement.
- Nominees recommended for service must demonstrate significance contributions to TSOP in a leadership role. Their service must have enabled the Society to stimulate interest and promote innovative research in coal geology. Contributions include educational activities, administrative duties, or the development of the Society.
- Nominees recommended for education must demonstrate a high degree of dedication and significant impact as a teacher of organic petrology or related disciplines.

Dr. Shifeng Dai

TSOP Vice-President and
Chair of the Honorary Member Selection Committee

TSOP DUES CHANGE

Due to the increasing cost of postage related to the black and white printed version of the newsletter, TSOP Council recently voted to increase the cost of membership with the printed newsletter to \$35 per year.

The membership dues for the e-newsletter will remain at \$25 per year.

We encourage members to use our convenient online dues payment system. You can use it to pay by check/cheque (US Members), money order, wire or credit card. Login at www.tsop.org/mbrsonly and select 'Online dues payment' or go to www.tsop.org/dues.

A copy of this year's dues form can be downloaded from the website by following the 'Dues' link from the main page (www.tsop.org) 'Members Only' menu.

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



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** (with e-newsletter or \$85/yr with printed newsletter) and help support the goals of the Society. See the website for details: <http://www.tsop.org/join.htm>

New TSOP Members



Canadian Discovery, Ltd

TSOP welcomes institutional member Canadian Discovery, Ltd. President Kaush Rakhit obtained his BSc in 1983 from the Univ. of Waterloo in Earth

Sciences and MSc in 1986 from the Univ. of Alberta in Petroleum Hydrogeology. His company Canadian Discovery has provided fully-integrated geoscience services to a diverse range of resource sector stakeholders since 1987. Current offerings include multi-client projects, information products, data/software and geoscience consulting.



Shawn Wright

Mr. Wright received his BSc and MSc degrees in geology/geochemistry from the University of Houston in 2009 and 2011, respectively. His PhD study at Univ. of Houston is investigating trace element distributions and Re-Os isotope systematics of kerogen and bitumen in shale source rocks.



Yulin Li

Dr. Li received his PhD in 1997 from the China Coal Research Institute and China University of Mining and Technology. Since 2003 he has been with Norwest in Calgary, Canada, where his research applies organic petrology to coal and coalbed methane resource assessments, and evaluation of unconventional shale oil and shale gas prospects. He served as Chairman of the Coal Geology Division of the China Geology and Coal Society from 2000 to 2003.



Daniel Hallau

Mr. Hallau received his MSc in geology from the Colorado School of Mines in 2014 and BA in geology from the University of Wisconsin-Madison in 2006. Since 2008 he has worked with The Discovery Group, Inc. where he has participated in stratigraphic and petrophysical studies in many hydrocarbon provinces around the world. His interest in organic petrology came from his recent participation in a large-scale vitrinite reflectance study in the Cretaceous section of the Denver-Julesburg basin.

Kindle Version of the AGI 2014 Directory of Geoscience Departments is Now Available

Following the initial print release of the 2014 Directory of Geoscience Departments last week, AGI has now released a Kindle version of this publication. AGI is also pleased to announce that the Directory of Geoscience Departments is also part of Amazon.com's Kindle Matchbook program, so if you have purchased the print version of the 2014 directory, you can now buy the Kindle version for only \$1.99. The hardcopy edition is \$35 (\$28 for AGI member society members) and is now available direct from AGI (<http://bit.ly/1fbhBsN>) or Amazon.com (<http://amzn.to/1fbhCNz>). The Kindle version is available from Amazon.com for \$9.99 (<http://amzn.to/1oMrS4b>).

The Directory of Geoscience Departments is the only comprehensive guide to geoscience organizations around the world and it is a vital resource for thousands of scientists, policymakers, publishers, students, and the general public to find various geoscience programs and connect with colleagues. The 49th Edition provides a state/country-sorted listing of nearly 2,300 university departments, museums, federal agencies, geological surveys and research institutes.

