

# ICCP NEWS




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Newsletter of the International Committee for Coal and Organic Petrology (ICCP). Founded 1953. <http://www.iccop.org>

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## 10<sup>th</sup> ICCP Course Dispersed Organic Matter



**Integrating transmitted and reflected light microscopy**

Held at GeoLab, Helmholtz Centre Potsdam  
German Research Centre for Geosciences – GFZ

June 26-30th, 2017 - Potsdam, Germany

**STUDENT TRAVEL GRANT APPLICATIONS TO ATTEND THE ICCP COURSE CLOSE  
30 MARCH 2017**

**ABSTRACT DEADLINE FOR THE 69<sup>TH</sup> ANNUAL ICCP MEETING IS 20 MARCH 2017**



69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)

September 3 - 9, 2017 | Romanian Academy Library | Bucharest, Romania



Under the Auspices of



Organizers



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**INSTITUTIONAL MEMBERS**



**ICCP WEBSITE**

<https://www.iccop.org>

Please send any feedback, comments, and uploads to Stavros Kalaitzidis

<mailto:skalait@upatras.gr>

The ICCP Newsletter, ISN 1445-4793 (1445-4858 online) is distributed 3 times a year, & welcomes contributions from members & non-members. The minutes of the Annual Meeting are published in the final issue each year, & the program for the Annual Meeting is included mid-year. The Newsletter is distributed to all members & is available on the open area of the webpage. This enables anyone interested in the science to obtain exposure to the ICCP activities. ICCP application details are available on the website, or contact the General Secretary, Walter Pickel.

mail to: [walter.pickel@organicpetrology.com](mailto:walter.pickel@organicpetrology.com)



## EDITORS COLUMN

Merry March greetings to all members, and non-members. The ICCP Newsletter is available on the open access ICCP webpage in order to promote the science and for ease of reference for the members. I hope that all the non-members will see the value of joining the ICCP and become involved in the various working groups of the three Commissions. I note that four of the most prestigious coal conferences in the conference calendar are in September this year, on three different continents. The ICCP is being held in Bucharest, the ICCS&T in China, and the IPCC in Pittsburgh USA, and TSOP in Canada. Whilst the ICCP, TSOP, and IPCC are annual conferences, the ICCS&T is held every two years and generally attracts a lot of researchers and academia involved in coal and related topics. I hope that each conference is successful. Some further details are included in this Newsletter regarding the 69<sup>th</sup> ICCP Meeting in Bucharest. The Meeting was last held in Bucharest in 1999, and I am sure we will enjoy the splendor of this famous city. Note the abstract and early bird deadlines please, and do visit the Meeting webpage (refer to page 12). Whilst on the topic of conferences, please make a note that the next International Geocongress will be held in India in 2020. The ICCP is again offering an Organic Petrology course this year, this time on Dispersed Organic Matter; please look out for the flyer in the Newsletter. Other conference and course dates are provided on the back page. I look forward to seeing you all in the beautiful city of Bucharest, Romania in September.

Best wishes, Nikki

**69TH ANNUAL ICCP MEETING WILL BE HELD IN BUCHAREST, ROMANIA**

**3-9 SEPTEMBER 2017.**

**NOTE: ABSTRACT DEADLINE 20 MARCH (2 PAGES)**

**NOTE: EARLY BIRD REGISTRATION CLOSES 31 MAY**

**REFER TO PAGE 12 HEREIN AND ICCP WEBPAGE FOR FURTHER INFORMATION**

<http://www.iccop.org/meetings/2017-iccp-meeting-in-bucharest-romania/>

**PLEASE NOTE:**

**Deadline for next ICCP Newsletter**

**19 JUNE 2017**

**Please submit short research synopses, articles, images**

**KNOW YOUR COAL PETROLOGIST**

**Answer on page 5**

# PRESIDENTS COLUMN

You have in your hands the first Newsletter of 2017 full of announcements of the forthcoming events organized involving the ICCP. We have first the Course in June, this time devoted for the third time to Dispersed Organic Matter. There is still time to apply for the students grant to attend the course. I would like to encourage you to do that since the course will be a nice experience in a beautiful venue where you will have the chance to interact with attendees from different sectors and backgrounds. The support of Hilgers Technisches Büro for the practical sessions will be again invaluable. In September, we will come for the second time to Bucharest; please be aware that the deadline for abstracts submission is very soon. The organizing committee is working hard to welcome us all for the Meeting.

I would like to encourage the members of Commission I to download the TEM-SEM manuscript and make suggestions. Although the sections dealing with the study of organic components was approved some time ago, it has been now updated with a section dealing with porosity which is very relevant in the context of unconventional oil and gas plays. The manuscript will finally be approved at the meeting and it is important that we have any suggestions for improvement before that date. Again thanks to the authors for preparing the manuscript.

This issue has also information from students work. This is a nice channel to publicize your work within a community specifically interested on organic petrology. Thanks Nikki, for having prepared again a nice issue full of interesting information.

Angeles G. Borrego

The list of SCAP-accredited petrographers has been uploaded on ICCP's webpage (<http://www.iccop.org/accreditation/accredited-petrographers/list-of-accredited-petrographers-in-scap/>).

Please check your contact details as soon as possible and inform Kimon of any required changes.

The certificates have been posted. If you have not yet received yours, please contact Kimon directly.

Congratulations once again on your accreditation

Prof. Dr. Kimon Christanis

Department of Geology

University of Patras

E-mail: [christan@upatras.gr](mailto:christan@upatras.gr)

URL: <http://lithos.geology.upatras.gr/epy/>

The list of accredited petrographers in the DOMVR programme has been updated on the ICCP webpage. Please check whether the contact details are correct. You should have received the certificate with your evaluation. If this is not the case or any modification in contact details is required, please contact Angeles:

([angeles@incar.csic.es](mailto:angeles@incar.csic.es)).

Congratulations once again on your accreditation.

Dr Angeles G. Borrego

Link to the post: <http://www.iccop.org/accreditation/accredited-petrographers/list-of-accredited-petrographers-in-domvr/>




69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)

September 3 - 9, 2017 | Romanian Academy Library | Bucharest, Romania

For more information about the meeting, please contact us:

**Dr. Georgeta Predeanu**

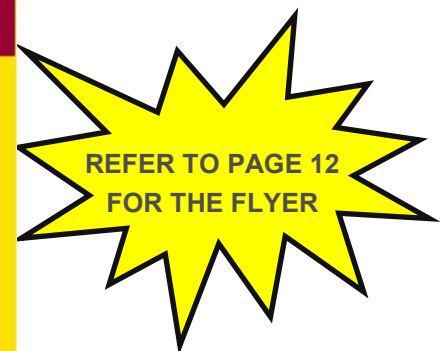
Chair of the Organising Committee

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69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)



# 10TH ICCP COURSE: DISPERSED ORGANIC MATTER

26-30 JUNE 2017

GEOLAB, HELMHOLTZ CENTRE, GFZ, POTSDAM, GERMANY

**10<sup>th</sup> ICCP Course Dispersed Organic Matter**

**Integrating transmitted and reflected light microscopy**

**COURSE INSTRUCTORS:**  
**ANGELES AND JOÃO**

Held at GeoLab, Helmholtz Centre Potsdam  
German Research Centre for Geosciences – GFZ

June 26-30th, 2017 - Potsdam, Germany

The International Committee for Coal and Organic Petrology (ICCP), in conjunction with Geolab, DGGV (Deutsche Geologische Gesellschaft – Geologische Vereinigung e.V.), the Teichmüller Foundation and GFZ (the German Research Centre for Geosciences), is pleased to announce a training course in Organic Petrology to be held in Potsdam from 26-30th June 2017.

Instructors will be Prof. João Graciano Mendonca Filho, Universidade Federal do Rio de Janeiro, Brazil, and Dr. Angeles G. Borrego, Instituto Nacional del Carbón, CSIC, Oviedo, Spain.

A Textbook will be available for the participants. Practical sessions will be held using a microscope with image projection, set up for transmitted and reflected white light observation, as well as reflectance measurements (FOSSIL software). The microscope system will be provided by Hilgers Technisches Büro.

The course focuses on the Petrology of Dispersed Organic Matter, examined both in transmitted and incident light, with particular emphasis in the integration of the information from both observation modes. The course will cover identification of palynofacies components and macerals, as well as the procedures for the quantification of various components. Determination of source rock maturity, geochemical and optical parameters, identification of vitrinite and measurement of vitrinite reflectance will be covered. Difficulties and common mistakes will be discussed.

While a basic geological understanding is required, the course is designed for those with little or no knowledge on source rocks. It is therefore suitable for under- or post-graduate students, as well as established geologists and other professionals working in the field of oil and gas exploration.

A Certificate of participation will be awarded to each person completing this course, but this does not include accreditation from the ICCP.

