Newsletter of the International Committee for Coal and Organic Petrology (ICCP)
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ICCP NEWS 93

Content includes:
Obituary: Prof.Dr.Flores
Minutes: Council, Plenary, Commissions
Thesis summary
Memories from Beijing & new memberships

http://www.iccop.org

Dec 2025

76TH ICCP BEIJING 2025

EDITORS COLUMN

Dear ICCP members and friends,

2025 is drawing to a close (or may already have done so by the time you read this newsletter!). This is a very full newsletter as it includes the Minutes from the Beijing ICCP Meeting, as well as the thesis summary by Mateusz, the winner of the 2025 ICCP Walter Pickel Travel Grant. And to lighten the lengthy reading (I hope you have a huge cup of coffee at hand!), there are memories from the Beijing meeting, social events, and field excursion.

The 76th ICCP meeting held in Beijing, China, was a great success, with fabulous organization by the team from the China University of Mining and Technology-Beijing. The field trip component was effectively organized by Taiyuan University of Technology with support from Shandong Provincial Bureau of Coal Geology. **Please refer to page 5** for a call for publications related to the Symposium, and the link to the great photographs. A big thank you to our Chinese colleagues and all the student assistants.

Despite the untimely and incredibly sad passing of our friend and colleague Prof. Deolinda Flores (**see page 4**), plans are advancing well for the 77th Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP). This will be held at the Faculty of Sciences of the University of Porto (FCUP), in Porto, Portugal, from September 13th to 17th, 2026. Additionally, the Symposium "Organic Petrology for a Changing World" will take place on September 18th, 2026, at the Academy of Sciences in Lisbon. Dr. Carolina Fonseca has taken on the organization role, for which the ICCP is extremely grateful. **Please see page 6** for the first announcement, as well as an exciting opportunity provided to the ICCP in the form of the Deolinda Flores Grant. Deolinda will be sorely missed by her family, her ICCP family, the organic petrology community at large, friends and colleagues around the world. May she be at peace.

The call for the next round of the ICCP Accreditation programs can be found on **page 17** – please check the timelines carefully. And we welcome the new ICCP members, most of whom were introduced during the Beijing meeting. Please do consider changing your affiliation from associated to full member – refer to the website for the benefits. A live link for paying your dues can be found here: https://www.iccop.org/application/fees/".

All the very best for the festive holidays and welcoming-in 2026; let's hope the new year treats us all well. And to those members and ICCP friends not celebrating the Christian or Orthodox holidays, wishing you all the best for your respective New Years celebrations.

Kind regards,

Nikki Wagner: Editor ICCP News; nwagner@uj.ac.za

ICCP WEBSITE https://www.iccop.org
Please send any feedback, comments, and uploads to Stavros Kalaitzidis

KNOW YOUR COAL PETROLOGIST

See page 29

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 Paul Hackley hackley_paul@yahoo.com.

CONTRIBUTIONS TO THE NEXT ICCP NEWS BY 30 MARCH 2026

PRESIDENT'S COLUMN

Dear Members,

This volume of the ICCP News contains the Minutes and reports from our Meeting in Beijing which took place last September. The organizers provided a very successful and enjoyable event, with a remarkable field trip, and I want to thank them for their enormous efforts.

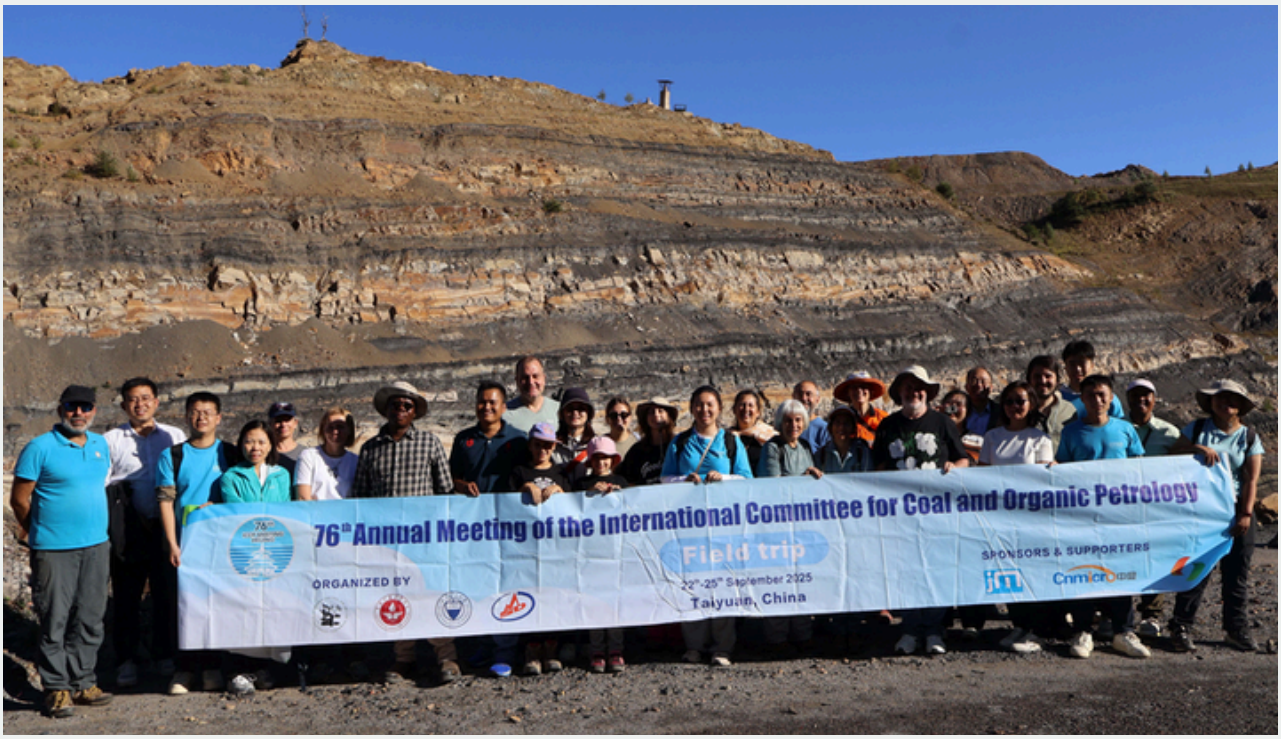
The ICCP was honoured to be back in China after 12 years. Many things changed on global and local stages in the interim years - changes that affect both our social lives and also our scientific quests. The Energy Transition and Green Transformation policies are imposing challenges to the worldwide scientific community to provide solutions for affordable, sustainable and environmentally friendly energy mixes. Within this context, China, with its vast fossil fuel resources, as well as its advanced renewables sector, will continue to play a crucial role in the worlds' scientific and economic development in the years to come. The topics of the 76th ICCP Meeting and the presentations during the ICCP Symposium revealed the way ahead for organic petrology. I am confident that we are strengthening the collaboration of ICCP with our colleagues from Universities and Research Centres in China. And I anticipate the continued engagements of the new members, particularly of the younger generation, to our working group activities.

We also held elections this year during the Meeting, and I sincerely thank and congratulate Dr. Jolanta Kus, Dr. George Siavalas and Dr. Paula Gonçalves for being elected as Council Officers, starting their new positions from September 2020.

Sadly, the year ended with the sudden loss of our dearest colleague and friend Prof. Dr. Deolinda Flores. Definitely the ICCP family will miss her kindness and engagement in all our activities.
The following period will continue to be busy for ICCP as we commence the new rounds for the Accreditation Programs, and of course the forthcoming 2026 Meeting in Portugal in September.

Most likely you will be reading this volume within the festive Christmas / western holiday period and as we approach respective New Years. I would like to wish a peaceful period to all, with less global tensions and a highly productive year. Best wishes for an enjoyable 2026!

Stavros Kalaitzidis



ICCP 2025 Field Excursion

Obituary: Prof. Dr. Deolinda Flores

It is with profound sadness that we shared the news of the passing of our esteemed friend, Prof. Dr. Deolinda Flores.
She was not only a brilliant scientist but a cherished friend, known for her extreme dedication to engagement in science and her belief in the ongoing nature of scientific inquiry. Beyond Deolinda' papers and breakthroughs, she was a mentor, a collaborator, and an outstanding source of inspiration. She taught us the value of scientific principles and work ethics, and her legacy of accomplishment will continue to guide us in the years to come.
Deolinda's absence leaves a significant void within our small hearts. She truly made the ICCP a better place.
While your "departure", Deolinda, is not what we expected, we are thankful for your great support and the very kind friendships we have built together over the years. As you embarked on a new-fangled journey, we would like to express gratitude and are blessed with fond memories!!!
It is tough to say goodbye to you, our Dear Deolinda. Thank you for the laughs, the lessons, and the wonderful memories. We will cherish these moments for as long as we live.
Your impact will be remembered and it has been a privilege to work with You, Deolinda. Thank you all for being part of our journey!

Jolanta Kus & Magdalena Misz-Kennan

Compiled by Jolanta and Magda in memory of Deolinda.

Dear Members of the ICCP,
It is with deep sorrow that we share the loss of our beloved friend and colleague Prof. Dr. Deolinda Flores on the 12th of November 2025, following a sudden illness.
Deolinda joined the ICCP in 1991 and remained an active member for 34 years. Her contributions were enormous in almost all thereafter milestones and achievements of our Organization. She held positions as a Member of the Council, Secretary and Chair of Commission I, Chair of the Accreditation Subcommittee; she convened numerous Working Groups, and co-authored several of our Maceral Classifications, which are the fundamentals of our discipline.
During her esteemed career, Deolinda achieved many national and international recognitions and held positions of responsibility, including this of the Editor of the International Journal of Coal Geology, and becoming a Corresponding Member of the Lisbon Academy of Sciences. She was a tireless ambassador of Organic Petrology and Geology in general, strengthening the legacy of University of Porto.
Deolinda created a research school, through which she guided and mentored many of us with her lovely personality, offering mood and gently strength.
I am confident that her approach in both life and science will continue inspiring us, and her legacy will continue through her students in the years to come.
We all will definitely miss Deolinda! Our thoughts are with her family, Mário, Carolina and Mário José.
Stavros Kalaitzidis

Link to an interview that Professore Deolinda gave this year.
https://www.apg365.pt/junho2025/
(I hope you can read it in English).

Here is the obituary from the University of Porto: https://noticias.up.pt/2025/11/12/morreu-deolinda-flores-geologa-e-professora-da-faculdade-de-ciencias/

SOME FINAL WORDS FROM THE BEIJING ICCP TEAM.

PLEASE NOTE THE WELCOME SPEECHES WILL BE INCLUDED IN THE NEXT ICCP NEWSLETTER

Dear all,
The International Journal of Coal Geology (IJCG) would like to publish a special issue featuring high-quality papers selected from the ICCP Annual Meeting.

The Special Volume of the 76th ICCP Meeting (2025), titled “VSI: 76th ICCP Meeting”, aims to highlight the latest advances in the research and practical applications of coal and organic petrology in an era of energy transition and technological innovation. This issue will include selected papers presented during the symposium sessions organized for the 76th ICCP Meeting, focusing on the expanding frontiers of organic petrology and its interdisciplinary applications. Please note that the invited papers for this special issue should fall within the scope of the journal (for more details, please visit: https://www.sciencedirect.com/special-issue/328545/76th-iccp-meeting).

As the energy landscape evolves, organic petrology continues to play a pivotal role in understanding the formation, utilization, and transformation of organic matter in geological and industrial contexts. This Special Issue will emphasize how the discipline contributes to sustainable resource development, critical mineral exploration, environmental management, and the integration of artificial intelligence and new technologies into petrological research.

Please note that the use of Artificial Intelligence (AI) and AI-assisted technologies in scholarly writing has received increasing attention recently, particularly regarding tools such as ChatGPT. In response to this trend, Elsevier has issued a new Generative AI Author Policy, which emphasizes maintaining the integrity of the scholarly record and providing transparency and guidance for authors, readers, reviewers, and editors. You can find more information here: https://www.elsevier.com/about/policies-and-standards/generative-ai-policies-for-journals.
The deadline for original manuscript submission is February 15, 2026, which is a strict deadline with no extensions.

Sincerely,
Na Xu, China University of Mining and Technology, Beijing, China (xuna1011@gmail.com)
Beilei Sun, Taiyuan University of Technology, Taiyuan, China (sunbeilei@tyut.edu.cn)
Yu Liu, China University of Mining and Technology, Beijing, China, liuyu@cumtb.edu.cn

Dear Colleagues,
On behalf of the Organizing Committee of the 76th ICCP Meeting, we would like to thank you once again for your participation and contribution to the conference.
The official conference photos have been uploaded to the ICCP 2025 website and are available for viewing and download at the following link:
http://www.iccp2025.com/StaticPage/folderlist.html
You are very welcome to use these photos for your personal and academic purposes.
Best regards,
Organizing Committee of the 76th ICCP Meeting

77th Annual ICCP Meeting hosted by the University of Porto and the Academy of Sciences of Lisbon, Portugal
11-18 September 2025

Organic Petrology for a Changing World

The International Committee for Coal and Organic Petrology, together with the Organizing Committee, is delighted to welcome you to the 77th Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP), which will be held for the fourth time in Portugal.

We warmly invite you to join this scientific event, hosted at the Faculty of Sciences of the University of Porto (FCUP), in the breathtaking city of Porto, Portugal, from September 13th–17th, 2026. A two-day Training Course on "Organic Matter in Anoxic Events" (September 11–12) will also take place at FCUP. The Symposium "Organic Petrology for a Changing World" will follow on September 18th, 2026, at the Sciences Academy in Lisbon.