Professor William Spackman 1919-2014

It is with great sadness that we pass along news of yet another great loss to the world of Organic Petrology. Professor William Spackman, former President of TSOP and Honorary member of our Society, passed away on March 13th, 2014 at the age of 94 in Wilmington, North Carolina.

Professor Spackman was one of the US' most influential coal scientists. He had a long and illustrious career in teaching, research and service at Penn State University. He directed many doctoral theses in paleobotany and coal science and his work led to the foundation of the Coal Research Section in the College of Earth and Mineral Sciences at Penn State. A former President of TSOP, he himself was made an Honorary member in 1993. A prominent Student Research Grant, "The Spackman Award", was named in his honour, to recognise his tremendous contribution to the education of young coal research scientists.

The following is a link to a public online obituary:
www.legacy.com/obituaries/starnewsonline/obituary.aspx?n=william-spackman&pid=170222947

A full memorial will appear in the next issue of the TSOP Newsletter.

In Memoriam

Duncan G. Murchison 1928-2013



Professor Duncan George Murchison, FRSE, passed away on Nov 13th, 2013.

Duncan had a long and distinguished career in many aspects of UK and international geosciences and academia as a researcher, academic leader, learned society officer and as an entrepreneur.

Professor Murchison was the father of organic petrology in the United Kingdom. He graduated in Geology from King's College, Newcastle where he was President of the Students' Union from 1953 to 1954. He then worked as a geologist with Royal Dutch Shell, completing his Ph.D. with Stanley Westoll at the Geology Department of Durham University, prior to his appointment as a Research Associate in the Department of Geology in Newcastle in January 1958. He was appointed Lecturer in 1960, promoted to Senior Lecturer in 1968, appointed as a Reader in Geochemistry in 1971 and appointed Professor of Geochemistry at the University in 1976. He was Dean of the University's Faculty of Science from 1980 to 1983 and he served as Pro-Vice-Chancellor from 1986 until his retirement in 1993. During this period he also served as Acting Vice-Chancellor for one year in 1991. He was accorded the title of Emeritus Professor on his retirement.

He was a Fellow, council member and treasurer of the Geological Society of London and a member of a number of international commissions. He served as President of the Royal Microscopical Society and was ICCP Treasurer for many years and also ICCP President (1979 – 1983). Duncan was the 1987 Thiessen medalist and in 2002 was awarded the Castaño Award of lifelong honorary member of TSOP.

He had numerous papers and his first paper was published in 1958 on "Reflectance of vitrinite" *Brennstoff-Chemie* (Special Issue 39, pp.47-51). Together with Mick Jones, Fari Goodarzi, Alan Cook and many others, he developed and published an important body of work on the optical properties of metal oxides, ore minerals, natural and carbonised coal macerals and the impact of igneous intrusions on coal rank and DOM in sediment maturity levels. Duncan carried out pivotal early work in establishing vitrinite reflectance as a front line tool for assessment of coal and sediment thermal history and also compiled an important early textbook on the British Coal Measures: "Coal and Coal Bearing Strata", Oliver and Boyd, Edinburgh that was published in 1968 together with Professor Stanley

Westoll FRS.

Duncan was nominated and elected fellow of the Royal Society of Edinburgh in 1971 and his citation read: "Dr Murchison is a most active worker in the field of Coal Petrology and of Organic Geochemistry applied to the origin and discovery of gas and liquid fuels. While his earlier works focused on the use of vitrinite reflectance in studies of coal rank and the thermal history of coals and related sediments, he was also a recognised expert in reflectance measurements of materials studied as polished surfaces and has applied these techniques to problems of technological value such as carbonization products, uranium oxide sinters, and ore minerals".

Despite being the first practical thermal history assessment tool, vitrinite reflectance has remained a mainstay of modern thermal history assessment for conventional petroleum exploration and geological history reconstruction and is a primary technology applied to exploration and development of shale gas and other unconventional resources today. Duncan's work has been applied in many different aspects of resource evaluation and has had great longevity of impact!

