ICCP NEWS No 85, ARPIL 2023



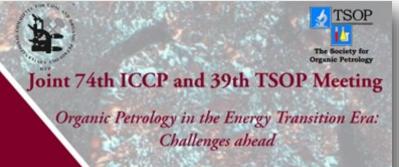
Newsletter of the International Committee for Coal and Organic Petrology (ICCP). Founded 1953. <u>http://www.iccop.org</u>







SKELETAL PECKING BIRD (fusinite) DANCING MAN (pyrite) THE SWAN (self-heated vitrinite) What have YOU seen under your microscope recently?



17 - 24 September 2023 Conference and Cultural Centre University of Patras



INCLUDED IN THIS NEWSLETTER P.4 ORGANIC PETROLOGY AWARD P.5 STATUTES CHANGE P.6 ICCP COURSE 2023 P.6 STANDARDIZATION WG P.6 HISTORICAL ACCREDITATION P.8 KNOW YOUR PETROGRAPHER CHAL-LENGE P.9 NEW MEMBERS P.10 ICCP MEETING 2024 P.12-13 STUDENT SUBMISSIONS P.14-15 ICCP MEETING PATRAS 2023 P.15 TSOP SHORT COURSE 2023

EDITORS COLUMN

Dear All,

The first quarter of the year has passed us by, and seasons change once again. Time flies, as do birds – two ' birds' were recently identified in coal samples, as well as a dancing man (front cover – refer to page 11). I hope those who celebrated Easter, Pesach, Ramadan, or other holidays recently had a festive and peaceful time.

The ICCP Council and Working Groups have been busy on a number of things, as reported in this Newsletter. Dr Borrego has re-established our connection with ISO, and she has also created a page on the ICCP website documenting the history of the ICCP Accreditation program (refer to page 6). The ICCP ballot on an amendment of the Statutes has been completed (refer to page 4). With regards to the Accreditation programs, those who participated should have received their SCAP and DOM-VR certificates in March – if the emails did not reach you, please contact the respective convenors. The CPAB deadline is in a few months.

The arrangements for the 2023 ICCP meeting in Patras are proceeding well and registrations are now open: 2023 Joint 74th ICCP and 39th TSOP Meeting | ICCP (<u>ICCP - International Committee for Coal and Organic Petrology (iccop.org)</u>– early bird registration closes 15th June. The theme for the combined ICCP/TSOP Meeting is: **Organic Petrology in the Energy Transition Era: challenges ahead (p.14). Please refer to the announcement on p.15 for the 2-023 ICCP-TSOP Short course.**

Unfortunately, Henny Gerschel informed the President that Freiberg University will no longer be able to host the ICCP Meeting in 2024. Angeles has stepped in and has invited the ICCP to join her and her team in Oviedo in 2024 – refer to page 9. I am certainly looking forward to visiting Oviedo again and sampling the food and drink of the region. Shifeng Dai recently confirmed that the 2025 ICCP Meeting in China will continue, although it is no longer combined with TSOP.

We also welcome 6 new ICCP members (page 8); it is always great to know that organic petrology remains relevant and adaptable to the changing environments. Associate members, please do remember you may apply for full membership (Application | ICCP (ww.iccop.org)); this will enable you to sponsor new ICCP members.

In the previous Newsletter I challenged the ICCP to identify those colleagues who attended the 57th ICCP Meeting (2005) in Patras. Thank you George Siavalas for taking up the challenge (reported on page 8)! George says he does have a bit of an unfair advantage as he was in charge of registrations for that meeting!

Happy reading – and please continue to send images / content / comments. I am certain that students have some contributions to make too – especially in terms of their final thesis abstracts. Let's make this Newsletter lively and informative! Best regards,

Nikki Wagner, Editor of the ICCP News.

INSTITUTIONAL MEMBER



Obituaries

Dr AHV (Harold) Smith died in Sheffield on 4th January aged 99. He was awarded the Thiesen Medal in 1990 and in 1992 became an HONORARY member of the ICCP. His papers on coal microscopy, lithotypes, pseudovitrinite, amongst others, are still referenced today. Thank you to his son for informing us of Dr Smith's passing. In his email, Graham wrote: "I know my father was immensely proud of the work he did with the ICCP". Graham would really appreciate any feedback on his fathers' contributions to organic petrology and the ICCP (**please contact the Editor**).

Madame Arlette ROBERT Née RAFFOUX, son épouse, Monsieur Guy ROBERT, son fils, et Madame Anne ROBERT, Madame Marie ROBERT-SCHMID et Monsieur Mathias SCHMID, Madame Pauline CHERIF et Monsieur Ilies CHERIF, Monsieur Camille ROBERT, ses petits enfants, Issam, Ines et Medine, ses arrières petits-enfants, et toute sa famille ont la douleur de vous faire part du décès de

> Monsieur Paul ROBERT Survenu le 07 décembre 2021 à l'âge de 92 ans

La bénédiction aura lieu à 8 h. le Merce au crématorium de TARBES suivie à 9 (Route de Tarbes, 65380 Azereix Tél

Arlette ROBERT 401, Rte de Landorthe 31800 Sai arlette.robert0579@orange.fr

R.I.P.

We also remember Gilles Nicolas who passed away in 2020 after a long illness.