The 77th ICCP Annual Meeting will focus on the multidisciplinary applications of Organic Petrology, highlighting the challenges and future directions of our science in the years ahead.

In addition to a stimulating scientific program, we are pleased to offer an exciting field trip through S. Pedro de Moel and Peniche to explore "The Lower Jurassic Organic-Rich Facies in the Lusitanian Basin (Portugal)". Don't miss the unique opportunity to visit the Toarcian Global Stratotype Section and Point (GSSP) at Ponta do Trovão, Peniche, and capture a memorable photo with its iconic golden spike!

We are proud to offer the Deolinda Flores Grant, which will give one outstanding MSc or PhD student from anywhere in the world the opportunity to join the meeting. The grant provides financial support for travel costs and includes participation in the training course, field trip, and symposium.

More information regarding registration and important dates will be available soon.

Stay tuned and see you in Porto!

From the Organizing Committee

Carolina Fonseca, Chair

For any queries, please contact: **cmfonseca13@gmail.com**

SEE YOU IN PORTO!

Time	Friday 11-Sep	Saturday 12-Sep	Sunday 13-Sep	Monday 14-Sep	Tuesday 15-Sep	Wednesday 16-Sep	Thursday 17-Sep	Friday 18-Sep
8.30-9.00	Training Course	Training Course	Commission Meeting	Registration	Commission Meeting	Commission Meeting	Field trip	
9:00 - 9:30				Welcome & Plenary Conference				Symposium
9:30 - 10:00								
10:00 - 10:30								
10:30 - 11:00	Coffee Break							Coffee Break
11:00 - 11:30	Training Course	Training Course	Commission Meeting	General Assembly	Commission Meeting	Closing and Plenary Session		Symposium
11:30 - 12:00								
12:00 - 12:30								
12:30 - 13:00								
13:00 - 13:30	*Lunch break*							*Lunch break*
13:30 - 14:00								
14:00 - 14:30	Training Course	Training Course / Council Meeting	Commission Meeting	Commission Meeting	Commission Meeting	*Field Trip*		Symposium
14:30 - 15:00								
15:00 - 15:30								
15:30 - 16:00								
16:00 - 16:30								
16:30 - 17:00			Coffee Break					Coffee Break
17:00 - 17:30			Commission Meeting	Commission Meeting	Microscope session			Visit to the Academy
17:30 - 18:00		Registration						
18:00 - 18:30		Ice-Break Party Botanical Garden of the University of Porto						Return to Porto
18:30 - 19:00								
19:00 - 19:30				Council Meeting			Overnight stay in Lisbon	
19:30 - 20:00					Evening Conference Dinner	Overnight stay in São Pedro de Moel		
20:00 - 20:30								
20:30 - 21:00								
21:00 - 21:30								

MINUTES OF ICCP COUNCIL MEETINGS

17th and 20th September, 2025
As compiled by the General Secretary

Council
The ICCP Council met Wednesday September 17, 2025, in Beijing, with in-person attendees Prof. Dr. Stavros Kalaitzidis, Prof. Joan Esterle, Prof. Nikki Wagner, Dr. Małgorzata Wojtaszek-Kalaitzidi, Dr. Sandra Rodrigues, Dr. Peter Crosdale, and Prof. Dr. Dragana Životić. Councilors Dr. Paul Hackley, Dr. George Siavalas, and Dr. Jolanta Kus attended remotely through Zoom. Also present in person were meeting organizing co-chair Prof. Beilei Sun, and Dr. Shixi Zhang (attending on behalf of meeting organizing chair Prof. Shifeng Dai).
The Council met again Saturday September 20, 2025, with the same in-person attendees although without representatives from the Beijing organizing committee and with the addition of Acting Secretary Maria Georgaki. Jolanta Kus and George Siavalas could not attend the second meeting of Council due to last-minute schedule changes. Prof. João Graciano Mendonça Filho could not attend either meeting.

1. Apologies
The Council meeting began with noting the apologies of those who could not attend: Ivana Sýkorová, Magdalena Misz-Kennan, Joana Ribeiro, Jolanta Kus, George Siavalas, Paul Hackley, Jennifer Nedzweckas, Javin Hatcherian, Brett Valentine, Kimon Christanis, Ioannis Oikonomopoulos, Antonis Bouzinos, Angeles Borrego, Henny Gerschel, João Graciano Mendonça Filho, Paddy Ranasinghe, Matt Todd, Itumeleng Matlala, Sanki Biswas, and Deolinda Flores.

2**. Minutes of Previous Meetings**
Short minutes of the Oviedo Council meeting and minutes of the Plenary Sessions were published in the ICCP Newsletter #90.

Resolution ICCPC25/2/1. Council approves the 2024 Council minutes as printed in the ICCP Newsletter #90.
Resolution ICCPC25/2/2. Council approves the 2024 Plenary Session minutes as printed in the ICCP Newsletter #90.

3. **Arrangements for the Beijing meeting**
The excellent arrangements for the Beijing meeting were presented by Dr. Shixi Zhang. Dr. Zhang noted 51 registered participants were from Asia, Africa, Australasia, and Europe, with 37 accepted abstracts.

The conference organization was hosted by China University of Mining and Technology-Beijing, with the field trip component organized by Taiyuan University of Technology with support from Shandong Provincial Bureau of Coal Geology. The conference venue was the centrally located Xijiao Hotel, the site of past ICCP meetings in Beijing. Eighteen professionals on the organizing committee were supported by a team of over 30 student volunteers, including airport pick-up service for 26 conference attendees arriving from overseas. Sponsorship was provided by Shandong Coalfield Geology Bureau, J&M Microsystems, CNMicro Instrument Company and Shanxi Institute of Geology and Mineral Resources. Cultural events began with the ice-breaker gathering, which included a live classical quartet performance, five beverages and “live” cuisine. The field trip to Taiyuan in Shanxi Province would initially be via high-speed train, then transfer to a bus, with stops to visit Pingyao Ancient City (UNESCO World Heritage site), coal-bearing Hongtugou outcrop, Coal Museum of China, and Jinci Temple. A medical professional would be on stand-by.

Resolution ICCPC25/3/1. Council thanks Prof. Shifeng Dai and Prof. Beilei Sun and their organizing team for their excellent work in preparation of the Beijing meeting.

4. **Future meetings**
Arrangements for the 2026 ICCP meeting in Porto, Portugal, were presented by Prof. Dr. Stavros Kalaitzidis on behalf of meeting chair Prof. Deolinda Flores. The time of ICCP commission meetings in Porto is shortened to accommodate the conference field trip which concludes in Lisbon after visiting Lower Jurassic organic-rich facies in the Lusitanian Basin. A potential pre-meeting short course on the role of organic matter in anoxic events is proposed with instructors Dr. Carolina Fonseca and Prof. João Graciano Mendonça Filho. Concerns about the condensed schedule were raised in a phone conversation with Deolinda at the Council meeting, with the resolution still to be determined if an additional day could be added to the schedule. Prof. Flores offered several options for altering the schedule which were discussed at the second Council meeting on September 20th. Based on remaining questions from the Council, it was determined that further communication regarding the 2026 meeting would be conducted via email with Prof. Flores.

MINUTES OF ICCP COUNCIL MEETINGS CONTINUED...

Resolution ICCPC25/4/1. Council thanks Prof. Deolinda Flores and her organizing team for their excellent work in preparation of the meeting presentation and planning.

An invitation for a joint TSOP-ICCP meeting in Johannesburg South Africa in 2027 organized by Prof. Nikki Wagner and Dr. Marvin Moroeng was presented and accepted.

Resolution ICCP25/4/2 The ICCP Council thanks Nikki Wagner for the invitation and approves the 2027 ICCP annual meeting in Johannesburg South Africa.

A meeting invitation and checklist from Dr. Mehmet Akbulut was presented and accepted for a 2028 meeting in Izmir Turkey, the first time ever the ICCP will meet in Turkey.
Resolution ICCP25/4/3 The ICCP Council thanks Mehmet Akbulut for the invitation and approves the 2028 ICCP annual meeting in Izmir Turkey.

Last, Dr. Paul Hackley has proposed a joint TSOP-ICCP meeting in 2029, to be held in Reston, Virginia, USA, and will work to form an organizing committee and with the ICCP Council on preparation of the meeting checklist.

5. Awards
No nominations have been received from the Thiessen or Organic Petrology Award Committees this year.

6. Elections
The terms of Vice President, Chair of Commission II, and Secretary of Commission II are expiring at the conclusion of the 2026 ICCP meeting in Porto and the currently incumbent officers are term-limited. Thus this requires a call for nominations for these offices. Since there were few members attending the Beijing meeting, a call for nominations to the membership was issued via email, so that members could select and nominate candidates prior to the closing plenary.
No nominees were received from the email solicitation or from the floor at the closing plenary, so nominees offered by Council for election were automatically appointed to the opening positions, with their terms to begin following the 2026 meeting.

Resolution ICCPC25/6/1. Council nominates the following candidates for election: Jolanta Kus for Vice President, George Siavalas for Chair of Commission II, and Paula Gonçalves for Secretary of Commission II.

Officer	Year elected	1st meeting	Yr 2	Yr 3	Yr 4	Yr to call nominations
President	2022	2024	2025	2026	2027	2026
V-Pres	2025	2027	2028	2029	2030	2029
Gen Sec	2024	2026	2027	2028	2029	2028
Hon Treas*	2024	2026	2027	2028	2029	2028
Editor*	2023	2024	2025	2026	2027	2026
Ch Com I	2024	2024	2025	2026	2027	2026
Sec Com I	2024	2026	2027	2028	2029	2028
Ch Com II	2025	2027	2028	2029	2030	2029
Sec Com II	2025	2027	2028	2029	2030	2029
Ch Com III	2022	2024	2025	2026	2027	2026
Sec Com III	2024	2024	2025	2026	2027	2026

Resolution ICCPC25/6/2. Council thanks the elected candidates for their current and future service to begin in 2026 as officers of ICCP: Jolanta Kus as Vice President; George Siavalas as Chair of Commission II, and Paula Gonçalves as Secretary of Commission II.

ICCP members are hereby reminded to nominate officers for Council in the years (shown in the table below) of officers and their current terms. Please note that to be eligible to stand for office, the nominated candidate must be a full member of ICCP. In addition, only full members can vote for the office of President, Vice-President, and general secretary. So, if you are eligible to be a full member and are not, this is a reminder to apply for full membership. Also, please check with potential candidates before nominating them to stand.

7**. Membership**
7.1 Applications for associate membership: Mr. Sardar Saleem, 2024 ICCP Newsletter #90, Dr. Beilei Sun, 2024 ICCP Newsletter #90, Mr. Chinmay Sethi, 2025 ICCP Newsletter #91, Ms. Mahima Panda, 2025 ICCP Newsletter #91, Dr. Bodhisawata Hazra, 2025 ICCP Newsletter #91, Dr. Alok Kumar, 2025 ICCP Newsletter #91, Dr. Malenšek Andolšek Neža, 2025 ICCP Newsletter #92, Dr. Patricia Alvarez, 2025 ICCP Newsletter #92, Mr. Cedric Daenens, Mr. Shawn Prendergast, Dr. Khairul Mustapha, Dr. Zhiheng Zhou, Dr. Anji Liu.

7.2 Applications for Full membership: Prof. Jim Hower, 2025 ICCP Newsletter #91 (re-admittance), Dr. Magdalena Zielińska, Dr. Hamed Sanei.

Resolution ICCPC 25/7/1. Council has accepted the membership applications and nominations and has forwarded them to the General Assembly for approval.

7.3 Deceased Members: Mr. Carl Hilgers, 1940-2025, attending ICCP since 2004, joined ICCP in 2009, Thiessen Awardee in 2024, Obituary in ICCP News #91; Dr. Rudi Schwab, 1937-2025, ICCP member since 1976, Obituary in ICCP News #92.

MINUTES OF ICCP COUNCIL MEETINGS CONTINUED...

8. Financial matters – Treasurer's report

All accounting for ICCP is in Australian dollars (AUD), although the ICCP invoices in EUROS and pays in multiple currencies. The ICCP made a net surplus of AUD $4687 in 2024-2025, with our main income since last meeting through training courses ($19301) and membership dues ($6149). The Treasurer noted major expenses of $4706 for the 2026 Accreditation Program: freight/courier $2061, short course $9841, scholarships $2340, technology costs of $1994, and banking at $652.

Due to the overall financial health of ICCP, we have not needed to raise the prices for training courses and accreditations. The Treasurer noted that the corporate members of ICCP have not paid their institutional dues, nor have the individual members at those corporate sponsors paid membership dues. Council agreed that the logos of the former corporate members should be removed from the ICCP webpage.

Resolution ICCPC25/8/1. Council:
i) receives the report presented by the Honorary Treasurer
ii) agrees that the report represents a fair statement of the financial affairs of the ICCP and congratulates the Honorary Treasurer on the report.
iii) thanks the Honorary Treasurer for their outstanding work to update and reconcile the membership accounts and to ensure all ICCP memberships are current.

9. Editor's report

The Editor's report included discussions of content, number of pages, and presentation of new members for ICCP News #90, #91, and #92. Hard copies of the Newsletter are stored in the ICCP Archives with Deolinda Flores in Porto. Hard copies to #75 are also stored in the National Library of Australia.

Resolution ICCPC25/9/1. Council receives the report of the Editor and congratulates her on her outstanding work.

1**0. Accreditation programs**

The Accreditation Program report summarizes the recent activities of the accreditation programs, which took place primarily in 2024, except for the Coal Blends Accreditation Program which continued into 2025. The total number of participants in the ICCP Accreditation Programs in 2024-2025 was 112, with 98 participants registered in SCAP, 52 in DOMVR, and 28 in CBAP with a total of 178 registrations across the 3 programs.