**The following items will be covered in the course:**

1. Dispersed Organic Matter (DOM): Concepts and definitions, OM production, processes and sedimentation, OM evolution, physicochemical transformation during maturation.
2. Transmitted and reflected light microscopy techniques (white and blue lights), sample preparation, modes of illumination, qualitative and quantitative procedures.
3. Palynofacies. Identification and classification of components. Interpretation of results.
4. Identification and quantification of macerals.
5. Maturity of organic matter: SCI-Spore Colour Index; spectral fluorescence parameters. Vitrinite reflectance measurement. Identification of indigenous vitrinite. Interpretation of results.
6. Case studies.

Emphasis will be given to practical exercises

Course language is English, and space is limited.

Student travel grants are available on application.

Registration is at : <http://www.iccop.org/10th-course-potsdam/>

Company / Professional	1300 €
Government / Non-Profit	700 €
Student	250 €

Registrations and payments should be received by the 15th May 2017.

Attendees are required to book their own accommodation.

For further information please contact: Peter Crosdale at [peter.crosdale@energyrc.com.au](mailto:peter.crosdale@energyrc.com.au)

## ICCP STUDENT TRAVEL GRANT TO ATTEND THE COURSE



<http://www.iccop.org/iccp-student-travel-grant-potsdam-2017-applications-are-now-open/>

APPLICATIONS TO ATTEND THE POTSDAM  
2017 ORGANIC PETROLOGY TRAINING  
COURSE ARE NOW OPEN.

PLEASE CHECK THE GRANT REQUIRE-  
MENTS AND SUBMIT THE APPLICATION  
FORMS TO Dr. Stavros Kalaitzidis  
([skalait@upatras.gr](mailto:skalait@upatras.gr))

**DEADLINE: 30 MARCH 2017**

### Answer to Know your coal petrologist (P2)

Reinhardt Thiessen, 1867—1938.

A pioneer in the use of thin sections in coal  
petrographic studies at USA Bureau of Mines.

In 1957 recognized as patron of the ICCP's  
Thiessen Medal.

(Photograph & caption courtesy of Jim Hower)

**Purpose:** The ICCP Student Travel Grant is designed to support student attendance at the ICCP Training Courses.

**Eligibility:** The ICCP Travel Grant supports qualified MSc and PhD students from around the world, who are active in fields related to the Themes of ICCP.

Applicants who have previously been granted an ICCP Travel Grant are not eligible to apply for a second grant under the scheme.

The ICCP Travel Grant is open to all students who express interest to attend.

**Grants:** One Grant up to Euros 1,000.00 plus the course fees will be granted for any course.

**Conditions:** Monetary awards shall be spent solely for the purposes of travelling to attend an ICCP Training Course, including accommodation. Funds awarded should not be used to fund research, purchase capital equipment, to pay salaries, tuition, etc.

**Students receiving the award will be required to provide receipts detailing travel spending to ICCP Treasurer after the course has concluded. Maximum period for providing the receipts will be 30 days after the course.**

Copies of travel receipts should be sent to Jennifer Pearson at: [jen@coalpetrography.com](mailto:jen@coalpetrography.com)  
The ICCP Travel Grant should be referred to in any following publication of the MSc or PhD Thesis.

**Application Deadline:** Two months after the course has been announced.

Completed applications should include:

1. Cover letter requesting travel funds and stating how attending the ICCP Training Course will assist with their research.
2. Filled out Application Form (click link opposite for the application form).
3. MSc or PhD research summary.
4. Letter of support from their primary faculty advisor.
5. Curriculum Vitae.

Applications will be reviewed and ranked by the Grant Subcommittee, who will be determined by the Council.

The selection of the grant awardee winner will be based on:

1. Merit of MSc or PhD research proposal.
2. Potential impact in the scientific fields of the three ICCP Commissions: General Coal and Organic Petrology, Applications in Geology, and Applications in Industry.

Application materials should be sent electronically to the Chair of the Subcommittee—email opposite.

## New Applications for Associate Member



**Prof. Dr. Hülya Inaner (A1)**  
Turkey

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Professor Doktor Inaner is a professor at the Dokuz Eylül University in Izmir, Turkey, where she has taught coal geology, and where she completed her PhD. Dr Inaner attended the 2013 ICCP training course and has become established as a coal petrographer. She is a frequent participant in the European Coal Conference. Her publications largely deal with Turkish lignites.



**Dr. Abbas Seyedolali**  
USA

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Dr. Seyedolali is a Senior Staff Geologist at Cheasapeake Energy in Oklahoma City. He is a sedimentologist and petrographer, with experience in working on-shore, offshore and deepwater conventional and unconventional reservoirs, and undertakes organic petrology and fluorescence microscopy of organic-rich mudstones. Dr. Seyedolali obtained his PhD from the University of Oregon, and is a member of AAPG, SEPM, GSA, CMS, and TSOP.

# WELCOME AND CONGRATULATIONS

## Applications for Full ICCP Member

None this time. But please do consider applying for full membership status if you have been an Associate Member for a while and have been active in the ICCP.

*Please keep your contact details current, or you may miss important information*

## Updated contact details

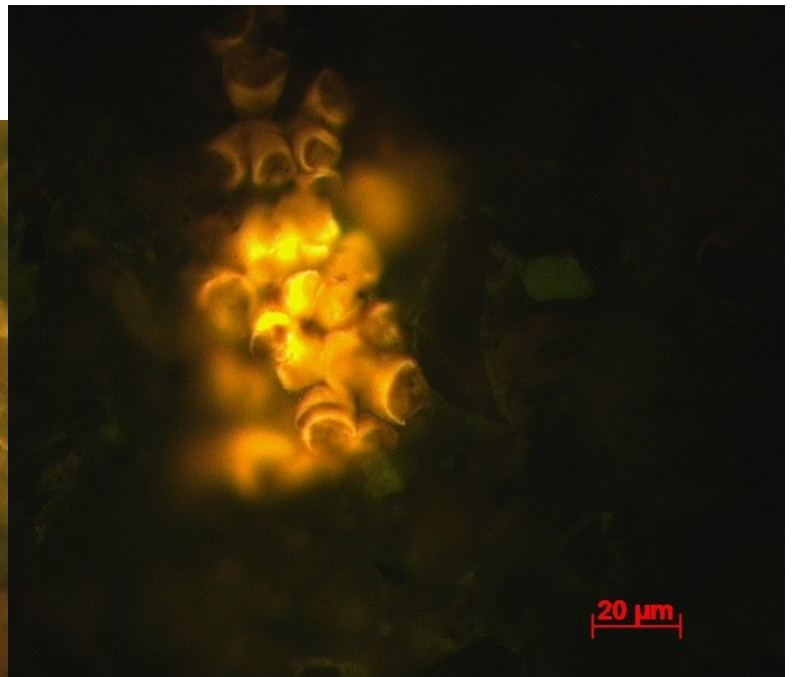
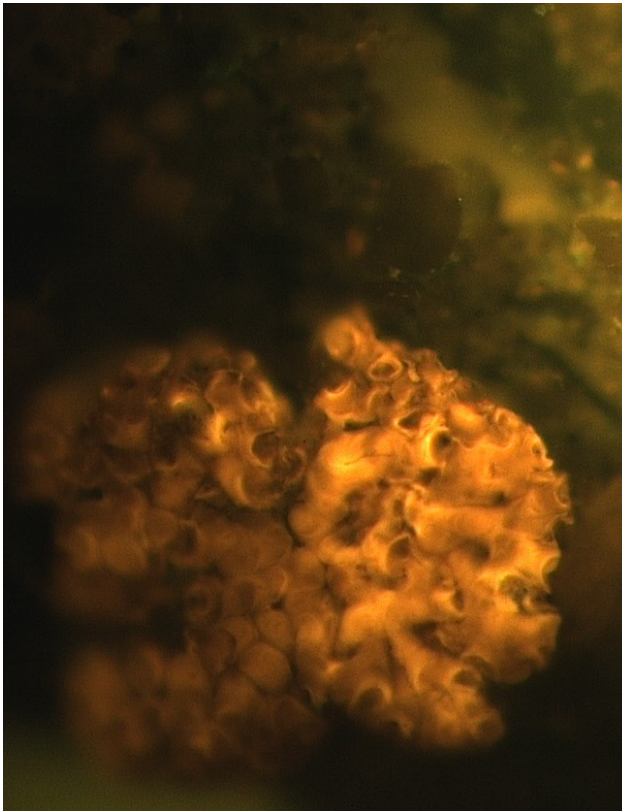
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## ICCP Archives

Deolinda Flores, Universidade Do Porto, Portugal is collecting any ICCP related documents for archiving. Should any one wish to contribute documents, please contact Deolinda:  
[dflores@fc.up.pt](mailto:dflores@fc.up.pt)

*The ICCP Newsletter is also a forum for students, young and advanced researchers, petrographers, and any one else, to present results, submit short reviews or articles, post notifications, request for assistance, announce relevant conferences / workshops / courses. Please submit all documents for inclusion into the next ICCP Newsletter to <mailto:nwagner@ui.ac.za> as soon as possible. The ICCP Newsletters are freely available on the website.*

# Members Corner



**Botryococcus  
(Algae)**  
**or**  
**Bryophytes ??**

## IDENTIFICATION?

These photographs are from Indian Permian shale of the Raniganj Coalfield, Damodar Basin, India

Bhagwan Singh has requested the assistance of organic petrographers to confirm the classification of these interesting and well photographed algae. Please contact Bhagwan directly, or submit your comments to the Editor.