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



KNOW YOUR PETROGRAPHER CHALLENGE

In 2023 the ICCP Meeting will take place in Patras. The family portrait above is from the 2005 Patras Meeting. How many organic petrologists do you recognize?

One petrographer rose to the challenge—see page 8.

PRESIDENT'S COLUMN

Many things have occurred since the last issue of the Newsletter by the end of the year. The accreditation rounds for SCAP and DOMVR have been completed and the participants have received their evaluation and diplomas, congratulations to all those who passed. We are now immersed in the submission of results for the CBAP. I would like to thank the organizers, treasurer and accreditation sub-committee for another successful round of the accreditation programs which is of major relevance for the ICCP.

We have now complete information about the forthcoming meeting in Patras in our webpage. This will be the first meeting which will run only in-person after the two hybrid meetings held in Prague (2021) and New Delhi (2022) due to the pandemic. It will be also a joint meeting with TSOP and therefore a nice opportunity to meet colleagues and friends after a long period of travel restrictions. Patras is also confirmed as the new venue for the ICCP training courses. Last year a well-attended course on General Organic Petrology took place. In 2023, right after the ICCP meeting, a course centred on Dispersed Organic Matter will take place. The registration is also open – please refer to the website.

We knew at the beginning of the year that it was no longer possible to hold the 2024 Meeting in Freiberg as initially planned. This offered me the possibility of inviting ICCP to come back to Oviedo. Many of you already know the town because it will be the fourth time that a meeting will take place here, although the last meeting was 15 years ago and we have welcomed many new members since then. Council has approved this invitation as the venue and rooms need to be booked as soon as possi-

ble. I am really pleased to be able to receive you in Oviedo where I am sure you will enjoy the meeting and social events. Full details will be provided at the meeting in Patras.

As you may know, the procedures for petrographic analysis of coal which have been developed by the ICCP are included with minor modifications in the ISO standards for petrographic analysis of coal. This has been possible through the participation of ICCP members in the meetings - sometimes formally (as during Lemos de Sousa presidency), and sometimes informally through the national representatives such as Walter Pickel who was coordinating the revision of ISO standards. ICCP has applied to become a Liaison Member of ISO and I will be attending the meeting in May in Delft on behalf of the ICCP. Further information is available in this issue. *[Editor: thank you for picking up this very important task, Angeles].*

In the first trimester of 2023, a ballot was conducted to modify the Statutes to allow for electronic voting. The proposal has been practically unanimously supported and you will find detailed information about the process and results in the inner pages of this Newsletter. I would like to thank our returning officer Rudi Schwab for his support in this process.

The ballot also allowed us to receive the sad news of the lost of two of our French members: Gilles Nicolas who passed away in 2020 after a long illness; and Paul Robert whom we lost in 2021 at the age of 92. We send the condolences to their families.

My wishes for Peace at the beginning of the year unfortunately have not been fulfilled in this first quarter and the war in Europe continues and, in many countries, armed conflicts are intensifying. I really wish war finalizes and you can safely travel to Patras where I wish to see all of you in September.

Angeles

2023 Joint 74th ICCP and 39th TSOP Meeting

17th – 24th September 2023

"Organic Petrology in the Energy Transition Era: challenges ahead"

The Organizing Committee has the pleasure to invite you to the Joint 74th ICCP and 39th TSOP Meeting, which will take place from 17th to 24th of September 2023 in Patras. Early bird registration by mid June,

Please visit the 2023 Joint 74th ICCP and 39th TSOP Meeting | ICCP (iccop.org)

For the Organizing Committee Kimon Christanis is Chair and Stavros Kalaitzidis, Executive Secretary



Organic Petrology Award

The Organic Petrology Award was established in 2003 during the 55th ICCP Meeting in Utrecht, the Netherlands. The Award recognizes significant contributions by coal and organic petrologists at an intermediate stage of their career.

The Organic Petrology Award is limited to applicants under 50 years of age. The award can be conferred every two years.

The award consists of a bronze medal and the Organic Petrology Award certificate.

Scientific contributions to consider include: scientific and/or practical contribution to various aspects of coal and organic petrology expressed, for example, in quality of the publication, their impact and significance, international recognition, scientific contribution.

Members submitting nominations should provide a letter of nomination, accompanied by any documents supporting the nomination, e.g. available or access to CV, web-based profile, list of publications etc.

The Organic Petrology Award Committee consists of the last five Awardees available.

The nominations should be sent to the Chair of the Subcommittee Dr. Magdalena Misz-Kennan (<u>magdalena.misz@us.edu.pl</u>), University of Silesia in Katowice, Faculty of Natural Sciences, Institute of Earth Sciences, Będzińska 60, 41-200 Sosnowiec, Poland.

Dr Jolanta Kus received the award in 2021.

Please submit confidential nominations to the Chair of the Committee: Dr. Magdalena Misz-Kennan, email to: magdalena.misz@us.edu.pl

Deadline for 2023 nominations: end April 2023

Refer to Awards | ICCP (iccop.org) for further information

PUBLISHED ARTICLE

First occurrence of Choanoflagellates, the closest living relative of animals, in the fossil record

Choanoflagellates are aquatic protists long considered to be the closest living relatives of the Metazoa. Thus, knowledge about the evolution of choanoflagellates is vital to the understanding of the ancestry of animals. Although previous studies suggest their appearance in the late Neoproterozoic, their fossil record is virtually non-existent, with no known specimens being described to date.