The cohort of participants was split evenly with 56 ICCP member participants and 56 non-member participants. However, ICCP membership correlates with persistence in the programs, as shown by the percentage of participants that are ICCP members is consistently higher among continuants than entrants across all programs. SCAP shows consistently high outcomes in both vitrinite reflectance (VR, 95.8% pass rate) and vitrinite content (VC, 94.8%), whereas DOMVR achieved 100% and CBAP achieved 84.6%. In March, 2025, the Accreditation Subcommittee met to discuss issues with sample shipping and possible resolutions, settling on updating the format of the address field input in the application to program participation.

Resolution ICCPC25/10/1 Council thanks the organizers of the three programs Kimon Christanis, Joao Graciano Mendonça Filho and Malgorzata Wojtaszek-Kalaitzidi for their work and congratulates them and Sandra Rodrigues for their reports.

1**1. Training Course**

The 16th ICCP Training Course in Organic Petrology and Environmental Applications was held June 23rd to 27th in Patras, Greece, 2025. The Walter Pickel Student Travel Grant was awarded to Mr. Mateusz Wolszczak from the Institute of Geochemistry, Mineralogy and Mineral Resources, Charles University in the Czech Republic. Mr. Wolszczak is working on his PhD thesis in "Residues from Solid Waste Incineration." Council discussed ways to implement additional practical instruction, with more hands-on microscope experience, which is a continual request in feedback from training course participants. The Council also discussed the possibility to formally publish the course textbooks with copyright, without coming to a resolution.

R*esolution ICCPC25/11/1. Council thanks the organizer of the ICCP short course and congratulates instructors Dr. George Siavalas and Dr. Eng. Małgorzata Wojtaszek- Kalaitzidi on this important activity for ICCP.*

Resolution ICCPC25/11/2. Council thanks the University of Patras, Department of Geology for support with the infrastructure and the practical sessions to hold the ICCP Courses.

MINUTES OF ICCP COUNCIL MEETINGS CONTINUED...

12. Website

The Council discussed the need to continue paying for email functionality from the ICCP website, e.g., to allow email distribution to the membership for matters related to working groups, or for voting, as was necessary during the Beijing meeting. The Council was unanimous that the organization should continue to pay for this capability.

13. Other business

Council discussed relations with TSOP, which will focus on the planned joint 2027 and 2029 meetings. Also relevant to relations with TSOP, Paula Gonçalves reported to Council that she hoped to finalize the material for the joint ICCP-TSOP Atlas of Dispersed Organic Matter in the coming year.

Council discussed the matter of registration in regard to the organization's ability to hold copyright in our intellectual property, including training course textbooks and manuscripts. Although the ICCP is a registered tax-exempt organization in Australia, it is not clear if the ICCP entity recognized by Australian tax law can hold copyright. The executive committee (President, General Secretary, and Treasurer) agreed to hold an online meeting in the near future to discuss this issue once additional information has been obtained from our accountant pertaining to the capabilities afforded to the ICCP entity as recognized through Australian tax law.

Council discussed the potential renaming of Organic Petrology Award to Marlies Teichmüller Organic Petrology Award in response to a member inquiry. The opinion of Council was divided with some members pointing to the objections of the late Alan Cook, who had established the Organic Petrology Award, to naming it in honor of a particular individual. The Council also recognized the existence of the Marlies Teichmüller Foundation, whose leadership may have objections to ICCP using Marlies namesake for an award, or would at least need to grant permission for the renaming, as would Marlies family and heirs. It was decided to postpone the topic and have a formal discussion within GA in the next ICCP Meeting in Porto.

Council discussed the idea of ICCP to cover open access license charges for working groups, a courtesy already extended to the classification committees for their products. Council recognized the importance of open access licensing for broader dissemination of the work of ICCP. However, as funding the open access licensing of all working groups may have substantial impact on the ICCP finances, Council was cautious in agreeing to this expenditure. The Council recognized that the subject merited further discussion and agreed that a fair and robust structure should be established to recognize and score working group manuscript products, thereby allowing all working groups to compete for ICCP funding on a common platform to support open access licensing.

Thank you to Maria Geogali for holding the position as acting General Secretary in the absence of Paul Hackley.

A LIVE LINK FOR PAYING YOUR DUES CAN BE FOUND HERE: HTTPS://WWW.ICCOP.ORG/APPLICATION/FEES/

The ICCP meetings enable in-depth conversations with friends and colleagues... there is nothing like a good debate regarding organic petrography!

MINUTES OF THE 76TH ICCP PLENARY SESSION

September 17-25th 2025, Beijing, China

ICCP Plenary Session

The 76th Annual Meeting of the International Committee for Coal and Organic Petrology was held from September 17th to 25th, 2025, in Beijing, China. The meeting was organized by the China University of Mining and Technology-Beijing. The field trip component was organized by Taiyuan University of Technology with support from Shandong Provincial Bureau of Coal Geology.

The opening plenary session of the ICCP on September 18th was chaired by Prof. Dr. Stavros Kalaitzidis and Ms. Maria Georgaki as acting secretary, with about 34 participants. The agenda included the following topics:

- 1.Greetings and welcome, introduction – Stavros Kalaitzidis
- 2.Information about the 76th ICCP Oviedo Meeting –Dr. Shixi Zhang on behalf of Dr. Shifeng Dai
- 3.Minutes from previous meeting - Stavros Kalaitzidis
- 4.Apologies - Stavros Kalaitzidis
- 5.Future Meetings (short status) - Stavros Kalaitzidis
- 6.Awards - Stavros Kalaitzidis
- 7.Membership - Stavros Kalaitzidis
- 8.Elections - Stavros Kalaitzidis
- 9.Editor´s report – Nikki Wagner
- 10.Treasurer´s report – Joan Esterle
- 11.ICCP Accreditation Program – Sandra Rodrigues
- 12.ICCP Training Program – Stavros Kalaitzidis

1.Dr. Stavros Kalaitzidis welcomed the gathered attendees.

2.Dr. Shixi Zhang presented the overview of the Beijing meeting logistics and the planned field trips.

3.Short minutes of the Ovideo Council meeting and minutes of the Plenary Sessions were approved, as published in the ICCP Newsletter #90, as listed in the Council Minutes within this newsletter.

4.Apologies for non-attendance were received from members, as listed in the minutes of the Beijing Council meetings within this volume.

Arrangements for Future meetings: The 2026 meeting in Porto will be held September 13th to 18th. In 2027 a joint TSOP-ICCP meeting is planned in Johannesburg, South Africa, 10th to 19th of September. An invitation has been received for the 2028 meeting in Izmir by Dr. Mehmet Akbulut, but no dates have been confirmed. An invitation has been received for 2029 for a joint TSOP-ICCP in Reston, Virginia, USA by Dr. Paul Hackley.

1. No nominations were received for the Organic Petrology Award and Thiessen Award.
2. Associate membership applications and applications for Full membership, as listed in the minutes of the Beijing Council meetings, were forwarded to the General Assembly and were approved. The loss of members, Mr. Carl Hilgers, and Dr. Rudi Schwab was announced, and a moment of silence was held in the General Assembly.
3. The results of the elections held in 2024 were announced, as listed in the Council minutes and ICCP News #90. The call for nominations to the offices of Vice President, Chair of Commission II and Secretary of Commission II was announced, with nominees to be received from the floor during the closing plenary.
4. The report of the Editor, regarding ICCP News #90, 91, and 90 was delivered by Prof. Nikki Wagner.
5. The Treasurer's report was delivered by Prof. Joan Esterle. The financial status of ICCP is recorded in the minutes of the Beijing Council meetings within this volume.
6. Dr. Sandra Rodrigues presented the Accreditation Program report and the plan for the next round. A discussion followed regarding the continued increase on posting expenses and the fee structure. The Accreditation Subcommittee will discuss further and present a plan. Details on the programs are contained in the Council Minutes within this volume.
7. Prof. Stavros Kalaitzidis provided an overview of the 2025 Training Course in Organic Petrology and Environmental Applications, held from June 23rd to 27th in Patras, Greece, 2025, presented by Dr. George Siavalas and Dr. Eng. Małgorzata Wojtaszek-Kalaitzidi. A discussion followed up regarding how ICCP can publish educational material, and it was agreed that Council will explore options. Council also will discuss the topic and timing of the next ICCP Course.

Closing Plenary

The Closing Plenary began after lunch on 21st Thursday September, chaired by ICC President Prof. Stavros Kalaitzidis and assisted by Ms. Maria Georgaki as acting secretary, and was based on the agenda items as follows:

- 1.Membership – Acting Secretary
- 2.Candidates for elections – Stavros Kalaitzidis
- 3.Short Report from the Council meetings- Acting Secretary
- 4.Future Meetings – Stavros Kalaitzidis
- 5.Thanks to the 2025 Organizing Committee – ICCP Council

MINUTES OF THE 76TH ICCP PLENARY SESSION CONTINUED..

1.Membership: an application received during the meeting from Prof. Dr. Tang Yuegang for admission as Full Member was announced and forwarded to the General Assembly, who approved the admission.
The new associate members presented at the Opening Plenary and previously in the ICCP News were welcomed to ICCP.
2. Candidates for elections: Candidates for Vice President: Dr. Jolanta Kus; Commission II Chair: Dr. George Siavalas; and Secretary of Commission II: Dr. Paula Gonçalves were presented to the gathered General Assembly. No nominations were received from the floor, so the proposed candidates were elected, with their respective 4-year terms to begin following the 2026 meeting of ICCP.
3. A short report on the Minutes of the ICCP Council Meetings was delivered by Ms. Maria Georgaki, on behalf of Dr. Paul Hackley, as further documented elsewhere within this Newsletter.
4. The preparations for the 2026 ICCP Meeting in Porto were presented on behalf of Prof. Deolinda Flores by Prof. Stavros Kalaitzidis. The organization is as presented in the Minutes of Council and elsewhere in this Newsletter.
Resolution ICCP25/4/1: The ICCP Council thanks Deolinda Flores for the planning and preparations for the 2026 meeting ICCP annual meeting in Porto, Portugal.
The preparations for the Joint ICCP-TSOP 2027 meeting in Johannesburg organized by Prof. Nikki Wagner and Dr. Marvin Moroeng were also announced.
Resolution ICCP24/4/2: The ICCP Council accepts the proposal from Prof. Dr. Nikki Wagner for hosting the 2027 ICCP annual meeting in Johannesburg and thanks Nikki and Marvin and their organizing committee.
5.

Finally, there was the presentation of thanks and gifts to the Chinese Organizing Committee for the amazing work to host the conference. ICCP President Prof. Stavros Kalaitzidis thanked the members of the organizing committee, including the Chair and her team: Prof. Shifeng Dai; the CUMTB Team: Prof. Shaoqing Wang, Prof. Jjing Lu, Prof. Na Xu, Assoc. & Asst. Profs. Shuai Zhang, Ruiwen Yan, Shixi Zhang, Kuo Li, Yu Liu, Xiaofang He, Kai Zhou, Zhengfu Zhao; and the TYUT Team: Prof. Beilei Sun, Assoc. Profs. Dongna Liu, Meifen Li, and Chao Liu. All the student organizing committee members were provided with certificates of thanks and gifts.

MINUTES OF COMMISSION I

General Coal and Organic Petrology

76th ICCP Meeting – Beijing, China, September 19th, 2025

Chair: Peter Crosdale,
peter.crosdale@energyrc.com.au
Secretary: Dragana Životić,
dragana.zivotic@rgf.bg.ac.rs

Opening remarks

The sessions of Commission I started September 19th at 09:00 and finished at 17:30. The Chair of the Commission gave a general description of Commission I with existing Working Groups, active, finalized-inactive, and outlined the programme for Commission I. Progress within the Single Coal Accreditation Program (SCAP), Organic Petrology Vade Mecum WG, Xylite-rich Lithotype Classification WG, Peat Petrography WG, Estimation of Maceral Composition in Samples with Low Organic Matter Content WG, Radiolytic alteration of the organic matter in coal and rocks enriched in radioactive minerals WG and Standardization WG.

Commission's I sessions included a Microscope Session, as well as presentations of the following WG's:

· SCAP - Single Coal Accreditation Program,
· Organic Petrology Vade Mecum Working Group,
· Xylite-rich Lithotype Classification Working Group,
· Peat Petrography Working Group,
· Estimation of Maceral Composition in Samples with Low Organic Matter Content WG,
· Radiolytic alteration of the organic matter in coal and rocks enriched in radioactive minerals WG and
· Standardization Working Group.

Accreditation Program – Kimon Christanis

Stavros Kalaitzidis, on behalf of Kimon, presented activities related to the 2024 Single Coal Accreditation Program and addressed the challenges associated with sample distribution. The 2024 SCAP exercise was announced in October 2023 and participants have electronically registered via the ICCP webpage until June 2024. The dispatch of invoices, samples and instructions has finished in August 2024. The exercise was carried out on bulk samples: beginners received six and continuing participants two bulk coal samples. The deadline for result submission was November 2024. The assessment and the certificates of SCAP 2024 were sent to the participants in December 2024 and January 2025, respectively. Participants had to measure the following parameters:

- Vitrinite random reflectance (VR) according to ISO 7404-5 and
- Vitrinite content (VC) according to ISO 7404-3.

For the 2024 SCAP exercise 98 analysts were initially registered; 96 submitted results, from whom 48 were ICCP members. They worked in 54 laboratories located in 25 countries. The breakdown in continuation versus new entries is 74 vs. 22, respectively. The geographic distribution of the participants was as follows: from America 27% (South America 8%, North America 19%), Oceania 19%, Europe 25%, Asia 20%, and Africa 9%.