He was founder of the 'Organic Geochemistry Unit' in the Department of Geology at Newcastle in 1968, which together with Archie Douglas and Mick Jones became the UK center for coal petrology and organic geochemistry starting the first graduate degrees in this area. Duncan supervised and trained numerous post graduates until his retirement. The OGU became a Postgraduate P –institute during the 'reorganisation of Earth Sciences' in British Universities in the late 1980's and became FFEGI (Fossil Fuels and Environmental Geochemistry Postgraduate Institute), but was commonly known as NRG. The OGU and its descendants trained many scientists who ply their trade today in all continents of the world.

Duncan was one of the pioneers of Coal Petrology in the UK and many of the coal and organic petrologists currently working in coal science and fossil fuels today hailed from that Organic Geochemistry Unit in Newcastle-upon-Tyne.

Duncan was very friendly, full of laughter, but very serious when it came to science. He was Duncan to his friends, Duncan G. Murchison to the academic world, and "Smurch" to those who will miss him most, including his many students. Above all, he will be remembered by all who knew him as a very colourful

fellow, always jovial, a man of great character. He was a keen photographer and a philatelist, an expert in the "Sea Lion" stamp of George the V. He was also an entrepreneur. Together with Mick Jones he established a successful geological consultancy at Newcastle carrying out vitrinite reflectance measurements for oil and gas companies and drilling services in the Newcastle area looking for old coal workings.

Duncan made extraordinary contributions to learned societies and won the Geological Society Distinguished Service Award of 2007 to recognise his massive contributions as the Society's Treasurer. There he oversaw a complete revision of the Society's accounting methods, bringing them into line with new charity accounting rules and the modern world. He laid the foundation of financial probity that now enables a revitalised Geological Society to spring forward from its Bicentenary into its second 200 years. In the words of Ted Nield, 'All of this was achieved at the expense of long hours of travel from Newcastle - including many letters to GNER about the state of their toilets - and was done with a characteristic sense of good humour that made the acceptance of unpalatable necessities that much easier'.

Duncan Murchison was a great man and scientist and he will be missed by all who knew him.

Memoriam by Steve Larter, Fari Goodarzi and Judith Potter.

Microbial Community Changes during Methanogen Culturing Experiments with Coal

Report on 2012 Spackman Award Project Rita Susilawati

University of Queensland, Australia

Over the last few years, the increasing demand for energy and the success of several studies supporting the production of real time biogenic methane from coal have increased the interest in developing coal as methane bioreactor. Although there are some broad similarities in the structure of microbial consortia, each CBM reservoir site has specific coal and community structures. These differ with respect to coal character, as well as individual

and minor community members and their dominance, lending uniqueness that may require site-specific engineering for methanogen stimulation. As such, it is essential to know the specific coal and in situ methanogen communities at a specific site to engineer potential coal bioreactors.

Using enrichment studies and polymerase chain reaction (PCR) amplification of 16S rRNA gene sequencing, viable coal to methane communities have been detected in water from coal bed methane (CBM) reservoirs in the South Sumatra Basin (SSB) Indonesia. Temporal changes in microbial community structures during methanogenesis were investigated in cultures of SSB formation water using three different coals as substrates (Burung, Mangus SB and Mangus Ant). Petrographic analysis showed that the Burung coal is the lowest rank ($R_v = 0.39\%$) followed by the Mangus SB ($R_v = 0.5\%$) and the Mangus Ant ($R_v = 2.2\%$). Vitrinite is the major maceral, accounting for 78 to 97 % of the total macerals present in all three coals. Liptinite accounts for 10 to 11% and the inertinite content varies from 9 to 12 %. All of the coals have very low mineral matter contents (<1%), which is typical for Indonesian coal. Overall the petrographic composition of the three coals is very similar.

While we did not observe any correlation between coal type and methane production, an inverse correlation between methane yield and coal rank was observed in our experiments. This is in agreement with previous studies (Strapoc et al., 2011; Scott, 1999). The sample set does not represent a true rank suite, as most type samples were from lignite to subbituminous range, with an outlier sample of anthracite.