Bhagwan D Singh <[singhbd.bsip@gmail.com](mailto:singhbd.bsip@gmail.com)>

## ICCP classifieds



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THEM.

PLEASE CONTACT Nikki Wagner  
[nwagner@uj.ac.za](mailto:nwagner@uj.ac.za)

## Application of coal petrography in understanding the variation of coal composition in the coalfields of Botswana

Ndivhuho Nendouvhada and Nicola Wagner

*Department of Geology, CIMERA, University of Johannesburg, Johannesburg, 2006, South Africa*

### Extended Abstract from MSc dissertation

The Botswana's fortunes have been primarily enhanced by the presence of carbon based resources. Diamonds are the prime revenue source, accounting for 76 % of export receipts in 2011 (Baruya and Kessels, 2013). Coal, a carbon resource at the other end of the carbon spectrum, is potentially a significant commodity in Botswana, and which has drawn major attention over the years. It is believed that the exploitation of the coal deposits will potentially diversify the diamonds dependent economy of Botswana. Unfortunately, infrastructure and water availability are major challenges the country is facing, hampering the potential coal export sector development. The substantial coal deposits of Botswana (Permian Age) are contained in the coalfields of the Karoo Supergroup, and are of sub-bituminous to bituminous in rank. Primarily preserved in the eastern margin of the Kalahari-Karoo Basin in Botswana, somewhat vague estimates of 212 billion tonnes of coal have been made. Though reconnaissance investigations were carried out to explore the Kalahari-Karoo Basin of Botswana, there is still a complete absence of petrographic information in the public domain (Hower *et al.*, 2012). As a result, little is known about the petrography of Botswanan coals, thus establishing the aim of this research project. The aim was to assess and compare the petrographic variations of coal composition across various coalfields of Botswana. The Morupule Coalfield has been considered as the type locality as the coal has been mined to power the only power station in Botswana. But is this coal representative of the other coalfields in Botswana? It was suspected that there were abrupt changes in coal composition across the Botswana coalfields.

Five coalfields were assessed: Lechana, South Orapa, Morupule, and Takatokwane, and Tuli. The samples were received as borehole cores. Coal petrographic analyses (detailed maceral group, vitrinite reflectance, and microlithotype analyses), along with chemical analyses (proximate, calorific values, and total sulphur) provided a sound understanding of the Botswanan coals. The petrographic analyses were carried out using Zeiss Axio Imager m2m reflected light microscope fitted with Hilgers Diskus Fossil software. By using the results obtained from the petrographic analyses, the study attempted to assess the depositional environment and conditions of formations under which the coal units were deposited.

The petrographic technique applied in this project included the use of the offline Hilgers Fossil Student software (installed on a separate PC) following scanning of the polished block in monochromatic light, as well as on-line analyses using both monochromatic and colour digital cameras. It was found that the discernment between certain coal components, such as liptinite and clay, and vitrinite and low reflecting inertinite, posed some difficulty when only the Fossil Student software was used for analyses. However, the use of the off-line Fossil Student software in addition to the on-line images produced reliable results. The advantage of using the off-line system is that it facilitates the analysis of a sample by the quick scan of the entire block surface using auto focusing and image capture. The images are recorded for later analysis, thus enabling multi users to conduct analyses at the same time (off-line). Thus, it can be concluded that the simultaneous application of the two techniques can be relied on in terms of detailed petrographic analyses.

The petrographic results revealed a wide variation of maceral composition and reflectance data. The Takatokwane, South Orapa, and Tuli coal samples reported a high vitrinite content (37-91 vol. %, 65-85 vol. %, and 76-88 vol. % respectively, min-

eral matter free basis (mmf)) (Figure 1 (a)). The samples from the aforementioned coalfields are characterised by variable ash content, and generally low sulphur content, with the exception of South Orapa and Tuli samples characterised by high sulphur content. Generally, the raw ash values of the Botswanan coals varied considerably across the coalfields, as did the total sulphur content. The CV and volatile matter contents indicated that certain seams or horizons could be suitable for steam generation and domestic use, and is most likely upgradeable by beneficiation.

As advised by Alan Golding (pers comm), the Lechana Coalfield is unique due to the presence of a plunging syncline. The three boreholes were sampled at different positions relative to the syncline, covering different formations. As a result, the Lechana samples were found to be rich in either vitrinite or inertinite with variable ash content (13.9-49.5 wt. %) and generally low to moderately high sulphur contents (0.10-3.21 wt. %). The syncline may have influenced the geometry of the depositional basin. Unfortunately, due to confidentiality issues, detailed information pertinent to the geology of this coalfield could not be acquired.

The Morupule samples were considerably different in composition when compared to those from the other coalfields of Botswana, being rich in inertinite (74-91 vol. % mmf) (Figure 1 (b)), with variable ash content and low sulphur content. As the Morupule coal is produced for power generation, it is the best studied coal in the country, and hence has been considered to be the type deposit for the country. Although the Morupule Main Seam (inertinite-rich) is believed to be traceable to other coalfields of Botswana, this study revealed that the so called Morupule Main Seam is variable in composition. The CV and volatile matter contents indicate that the coal could be suitable for steam generation and domestic use, and is most likely upgradeable by beneficiation.

The amount of liptinite determined petrographically rarely exceeded 5 vol. % in the Botswana coal samples. This is in agreement with the typical South African Permian-aged coals (Snyman, 1989; Van Niekerk *et al.*, 2010). According to literature, the Gondwana Permian-aged coals are generally rich in inertinite (Holland *et al.*, 1989; Hower *et al.*, 2013; Snyman and Botha, 1993). In South Africa, the Main Karoo Basin Vryheid samples are typically rich in inertinite, and the upper Volksrust occurring in the northern tectonically controlled basins more vitrinite-rich. According to a paper by Clark *et al.* (1986), maceral composition of Botswana coals are generally typical of the Gondwana Permian-aged coals with higher inertinite than vitrinite. In the 5 coalfields included in this study, the South Orapa, Takatokwane, and Tuli coal samples are predominantly comprised of vitrinite-rich coal, with only few samples rich in inertinite. The Lechana and Morupule coal samples are predominantly rich in inertinite, although the Lechana area also has vitrinite-rich occurrences.

Vitrinite reflectance shows that the coal samples from Botswana fall between the sub-bituminous and bituminous rank categories. The standard deviation for these coal samples rarely exceeds 1 (apart from 2 samples from South Orapa), indicating stable populations and that no other extraneous heat took part in the coalification process apart from that attributed to the geothermal gradient and heat from compression. As encountered in the coal samples from South Orapa, an abrupt change of vitrinite reflectance was observed, indicating that the samples were affected by heat, resulting in two samples with a rank category of medium rank B. These high reflectance readings must be attributed to a dolerite sill or dyke immediately below the coal seam; unfortunately the drill core did not proceed further than the coal seam. The stratigraphy of the Orapa coal seams has not yet been correlated with the other coal seams in Botswana. Further samples are required for confirmation of the higher rank at this locality.



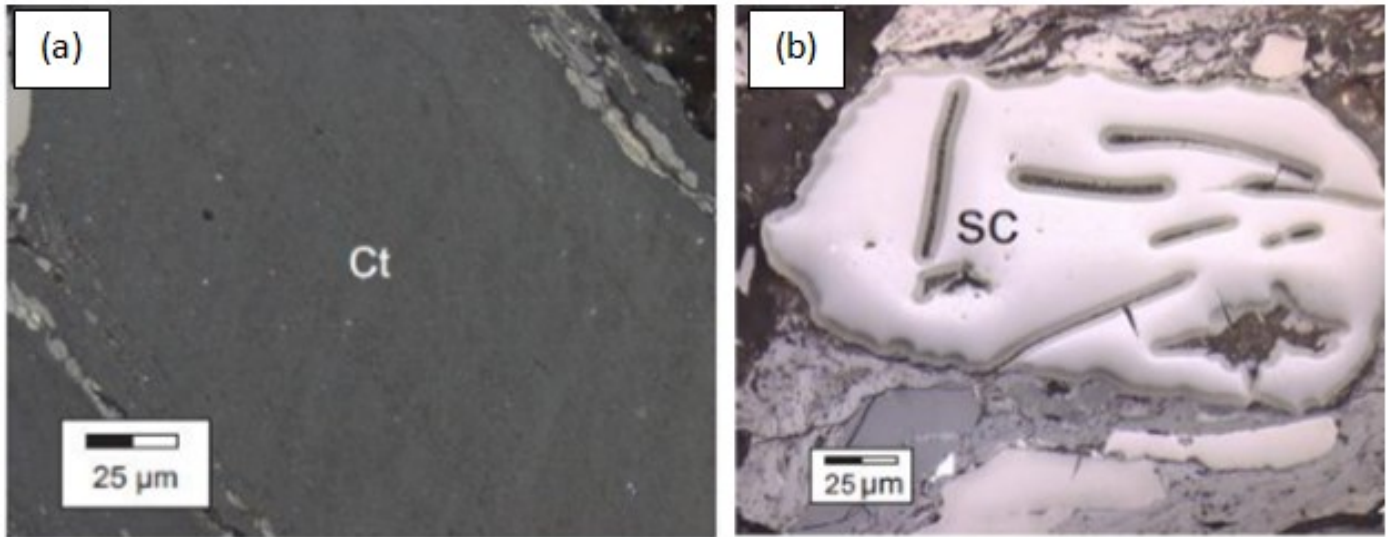


Figure 1: (a) Mineral matter free collotelinite of the Takatokwane Coalfield; (b) secretinite in the Morupule