Stavros pointed out the problems with the shipping addresses in some countries and emphasized that the Registration Form for SCAP should be changed and supplemented. He also reported that the coal bank is currently well-maintained thanks to receipt of some coals from Mongolia. Additionally, Stavros presented the results of a statistical evaluation of all VR data collected from the 1993 to 2024 SCAP exercises. He encouraged ICCP members to provide suggestions regarding potential applications of this data. It was noted that SCAP and other accreditation exercises underpin both the scientific and commercial acceptance of organic petrological data and countries with low participation rates were strongly encouraged to join the programs.

The organizer of the 2024 SCAP exercise highly acknowledged the contribution of all the members of the Accreditation Sub-Committee, particularly the current chair Sandra Rodriges, Magdalena Misz-Kennan, Deolinda Flores, Jolanta Kus, Paddy Ranasinghe, Małgorzata Wojtaszek-Kalaitzidi and João Graciano Mendonça Filho, the Honorary Treasurer Joan Esterle, Jolanta Kus and BGR's post office for helping to send sample sets to certain countries, Deolinda Flores and Álvaro Figueira, for maintaining the database, postgraduate students Costadis and Maria and all the participants. Members who can supply suitable bulk, single coal samples (2-3 kg, vitrinite-rich, low ash coal with reflectance between 0.5 to 1.8% Rr, even higher), have to contact Kimon: christan@upatras.gr.

More details of the historical development of SCAP and other ICCP Accreditation Programs are available on webpage: https://www.iccop.org/accreditation/historical-development-of-iccp-accreditation-programs/.

After short discussion Commission I thanked Kimon for all his efforts in convening the SCAP.

MINUTES OF COMMISSION I CONTINUE...

Organic Petrology Vade Mecum WG – Peter Crosdale
Peter Crosdale explained to ICCP members the meaning of the term "Vade Mecum" and discussed the relevance of a book or written guide for organic petrologists to carry for reference. He also suggested potential topics and presented additional topics proposed by participants for future work within the Organic Petrology Vade Mecum WG. He would like to finalise this WG in two years' time and asks that people contribute as soon as possible.
During the discussion participants supported Peters proposal. Members interested in participating in the activities of this WG please contact Peter (peter.crosdale@energyrc.com.au).
Commission I would like to thank Peter and members of WG for their efforts and dedication on this work.

Xylite-rich Lithotype Classification WG – Ioannis Oikonomopoulos and Konstantinos Perleros
Konstantinos Perleros provided an update on the Xylite-rich Lithotype Classification WG and outlined the planned future steps for the group's work. Małgorzata Wojtaszek-Kalaitzidi presented previous Xylite classifications and addressed the issue regarding the lack of valid standards for identifying xylites with high cellulose content, which are important for industrial applications. Next steps in the activities of the WG will be pellets distribution (to the participants) for macro and micro scale characterization. Following up stage will involve a) discussions on particular definitions, which were identified as "too extensive" during the last meeting, and b) contribution to the ICCP database with photomicrographs of woody materials.
During the discussion participants supported Konstantinos proposal. Members interested in participating in the activities of this WG please contact Konstantinos (cperleros@gmail.com) and Ioannis (ioikonomopoulos@helpe.gr)
Commission I would like to thank Konstantinos and Ioannis for their initiative and efforts in this Working Group.

Peat Petrography WG – Kimon Christanis and Stavros Kalaitzidis
Stavros Kalaitzidis provided an overview of the prior activities and publications of the Peat Petrography WG, and highlighted the advancements made within the group through the integration of a new dataset comprising images and reflectance measurements.
An interesting discussion over the terminologies used was supported by the use of photomicrographs. The WG is preparing the draft paper with the peat maceral classification.
After short discussion Commission I thanked Kimon and Stavros for their efforts and dedication on this WG.
Estimation of Maceral Composition in Samples with Low Organic Matter Content WG – Peter Crosdale
Peter Crosdale discussed the objectives and work program of the Estimation of Maceral Composition in Samples with Low Organic Matter Content WG, along with a recently published paper (April 2025) that examines this issue. The initial exercises indicated that the amount of OM was not estimated accurately, and Peter provided a demonstration explaining possible reasons. He also described the proposed next steps for the group's activities.
During the discussion participant pointed out on some difficulties during the exercises. A new exercise is planned for this year using a sample which should prove easier to prepare. Participant interested participating should contact Peter (peter.crosdale@energyrc.com.au).
Commission I would like to thank Peter and all members of WG for their efforts and dedication on this work.

Radiolytic alteration of the organic matter in coal and rocks enriched in radioactive minerals WG – Tatiana Larikova and Ivana Sýkorová
A recorded presentation by Tatiana Larikova was shown to the ICCP members. She presented the results of the first and second Round Robin Exercises conducted by the Radiolytic Alteration of Organic Matter in Coal and Rocks Enriched in Radioactive Minerals Working Group, providing definitions, addressing challenges, and clarifying misunderstandings encountered during the process, and also the new data on the statistics with standard deviation calculations. Tatiana outlined the upcoming steps and encouraged members to participate in the exercises. She also requested assistance with coal and shale samples that may be used in future activities.
During the discussion the participants congratulated the conveners on the results of the second RR exercise and expressed interest to participate in exercises, as well as support with the samples.
Conveners encourage all ICCP members to provide their examples of the radiolytically altered samples or photos of the U-bearing shales. Members interested in participating in the activities of this WG please contact Tatiana (larikova@irsm.cas.cz) and Ivana (sykorova@irsm.cas.cz).
Commission I thank Tatiana and Ivana for their initiative and efforts in this Working Group.

MINUTES OF COMMISSION I CONTINUE

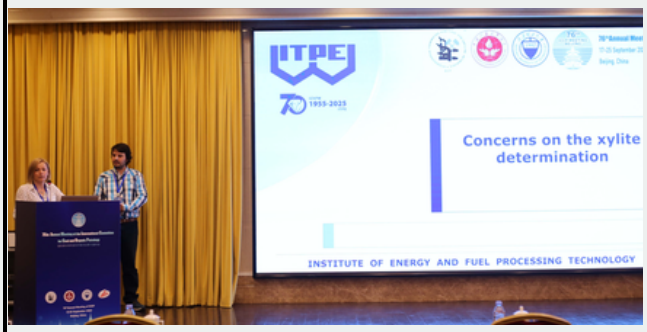
Standardization WG – Angeles Borrego
Stavros Kalaitzidis on behalf of Angeles provided a concise update on the progress of the Standardization WG, outlining all modifications made to the ISO 7404-4 standard between the two meetings. Commission I has approved the proposed modifications to ISO 7404-4 Microlithotype Analysis (Resolutions Commission I 19/09/2025-1). Rich Pearson will be the ICCP representative at the WG14 meeting of ISO/TC 27 in New Orleans on 2nd November 2025. The session is titled: "ISO 7404-4 Microlithotype Analysis". Discrepancies between ISO Standard Text, Organic Petrology Textbooks, and Actual Practice. Survey Conducted within the ICCP" (Resolutions Commission I 19/09/2025-2).
Commission I would like to thank Angeles for her fantastic efforts in this WG.

Microscopy session
The Microscopy Session took place on Saturday the 20th of September. The participants had the chance to discuss on the samples provided by Peter Crosdale. A selection of very high vitrinite (>95%) and heat affected coals were looked at.

Closing Remarks
Peter Crosdale and Dragana Životić closed the Session of Commission I. In closing remarks, Chair of the Commission I expressed his gratitude to the conveners and all members of the WGs for their dedication and efforts to the scope of ICCP. Conveners of WGs encourage to check and provide any additional information. Chair of the Commission I and president of ICCP expressed their gratitude to Dragana Životić for her work as Secretary of Commission I.
ICCP Members were also reminded that the following Commission I Services are available for the Organic Petrography Community:
Single Coal Accreditation Program, SCAP – Kimon Christanis (christan@upatras.gr).
Reflectance Standard Checking: The service to check standards against the ICCP Reflectance Standard continues to be available from Richard Pearson (50€ for non-members and free for ICCP members) and from Evelyn Bieg (only for ICCP members).
As per final remarks Commission I would like to encourage ICCP members to visit the webpage. A lot of data and information from the WGs has been uploaded
http://www.iccop.org/commissions/commission-i/.

The convenors of the various WGs are encouraged to check and regularly update the web material.At the end, Commission I would like to express gratitude to Angeles and her team, as well as all participants of the sessions for their active participation resulting in well organised and productive Meeting.

We hope to see you in Porto next year.
Thank you!!!



Call for Participation in the ICCP Accreditation Programs 2026-2027 Exercise

The International Committee for Coal and Organic Petrology (ICCP) invites participation in the 2026–2027 round of the ICCP Accreditation Programs, designed to validate the competence of analysts performing petrographic analyses in accordance with ISO standards.

The following programs are offered:

- Single Coal Accreditation Program (SCAP): Assessment of maceral group identification and quantification, and vitrinite random reflectance measurements in coal. Organizer: Kimon Christanis (christan@upatras.gr)
- Dispersed Organic Matter Vitrinite Reflectance Accreditation Program (DOMVR): Assessment of vitrinite identification and reflectance measurements in dispersed organic matter occurring in rocks such as carbonaceous shales and hydrocarbon source rocks. Organizer: João Graciano Mendonça Filho (graciano@geologia.ufrj.br)
- Coal Blends Accreditation Program (CBAP): Assessment of the ability to identify the number of coals in a blend and to determine their petrographic characteristics, including vitrinite reflectance and maceral group composition, according to ISO standards. Organizer: Małgorzata Wojtaszek-Kalaitzidi (mwojtaszek@itpe.pl)

Participants must complete the registration form available at www.iccop.org/accreditation/accreditation-form no later than 30 April 2026. More information will be available shortly on the ICCP website.

The ICCP Accreditation Programs are a well-established and internationally recognised framework for validating analytical competence in coal and organic petrology. Interested analysts are encouraged to contact the appropriate program organizer.

If you have any questions, please contact Sandra Rodrigues, Chair of the Accreditation Subcommittee.

Table 1. General schedule proposed for 2026-2027 ICCP Accreditation Programs.

	SCAP	DOMVR	CBAP
Announcement and call for participation	February to April 30, 2026	February to April 30, 2026	February to April 30 2026
Invoicing	until May 31 2026	until May 31 2026	until May 31 2026
Sample distribution	June to July 2026	June to July 2026	December 2026
Reception of results	August to October 2026	August to October 2026	January to March 2027
Evaluation, Certificates and Web	November to December 2026	November to December 2026	April to June 2027
Certificates Validity	01.01.2027 to 31.12.2028	01.01.2027 to 31.12.2028	01.07.2027 to 30.06.2028

MINUTES OF COMMISSION II

Geological Applications of Coal and Organic Petrology

Chair: Jolanta Kus, J.Kus@bgr.de
Acting Chair: Joan Esterle
Secretary: George Siavalas, Georgios.Siavalas@shell.com
Acting Secretary: Konstantinos (Costadis) Perleros

Thursday – 18th September

The Commission II session started on Thursday September 18th at 13:30 (local time in Beijing time zone). Both Chair and Secretary of Commission II were not able to attend the meeting this year, and were replaced by Joan Esterle and Costadis Perleros as acting Chair and Secretary, respectively. Peak attendance was 30 persons and the session did not include an option for an online participation.

13:30 – 14:00 – Welcome Remarks – Recorded presentation by the Chair, Jolanta Kus

Commission II Chair, Jolanta Kus, in her pre-recorded talk for the opening session, welcomed all participants and kicked off the activities of the Commission. She gave an overview of the recent and older publications generated from the Commission's activities, the available training material offered by the Commission, and the recent developments in the ICCP webpage. She also gave an overview of the recently formed working groups within Commission II, including the Geological Applications of Graptolite Reflectance, Igneous Intrusions in Coal Seams and Shales, as well as the Identification of Secondary Organic Matter, and Identification of Secondary Organic Matter in Sedimentary Rocks working groups. Closing the opening session, the Chair presented ideas for new working groups under Commission II into solving certain geological problems, invited attendees to propose new working groups in the closing session and showed an outline of the meeting's schedule.

14:00 – 14:15 –Geological Application of Graptolite Reflectance WG – Conveners: Xiaowei (Sherry) Zheng and Thomas Gentzis (Presented by Sherry Zheng)

The WG group was created in the 2022 meeting in New Delhi and a call for a round robin exercise and sample distribution was carried out during 2023. The 2024 report presented the results of this first round robin exercise and this year's report presented a summary and an update of the results of that exercise. Twenty-four analysts expressed interest to take the exercise and 17 returned results on time to be included in the evaluation of results.

The analysts were asked to measure and report the random reflectance of granular, non-granular and nodular graptolite, respectively in a single sample that they received. Except for the received results the Convener reported some initial feedback reported by some analysts including that most of the graptolites have continuous morphologies from cleat graptolite to more bituminite-like substance making it difficult to include them into a certain class (P. Crosdale) and that the granular graptolites are heavily mineralized and contain solid bitumen resulting in very high standard deviation (Alex Zdravkov).

The group statistics for each of the graptolite varieties were presented and it was demonstrated that for the granular and non-granular graptolites the mean values were similar but the range of reported values among the analysts was very broad and the group standard deviation for both varieties were exceptionally high compared to the mean values. The results were significantly improved in the case of nodular graptolite with a narrower range in reported values and a significantly lower group standard deviation.

The convenor reported that potential reasons for the observed discrepancies could include that not all of the three types of graptolite can be observed and identified by all participants, the inaccurate categorization between granular and nongranular graptolite, the uneven and wide range of reflectance on a single grain and the occurrence of mineral inclusions in the measured component. Special attention during mention should be given to the following aspects; heterogeneity of a single graptolite zooclast (inner low reflectance vs. higher reflectance of the outline of the grain), which is difficult for measurement and classification purposes, the irregular shape, large or coarser-grained chunk material, and the co-occurrence of diagenetic solid bitumen.