In a study recently published in Nature's Scientific Reports ("First putative occurrence in the fossil record of choanoflagellates, the sister group of Metazoa"), the first observation of fossil choanoflagellates in sediments from the Cretaceous (Cenomanian-Turonian) of Spain is presented, using advanced petrographic techniques.

This article is the result of an intense international multidisciplinary scientific collaboration, led by ICCP members Dr. Carolina Fonseca, and Professor João Graciano Mendonça Filho.

Open access at First putative occurrence in the fossil rec-

ord of choanoflagellates, the sister group of Metazoa Scientific Reports (nature.com)

DEADLINE

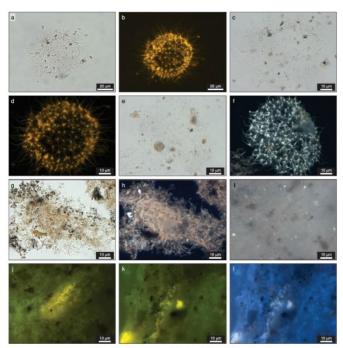


Figure 3. Photomicrographs of choanoflagellates from the Capas Blancas Mb. (*R. cushmani* Blozone) at Baños de la Hedionda. (a,b,c,d). Choanoflagellate with high preservation state (palynofactes slide). (ef,g,h). Amorphous choanoflagellate (palynofactes slide). (i,j,k,j). Choanoflagellate (whole-rock). Transmitted white light: (a,c,g). Reflected white light: (i). Fluorescence mode: (b,d,f,h,j,k,J).

Results of voting to update the ICCP statutes

From ICCP General Secretary Paul Hackley

ICCP members (full members) were contacted by mail and email in December 2022 to vote on a modification of the statutes to allow online voting. Here are the results:

> Number of written replies received before the deadline of 31st March 2023: 28 (twenty-eight)

> Votes in favor of proposed modification: 27 (twenty-seven)

> Votes opposed to proposed modification: 0 (zero)

⇒ Invalid votes: 1 (one; no option marked)

Six full members also informed the Returning Officer by email that they agreed to the modification, so support for the long overdue change was virtually unanimous. As expected, the voter turnout of 40% was very low. A no-answer was considered as a yes-vote

In summary, the motion to change the statutes to allow electronic voting was carried, finally moving ICCP into the 21st century. The updated statutes read as follows:

11. ELECTION OF OFFICERS

(c) Voting procedures

- (i) All elections shall be conducted by secret ballot. The Council shall invite a member of long standing, who is not currently associated with any elective position, to act as Returning Officer for elections to elective positions. The duties of the Returning Officer shall be to confirm votes sent in by members, and to send a summary of the votes cast to the General Secretary.
- (iv) All members eligible to take part in the election shall receive voting information from the General Secretary. This information shall contain the names of all candidates duly nominated. The vote will be made by clearly indicating the name of the preferred candidate. Completed election forms shall be sent to the Returning Officer.

14. ALTERATION OF STATUTES

These statutes may be altered by resolution proposed at a General Assembly provided that the resolution is carried by a majority of at least two-thirds of all Full and Honorary Members who cast a vote by ballot.

ICCP thanks the members who voted on the proposed changes to the statutes, and thanks ICCP President Angeles Borrego for mailing the postal ballots and Returning Officer Rudi Schwab for receiving and tabulating the votes.

74th ANNUAL ICCP MEETING HOSTED BY THE UNIVERSITY OF PATRAS, GREECE 17—24 SEPTEMBER 2023 JOINT WITH TSOP. CALL FOR ABSTRACTS

Call for Abstracts

Please follow the instructions on the Abstract template <u>https://www.iccop.org/</u> <u>documents/2023 iccp tsop abstract template author name.docx/</u>

and submit your abstract before 15th of June 2023 to (Max 8 MB) to iccp.tsop23@upatras.gr

For further information please visit the meeting webpage: <u>https://www.iccop.org/</u> <u>meetings/joint-74th-iccp-and-39th-tsop-meeting/</u>





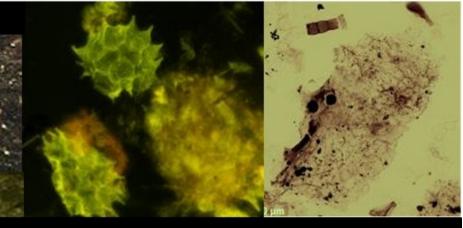






First Announcement





15th ICCP Course. Optical Microscopy of Dispersed Organic Matter: facies and maturity Patras, September 25-29, 2023

The International Committee for Coal and Organic Petrology (ICCP), in conjunction with the Department of Geology, University of Patras, is pleased to announce a training course in Optical Microscopy of Dispersed Organic Matter to be held in Patras, Greece between 25-29thSeptember 2023.

- The course is designed for professionals and students, and is not exclusively targeting organic petrologists but also those, who rather deal with petrographic data.
- The course is centred on the petrology of dispersed organic matter both under transmitted and reflected light with particular emphasis in the integration of the information from both observation modes. The course will cover identification of palynofacies components, macerals and procedures for the quantification of the different components. Challenges and common mistakes will be covered. Estimation of source rock maturity, geochemical and optical parameters, identification of vitrinite and measurement of vitrinite reflectance will be stressed.
- The Instructors will be Prof. João Graciano Mendonça Filho and Dr Angeles G. Borrego.