In an attempt to reconstruct the depositional environment, the results obtained from the ternary facies microlithotype and the Diessel facies models revealed that the Botswana depositional settings trended from fluvial to lacustrine conditions during peat swamp development. The variability in the microlithotype data could be ultimately linked to the depositional conditions responsible for the formation of coal in Botswana. The facies microlithotype and the Diessel facies models also indicate fluctuating depositional settings that range from limnic, limnotelmatic to telmatic depositional conditions. The depositional environments for each coalfield were determined as follows:

- 1) Lechana-fluvial to lacustrine; South Orapa-fluvial with marine transgressions;
- 2) Morupule-lacustrine;
- 3) Takatokwane-lacustrine; upper deltaic to fluvial, and
- 4) Tuli- fluvial.

Thus, providing an explanation on the variable maceral and microlithotype composition in the coals from Botswana. The simultaneous use of these two depositional models yielded complimentary results in most cases, with the exception of the Tuli samples, where the Diessel facies model was not applicable. The Diessel facies model could not be applied to the Tuli coal samples due to the elevated amount of vitrinite which resulted in the samples plotting outside the area of the graph.

The petrographic results obtained from this study have demonstrated that the notion that all Botswanan coals are rich in inertinite as untrue. The results showed that the coals from Botswana are as variable in composition as compared to the South African coals. However, it is required that further samples from these and other coalfields require petrographic assessment. The petrographic data will be useful in the reassessment of the coal stratigraphy across Botswana.

**References**

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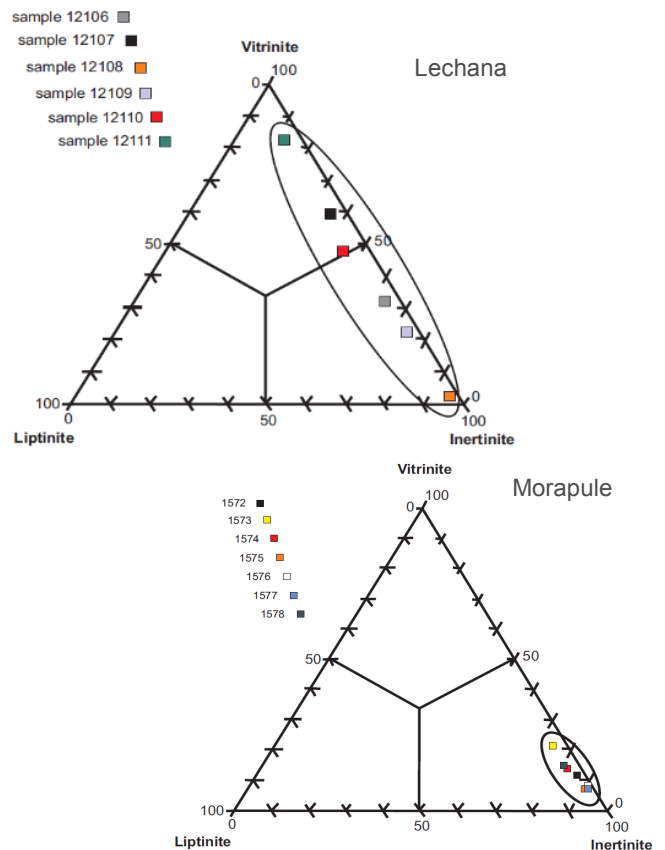
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**Mr Nendouvhada was the recipient of the ICCP Travel grant in 2016. He has submitted his MSC dissertation for examination.**

## Petrographic consideration of the impact of the Tshipise fault on coal quality in the Soutpansberg Coalfield, South Africa.

M. Mphaphuli<sup>a,\*</sup>, N.J. Wagner<sup>a</sup>, J. Sparrow<sup>b</sup>

<sup>a</sup> Department of Geology, University of Johannesburg, P.O. Box 524, Auckland Park, Johannesburg 2006, South Africa

<sup>b</sup> Coal of Africa Limited, Summercon Office Park Cnr Rockery Lane and Sunset Avenue, Lonehill, 2191, South Africa

### Extended Abstract from MSC dissertation

The basis of this research was to understand coal quality and petrographic variations, of samples from the Soutpansberg Coalfield, and to attempt to infer the depositional environments. The Soutpansberg Coalfield is hosted in the Karoo Basin, Limpopo Province of South Africa, situated to the north of the Soutpansberg Mountain Range and extending for ±190 km from Waterpoort in the west, to the Kruger National Park in the east (Hancox and Gotz, 2014). The greater Soutpansberg Coalfield has been divided into three subdivisions: Mopane, Tshipise, and Pafuri. The study area is located in the Mopane sub-basin. The nature of the coal deposits gradually changes from a multi-seam coal-mudstone association, approximately 40m thick in the west and comprising up to seven discrete coal seams (Mopane Coalfield in the Waterpoort area), to two individual seams in the east (Pafuri Coalfield in the Tshikondeni area) (Telfer and Njowa, 2012).

The Soutpansberg Coalfield is preserved within extensive horst and graben systems, with faults exerting major structural control. There are three notably major faults in the Soutpansberg Coalfield, that is: Klein Tshipise, Tshipise, and Bosbokpoort Faults. The Tshipise Fault is an ENE – SWS trending fault, and on the southern side of the fault the coal is of a higher rank and exhibits coking properties. Whereas, on the northern side of the fault the coal is of a lower rank with limited coking properties. This study therefore attempts to understand what causes these variations.

Thirty five samples were collected across the coalfields of Limpopo, comprising of samples from the Makhado project area, Voorburg, and Vele Colliery where a total of 26 samples were collected from 10 boreholes. For comparative purposes and to complete the consideration of coal from the Limpopo Province, additional samples from the Vele Colliery and Waterberg Coalfield were provided, as well as one ROM sample from Tshikondeni Colliery to the east of the province.

The samples were crushed using a roll, jaw, and cone crusher to obtain a size of approximately 4mm. The 4mm sample was split using a rotary splitter, and half of the sample was kept as a reference. The other half of the 4mm sample was milled using a Retsch ZM200 to two different sizes: 1mm for petrographic and other optical studies, and to 212µm for chemical analyses, XRD, and FSI.

Chemical analyses (including proximate analyses, calorific value, and total sulphur), Free Swelling Index, petrographic analyses (detailed maceral point, vitrinite reflectance and abnormal condition), and mineral analyses (XRD, SEM, EMPA) were conducted on the samples collected. The petrographic analysis were carried out using Zeiss Axio Imager M2M retrofitted with Hilgers Diskus Fossil software for reflectance and maceral analyses, at a magnification of x500 under oil immersion. The samples were scanned using the monochromatic digital camera, and analysed offline using the Fossil student program. The reflectance system was calibrated using YAG 0.900 and internal standards. The abnormal condition analysis and images were conducted using the colour digital camera.

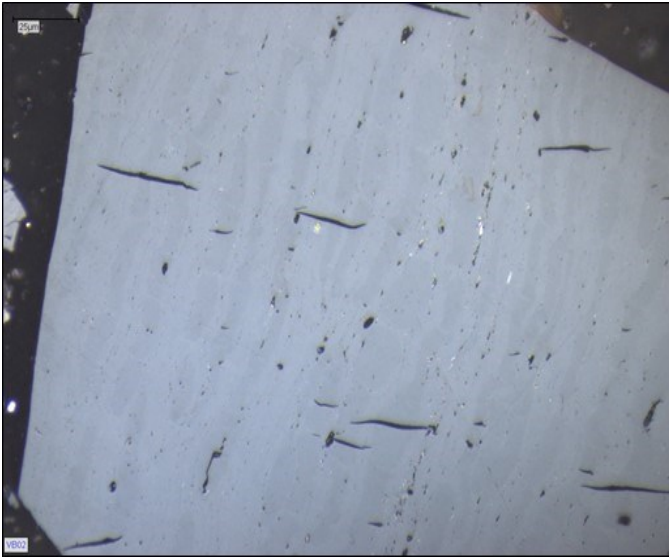
The studied coals were characterized by relatively high ash, total sulphur, and volatile matter contents, and low moisture and CV values. The high ash content can be related to the high mineral matter content and the high volatile matter content can be related to the high vitrinite contents determined petrographically. A trend between the ash and CV was noted, where ash increased with a decrease in CV. According to Telfer and Nojwa (2012), the Soutpansberg coal has a coal mudstone association; this is evident in the analysis, where the high ash / mineral content can be attributed to the mudstone coal association.