The conclusion of the exercise is that clearer definitions and a better method for the distinction between granular and non-granular graptolite is necessary. The plans for future work within this WG include a new round robin exercise that will be conducted on photomicrographs contained within a PowerPoint presentation, and a call for additional samples with well-preserved graptolite at approximately 0.40-0.70% GRo. Discussion:

Joan Esterle commented that since it is concluded that the identification and measurement of granular graptolite is problematic, whether there should be a threshold of an absolute value between granular and non-granular graptolite.

Wu Li commented that the shape is not obvious but only the texture.

Hamed Sanei commented that it is possible that the probe size is a problem with the lower reported values and that the participants should be asked

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what aperture they used and whether they used the Fossil system or not.
Yuegang Tang asked whether there is an established relationship among vitrinite and graptolite and bituminite reflectance. The Convener referred to her previously published PhD research and commented that there is no established relationship between graptolite and bituminite reflectance.
Joan Esterle asked which sedimentary basins have rocks rich in graptolites and the Convener responded that they are typically Lower Paleozoic Basins, such as the Baltic Sea etc.
Commission II thanks Sherry for her continuous efforts and dedication to the activities of this WG.

14:15 – 14:30 – DOMVR and Component Identification Results in Microscopy Samples in Commission II of the ICCP – Convener: Angeles Gomez Borrego (Presented by Joan Esterle)
Joan Esterle reported that the objective of the WG is the compilation of all information related to microscopy samples that were and are studied in the various WGs of Com. II. It contains a list of samples matched with the related WG and the objectives of analysis of each sample. Angeles, who is the Convenor, updated the recent results on microscopy samples into the data base and compiled a most recent data input to the data base. Both published and unpublished documents related to samples are uploaded with part of those documents being open and part of them being restricted.
Commission II thanks Angeles for updating the database with the most recent results and for her continuous dedication in keeping this WG active.

14:30 – 15:00- DOMVR Accreditation Programme – Organizer: João Graciano Mendonça Filho
Sandra Rodrigues presented on behalf of João Graciano Mendonça Filho the results of the 2024 DOMVR Accreditation Programme explaining the objectives of the programme and the timeline for the current exercise. At the time of the 2024 meeting, the information letters and spreadsheets for the return of the results had been distributed to the participants. However, even though the process with the online applications for participation was smooth there were several issues with inaccuracies in the address or contact information of the participants, which resulted in the late distribution of the physical samples to them.

This meant that the issuing of the new certificates post-dated the expiry date of the certificates awarded to the accredited petrographers from the 2022 exercise (31st December 2024). The Accreditation sub-committee approved the extension of the validity of the 2022 certificates either until the 28th of February of 2025.
Fifty-two analysts participated in the 2024/2025 round, which is the 10th in total. Thirty-nine out of them continue from previous rounds and 13 are new entries. Thirty-six analysts are ICCP members and 16 are non-members. The geographic distribution of the participants revealed that most of them work in the USA (18%) with Brazil (16%) and Australia (12%) being second and third, respectively in number of participants. Several countries have only one participant accounting for 2% of the total analysts in this round. The Convener also highlighted that the number of laboratories providing multiple participants is always relevant to the programme because of potential bias in the dataset introduced by colleagues. In this round 7 laboratories participate with multiple participants and different sets of samples were sent to each one of them in order to mitigate the potential bias mentioned above.
The Convener also praised the outstanding performance of the database and the evaluation software as opposed to the several previous years and was very pleased to announce that the sample bank is healthy again with replenished supplies of new samples, which will secure the activities of the programme for several more rounds. In more detail 7 new samples were donated and after being tested for TOC, organic composition on strewn slides, and vitrinite reflectance were incorporated to the sample bank. New samples included 3 from India, 2 from Brazil, 1 from Portugal and 1 from Nigeria and the Convener briefly described the age and specific location of each one of them.
João Graciano thanked Joalice O. Mendonça, Carolina Fonseca, and Thiago Barbosa of the Palynofacies and Organic Facies Laboratory of LAFO-UFRJ (Brazil) for their support in the development of the 10th round of the DOMVR Accreditation Programme, Jolanta Kus for assisting with sample distribution, Joan Esterle for invoicing and archiving of the applicants, and Magda Misz-Kennan for helping in obtaining new samples. He is also grateful to those who donated samples to the programme including among others Prof. Dr. Atul Varma, Dr. Andre Singolon, Dr. Mario Assine, and Dr. Luis Duarte.

MINUTES OF COMMISSION II CONTINUE...

Discussion:
Sandra and Joan encouraged people from the audience to take part in the DOMVR Accreditation Programme, since it provides an excellent opportunity for analysts dealing with the analysis of dispersed organic matter to test themselves and congratulated João Graciano for all of his effort in running such an important programme for ICCP.
Commission II thanks João for his continuous effort to keep running this significant activity for ICCP.

15:00 – 15:15 – Dispersed Organic Matter in Sedimentary Rocks – Conveners: Jolanta Kus, Paul C. Hackley, Paula A. Gonçalves
Jolanta Kus in a pre-recorded presentation showed the objectives of the working group together with a summary of the activities during the past year. The activities focused on the publication of two manuscripts summarizing the work done in the working group since its establishment, prepared by the current Conveners. The first manuscript, titled "The petrology of dispersed organic matter in sedimentary rocks: review and update", authored by Gonçalves et al., was published during the 2024 calendar year in the International Journal of Coal Geology under the GOLD access fee.
The second manuscript titled "Applications of dispersed organic matter petrology in the 21st century: a review" by Kus et al. is prepared to be submitted for publication. The current status is that the manuscript is prepared and includes 14 chapters in 258 pages, excluding figures and tables. Nine of the chapters have been technically reviewed and review is pending or not yet started on the remaining 5. The technical reviews which took place between 06.2024 – 05.2025 were kindly performed by Paul C. Hackley and James Hower, as well as by Timur Bulatov, Henrik Petersen and Joan Esterle. The authors, which are also the active Conveners of the WG announced their intention to make the manuscript available for review to active members of Commission II. An invitation to review will be announced in the Newsletter and ICCP webpage. The technical review at USGS will also commence during the same time period.
Jolanta acknowledged the contribution and excellent collaboration with her co-Conveners in the WG, Paul Hackley and Paula Gonçalves, and because of the size of the final MS, she raised the question to the floor whether this MS should be submitted for publication as a paper or a book with Elsevier.

Commission II thanks Jolanta, Paul and Paula for their enormous effort in the preparation of the two manuscripts and congratulates them for the publication of manuscript 1 under the GOLD access system.

15:15 – 15:30 – Identification of Dispersed Organic Matter – Convener: Jolanta Kus
In a pre-recorded presentation Jolanta Kus briefly refreshed the aims of the WG, which include to test the suitability of the ICCP-TSOP classification of DOM in the identification of organic components in whole rock pellets and to modify, if necessary, the ICCP definitions of liptinite macerals (lamalginite, telalginite and bituminite, etc.). She also gave a brief overview of the history and previous round robin exercises and publications of past activities with extra focus on the results of the 2020 round robin exercise, which warranted the need for the analysts to repeat the exercise during 2023 on the same polished pellets, which were dry-polished in the same laboratory. The results of which were presented in the Patras meeting.
Jolanta also presented the plan of activities until the 2025 meeting, which included the preparation of a draft manuscript to be submitted for publication to a peer-reviewed journal summarizing the results of the 2016, 2018 and 2020 round robin exercises focusing on specific problematic areas, The draft manuscript was prepared in mid 2024-2025, the review of the manuscript at USGS started in July 2025 and at ICCP in September 2025, respectively.
The mail outcomes of the combination of the results of the previous exercises are summarized as follows:
1. Bituminite morphological characteristics including form, size, appearance, impurities, and gradational character should be considered for renovation of the bituminite definition.
2. A recommendation not to advance with association to formerly defined bituminite types (e.g., bituminite I sensu Teichmüller and Ottenjann, 1977).
3. Mean random BitRo, including outlying values, varied from 0.19 to 0.35% and was reported for the first time, with GSD from 0.04 to 0.17.
4. Mean VRo values including outliers in the three Round Robin Exercises ranged from 0.47 to 0.71 %, confirming the immature to thermally mature nature of the KCF samples used.
5.Precision of VR_o values without excluding outliers, evaluated via the averaged unsigned multiple of the standard deviation rule (< 1.5) showed moderate to high precision comparable to historical values from similar Round Robin Exercises.

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6. An average reproducibility limit (RL) of 0.29% (no outlying values excluded) showed an improvement in reproducibility relative to similar historical Round Robin Exercises (0.35%).

Discussion
Stavros Kalaitzidis stated that he has questions for Jolanta around the review and content of the paper and when it will be submitted for publication, and whether ICCP, as a co-author should vote for this publication. He also indicated that some of the conclusions were not actually discussed in some of the presentations at the previous meetings. He suggested to have some additional online meetings about the review before the manuscript is published.
Maria Hamor Vido indicated that it would be good to have an interpretation of the figures, or have new photographs and offered her help towards that if needed.
Stavros indicated that there is a big discussion on past ICCP classifications with no authors, since now the current practise is to publish the classifications with all of the authors involved, namely.
Maria Hamor Vido asked if that is also related to copyright issues.
Stavros stated that the copyright has been given to Elsevier, and that the revisions must be done in a style similar to that of a handbook. He also proposed that it might be worthy to investigate if it is possible to claim the copyright back.
Yuegang Tang mentioned that there are Canadian MOOC online courses for free online, if the copyright is owned, and then a short video could be published for practice.
Hamed Sanei suggested that maybe it would be good to link the WGs themselves with the publications of the actual WG.
Commission II thanks Jolanta for her energy and dedication to execute the activities of this WG.

15:30 – 16:00-Coffee break

16:00 – 16:30- Standardisation of Fluorescence Measurements WG – Conveners: Jolanta Kus and Paul Hackley
Jolanta Kus in a pre-recorded presentation gave a summary of the activities of this working group. She first indicated that the WG has been renamed from “Correction Function for Fluorescence Lamps” to “Standardisation of Fluorescence Measurements” in 2025 and stated that the objective is to standardize spectral fluorescence measurements of sedimentary organic matter in rocks. She gave a brief summary of the scope of fluorescence measurements, the routine methodology and the past activities of the WG aiming to improve the reproducibility of the measurements among different laboratories.
The activities of the WG in 2025 included the preparation and conduction of preliminary test in conjunction with BAM (The Federal Institute for Materials Research and Testing, Berlin, Germany) and the development of a well-designed methodology for spectral fluorescence measurements defining among others warm-up time, distance to the objective, type of objective, magnification, and numerical aperture, background correction, dark current correction, filters set, etc.
The hardware to be used includes the following:
1. ICCP lamp source 2B
2. Glass-based Multi-emitter Fluorescence Standard (ME Slide) of BAM (Dr. U. Resch-Gengner (BAM) kindly offered to supply us with the reference material ME Slide of BAM-F012).
3. Polished resin block 1 prepared by LAOP (Das Labor für Angewandte Organische Petrologie, eng.: The Laboratory for Applied Organic Petrology), Tübingen, Germany.
Participants to the exercise will be the following laboratories: BAM (The Federal Institute for Materials Research and Testing, Berlin, Germany), INCAR (Institute of Carbon Science and Technology, Oviedo, Spain), USGS (United States Geological Survey, Reston, VA, USA), UFRJ (Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil), AU (Aarhus University, Aarhus, Denmark), and BGR (The Federal Institute for Geosciences and Natural Resources, Hannover, Germany).
A set of preliminary measurements and tests had already been conducted at INCAR and BGR prior to the meeting and the following remarks were noted:
The displayed absolute intensity of the ICCP Lamp 2B measured by BGR (63 xw objective) and INCAR (20 xw objective) differs in spectral resolution (1 nm vs 5 nm, respectively) and reflects the overall spectrometer design and fabrication, i.e. the design's resolution capacity vs. sensitivity.
The relative correction functions display again evident differences between both set-ups of microscope brands, types, and spectrometer designs. The relative correction functions were most aligned for water objectives, intermediate with oil objectives, and were least aligned with dry objectives of INCAR.
The emission spectra of BAM-F012 under given set-up were well-comparable with BGR and INCAR peaks fitting well with BAM peaks. In the blue light spectrum, the INCAR peaks displayed a slight offset.
The emission spectrum of epoxy resin block 1 yielded differences in the overall signal-to noise

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ratio, owing possibly to lower sensitivity capacity of the MSP 400 Tidas CCD spectrometer for the given set-up. Nevertheless, the lambda max of both spectra differed by c. 15 nm.
No particular comments or associated discussion followed this presentation.

Commission II thanks Jolanta Kus and Paul Hackley for organizing the activities of the WG, and the laboratories that take part to the standardization exercise.

16:30 – 16:45 – Identification of Thermal Maturity Relevant Organic Matter WG – Conveners: Grzegorz Lis & Paul Hackley
In a pre-recorded message, the new co-Convener, Greg Lis introduced himself as the lead Convener of the WG, thanked the previous Convener, Paul Hackley for running the working group activities for 16 years between 2009-2025, and stated that Paul is not moving away from the group and he will have an advisory role to support him with the activities.
Greg also mentioned that there is ongoing discussion among himself, Paul, and George Siavalas, about the type and content of a new exercise, which will be finalised by the end of the year and most likely will be related to the petrography of solid bitumen. He indicated that once the exercise format is decided he will distribute that to the interested participants.
Discussion:
No particular comments or related discussion followed the presentation.
Commission II welcomes Greg as a co-Convener, thanks him for his commitment and wishes him success in his new duties.