Course outline: The course will be held daily (25-29th September) from 9:00 a.m. until 5:00 p.m., with breaks for Due date for registration and payment is August 30th, 2023. morning and afternoon coffee/tea, and lunch.

The following items will be covered in the course: 1. Dispersed Organic Matter (DOM): Concepts and definitions. OM production, processes and sedimentation

OM evolution. Physicochemical transformation during maturation

2. Transmitted and reflected light microscopy techniques (white and blue light)

Sample preparation, modes of illumination, qualitative and quantitative procedures

3. Palynofacies. Identification and classification of components. Interpretation of results.

4. Identification and quantification of macerals and components 5. Maturity of organic matter: SCI-Spore Colour Index; spectral fluorescence parameters. Vitrinite reflectance measurement. Identification of indigenous vitrinite. Interpretation of results

6. Organic facies and case studies

7. Emphasis will be given to practical exercises. Practical ses-

sion facilities will be provided by Hilgers Technisches Büro, using a microscope coupled to an image projector equipped with FOSSIL software for reflectance measurement, documentation and training.

8. One full afternoon at least will be devoted to questions and problems in the materials the participants are dealing with in their research or technical works. The format will be as slide show to share and also the samples can be brought to the practical sessions.

Related activities: The course will take place right after the 2023 Joint 74th ICCP and 39th TSOP Meeting in the same location, therefore participants will have the chance to attend the fieldtrips organized around the meeting and the symposium sessions.

Registration and fees: Costs for the course include course notes. lunches and coffee-breaks. Cost for the course excludes travel, accommodation and meals other than during the course. The number of participants is limited to 20.

Registration (https://www.iccop.org/registration-form-for-the-15th-iccp-dom-course-in-patras-2023/) is now available.

A detailed outline of the course will be available on the website closer to the course.

- Company / Professional1300 € \rightarrow
- Government / Non-Profit 750 €
- ⇒ Student 250 €

Accommodation

Participants will have to arrange their own accommodation. . For any assistance please contact Dr. Stavros Kalaitzidis (skalait@upatras.gr).

Venue

Conference and Cultural Centre, University of Patras

For further Information https://www.iccop.org/course/15th-iccpcourse-optical-microscopy-of-dispersed-organic-matter-faciesand-maturity-patras-2023/

News from the Standardization WG (ISO)

The petrographic analysis of coals and dispersed organic matter is an activity of reference in the work of many ICCP members. The development of procedures and nomenclature was the reason to create the ICCP according to our statutes "to develop and publish definitive descriptions and methods to secure the continuing international exchange of scientific information relating directly or indirectly to organic petrology". The methods as stated in the ICCP handbook are covered in the corresponding ISO and ASTM standards without significant discrepancies. The exchange of the ICCP with ISO has always occurred but quite often has been through an informal path because some of our members were engaged in the national representation of their respective countries. In recent years Walter Pickel was coordinating the activities of the standardization Working Group of the ICCP and also those of the revision of ISO 7404 standards, an ideal circumstance which made possible the transfer of ICCP position to the ISO Subcommittee. The ISO 7404-1 and -4 dealing with Vocabulary and microlithotype analysis have been recently revised (2016 and 2017, respectively) but ISO 7404-2, -3 and -5 (sample preparation, maceral analysis and vitrinite reflectance measurements) still need revision. The projects have been cancelled for the moment due to the sudden and unexpected Walter's passing. At the meeting in New Delhi I made a short presentation within Angeles. (angeles@incar.csic.es)

the Standardization WG of the contributions of ICCP to the definition of the standards for petrographic analysis and it was agreed that I should continue pushing with the activities of the group.

The replacement of Walter Pickel will be impossible but still there are tasks that need to be performed. New source of light should be incorporated to the acceptable procedures because the microscopes have incorporated new technical developments, new polishing procedures are available which impact in the reflectance values, to mention some of the issues. These aspects need to be considered in the revised version of the standards and it is very important that the experience, opinion and view of the ICCP is taken into account when drafting the new versions. I have been in contact with the Chair and Secretary of ISO TC27/SC05 dealing with analysis of coal. They have guided us to apply to become a liaison member of ISO and I will be attending to the Meeting in Delf in May on behalf of the ICCP. It is important that those members who participate in your respective national committees or groups of discussion contact to me so that we can discuss and coordinate the activities. Very likely I will not be able to attend every meeting, but it is important that we have a task force able to transfer the position of the ICCP to ISO for continuing the fruitful feedback in the petrographic analysis of organic matter.

So please If you are interested in the discussions of the procedures and methodology for petrographic analysis of organic matter to be included in the standards, please contact to

Historical Development of ICCP Accreditation Programs

intends to keep the memory of this track and yield tribute to those who contributed with their work and capacities on a voluntary basis to build a remarkable success history of the ICCP. The first proposal for an ICCP Accreditation Program dates back to 1986 at the meeting in Doncaster (UK) and Dr. A. Harold V. Smith was instrumental in pushing the process. It was the vitrinite reflectance analysis and the maceral groups composition in coal the two kind of analysis that were considered mature enough to be part of an Accreditation Program. The accreditation procedures were first established at the meeting in Aachen (Germany) in 1988 and the two first round robin exercises were conducted by Dr. Reinhold Kutzner in 1993 and 1994 and the results were evaluated using the reproducibility criteria of ISO 7404. These exercises had a significant number of participants 25 (1993) and 37 (1994) and served to establish the number of samples to be analysed in the future for accreditation (6) and provided a significant amount of data to be statistically evaluated. A periodicity of two years was established at this stage for the Accreditation exercises.