On average, the Voorburg North samples were comparable to Makhado samples in terms of the ash, volatile matter and CV contents. Voorburg South reported a higher CV and lower ash compared to Voorburg North and Makhado. Vele samples reported high ash contents averaging 46.20% and a low CV with an average of 17.50 MJ/kg. The Waterberg samples reported the highest ash content on average (49.22 %). On average, the CV of the all coal samples is low (due to the high ash content), with the exception of the Tshikondeni sample. The Tshikondeni sample reported the best coal quality of the Limpopo coals studied.

A high FSI number was found to be associated with samples that had high volatile matter, lower ash content and higher CV. In Voorburg North, one sample (VB01) reported FSI > 4 and was classified as strongly caking with the other samples classified as non-caking to medium caking (FSI ranging between 0 – 3). Most samples in Voorburg South reported a FSI > 4 and were classified as strongly caking, with the exception of few samples which are non-caking. Makhado coals varied from non-caking to strongly caking. The samples from the Waterberg Coalfield were classified as non-caking. The Tshikondeni coal sample yielded a FSI of 8 and can be classified as a strongly caking coal. A trend noted was that high FSI is reported for samples with low ash and high CV. A positive correlation is reported between CV and FSI (where higher CV yields higher FSI). In terms of ash and FSI, a negative correlation was noted: high ash and low FSI.

The maceral analysis indicated that the coals generally were rich in vitrinite (on average greater than (>) 60 vol%), with low inertinite and very low liptinite contents, apart from the Waterberg samples. Collotelinite dominated over collodetrinite. This is characteristic of the Soutpansberg coals. South African coals from the Mpumalanga Coalfields are characterised by higher inertinite than vitrinite, with the exception of the samples from Waterberg. Pseudovitrinite was determined (Fig. 1), which is known to inhibit coking properties (Kaegi, 1985). Pseudovitrinite is not uncommon in South African coals (Kruszewska, 2003).

Voorburg North coal samples reported a mean RoV % between 0.76 – 0.84%, with an average of 0.79%. This classified the samples as medium rank C, according to UN-ECE (1998). In Voorburg North, the bottom seam samples appear to have a slightly higher reflectance compared to the middle seam horizon. Voorburg South reported higher reflectance values compared to Voorburg North, with a mean RoV% of between 0.80 - 1.26%. Thus, the rank of the coal samples ranged from medium rank C to medium rank A. Voorburg South samples are located between the Tshipise and Bosbokpoort Faults and the trend of the bottom seam having a higher reflectance does not follow. Samples closer to the Bosbokpoort Fault reported the highest reflectance values and bimodal distributions, indicating that the fault played a role in rank advance. According to Sparrow (2012) and Hancox and Gotz (2014), the coal rank increases from the west to the east across the Limpopo Province. This is evident in this study where the Waterberg samples in the west had a mean RoV% 0.63 and 0.65 in comparison to Tshikondeni in the east with a mean



**Fig 1: Example of pseudovitrinite. Oil immersion X500 non-polarized reflected light. Short edge approx. 200 µm**

reflectance of 1.23 % (medium rank A).

The mineral matter identified in the coal samples was clay, quartz, siderite and pyrite. Samples from the northern side of the fault had relatively high mineral matter, high total sulphur, and ash, with syngenetic pyrite being more common than carbonate minerals. Petrographically, different types of pyrite were identified: infilling cell or pore structures, disseminated euhedral, massive, infilling cracks and replacing other minerals, and framboidal pyrite sometimes preserving irregular forms. The Makhado coal samples were rich in silicates and reported a slightly higher siderite composition compared to the Voorburg North samples, with pyrite observed to be more epigenetic with some traces of syngenetic pyrite.

Framboidal pyrite with concentric rings overgrowth was noted in some Makhado samples. SEM and EMPA analyses revealed an enrichment of Ni, As, and Pb in the overgrowth of the framboidal pyrite (Fig. 2). It was proposed that the Tshipise and Bosbokpoort Faults carried fluids rich in these elements that subsequently precipitated around the syngenetic pyrite. This study demonstrates that the mineralogy in the coal is affected by the fault subsequent to coalification. Further studies are in progress to enhance the understanding of this unusual mineralogy.

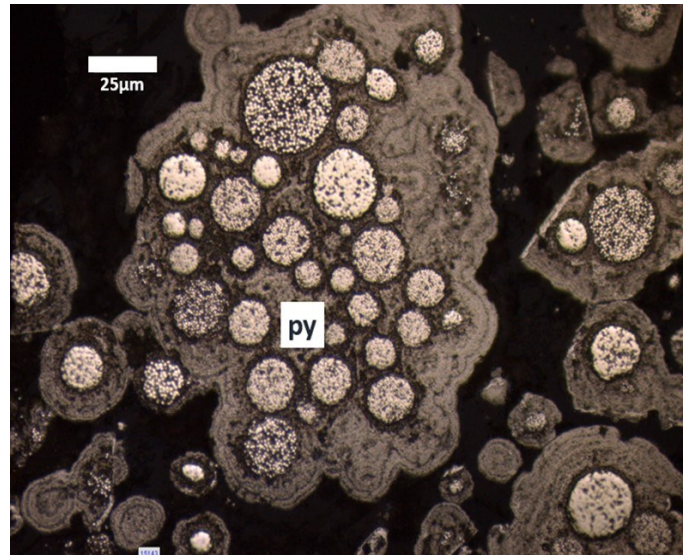
A variety of carbonate minerals were identified petrographically and by XRD, ranging from syngenetic siderite to epigenetic calcite. The carbonates determined petrographically were: siderite, and calcite, and in addition, dolomite and ankerite were determined by XRD. The siderite occurs as nodules which could possibly show syngenetic in nature and the calcite infills cracks in vitrinite (which is epigenetic in origin). Ankerite was found associated with the concentric rings as cleats.

The interpretation of depositional environments using coal petrographic parameters relied on the use of "facies diagnostic" vitrinite, inertinite and liptinite macerals. The maceral facies diagnostics helped determine the Gelification Index (GI) and Tissue Preservation Index (TPI). TPI and GI indices indicated a marsh and wet forest depositional environment for most samples. The syngenetic pyrite can possibly indicate marine transgressions influence, or more likely, the occurrence of ground water enriched in sulphur-rich waters due to bacterial activity circulating in the peat.

In summary, the study determined that there were indeed variations in coal properties either side of the Tshipise and Bosbokpoort Faults.

**References**

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**Fig 2: Bottryoidal mineral growth around framboidal pyrite. SEM image.**

**Miss Maphaphuli was the co-recipient of the ICCP Travel grant in 2016. She has submitted her MSc dissertation for examination.**

**Do you know the advantage of being an ACTIVE ICCP member? See the benefits of participating in the working group activities by viewing the webpage. <http://www.iccop.org/application/>**

**REGISTER FOR THE 2017 ICCP MEETING IN ROMANIA**  
<http://www.iccop.org/meetings/2017-iccp-meeting-in-bucharest-romania/>



# 69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)

September 3 - 9, 2017 | Romanian Academy Library | Bucharest, Romania



## FIRST ANNOUNCEMENT

Under the Auspices of



ACADEMIA ROMÂNĂ

Organizers



UNIVERSITATEA POLITEHNICA  
DIN BUCUREȘTI



UNIVERSITATEA  
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ALTELCERCETAREA NAȚIONALĂ PENTRU CERCETAREA ȘTIINȚIFICĂ

# WELCOME MESSAGE

On behalf of the Organizing Committee you are invited to attend the 69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP) in Bucharest, Romania, September 3–9, 2017.

The meeting is organized under the auspices of the Romanian Academy, by the University "Politehnica" of Bucharest and by the University of Bucharest in partnership with "The Romanian Ministry of Education and Scientific Research" and "The National Authority of Scientific Research" and hosted by the Romanian Academy Library.

The Organizing Committee is honored to contribute to the continuation of activities of the ICCP that represents, since 1951, the scientific referential for international community to the understanding of the origin of coal, the behavior of coal in industrial processes, the exploration for petroleum, and the thermal/burial histories of sedimentary basins.