16:45 - 17:00 – Identification of Secondary Organic Matter in Sedimentary Rocks – Conveners: George Siavalas & Paul Hackley
Joan Esterle presented the report of the activities of this working group on behalf of the Conveners. The report described the WG's first, photograph-based exercise showing the objectives and anticipated outcome from this exercise together with the material supplied to the interested participants. Because of the low response rate, the Conveners re-ran the exercise in real time at the site during the Oviedo meeting using an interactive presentation tool, which allowed the attendees to give their interpretation on 9 photomicrographs demonstrated on the presentation monitor using their smartphone or laptop. The participants were asked to describe the components shown on the screen and rank the different diagnostic criteria. The participants responses were recorded and the Conveners evaluated the answers of the participants and reported the findings.

The observations and conclusions from the results of this exercise revealed that most analysts described the components using a single term without providing additional descriptors related to anisotropy, fluorescence, mode of occurrence and genetic associations. Presumably the less experienced analysts often confused secondary components with coal macerals such as bituminite, resinite and vitrinite/inertinite.
Solid bitumen seems to be the most popular term, sometimes used interchangeably with the term migrabitumen. On limited occasions, the term solid bitumen was also used interchangeably with pyrobitumen. It is unclear whether analysts consider pyrobitumen a subtype of solid bitumen or a different component. In addition, the terms oil, oil inclusion and bitumen seem to be used interchangeably by the analysts to describe components displaying fluorescence.
The number of terms used by the different analysts varied from 3-8 for a single component with most components described by 7-8 different terms among the petrographers who voted. The wide range of terms used by different analysts to describe a single component suggests that a more limited pool of terms should be provided to the participants to choose from in order to increase convergence.
Most analysts limited the description to the generic terms "solid bitumen" and "pyrobitumen" without providing additional descriptors. A set of options for description should be provided in a follow up exercise, while photomicrograph-based exercises seem not to be very appropriate for the identification of secondary components since the analysts miss the context of the rock, often misinterpreting the marked components and even confusing them for coal macerals
The results from this first exercise clearly indicate that further work is necessary in order to meet the objectives of the working group. The planned future activities of the WG will include another photograph-based exercise, in a more systematic format with a set of pre-selected terms as opposed to free format, and more information provided on the rock context, will be performed to test reproducibility and analyst convergence. This exercise will be followed by another one on actual polished blocks of rock samples, applying an optimized set of the pre-selected terms.

D*iscussion:*
Stavros Kalaitzidis thanked Paul and George for organizing the exercise, and mentioned there are many systems to use, and suggested to check which system was used by each participant

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Peter Crosdale commented on the difference between solid bitumen and pyrobitumen, stated that it is not easy to determine microscopically and asked for criteria for the distinction.
Hamed Sanei responded that pyrobitumen in general has different or higher maturity than solid bitumen, but could also be associated with a different genetic mechanism.
Stavros Kalaitzidis indicated that there is a classification separating (migra) solid, from pyrobitumen (>1% is pyrobitumen) maybe in the ICCP/TSOP atlas that has not been published yet.
Commission II thanks George and Paul for their time and effort in convening this WG and congratulates them.

17:00 – 17:30 –Igneous intrusions in coal seams and shales WG – Conveners: Sandra Rodrigues, Jolanta Kus, Magdalena Misz-Kennan and Sue Rimmer

Sandra Rodrigues presented the report of activities of this WG. The objective of the WG is to investigate the petrographic changes in dispersed organic, coaly, and mineral matter promoted by contact metamorphism. This WG will also look at the impact of emplacement of the igneous intrusions, which causes deformation on megascopic scale, such as folding and fracturing, columnar jointing, and other megascopic alterations. The Conveners plan to meet the objectives through the execution of photomicrograph-based round robin exercises, which will have as direct output the preparation of Petrographic Atlas that will include megascopic and microscopic features of related to the impact of igneous intrusions on dispersed organic matter in coal seams and shales of various rank and thermal maturity. The focus of activities during the last year was the launching of the first exercise comprising 22 images from 2 samples. The first sample is an Early Eocene coal, taken from a borehole. The coal layer is located between two magmatic intrusions, and at 10.55 m depth from the upper magmatic intrusion and 105.95 m above the lower magmatic intrusion. Background coal sample has a mean random reflectance of vitrinite (mainly eu-ulminite A) that varies between 0.46 and 0.60% (0.53% average) and belongs to the Suluova coal from Amasya-Suluova Basin, in Turkey. The second sample is a heat-affected bituminous coal collected from a working open-cast mine Zonguldack of Late Carboniferous age (Westphalian A). The background coal for open-cast mine has a reflectance of 0.89% to 1.17% Rr (after Ünal-Kartal and Karadirek, 2024); 0.69% to 1.21% Rr. The Conveners express their gratitude to Professor Ali Ihsan Karayigit (Hacettepe University, Turkey) for sending the samples.

The objective of the first Round Robin (RR) exercise was, primarily, to assess the setup of the exercise, including: type of images, e.g., non-polarised and polarised reflected white light, the addition of a lambda plate, fluorescence mode; random reflectance (VRr%), maximum and minimum reflectance, the use of squares and pointers to indicate the materials that are being evaluated; and appropriate categories. Sandra showed examples of the images sent to the participants together with the layout of the Excel spreadsheet distributed for the submission of results.
The participants were asked to assess the type of material (organic carbon or minerals), and characterize the organic materials according to the optical anisotropy (isotropic or anisotropic), the degree of thermal alteration (altered or non-altered macerals), and the newly formed particles (natural coke, pyrolytic carbon, graphite-like or coked bitumen). They were also asked to characterise the observed microstructures (devolatilization pores, microfractures, coal/coke breccia, microfolds or injection of molten material), and to identify metallic vs. non-metallic minerals. The participants were asked to always select an option even if that is the “not applicable” option because the assessment of the inter-participant reliability across the different categories (6) was done using the Fleiss’ κ for multi-participant, multi-class data, alongside per-image consensus, class prevalences, and multi-tick rates; ratings, which were valid when exactly one category was selected.
Sandra showed examples of the images under each of the categories together with the characterization results from the participants and discussed some of the outcomes and comments the Conveners received form the participants. She indicated that the Conveners initially intended to include maximum and minimum reflectance values on the images to assist with the optical anisotropy, but decided to remove that information from the images, so that the participants rely more on the visual changes in the polarised and lambda plate images. No participant requested to add maximum and minimum reflectance. But this doesn’t mean that it would not be necessary for other samples.
With regards to the use of squares and pointers to indicate the materials that are being evaluated Sandra commented that in general, the participants understood that the red pointer determined what needed to be characterised, but there were cases where the participants characterised what was around the red pointer, particularly when the red point was in a devolatilization pore, and the participant chose to characterise the coke material.

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Out of the 11 analysts receiving the exercise material 6 returned their results at the time of the meeting and the Fleiss' kappa quantification suggests that highest agreement was achieved for the distinction between organic carbon and mineral and for the mineral characterisation. Characterisation of microstructures had the lowest coefficient suggesting the lowest level of agreement among participants. Sandra commented that this level of identification should probably be independent of the rest and appear earlier in the characterisation scheme to improve agreement.
She concluded the presentation by thanking those who returned their results on time for the meeting and asked the floor for suggestions and ideas for the next exercise.

Discussion:
Stavros Kalaitzidis congratulated Sandra and the other three Conveners for the great exercise and asked why the introduced the area within a square in the component to be identified and not a single point instead.
Sandra stated that perhaps the square is not necessary and maybe a single point will be given in the next exercise. An additional reason is that maybe you need minimum and maximum reflectance needs to be determined R%.
Stavros agreed that this could be a good reason and inquired whether the "not applicable" category is necessary for the characterisation of the components and the observed textures.
Sandra commented that when a devolatilisation pore occurs some of the features are not applicable.
Stavros added that if it is for quantitative reasons the pores and cracks do not matter but for qualitative determinations it would be applicable.
Sandra stated that it may be good to have the micropores included in the microstructures and not "not applicable" category. She also asked the opinion of the audience on what qualifier to use for pyrolytic carbon, newly-formed?
Nikki Wagner commented that it may be useful to adopt an approach similar to that of the Self-heating WG.
Commission II congratulates Sandra, Jolanta, Magda, and Sue for executing the exercise under the WG and presenting the results to the meeting.

<u>17:30 – 18:00 – Closing Remarks – Joan Esterle & Costadis Perleros</u>
The acting chair of Commission II, Joan Esterle, closed the meeting of the Commission II by congratulating all Conveners and participants, and asked for proposals from the floor for new working groups, related to the ideas presented in the

opening session or new ones. No further proposals for new working groups were received and no comments or suggestions were added from the floor, and Commission II concluded its activities during the 75th ICCP Meeting.

The meeting of Commission II ended at 18:00 on September 18th 2025.
Commission II congratulates and recognizes all of the significant and valuable work of the Conveners and Participants, thanks all ICCP Commission II Attendees, and gives special thanks to Joan Esterle and Costadis Perleros for stepping in and executing the duties of acting chair and secretary, respectively.

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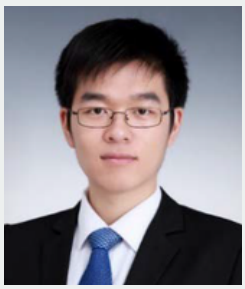

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MINUTES OF COMMISSION III

INDUSTRIAL APPLICATION OF COAL AND ORGANIC PETROLOGY

Chair: Sandra Rodrigues (s.rodrigues@uq.edu.au)
Secretary: Małgorzata Wojtaszek-Kalaitzidi (mwojtaszek@itpe.pl)

Opening remarks:

The sessions of Commission III took place on Saturday, 20th (WGs and AP) and Sunday, 21st (microscope session) of September. Fifteen ICCP members attended the session of Commission III. The Chair, Sandra Rodrigues, opened the Session by welcoming attendees. She presented the status of several WGs, which have been active or partly active during the past few years. Sandra described the activity of Com III on Facebook and invited conveners and participants to send photos and short notes to publish on social media.

Commission's III sessions included presentations of the following WG's:

· Microscopy of Carbon Materials
· Coke Petrography
· Self-heating of Coal and Coal Wastes
· Optimisation of Reflectance measurements on complex blends
· Liquefaction Residues Classification
· Environmental Application of Organic Petrology
· Biochar Reflectance

As well as the report on the activities and results of the 2024-2025 Coal Blends Accreditation Program.

The Commission III microscope session took place on Sunday, 21st September, in the morning and was attended by at least 14 participants. During the session, samples of black mass from electronic wastes and coffee grounds biochar were observed and discussed. Some of these materials will be integrated in futures activities of the Carbon Materials WG. The Chair and Secretary thank the organisers for making the microscope available for these technical sessions, as they significantly increase the engagement and interest of the participants in the meeting.

We also surprised the ICCP President, Stavros, with a birthday cake and a gift. As always (😊), he looked very surprised that we remembered his birthday.

1. **Microscopy of Carbon Materials** – Małgorzata Wojtaszek-Kalaitzidi

The Convenor, Małgorzata Wojtaszek-Kalaitzidi, opened the meeting and welcomed all participants. She began with a summary of the current status of the Working Group, noting that activities had been paused over the past year following the departure of the previous long-standing Convenor, Georgeta Predeanu. Małgorzata then outlined the proposed strategic direction for the group, introducing a new research focus on carbonaceous materials derived from electronic waste and black mass.

The key initiative for the upcoming term will be the development of a classification system under the working title "Classification of Recycled Graphite from Electronic Wastes." She highlighted the scientific and organisational challenges associated with establishing such a methodology and emphasised that this will represent one of the group's central long-term objectives.

To support this expanded scope of work, Małgorzata proposed restructuring the leadership model and appointing two additional co-convenors: Patricia Álvarez from INCAR and Bruno Valentim from the University of Porto, both recognised experts in carbon materials research. Both candidates expressed their willingness to accept the roles, and the proposal received strong support from the participants.

Małgorzata also presented a concept for developing a comprehensive Atlas of Carbon Materials and Carbonised Materials and shared a preliminary draft of its planned structure. She proposed establishing an editorial board comprising: Małgorzata Wojtaszek-Kalaitzidi, Georgeta Predeanu, Sandra Rodrigues, and Patricia Álvarez.

Participants responded positively to the initiative, expressing strong interest in contributing expertise and reference material. During the open discussion, several scientific and organisational considerations were raised. Nikki Wagner asked how the group plans to utilise information about the different carbon types present in electronic waste samples. The convenor clarified that electronic components vary substantially in their carbon composition and contamination profile, and therefore, the identification and quantification of individual carbon types are crucial. She added that the industry currently treats recycled material simply as "black mass," and manufacturers require detailed specification of its constituents to improve processing efficiency and recovery potential. Patricia Álvarez reinforced the importance of quantifying graphite content in particular, while Stavros Kalaitzidis noted that this topic is of growing significance in metallurgical applications due to the increasing demand for liberated graphitic materials.

Further discussion concerned the structure and visual requirements of the proposed atlas. Joan Esterle suggested that images should be presented under different illumination conditions, noting that not all laboratories are equipped with λ-plates. Patricia Álvarez recommended including complementary analytical methods—specifically Raman spectroscopy and SEM-EDS—to support microtextural interpretation and improve confidence in material identification.

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Nikki Wagner expressed interest in contributing reference material related to pitch and coke derived from gasification products. In response, the convenor proposed establishing a shared online working space to facilitate contributions, document exchange, and collaborative manuscript development. Tamas Hamor remarked that such an atlas would likely be of high value and interest to the European Union.