Our microbial profiling revealed that each coal microcosm has unique microbial structures. The fact that each microcosm has its own microbial structure, diversity and pattern despite having the same source of inoculum may indicate the influence of different coal substrates on the microbial community structure in each microcosm. The heterogeneity of the coal structure as a substrate may influence the bacterial community, causing it to harbour particular microbes in each microcosm. It is also interesting to note that, despite each coal having its own uniqueness, the Mangus SB and Mangus Ant microbial structures were similar to each other but different from the Burung microcosm. Although the coals come from the same seam, it is not yet clear what factor has produced those similarities.

The Mangus SB and Mangus Ant coals have different chemical and petrographic properties due to the huge differences in rank. As heat affected coals, the two coals were originally the same and as such may still share some of the same characteristics. This highlights the need for more detailed study of heat affected coals and their methanogenesis potential.

Although each microcosm revealed its own microbial hierarchy, with differences in microbial abundance and diversity, similar patterns were observed in all microcosms. The relative abundance of bacterial communities tended to decrease over time with a subsequent increase in methanogen communities, corresponding to an increased methane production and rate, suggesting that the changes in the bacterial community structure influence the formation of the methanogen community structure. The influence of rank of the coal substrate was consistent during the early microbial growth phase, but was unclear during the later stages of methanogen activity. The results of this experiment are supportive, but not conclusively so, of a correlation between coal maturity, microbial methanogen abundance and methane production.

Ms Susilawati is a recipient of an Australian Award (AUSAid) and a University of Queensland Research Grant. PT Medco CBM Sekayu and PT Bukit Asam kindly allowed site and sample access. The TSOP Spackman award was used to partly fund laboratory consumables and gas isotope analyses for this study.



CALENDAR OF EVENTS

www.tsop.org/cal.htm



2014



April 6-9: AAPG Annual Convention, Houston, TX, USA. www.aapg.org

April 24-25: Ashes and Slags from TPPs – removal, transport, processing, landfilling, Moscow, Russia. www.ecopower.ru/index.php?newsid=123

June 8-13: Goldschmidt Geochemistry Conference, Sacramento, California, USA. <http://goldschmidt.info/2014/index>

June 23-27: ICCP Dispersed Organic Matter Course, Potsdam, Germany. www.iccop.org/2014-iccp-training-courses/

August 26-31: 9th European Palaeobotany Palynology Conference, Padova, Italy. www.palynology.org/upcoming-aasp-meetings/14

September 16-19: ICCP Organic Petrology in Industrial Applications, Dhanbad, India. www.iccop.org/2014-iccp-training-courses/

September 20-26: 66th Annual ICCP Meeting, Kolkata, India. www.iccop.org

September 27 – October 3: 31st Annual TSOP Meeting, Sydney, Australia. <http://wp.csiro.au/tsop2014>

September 28 - October 4: 47th AASP-TPS Meeting, Mendoza, Argentina. www.palynology.org/upcoming-aasp-meetings

October 6-9: Pittsburgh Coal Conference, Pittsburgh, Pennsylvania, USA. www.engineering.pitt.edu/pcc/

October 19-22: Geological Society of America Annual Meeting, Vancouver, BC, Canada. www.geosociety.org/meetings/2014/

For more geology event information, see: <http://calendar.agiweb.org/index.html>





THE SOCIETY FOR ORGANIC PETROLOGY



31st Annual Meeting

Organic Matter Down Under II

Sydney, Australia

27 September – 3 October 2014



Conference Themes

- Organic petrology for unconventional gas
- Microbiology of organic-rich rocks
- Fugitive emissions and CO₂ storage
- Coal behaviour in utilisation
- New techniques in organic petrology and geochemistry

Papers on other aspects of organic petrology and geochemistry are also welcome



Short Courses

Applications of coal petrology
Digital core analysis

Field Trips

Southern Sydney Basin
Hunter Coalfield



Abstracts Due: 31 May, 2014



Details: <http://www.tsop.org>