We look forward to a great meeting in September of 2017.

**Chair of the Organizing Committee,  
Dr. Georgeta Predeanu**

# ORGANISERS

**Romanian Academy** has the status of "the highest scientific authority in the country, bringing together the worthiest personalities in science, technology, education, culture and art in Romania, as representing the creative spirituality of the nation".



Romanian Academy has the legal right to its own network of "science facilities for advanced and fundamental research", standing in three regional branches (Iasi, Cluj and Timisoara), 14 sections (Philology and Literature; Historical Sciences and Archaeology; Mathematical Sciences; Physical Sciences; Chemical Sciences; Biological Sciences; Geonomical Sciences; Engineering Sciences; Agricultural and Forestry Sciences; Medical Sciences; Economic, Law, and Sociological Sciences; Philosophical, Theological, Psychological, and Pedagogical Sciences; Arts, Architecture and Audio-Visual; Information Science and Technology), 63 research institutes and centers, a Publishing House and a Library ([www.acad.ro](http://www.acad.ro)).

**University POLITEHNICA of Bucharest (UPB)** is the largest, oldest and most prestigious technical university in Romania and among the most prestigious national universities with a tradition developed in over 190 years ([www.upb.ro](http://www.upb.ro)).



Here, within the Faculty of Industrial Chemistry were initiated in early 1950 and developed after 1970 the organic petrology researches in basic and applied research covering almost all areas of interest in the mining, oil, energy, metallurgy, environmental, advanced materials, some of them having an internationally pioneering approach.

**The University of Bucharest** is a leading academic centre and a main reference of the Romanian society, adhering to the principles of academic integrity and critical thinking.

The University of Bucharest is the leading higher education institution in Romania and in South East Europe, the largest and the second oldest university in Romania, actively contributing through research and teaching to the development and use of knowledge. Here, the Department of Geology of the Faculty of Geology and Geophysics has a long tradition in the field of Coal Geology and Petrology. It has a large scientific library in Paleobotany, Palynology and Coal Geology stored and used with a detailed bibliographical database ([www.unibuc.ro](http://www.unibuc.ro)).



## ABOUT BUCHAREST



Legend says that Bucharest was founded by a shepherd named Bucur (*bucurie*; literally 'joy'), who built a church on the right bank of the Dâmbovița River. The city, which lies on the Wallachian plains between the Carpathian foothills and the Danube River, was settled by Dacians as early as 70 BC. By 1459 a princely residence and military citadel had been established under the chancellorship of Prince Vlad Țepeș. By the end of the 17th century, the city was the capital of Wallachia and ranked among southeastern Europe's wealthiest cities. Bucharest became the national capital in 1862, as it lays on the main trade route between east and west.

Bucharest is one of the most beautiful capital cities in Eastern Europe, as it's an interesting mix of old buildings, modern architecture, green spots, and amazing street art.

Therefore, if you're here for the ICCP 2017 Conference, make the best out your time and visit some of the most *must-see* locations that will help you get acquainted with the city in a matter of days.

## Wander, Explore and Discover Bucharest

### If you want a taste of good music...



Go to the **Romanian Athenaeum!** An impressive edifice built over 120 years ago, the Romanian Athenaeum is not only a place for music, home to many great musical personalities, and talents of the world, but also an architectural and spiritual landmark of a whole nation. You may experience by yourself the exciting taste of music within the Enescu Festival 2017, in the same time with the ICCP meeting ([www.festivalenescu.ro](http://www.festivalenescu.ro)).

### If you want to experience art at its finest...

Visit the **National Museum of Art**, which hosts three art galleries: The European Art Gallery, the Romanian Medieval Art Gallery, and the Romanian Modern Art Gallery, bringing together art works exhibited in an attractive, modern manner, thus turning a visit to the museum into an enjoyable and instructive way of spending time.

### If you want to explore something really special...

Visit the **Village Museum** – an open-air, ethnographic museum in the heart of Bucharest, on the shores of Herăstrău Lake! You will have the chance to see a real "village", with peasant houses from all over the country.



### If you want to be amazed...

Take a tour of the **Palace of Parliament!** It is the second largest administrative building in the world, after the Pentagon. Few people know that, besides the 12 levels visible to people above ground, it has another 8 levels underground.



## VENUE

The meeting venue is "Ion-Heliade Radulescu" Amphitheater at the Romanian Academy Library in Bucharest, which is located in the same garden area with the Romanian Academy, coined by the Calea Victoriei and Dacia Boulevard.

Founded on August 6<sup>th</sup>, 1867, only one year after the foundation of the Romanian Academic Society, the mission of the Romanian Academy Library is to gather and preserve, in its collections, the National Fund of manuscripts and prints, heritage of Romanian history and culture, as well as universal history and civilization. Having the status of a National Library, its collections have an encyclopedic structure, starting with the oldest writing in Romanian language or in languages used in ancient offices or churches, which have circulated inside the Romanian area, up to recent publications of any type and on any support material.

Being the beneficiary of the Legal Deposit since 1885, the Romanian Academy Library is publishing the Retrospective Bibliography of Romanian Books and Serials, as well as special bibliographies like Mihai Eminescu Bibliography or Independence War Bibliography, supporting documentation and research on Romanian science and culture. Its funds comprise of over 14 million units, out of which 3,600,000 are monographs and 5,300,000 are serials.

The Special Collections make the Romanian Academy Library one of the most important institutions of its kind. The Collection of Manuscripts is the richest in Romania and the Collections of Prints and Drawings, Maps, Music, Numismatics are benchmarks in their fields.

Join the virtual incursion into the future meeting venue at:

<http://biblacad.ro/expoVirtuale.html>



**Romanian Academy Library**  
**Ion Heliade Radulescu conference hall**  
 Bucuresti, Calea Victoriei 125, Sector 1, București,  
[www.biblacad.ro](http://www.biblacad.ro)



# PRELIMINARY PROGRAM

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	03.09.	04.09.	05.09.	06.09.	07.09.	08.09.	09.09.
8.00-8.30		ICCP					Field trip
8.30-9.00		Registration					
9.00-9.30		ICCP Welcome	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Symposium	
9.30-10.00							
10.00-10.30							
10.30-11.00		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
11.00-11.30		ICCP General Assembly	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Symposium	
11.30-12.00							
12.00-12.30							
12.30-13.00		Lunch break	Lunch break	Lunch break	Lunch break	Lunch break	
13.00-13.30							
13.30-14.00	ICCP Council Meeting	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Commision Meeting	ICCP Symposium	
14.00-14.30							
14.30-15.00							
15.00-15.30		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
15.30-16.00		ICCP Commision Meeting	ICCP Commision Meeting	ICCP Commision Meeting	Closing plenary session	ICCP Symposium	
16.00-16.30							
16.30-17.00							
17.00-17.30							
17.30-18.00				ICCP Council Meeting			
18.00-18.30	Registration and ice breaker						
18.30-19.00							
19.00-19.30							
19.30-20.00							
20.00-20.30							
20.30-21.00					Conference dinner		
21.00-21.30							
21.30-22.00							
22.00-22.30							
22.30-23.00							
23.00-24.00							

1. Field trip organized by Mihai Popa and Izabela Mariş (University of Bucharest) will have a few stops: Pliocene lignites and other significant geological targets along the Prahova Valley, and Teleajen Valley crossing the Southeast Carpathians.

2. Final Conference Program and Field Trip details will be presented in the FINAL Announcement.





## HONORARY PRESIDENTS OF THE 69<sup>th</sup> ICCP MEETING

**Academician Bogdan Simionescu**

*Vice-president of the Romanian Academy*

**Emeritus Prof. Cornelia Panaitescu**

*ICCP Honorary Member, University Politehnica of Bucharest*

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**Jolanta Kus**

*Federal Institute for Geosciences and  
Natural Resources, Hannover, Germany*

## CALL FOR ABSTRACTS

The 2017 ICCP Scientific Committee invites all interested participants to submit an abstract(s) for the **Symposium on "Advances in Applied Coal and Organic Petrology"** that will be organized during the 69th Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP) held between 3-9 September, 2017 at Romanian Academy Library (RAL) in Bucharest, Romania.

The Symposium organized during the 69th ICCP Annual Meeting, is an international event that brings together leading scientific researchers, practitioners and young scientists across the globe representing research and educational institutions and companies with the aim to exchange and share scientific progress in applied coal and organic petrology. The Symposium intends to explore novel ideas, as well as to define research priorities and foster dialogue among the scientists to stimulate research activities and further practical needs across the fields of applications and methods in the coal and organic petrology.

Abstracts for the **Symposium on "Advances in Applied Coal and Organic Petrology"**

should be submitted via e-mail at

@ [iccp2017romania@gmail.com](mailto:iccp2017romania@gmail.com) and at [gpredeanu@gmail.com](mailto:gpredeanu@gmail.com)

**!** Symposium abstracts sent via fax, or regular mail will not be processed or acknowledged.



69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)



Please, download the **Abstract Template** and **Guidelines for Abstracts** from the ICCP website at: <http://www.iccop.org/meetings/2017-iccp-meeting-in-bucharest-romania/>.  
The deadline for the abstract submission is **March 20, 2017**.