Fixing the statistical Evaluation.

Two independent teams evaluated the data following different procedures:

i) A chi-squared test (c2) and analysis of Variance (ANOVA) performed by Dr. Willem Fermont and Dr. Petra David and ii) Applying the Standard Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method (ASTM E 691) carried out by Prof. Alan Davis, Dr. Alan C. Cook & Mr. Aivars Depers.

After significant discussion a Z-score technique was selected which is explained in the section Statistical Evaluation in Detail (https://www.iccop.org/accreditation/statistical-evaluation-indetail/). See Cook et al., 1997 (New Zealand Coal Conference).

The Accreditation Program of the ICCP has been the result of PLEASE REFER TO THE ICCP WEBSITE FOR FURTHER the joint effort of many people over the years and this section INFORMATION AND TO CHECK THE LIST OF ICCP AC-CREDITED PETROGRAPHERS.FOR THOSE NOT ACCRED-ITED, WE INVITE YOU TO PARTICIPATE IN THE NEXT ROUND (2024)

- Single Coal Accreditation Program: Organizer: Kimon Christanis (christan@upatras.gr)
- Dispersed Organic Matter Vitrinite Reflectance Accreditation Program: Organizer: Joao Graciano Mendonca Filho (graciano@geologia.ufrj.br)
 - Coal Blends Accreditation Program: Organizer: Małgorzata Wojtaszek-Kalaitzidi (mwojtaszek@ichpw.pl)





AHV Smith. Initial

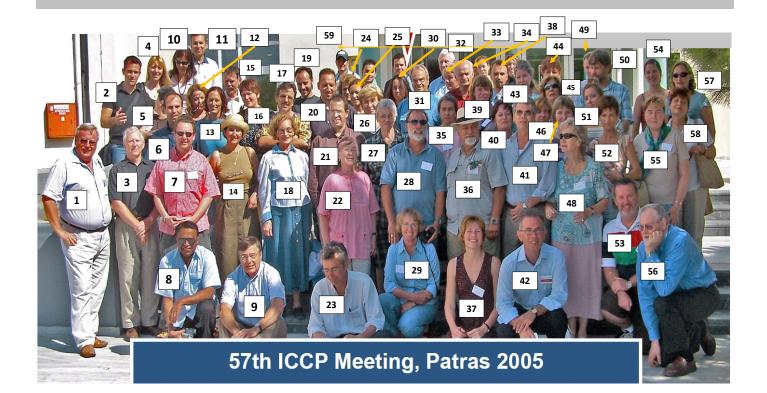
Reinhold Kutzner.

Historical Development of ICCP Accreditation Programs | ICCP (iccop.org)

KNOW YOUR PETROGRAPHER CHALLENGE

In 2023 the ICCP Meeting will take place in Patras. The family portrait above is from the 2005 Patras Meeting. How many organic petrologists do you recognize?

One petrographer rose to the challenge—THANK YOU GEORGE SIVALAS!



- 1 Krystian Probierz (?)
- 2. Stefanos Papazisimou
- 3. Harold Read
- Lila Gurba 4
- Krystyna Tokarska 5
- Stavros Kalaitzidis 6.
- 7. Bob Davis
- 8. Paddy Ranasinghe
- Gerd Bieg 9.
- 10 Carla Araujo
- 11. Ali Ihsan Karayigit
- 12 Kassiani Papanikolaou
- AngelesGomez Borrego 13.
- 14 Georgetta Predeanu
- 15 Wolfgang Kalkreuth
- 16. Petra David
- 17. Lopo Vasconcelos
- 18. CorneliaPanaitescu
- 19. GeorgeSiavalas
- 20. AntonisBouzinos

- 21. Paul Hackley
- 22. Ida Volkova
- 23. Walter Pickel
- 24. GiannisOikonomopoulos
- Tania Chatziapostolou 25.
- 26. Ivana Sykorova
- 27. Monica Wolf
- 28 Dave Pearson
- Jen Pearson 29
- Lia Mavridou 30.
- Rudy Schwab 31.
- 32. Carl Hilgers
- Darko Spanic 33.
- 34 Marco Ercegovac
- 35. DraganaZivotic
- Makis Antoniadis 36.
- 37. Regina Schafer
- 38. Rafal Morga
- 39 Magda Misz-Kennan
- NataliaPronina 40

- 41. Luis Flotte
- 42. Kimon Christanis
- 43. Jolanta Kus
- 44. Tamara Troskot-Corbic
- Zuleika Carreta Correiada Silva 45
- 46. DeolindaFlores
- 47. Maria Mastalerz
- 48 Barbara Kwiecinska
- 50. Grzegorz Nowak
- 51. Irena Kostova (?)