2. **Coke Petrography -** Małgorzata Wojtaszek-Kalaitzidi

The Convenor, Małgorzata Wojtaszek-Kalaitzidi, presented an overview of the activities undertaken by the Coke Petrography Working Group during the past year. She summarised the status of the Round Robin Exercise conducted in 2025, referred to as Exercise #4, which aimed to assess the accuracy and reproducibility of identifying coke optical textures based on a simplified classification approach. For the first time, the exercise was performed in parallel in two separate groups: one consisting of petrographers experienced in coke petrography and another consisting of less experienced participants. This design was intended to determine whether experience level affects the variability of results and to what extent.

The exercise incorporated a self-evaluation component. Although both versions of the exercise were identical, the responses were recorded separately to allow independent statistical analysis. Participants were instructed to identify coke optical texture types displayed in a collection of photomicrographs provided through Google Forms.

The analysis of the collected data demonstrated no substantial difference in the level of agreement between the experienced and less experienced petrographer groups. No variation was detected in the classification approach within each group, and both groups encountered challenges with the same textures and specific photomicrographs. The most frequent difficulty involved distinguishing between elongated forms and visually similar texture types. Overall, more than 60% of submitted results achieved agreement levels equal to or exceeding 85%.

On the basis of these outcomes, it was concluded that refinement of the current classification framework, particularly regarding elongated textures, may further improve consistency and clarity of interpretation. The recommended next steps include applying small modifications to the existing classification system and repeating the exercise in a revised format.

In addition to reporting on the Round Robin results, the Convenor introduced upcoming areas of work for the Working Group. These include advancing biocoke petrography with a focus on differentiating biocarbon components such as biochar from organic inertinite, as well as continuing work on bireflectance analysis using physical samples.

Joan Esterle asked what to choose when there are multiple textures inside the square. The convener explained that in such cases the participant needs to choose the texture that is above 75%, because it is not always possible to separate the textures. Peter Crosdale suggested adding the 75% rules in all the slides, so people don't forget. To solve this problem, Stavros Kalaitzidis suggested having two photos, one with a square and another one with an arrow to the texture of interest. He also commented that the textures in the corners of the images sometimes don't have good resolution compared with the middle and suggested avoiding selecting areas in the corners of the microphotographs. Stavros also asked the convener what her target for the exercise was. She had already reached an agreement of 85% between participants or textures. The convener wants to reach 90% of agreement.

Joan Esterle asked what is relationship between texture and porosity? The convener explained that texture is related to the chemical behaviour of coke in blast furnace, while porosity is related to mechanical behaviour and access of the oxidants. Peter Crosdale commented that this simplified classification is much accessible to participants. He also asked the convener to explain the mosaic textures and suggested adding pictures to clarify the type of textures. The convener explained that in the mosaic texture, the domains very well defined.

Nikki Wagner asked if biocoke would fit in this WG? The convener said that, despite being also metallurgical coke, it has biochar added to reduce "emissions", it would be better not to mix the two in the exercise. Joan Esterle commented that there would probably be more people willing to do the exercise in biocoke than in traditional coke petrography.

3. **Self-heating in coal and coal waste dumps** – Jolanta Kus, Magdalena Misz-Kennan, Deolinda Flores

The presentation on the activities of the group was delivered by Jolanta in the form of a prerecorded presentation. She summarised the achievements

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and challenges arising from the most recent exercise and provided an overview of its structure and implementation. The objectives of the 2025 SHWG exercise was to apply and to test the established classification of oxidatively and thermally affected organic matter in self-heated coals. Also, to test the modified terminologies of the following categories: altered and newly formed, porous and massive, isotropic and anisotropic, and natural cokes and "pseudomicrinite".

Jolanta explained that the exercise had been prepared with the support of Alexander Zdravkov who designed the exercise in Google Forms. She noted that while the format is convenient and user-friendly for participants, allowing the tasks, instructions, and images to be viewed together on a single screen, the process of creating such an exercise in Google Forms is technically demanding and requires significant time and effort. Seventeen participants delivered the results. The convener attributed the general improvement in the Level of Overall Agreement (LOA) in the last round due to the modification of the categories mentioned above and performance of the exercise using Google Forms. The conveners thank the participants for their commitment and feedback and to Alexander Zdravkov for the design, preparation, support, monitoring, verification, and setting up statistical evaluation of the incoming results of this exercise

Following the presentation, Nikki commented that participating in exercises conducted via Google Forms is highly enjoyable and efficient from the user perspective. She highlighted that consolidating images, instructions, and response fields into one interface ensures clarity, reduces confusion, and creates a well-organised workflow for analysts.

4. **Coal Blends Accreditation Program** - Małgorzata Wojtaszek-Kalaitzidi

Małgorzata Wojtaszek-Kalaitzidi presented the report summarising the completed round of the Coal Blends Accreditation Program. She reviewed the organisational framework, including rules applied during the exercise and the principles used for evaluating participant performance. Małgorzata also reported on participation levels and overall success rates. Participation numbers have remained relatively consistent over recent years, although each round continues to include a substantial group of first-time participants a proportion consistent with the failure rate observed in the previous round. The 2024 CBAP exercise was considered successful.

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Participants whose results demonstrated the lowest performance, shown through high AUMSD values (>1.5) and/or significant bias in ASMSD, were formally notified and provided with recommendations for improving their analytical approach in future rounds.

Małgorzata also presented the financial report and budget summary for the CBAP programme. The total cost of conducting the most recent round amounted to 616 EUR, with more than half of the expenses associated with shipping samples to participants. During the discussion, concerns were raised regarding the current participation fee structure, particularly in cases where shipment costs to certain global regions exceed the actual registration fee for the programme. Although the Convener makes every effort to send packages using standard postal services to reduce costs, this approach is not always successful. In some instances, parcels have been returned or lost, requiring reshipment via courier services, which substantially increases the total cost of distribution.

Nikki Wagner suggested sending feedback on the evaluation of the results, especially for the participants who failed, so that participants can learn from the feedback. The convener will discuss this with the ASC to see if it is possible to extract this information from the database.

5. **Optimization of reflectance measurements on complex blends**- Ashok Singh, Joan Esterle

Joan Esterle gave a presentation on behalf of Ashok Singh regarding the required number of petrographic measurement points in coal blends, raising the question of whether 100, 250, or 1000 points should be used, given that the ISO standard specifies 1000. It was noted that performing 1000 measurements manually is very difficult, and Joan will request the raw data from Ashok to support further discussion. During the meeting, Peter Crosdale suggested using modelling or simulation approaches to determine the optimal number of points needed in such complex blends. Stavros Kalaitzidis emphasised that Indian petrographers should follow ICCP procedures and reminded the group that this was the main reason the Working Group was established.

Joan highlighted the need to encourage Indian petrographers to join the CBAP program and proposed that a recommendation should be made to revise the ISO standard, since India is required to follow it. Nikki Wagner agreed that the ISO standard requires revision, especially because blends are not specifically addressed in the current version. She also pointed out that microscope calibration requirements—sometimes every 15 points—make counting 1000 points even more challenging in practice.

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Stavros suggested inviting someone from India to join the Working Group to strengthen participation and representation. Joan confirmed she would coordinate with Ashok to identify another Indian representative, noting that this issue is particularly relevant for India, as the country uses coal sourced from many different regions worldwide.
There was a discussion about whether the working group should be closed; however, all agreed that complex blends are important, but since both the current convenors are retired, someone else might take over the working group. Margo, although she has a lot of work to do already, put her hand up. Ashok informed later that from the Indian group Dr Priya Kumari from CSIR-CIMFR, India, will work with Margo and Ashok Singh will also be available to work with this team in another academic capacity.

6. **Liquefaction Residues Classification** – Henny Gerschel

The presentation on the activities of the group was delivered by Sandra Rodrigues on behalf of Henny Gerschel. Sandra reported the results of the recently completed exercise focused on the classification of residues from the hydrogenation process and presented the draft manuscript proposed by Henny. She outlined the first drafted version of the proposed classification system for liquefaction residues, which includes a preliminary nomenclature of the microscopic components of solid residues together with descriptions of their optical characteristics. Sandra noted that many of these identified components may serve as indicators of technological process performance and efficiency and therefore the classification has the potential to support process evaluation and optimisation.
Sandra then summarised the feedback and concerns expressed by participants during the exercise. These comments related primarily to the suitability of the samples selected, the clarity and resolution of the photomicrographs, and ambiguities in the accompanying instructions. Several participants reported inconsistencies between the images provided and the requirements of the classification task. Additionally, weaknesses were identified in the proposed classification system itself.
It was reported that comments on the draft manuscript have already been received from Magda Misz-Kennan and Sandra Rodrigues, and these have been incorporated into the current version, which was circulated as an appendix to this exercise. Based on the results, the overall level of agreement among participants ranged from 85.8% to 98.6%, indicating relatively high consistency despite the concerns raised.
During the discussion, it was recognised that limited progress had been made since the previous reporting period. As a result, the group agreed that a new exercise should be conducted using clearer and more representative images, together with an improved version of the classification scheme. Magda offered to prepare a new set of 40 images using samples from hydrogenation experiments performed by S. Pusz, with the intention of distributing the material to participants before the end of the year.
Professor Yuegang Tang suggested that the revised classification system should explicitly include Vitroclast, and later added that mesophase and isotropic textures should also be incorporated. Stavros Kalaitzidis remarked that the content of the current draft manuscript does not sufficiently differ from the material published in the historical ICCP Handbook (1993) and emphasized the need to incorporate current literature, improved imaging, and modern examples before further publication can be considered.
Sandra confirmed that all feedback would be reported to the Convener and acknowledged the suggestion to evaluate potential future changes in group leadership. Stavros proposed that Professor Tang should take an active role in further refinement of the classification framework, in recognition of his expertise and contributions to the discussion.

7. **Biochar Reflectance** – Georgios Siavalas, Zhiheng Zhou, Hamed Sanei

Due to the absence of the designated conveners, George Siavalas and Zhiheng Zhou, Hamed Sanei delivered the presentation on planned activities. He introduced the topic of CO_2 storage using biochar and discussed the role of reflectance analysis as a tool for assessing biochar stability within this context. Hamed also outlined the proposed methodology for the upcoming Round Robin exercise and provided an overview of the expected analytical workflow.
A discussion followed concerning the need to design the exercise in a multidimensional format that would allow evaluation not only of reproducibility and methodological consistency, but also of the minimum number of measurements required for reliable statistical interpretation. The current recommendation of 500 reflectance points per sample was acknowledged; however, concerns were expressed regarding the substantial workload this represents, particularly for laboratories conducting manual point-counting.
Further discussion focused on defining the technical requirements of the exercise, including the analytical system to be used, sample grain size specification, the number of samples required, and whether specimens should be provided as polished blocks or powdered material.

MINUTES OF COMMISSION III CONTINUE...

Questions were raised regarding the possibility of using Hilgers scan-based images for the exercise. In response, Małgorzata explained that while Hilgers-based scans are available and highly calibrated, using them would eliminate many analytical variables that are essential to test in a real comparative study. She also noted that not all petrographers have access to Hilgers systems, which would limit participation and comparability.

8. **Environmental Application of Organic Petrology -** Georgios Siavalas and Stavros Kalaitzidis

The presentation on the activities of the Working Group on Environmental Application of Organic Petrology was delivered by Stavros Kalaitzidis. He provided an overview of the group's recent work, with particular focus on the first ICCP training course held in June under the same title. Stavros presented a detailed report summarising participation numbers, organisational aspects, the structure of the programme, and the results of the participant satisfaction survey.

During his presentation, Stavros introduced the training Handbook developed specifically for the course and outlined its contents and pedagogical approach. He emphasised that the Handbook contains a considerable amount of previously unpublished material representing original research contributions from the authors that is why was not provided in digital version to the participants. In light of its scientific value and relevance for future training, a proposal has been submitted to publish the manual as a formal reference volume through Elsevier.

Following this announcement, Nikki Wagner commented that publishing with Elsevier would be beneficial for visibility and academic credibility; however, she also suggested that an ICCP self-publication route should remain under consideration, as it may offer greater flexibility and accessibility for the organisation and its members.

Sandra Rodrigues raised a question regarding whether the training course included the identification of diatoms in recent sediments. Stavros clarified that, although diatoms are organic matter rather than contaminants, their identification was indeed covered during the course. In response, Maria Hámor-Vidó added that it would be valuable to explicitly include information describing the morphological appearance of diatom particles within the manual. She recommended adding a dedicated section on the subject to ensure clarity for less experienced analysts.

The session of Commission III was formally closed by the Chair, Sandra Rodrigues, on Saturday, 20th September, prior to the Commission III microscopy session. In her closing remarks, Sandra summarized the progress presented within the activities of the working groups. She invited all participants to engage actively in the work of the individual groups, emphasizing the benefits arising from the continued development of petrographic techniques for industrial research. She also expressed her appreciation to those who agreed to take on the role of new convenors. Furthermore, she noted that, given China's position as one of the fastest-developing countries worldwide, more active involvement of both ICCP and Chinese scientists in working group activities would be highly beneficial. Finally, Sandra informed the participants that no new proposals for the establishment of additional working groups within Commission III had been submitted.

Know your coal petrologist

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Prof. Kimon specializes in Peat/Coal Geology, Organic Petrology, Environmental impacts from peat/coal utilization, non-energy applications of peat and coal.

He has been an ICCP member for many years and previously was the convenor for the ICCP accreditation programs. We sincerely appreciate everything he has done and continues to do in the ICCP and organic petrology, even though he is (mostly) retired.