The Scientific Committee will review all submitted proposals and notify presenting and/or corresponding authors of acceptance or non-acceptance of their contribution by **April 20, 2017**. Please, indicate a preference for an oral or poster presentation.

The accepted **Symposium Abstracts** will be provided within the **ICCP Program & Abstract Book**, which is going to be edited by the **Schriftenreihe der Deutschen Gesellschaft für Geowissenschaften (SDGG)** (English version, Publication Series of the German Society for Geosciences) and printed by **The Publishing House of the Romanian Academy (EAR)**. The selected full papers from this year's ICCP meeting are planned to be published in a special volume of the „International Journal of Coal Geology“.

The deadline date for submission of full papers is 31 December, 2017.

## IMPORTANT DATES AND DEADLINES DURING THE 69TH ANNUAL MEETING

The 69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP) is a **week-long scientifically event**.

Dear participants, we encourage you to keep the mentioned deadlines for **Abstract submission** and **Registration payments**.

Thank you!

**DEADLINE FOR ABSTRACT SUBMISSION**  
**March, 20, 2017**

**March 20, 2017** — Submission of abstracts (max. 2 pages) following strictly the **Abstract Template** and **Guidelines for Abstracts**. Abstracts submitted after March 20, 2017 will not be considered for presentation at the symposium.

**The deadline for abstract submission will not be extended.**

**April 20, 2017** — Notification of acceptance for submitted abstracts and for invited sessions.

**April 28, 2017** — All the accepted contributions are transferred to the SDGG and EAR for production purposes.

**May 31, 2017** — **Registration** payment (early payment).

**September 3 - 9, 2017** — **69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)**

## REGISTRATION

Early Registration Fee before May 31	- EUR 250
Registration after May 31	- EUR 280
Registration Fee for 1 day Symposium	- EUR
Student Fee	- EUR 80
Accompanying Person Fee	- EUR 120
Conference Dinner	- EUR 60
Field Trip	- EUR 60

**DEADLINE FOR REGISTRATION**  
**May 31, 2017**

Fee is payable by bank transfer until **May 31, 2017**

to the coordinates below.

In case you do not manage to pay by bank transfer respecting the deadline, you can pay by POS or cash at the registration desk.

### SC TRIMA EVENTS SRL

Address: 2M BOJA STREET, BUCHAREST, DISTRICT 6 | VAT No RO18464372

Bank: ING BANK | Account: RO39 INGB 0000 9999 0339 7440/EUR

Mention: ICCP2017 - "YOUR NAME"



69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)

# ACCOMMODATION

**DEADLINE FOR BOOKING  
June 10, 2017**

After June 10, 2017, all accommodation bookings will be made on a first come first served basis

The Organizers have made special arrangements with 3 Hotels located in the centre of Bucharest in the very proximity of the meeting venue.

**Le Boutique Hotel Moxa, 4 star hotel** (129 Cal. Victoriei)

Distance 200 m from venue, 5 min. walk | [www.hotelmoxa.com](http://www.hotelmoxa.com)

**Our current negotiated room rates in “Le Moxa Boutique Hotel” are:**

- 80 Euro/night (Single occupancy) in Standard Room**
- 90 Euro/night (Double occupancy) in Standard Room**
- 80 Euro/night (Single occupancy) in Deluxe Room**
- 90 Euro/night (Double occupancy) in Deluxe Room**

The room-rate includes: breakfast, VAT, FREE in-hotel/in-room Wifi, FREE access to the fitness center & sauna



**Golden Tulip Victoria, 4 star hotel** (166 Calea Victoriei)

Distance: 200 m from venue, 5 min. walk | [www.goldentulipbucharest.com](http://www.goldentulipbucharest.com)

**Our current negotiated room rates in “Golden Tulip Hotel” are:**

- 83 Euro/night (Single occupancy)**
- 93 Euro/night (Double occupancy)**
- 1 room for special need available.**

The room-rate includes: breakfast, VAT, FREE in-hotel/in-room Wifi, FREE access to the fitness center, FREE tea & coffee



**Duke Hotel, 4 star hotel** (Bd. Dacia 33)

Distance: 500 m from venue, 10 min. walk | [www.hotelduke.ro](http://www.hotelduke.ro)

**Our current negotiated room rates in “Duke Hotel” are:**

- 55 Euro/night (Single occupancy)**
- 65 Euro/night (Double occupancy)**

The room-rate includes: breakfast, VAT, FREE in-hotel/in-room Wifi



**University of Bucharest Campus**

[www.unibuc.ro/n/student/Prezentarea\\_caminelor\\_Universitatii\\_din\\_Bucuresti.php](http://www.unibuc.ro/n/student/Prezentarea_caminelor_Universitatii_din_Bucuresti.php)

**Our current negotiated room rates are:**

- 25 Euro/night (Single occupancy)**
- 40 Euro/night (Double occupancy)**

A listing of alternative hotels in the downtown area will be made available upon request by e-mail at [alina.bugean@trima.ro](mailto:alina.bugean@trima.ro).



## TRAVEL TO BUCHAREST



**By Air:** Bucharest is a very accessible city from all over the world. Some of the major airlines that land on Henri Coanda International Airport are: Lufthansa, Tarom, Klm, Air France, Alitalia, British Airways, Austrian Airlines, Czech Airlines, El Al Israel Airlines, Malev, Olympic, Turkish, and many more. Low cost airline Companies have a direct flight to Bucharest from major cities in Europe.

**By Car:** Road traffic on European highways ensures access to Romania. Traffic is on the right side of the road, overtaking on the left, the signs are those acknowledged by the international legislation. By car at the moment, after entering Romania, the VIGNETTE may be required. This can be purchased from most gas stations on Romanian territory, but it is advised to buy it from the gas stations close to the Customs.

**By Bus:** There are many bus routes that connect Bucharest and Romania's main cities with Athens, Berlin, Budapest, Copenhagen, Frankfurt, Istanbul, London, Milan, Munich, Paris, Rome, Vienna, etc.

**By Train:** The Railway Station for international arrivals is "Gara de Nord", Bucharest. It is located near the center of the city (North).

### How to get to the Venue of the Meeting

**Public transportation** in Bucharest: Bucharest's public transport system is the largest in Romania and one of the largest in Europe. From the airport, you can take bus 783 that will take you to the centre of the city.

**Taxis** are also available at the airport. There are many taxis waiting in front of the Airport. In order to call a taxi, place your order using the special machines you will find in the arrival terminal or chose one from the front of the airport that has the company name, telephone, and pricing marked on the door. Taxi fares from the airport (2016): about 2 lei/km (0.5 euro/km). The distance between the "Henri Coanda" Airport and the Venue of the Meeting is around 20 km.

Special prices for taxi transportation (about 25 Euro/car) from the Bucharest airport to the downtown and return can be arranged by Organizing Committee with the selected hotels. Further information will be distributed in 2nd Announcement.

### Visas

Participants from Colombia, Egypt, India, Indonesia, Irak, Japan, Malaysia, Mozambique, Peru, Philippines, P.R. China, Russian Federation, Serbia, South Africa, Turkey and Ukraine, require a visa for entering Romania. Please contact the organisers for details.

Private pick up can be provided upon request

Booking options and info available at  
[www.iccp.org/meeting/2017-iccp-meeting-in-bucharest](http://www.iccp.org/meeting/2017-iccp-meeting-in-bucharest)

For more information about the meeting, please contact us:

**Dr. Georgeta Predeanu**

Chair of the Organising Committee

+40 724 283 809

@ [iccp2017romania@gmail.com](mailto:iccp2017romania@gmail.com); [gpredeanu@gmail.com](mailto:gpredeanu@gmail.com)



69<sup>th</sup> Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP)



# International Meeting of Sedimentology 2017

33rd IAS & 16th ASF Joint Meeting

Word cloud including terms: Sources, Carbonates, interactions, future, collaborations, share, understanding, view, Paleoenvironments, Paleoclimates, deep, geological, environments, gather, sedimentological, associated, new, processes, geology, Sedimentology, Diagenesis, Earth, past, experiences, Basins, discuss, produce, dynamics, research, opportunity, Fluids/sediments, Sinks/Reading, communities, times, event, bring, present, bioconstructions, processes, Clastic, view, rewarding, geological, associated, new, processes, Clastic.