49

- 52. Victoria Kolomenskaya
- 53. Peter Crosdale
- Britta Hilgers 54
- 55. Irina Stukalova
- AlanCook 56.
- 57. HeikeLiszio
- 58 Maya Stefanova
- 59 Random Kimon's students

49-Rafal Morga

From Magda:

NEW ASSOCIATE MEMBERS —WELCOME TO THE ICCP

Surname: HANDLEY First Name: PETER Title: MR Position: Consulting Manager/Principal Geologist Degree: BAppSc Hons (Geology) Organization: Measured Group Postal address: 55 View Street, Wooloowin Brisbane Queensland 4030 Phone: +61 7 3220 1435 Email: peter.handley@measuredgroup.com.au / p_handley78@hotmail.com Sponsoring member: Prof Joan Esterle Commissions: 1, 2, 3 Comment: Peter has over 18 years' experience working as a geologist in Australia, with operational and technical experience in both open-cut and underground mining operations. Although not an active petrographer, Peter works with petrographic data to solve issues around the prediction of coal quality variation.

Surname: DOUDS First Name: ASHLEY Title: Ms. Position: Research Geologist Degree: Master of Science, Geology, West Virginia University Organization: Indiana Geological and Water Survey Postal address: 1001 E 10th St Bloomington, IN 47405 Phone: 8128554158 Email: adouds@iu.edu Sponsoring member: Prof. Maria Mastalerz Commissions: ?

Comment: Ashley has more than 20 years of experience in petroleum geology of both conventional and non-conventional systems, and recently joined the organic petrology laboratory at ICGS, USA

Surname: RIMMER First name: SUE Title: Emeritus Professor

Degree: PhD. Geology, Penn State.

Organization: Geology - School of Earth Systems and Sustainability, Southern Illinois University Postal address: 201D Parkinson Laboratory - Mailcode 4324 1259 Lincoln Drive Carbondale, IL 62901, USA

Phone: + (618) 453-7369

Email: srimmer@siu.edu

Sponsoring member: Dr Jolanta Kus

Commissions.

Comments: Sue is a renowned coal and organic petrologist. She worked as a Research Professor at two universities: the Southern Illinois University Carbondale and University of Kentucky and occupied several positions of teaching and research.

Degree: Organisation: U.S. Geological Survey Address: 12201 Sunrise Valley Drive, Mail Stop 954, Reston, VA 20192 Phone: +703-648-6449 Email: jlrivera@usgs.gov Sponsoring member: Paul Hackley Commissions: 1, 2, 3 Comment: . She is ICCP accredited and is currently working on DOM petrology in the USGS Organic Petrology Laboratory. She is studying graptolite types in collaboration with Sherry Zheng (Aarhus Univ.) and has an interest in paleoenvironments as revealed through organic petrology.

Surname: Nedzweckas (RIVERA) First Name: JENNIFER Title: Ms Position: Physical Scientist

Surname: BATBOLD First Name: DEMBERELSUREN Title: Ms Occupation: petrographer Organisation: Energy Resources LLC Degree: PhD Mongolian University Science and Technology Address: Phone: +976-70122279 Email: demberelsuren.b@mmc.mn Sponsoring member: Commissions: Comment: .Doctoral thesis titled "The coal facies interpretations in the Baruunnaran coal deposit, Southern Mongolia" was defended in 2021 at the Mongolian University Science and Technology . She is currently working as a petrographer.













delegación ^{EN} ASTURIAS

Change in the Venue for the 75th ICCP Meeting in 2024

Freiberg was the venue initially expected to hold the 75th ICCP Meeting, but at the beginning of the year Council was informed that this was no longer possible. An invitation has been received from Angeles G. Borrego on behalf of the Instituto de Ciencia y Tecnología del Carbono INCAR-CSIC and the Institutional Delegation of CSIC in Asturias to hold the meeting in Oviedo. The meeting will take place the last week of September 2024 at the headquarters of the Institutional Delegation of CSIC in Asturias and the Oviedo Chamber of Commerce and Industry.

The building is located in Oviedo downtown at walking distance from many hotels and the commercial and historical city centre. The structure of the meeting will be as typical with 4 days





devoted to the discussion of Commission Working Groups and a symposium on Friday. One day excursion on Saturday is

planned to visit the Carboniferous carbonate platforms some of them organic-rich and responsible for the main relief of the mountains at the boundary between Leon and Asturias. Oviedo

is 25 km away of the coast and close to the mountains. The

My meeting memento from my last visit to Oviedo. I am looking forward to returning [Ed}

NEW ASSOCIATE MEMBERS CONTIN.....

Surname: RANJIN First Name: GANZORIG Title: Organization: Energy resources LLC Degree: Address: Phone: +88107060 Email: ganzorig.r@mmc.mn Sponsoring member: Commissions: Application of Coal Petrology to Utilization **Comment:** .



SHOULD YOU WISH TO ADVERTISE A SPECIFIC EVENT / WORKSHOP / CONFERENCE / SEMI-NAR / COURSE, PLEASE CONTACT THE EDITOR.