PhD Thesis Summary: Walter Pickel Travel Grant recipient

Residues from solid waste incineration: mineralogy, geochemistry, and resource potential

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Collaboration contacts: Dr. Michal Šyc (Institute of Chemical Process Fundamentals, Czech Academy of Science, Czechia), Dr. Jiří Hykš (Danish Waste Solutions, Denmark), Dr. Anna Potysz (Institute of Geology, University of Wrocław, Poland)

Introduction:

In Europe, non-recyclable waste often undergoes incineration process, which reduces its volume, decreases its hazardous character, and generates additional value (e.g., energy in the waste-to-energy plants) (Li et al. 2004). Various types of residues (bottom ashes, fly ashes, etc.) are produced by the incineration (Abanades et al. 2002). These residues might concentrate potentially toxic metals (e.g. Cu, Zn, Pb, Ni, Cr, Co) to much higher extent than found in the original waste (i.e. thousands of ppm) (Li et al. 2004). These elements might be considered either as a threat (environmental pollution) or a resource (metal recovery) (Šyc et al. 2020).

Waste incineration residues consist of various phases, including crystalline mineral-like phases, amorphous glass, and organic matter (with all phases being potential carriers of metals) (De Matteis et al. 2024). Detailed description of the phases presented in the residues provides insight into incineration process itself (and its influence on chemical and phase transformation of the waste feed) and enables to decipher leaching properties of the material. On the other hand, conducting leaching/extraction tests provides answers regarding elements' leachability (Dijkstra et al. 2006), which is crucial for both evaluating hazardous properties of the material and pointing out a recovery potential (all investigation steps required for an incineration residue sample are presented in Fig. 1). Finding a way of providing feasible metal recovery is of a great interest within the frame of the project.

Bottom ashes:

Main type of residue investigated extensively so far are bottom ashes. Bottom ashes constitute the most abundant solid residue from waste incineration (ca. 80% of all incineration residues). They concentrate non-volatile elements (Si, Al, Fe) unlike fly ashes, which comprise elements more susceptible for being volatilized (K, Cl). Both residues contain elevated concentrations of metals, with metals distribution between these residues strongly depending on elements` tendency to become volatile (e.g. Cu, Ni and Co end up in bottom ashes as less volatile, while Zn or Cd are readily volatilized and concentrate within fly ashes) (Abanades et al 2002).

Bottom ashes are mostly composed of Si-rich glass, also containing silicate-like phases (e.g., pyroxenes, melilite, quartz), oxides (spinel family oxides), metal sulfides and metallic alloy particles (Li et al. 2004; Saffarahazdeh et al. 2009; Zhu et al. 2021). However, other phases, such as phosphates, carbonates, and organic matter, can be found in the bottom ashes as well (Fig. 2).

Bottom ashes from waste incineration, unlike fly ashes, are considered as non-hazardous wastes, due to lower metal content and their lower leachability compared to fly ashes, which are generally classified as hazardous material. Although, long-term (i.e. years) extensive metal extraction has been observed for bottom ashes as well, which pose a question about their environmental stability (Gianfilippo et al. 2018). Presence of metals and their mobility within bottom ashes might restrict their secondary utilization in construction sector (roads construction, supplementary cementitious material, etc.) (Chen et al. 2023; Joseph et al. 2020). Therefore, bottom ashes cleansing from metals might be considered both as a material preparation process and a metal recovery process (Šyc, et al. 2020).

Although bottom ashes from municipal waste incineration are widely investigated regarding phase composition, metal concentrations and leaching properties, bottom ashes originating from incineration of hazardous waste (e.g., hospital and industrial waste) received much less attention. Detailed petrological and geochemical investigation (both on non-organic and organic constituents) can improve our understanding of hazardous waste incineration process and highlight the behavior of bottom ashes under variable conditions.

Organic matter:

Organic substances are present in the incineration residues, including bottom ashes. Most of the research focused on organic geochemistry and leachability of organic from waste incineration bottom ashes so far, not giving broad attention to a detailed organic petrology description (Arickx et al. 2007; Dugenest et al. 1999; Guimaraes et al. 2005; Van Zomeren & Comans 2009; Zhu et al. 2021).

PhD Thesis Summary continued...

Waste incineration bottom ashes, as example of residue from solid recovered fuel (SRF), differ from bottom ashes known from power plant combustion bottom ashes.

So far, organic matter was encountered in many samples of bottom ashes, revealing some diversity in size and internal structure, although detailed description of petrographic features is still proceeded.

Recognition of organic compounds might help in understanding of the influence of incineration process on the original organic substances in the waste feed. This can also be helpful in deciphering the degree of reactivity of organic matter, which can be of great interest since some metals (i.e., Cu, Mo, V) might be concentrated in organic fraction of waste incineration bottom ashes (Arickx et al. 2007; De Matteis et al. 2024).

Additionally, some geochemical parameters, such as measurements of TOC, can improve the description of organic components. The bireflectance measurement or Raman spectroscopic measurements can help to decipher the peak temperatures of incineration or degree of structural order might be deduced.

Conclusions:

Preliminary results of this study have already been presented on the mineralogical and geochemical conferences (i.e. Goldschmidt2025, Meeting of the Mineralogical Society of Poland 2025), highlighting diversity in phase and chemical compositions of hazardous waste incineration bottom ashes, along with the evaluation of their resource potential:

·Wolszczak M., Ettler V., Šyc M., Hyks J. Bottom ashes from a hazardous waste incinerator: temporal variability in mineralogical and chemical compositions. Goldschmidt 2025 6-11 July 2025, Prague, Czechia: https://www.researchgate.net/publication/393679631_Bottom_ashes_from_a_hazardous_waste_incinerator_temporal_variability_in_mineralogical_and_chemical_compositions

·Wolszczak M., Ettler V., Šyc M., Hyks J., Korbelová Z. Resource potential of hazardous waste incineration bottom ashes: phases composition and metal leachability. 30th Meeting of the Petrology Group of the Mineralogical Society of Poland "How Can Mineralogical Sciences Support the Mineral Resources Industry?" 16-19 October 2025, Lubliniec, Poland: https://www.researchgate.net/publication/396807280_Resource_potential_of_hazardous_waste_incineration_bottom_ashes_phases_composition_and_metal_leachability

Further investigations, including different leaching and recovery tests and description of organic components of the incineration residues are planned for the future.

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PhD Thesis Summary continued...

Fig. 1 – Summary of investigation route for incineration residue sample, indicated by red arrows: composition investigating, leaching tests and then composition investigation of post-leaching material; abbreviations: XRD (X-ray diffraction), RL (reflected light), SEM-EDS (scanning electron microscopy with energy-dispersive spectroscopy), EPMA (electron probe microanalysis)

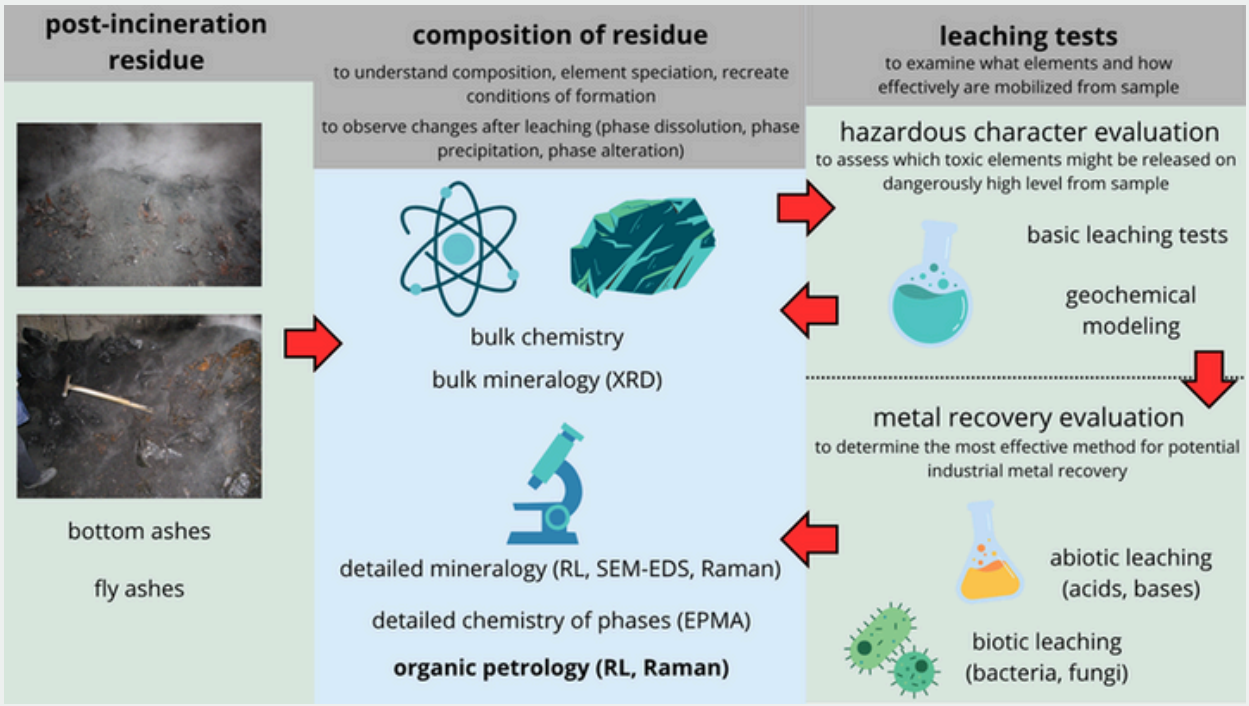
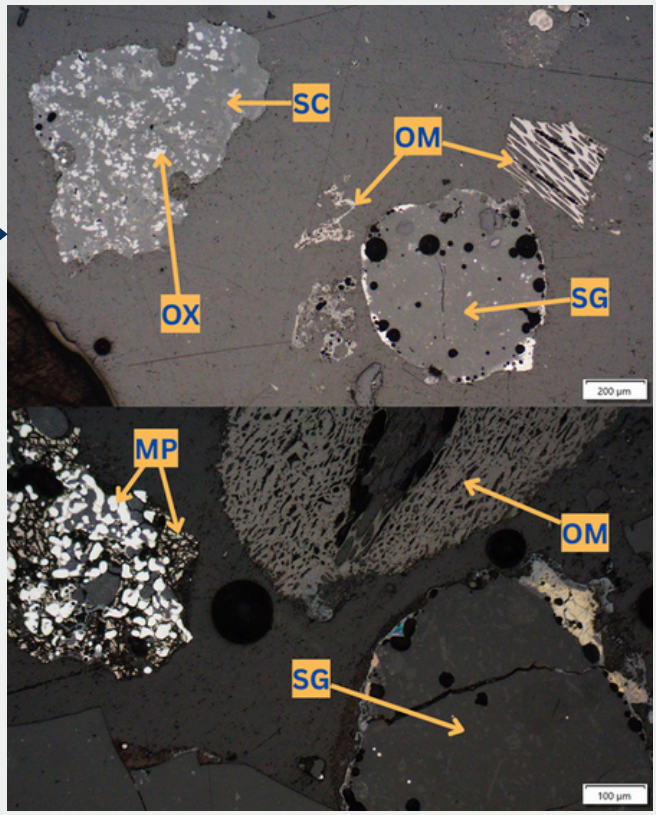


Fig. 2 – Examples of phases encountered in bottom ashes under reflected polarized light (no oil immersion applied); slag particles (SG), oxides (OX), silicates (SC), organic matter (OM) and metal-rich phases (MP).



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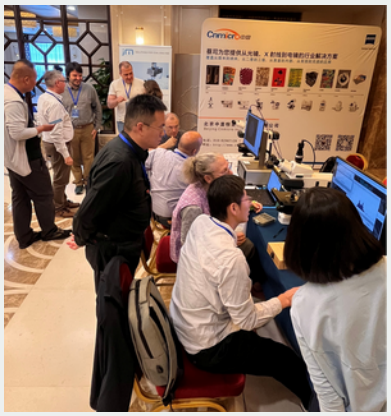

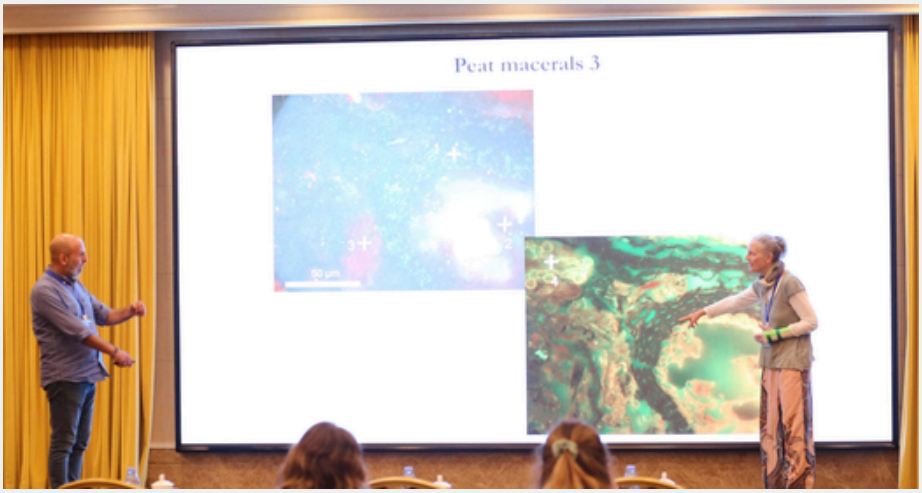

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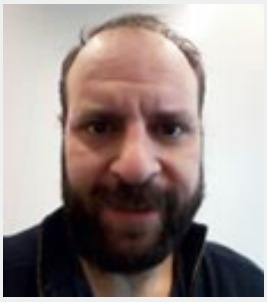

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