October 10-12, 2017  
Toulouse FRANCE

[ims2017.sciencesconf.org](http://ims2017.sciencesconf.org)

7-9 oct 2017	<b>Pre-meeting excursions</b>
10-12 oct 2017	<b>Scientific themes</b>
	<ul style="list-style-type: none"> <li>• Carbonates &amp; Bioconstructions</li> <li>• Clastic Sedimentary Processes(continental, coastal &amp; marine)</li> <li>• Paleo-environments &amp; Paleo-climates</li> <li>• Reading times in sediments</li> <li>• Sedimentary Basins &amp; their dynamics (tectonics, climate, sedimentation &amp; surface processes)</li> <li>• Sources &amp; Sinks (sedimentary budgets and source tracing)</li> <li>• Sedimentology &amp; Ressources</li> <li>• Fluids/sediments interactions and Diagenesis</li> </ul>
	<b>Post-meeting excursions</b>
13-15 oct 2017	

**Milestones**

- Deadline for Abstract submission  
June, 15<sup>th</sup> 2017
- Deadline for Early bird registration  
June, 15<sup>th</sup> 2017
- Scientific program and 3rd circular  
July 2017

[ims2017.sciencesconf.org](http://ims2017.sciencesconf.org)  
[https://](https://ims2017.sciencesconf.org)

# Course in Coal Science

October 8-14, 2017 – Xuzhou, CHINA  
China University of Mining and Technology, Xuzhou & Beijing



Enquiries:  
[taylorwz9301@gmail.com](mailto:taylorwz9301@gmail.com), or [daishifeng@gmail.com](mailto:daishifeng@gmail.com)



## THIRTY-FOURTH ANNUAL INTERNATIONAL PITTSBURGH COAL CONFERENCE

### Conference Announcement and Call for Papers

Abstracts Deadline: March 1 2017

September 5 – 8, 2017  
Sheraton Station Square  
Pittsburgh, PA USA



**Coal – Energy, Environment and Sustainable Development**

Please visit the PCC WEBSITE:  
[www.pccpitt.org](http://www.pccpitt.org)

Conference Secretary

[ipcc@pitt.edu](mailto:ipcc@pitt.edu)

Hosted By:



University of Pittsburgh  
**PITT | SWANSON**  
ENGINEERING

# ICCP Publications & Training Material

ICCP Publications are available for download or purchase to all members and non-members.

**DO NOT SEND PAYMENT WHEN ORDERING, AN INVOICE SHALL BE ISSUED AFTER ORDERING**

**Orders to:** Dr Peter Crosdale mailto:[peter.crosdale@energyrc.com.au](mailto:peter.crosdale@energyrc.com.au)  
P.O.Box 54, Coorparoo, Qld 415, Australia.

**All ICCP HANDBOOKS -(1963, 1985, 1986, 1993) can be downloaded from the website:**  
<http://www.iccop.org/publications/iccp-handbook/>

**Atlas on Fly Ash**, as prepared by Commission III, is available for free download on the ICCP website.

## **Atlas of Anthropogenic Particles**

A digital atlas of anthropogenic particles largely derived from fossil fuel sources. The atlas contains 543 images grouped by source and site of occurrence. ICCP News 39 Nov 2006 pp 55-56.

Cost: 16€ including postage.

## **ICCP Training Material on Vitrinite Reflectance Measurements on Dispersed Organic Matter**

CD & set of 4 polished grain mounts; CD's can be purchased separately ICCP News 39 Nov 2006 pp 53-54.

Cost: CD+polished blocks set 40€ incl. postage (ICCP/TSOP members); 120€ (non members).

CD alone: 16€ .

## **ICCP Training kit for spectral fluorescence measurements in Dispersed Organic Matter.**

Two polished blocks Posidonia & Irati shales & Exel sheet of results from round robin exercises.

Cost: samples & exel sheet 30€ incl. postage (ICCP/TSOP members); 90€ (non members).

## ICCP Services

### **Accreditation Programs**

#### **Maceral Group Analyses of Coals (SCAP)**

Convenor: Dr Kimon Christanis

Department of Geology

University of Patras

Ph +30-2610-99 7568

mailto: [christan@upatras.gr](mailto:christan@upatras.gr)

#### **Vitrinite Reflectance of Coals (SCAP)**

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### **ICCP Reflectance Standard**

If you would like to check the calibration of your reflectance standard against the ICCP standard, please contact the following people for availability and costs:

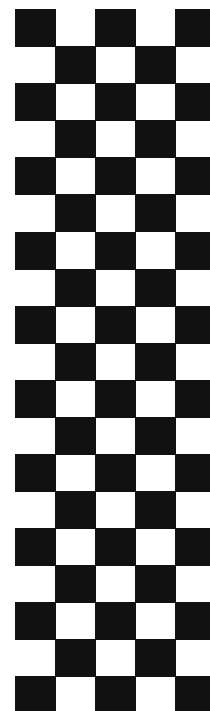
- Dr Walter Pickel, ICCP General Secretary  
Director Organic Petrology, Coal and Organic Petrology  
Services Pty Ltd  
Sans Souci, NWS, Australia  
Ph +61-2-9524 0403  
mailto: [walterpickel@optusnet.com.au](mailto:walterpickel@optusnet.com.au)

The standard is also available through

- Dr David Pearson  
David E. Pearson & Associated Ltd  
Victoria, British Columbia, Canada  
Ph +1-250 477 2548  
mailto: [dpearson@coalpetrography.com](mailto:dpearson@coalpetrography.com)

And

- Gerd and Gisela Bieg  
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Haltern am See, Germany  
Ph +49-2364-6285  
mailto: [mikro-un@t-online.de](mailto:mikro-un@t-online.de)



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**ICCP Publications & Training Material:**...Dr Peter Crosdale ..... mailto: [peter.crosdale@energyrc.com.au](mailto:peter.crosdale@energyrc.com.au)

# UPCOMING EVENTS

**27-28 April 2017: 4th International Conference Geology & Geoscience Summit, Dubai, UAE.** Theme: Exploring the Recent trends and analytical techniques in the field of Geology and Geosciences. <http://geology.conferenceseries.com/> ;

Email: [geology@earthscienceconferences.com](mailto:geology@earthscienceconferences.com)

**8-12 May 2017: 8th Clean Coal Technologies Conference (CCT2017),** Sardinia, Italy. CCT2017 aims to help disseminate new technologies to new regions and support further innovation by bringing together utilities, technology providers, researchers, and policy-makers from coal-using nations around the world. <http://www.cct2017.org/> .

**26-30 June 2017: ICCP Training course on dispersed organic matter—integrating transmitted and reflected light microscopy,** Potsdam., Germany. Instructors are: Prof. Joao Graciano Mendonca Filho from the Universidade Federal do Rio de Janeiro, Brazil, and Dr. Angeles G. Borrego, Instituto Nacional del Carbón, CSIC, Oviedo, Spain. The microscope system will be provided by Hilgers Technisches Büro. <http://www.iccop.org>.

**3-9 Sept 2017: 69th Annual ICCP Meeting,** Bucharest, Romania. Submission of abstracts by 20 March—download abstract template & guidelines <http://www.iccop.org/meetings/2017-iccp-meeting-in-bucharest-romania/>. Early bird registration by 31 May. Selected papers will be published in the International Journal of Coal Geology. <http://www.iccop.org>.

**5-8 Sept 2017: 34th Annual International Pittsburgh Coal Conference,** Pittsburgh, USA. Abstract deadline March 1 2017. [www.pccpitt.org](http://www.pccpitt.org)

**21-27 Sept 2017: 34th TSOP Annual Meeting,** Calgary, Canada. Organic matter in energy systems, with a focus on conventional and unconventional petroleum systems. Registration and abstract submission now open. <https://tsop2017.wordpress.com/>

**25-29 Sept 2017: International Conference on Coal Science and Technology (ICCS&T) AND Australia-China Symposium on Energy (ACSE),** Beijing China. Abstract deadline 31st March 2017; papers will be published in a special edition of Fuel Processing Technology. [www.iccstacse.cumtb.edu.cn](http://www.iccstacse.cumtb.edu.cn), or email: [iccst2017@cumtb.edu.cn](mailto:iccst2017@cumtb.edu.cn)

**8-14 October 2017: Course in Coal Science,** China University of Mining and Technology. Xuzhou & Beijing. One week course for young coal scientists, students, and global coal industry, presented by international leaders, covering many aspects of coal science. For enquiries contact: [taylorwz9301@gmail.com](mailto:taylorwz9301@gmail.com), or [daishifeng@gmail.com](mailto:daishifeng@gmail.com)

**10-12 Oct 2017: International Meeting of Sedimentology. 33rd IAS & 16th ASF Joint Meeting.** Toulouse, France. Abstract deadline June 15; early bird deadline June 15.

<https://ims2017.sciencesconf.org>. Or email to: [ims2017@sciencsconf.org](mailto:ims2017@sciencsconf.org)

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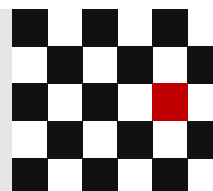
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Or visit the website: <http://www.iccop.org>

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Any submissions, contributions, letters, comments, news items, and so on, most welcomed  
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