Council of the International Committee for Coal and Organic Petrology (ICCP)

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Vice-president (2019-2022) Dr João Graciano Mendonca Filho



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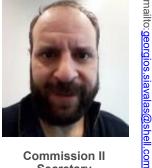
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Student thesis abstract

Submitting Author's Name: Mangs Ayuba Danmangu Affiliation: University of Johannesburg, South Africa PhD Candidate Supervisor: Prof NJ Wagner Email.mangsdanmangu@gmail.com

EXTENDED ABSTRACT

Nigeria has significant coal deposits that are not well documented. This study considers the petrography of coal deposits occurring in the Benue Trough, Nigeria. Detailed petrography, supplemented by mineralogy and geochemistry, was conducted with a view to infer the depositional conditions that controlled the coal formation. The Benue Trough is rift-rift-rift system (triple junction) that trends NE-SW directions from south of Chad Basin to north of Gulf of Guinea.

Twenty-nine (29) grab samples were acquired in nineteen (19) coal areas from the Lower Benue Trough (LBT), Middle Benue Trough (MBT), and Upper Benue Trough (UBT) as shown in Figure 1. The proximate data of the coals shows high volatile matter yield, and fixed carbon, low ash, and high calorific values (24.82 MJ/kg average). Sulphur values are usually low (average of 0.72%).

Vitrinite reflectance values show the coal rank ranges from low to medium in the categories of lignite to subbituminous and bituminous coal. Vitrinite dominates the samples, with variable content of inertinite and liptinite. Microlithotype composition showed variation in the three sub-regions, with MBT samples being predominantly vitrite and carbominerite (carbargillites/ clays, carbosilicates /clays, with limited carbopyrite).

Coal facies studies can be used to decode paleoenvironmental 10°. settings under which organic matter is accumulated. Indices that are usually considered in paleoenvironmental studies include: gelification index (GI), tissue preservation index (TPI), ground water index (GWI), vegetation index (VI), and wood index (WI). The MBT samples generally reported a high GI which is indicative of a wet environment. Relating the facies models applied in this study, MBT samples clearly differ from the UBT and LBT samples, in agreement with coal quality differences. The UBT and LBT samples cluster in an upper deltaic to drier piedmont plain setting, while the MBT coal samples cluster in a lower deltaic marsh to wet forest swamp setting. An assessment of the facies model used shows that interpreting depositional environments from just a single model is not good enough for a conclusive finding (Mangs et al., 2022)

The geochemistry indicates depletion in the major elements, trace, and rare earth elements, which could be linked to the source of the sediments from weathered basement rocks transported into the Benue Trough. The mineral composition is dominated by kaolinite, quartz, pyrite. Dominant oxides in the coal samples are: Al_2O_3 , SiO_2 , Fe_2O_3 with variations in others (BaO, CaO, Cr₂O₃, K₂O, MgO, MnO, Na₂O, NiO, P₂O₅, SO₃, TiO₂, & V₂O₅) with carriers being quartz, clay minerals and

pyrite. Major oxides and trace elements data was used to interpret paleo-setting and paleo- redox conditions of the peat swamps. V/Ni, U/Th, V/Cr, Sr/Ba, Ni/Co ratios reveal a (fresh) aquatic setting in a predominantly humid climate.

Gross calorific value (GCV) and combustion profiles show that the Nigeria coals could be used for power generation with the exception of samples 01 and 17. Other applications such as energy in cement manufacture, brick manufacturing works, foundries, and as smokeless coal briquettes are also possible.

References

- Mangs, A.D., Wagner, N.J., Moroeng, M.O., Lar, U.A., 2022. Petrographic Composition of the Coal Within the Benue Trough, Nigeria, with a Consideration of the Paleodepositional Setting. International Journal of Coal Science & Technology, pp 1-24
- Obaje, N.G., 2009. Geology and mineral resources of Nigeria. Springer Verlag. Berlin, pp 221.

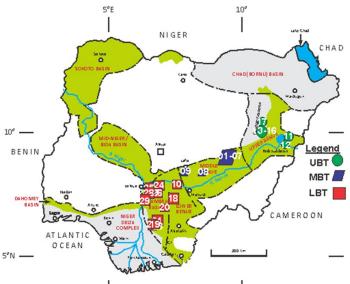


Figure 1. Sample location map of the Benue Trough (included in Mangs et al., 2022, modified from Obaje, 2009)

PLEASE NOTE ALL MEMBERS ARE RESPONSIBLE FOR MAINTAINING THEIR CONTACT DETAILS ON THE WEBSITE

Should you wish for new contact details to be published in the newsletter, please do forward these to the Editor (<u>nwagner@uj.ac.za</u>). Should you require your login details, please contact the General Secretary (<u>Hackley_paul@yahoo.com</u>).

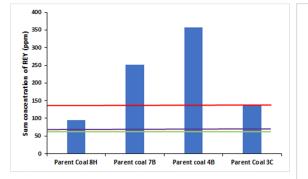
The ICCP Newsletter provides a forum for students, young and advanced researchers, petrologists, petrographers, and any one else, to present results, submit short reviews or articles, post notifications, request assistance, announce relevant conferences / workshops / courses. Please submit all documents for inclusion into the next ICCP Newsletter.

Student dissertation abstract

<u>Submitting Author's Name: Fatima Chitlango</u> Affiliation: University of Johannesburg, South Africa MSc Candidate Supervisor: Prof NJ Wagner Email: zonkechitlango@gmail.com

In recent years, the demand for rare earth elements has increased for use in technology, health care, renewable energy, oil refining, and electronics due to global supply shortages. (In this study, REE refers to the sum of lanthanides, REY refers to lanthanides plus yttrium). This demand has led to increased interest and research in coal deposits being considered an alternative source for these critical raw materials. Several countries, including South Africa, are considering coal and its by-products for the extraction of REEs. However, it is essential to understand the concentration of REEs in the host rock before extraction. South Africa has extensive coal resources, but the understanding of the concentration, mode of occurrence, and distribution of REEs in the coals and associated sediments is limited. The Waterberg Coalfield is estimated to contain 40 to 50 % of South Africa's coal resources, but this coalfield is underexplored, and there is currently no information available pertaining to REE concentrations. The recovery methods for critical elements (including REEs) include preconcentration, activation, extraction, enrichment, and purification. Among these recovery methods, preconcentration has a direct effect on extraction efficiency and energy consumption. Density fractionation of coal is considered a preconcentration method.

The study aimed to assess density fractionated coal samples from the Waterberg Coalfield to determine the concentration and mode of occurrence of REEs, and to establish the behavior of REEs during density fractionation. Thirty densityfractionated coal samples selected from zones 8H, 8I, 7B, 4B, and 3C, were characterized using proximate analysis, petrography, X-ray diffraction (XRD), and X-ray fluorescence (XRF). The concentration of REEs in the density fractionated coals



<u>Figure 1</u>: Composite parent coal (TREY) results with REY averages from Chinese (red line), World (purple line), and USA (green line) coals. was determined using ICP-MS (after microwave digestion). The mode of occurrence of REEs was determined using Pearson's correlation (indirect) and Tescan Integrated Mineral Analyzer (TIMA) (direct).

The coals are classified as medium-rank C bituminous coals. The dominant minerals are kaolinite and quartz. The TREY concentration in the parent coals is higher than the average sum of TREY of Chinese coals, except for Zone 8H wher the concentrations compared to the Chinese, USA, and world coals (Figure 1). The TREY concentrations in the density fractions range from 45.1 to 389.2 ppm. The values are higher than that of world coals, except for sample 8H F1.30 (TREY concentration of 45.1 ppm) and generally higher than the average reported for Chinese coals (Figure 2).

Float products obtained at 1.40 to 1.80 densities show a greater variation of light REY (LREY) compared to medium REY (MREY) and heavy REY (HREY). Density fractions float 1.30 and sink 1.80 show no distinct type of REY enrichment. The results suggest a relationship between the concentration of LREY with float densities of 1.40 to 1.80. Using Pearson's Correlations positive correlation coefficients of REY with both organic matter and mineral matter were identified, suggesting that the REY in the density fractionated coal samples have a mixed organic and inorganic affinity (i.e. mixed association).

The TIMA image analysis revealed that REEs in these samples have organic, intimate organic, and inorganic associations particularly associated with phosphates, silicates, aluminosilicates, iron-bearing, and sulphur-bearing minerals. The REY occurring in these coal samples may be due to inputs of hydrothermal solutions following coalification, as well as terrigenous sediment input from the Bushveld Igneous Complex during peat formation. Preconcentration by density fractionation may not be the best REY concentration process for these coals. Further investigations are required to confirm the potential of the Waterberg coal ash for economic viability for REE extraction.

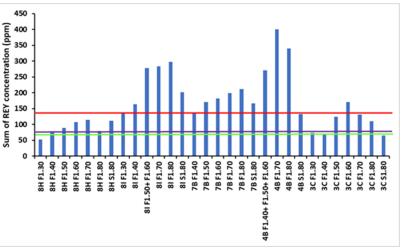
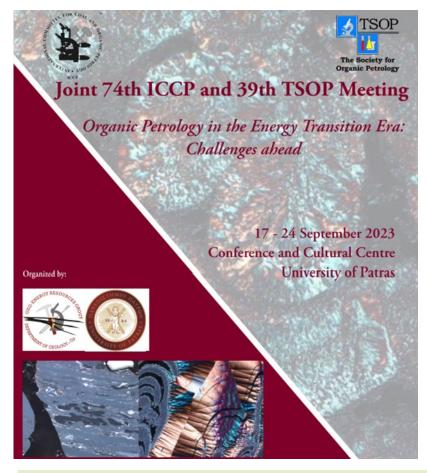


Figure 2: TREY of the density fractions with REY averages for Chinese (red line), world (purple line), and USA (green line) coals.

Membership Enquiries

General Secretary mailto: <u>Hackley_paul@yahoo.com</u> Or visit the website: <u>http://www.iccop.org</u> ICCP NEWS Enquiries Editor: Nikki Wagner / mailto: <u>nwagner@uj.ac.za</u> President of the ICCP: Dr M Ángeles Gómez Borrego mailto: <u>angeles@incar.csic.es</u>



2023 Joint 74th ICCP and 39th TSOP Meeting

Organic Petrology in the Energy Transition Era: challenges ahead

The Meeting is organized by the Department of Geology, University of Patras, from 17th to 24th of September 2023, in the Conference & Cultural Center of the University of Patras, in Rio, a suburb of Patras, Western Greece.

https://www.iccop.org/meetings/joint-74thiccp-and-39th-tsop-meeting/ #TravelingtoPatras.

The Joint ICCP-TSOP Ice Breaker party will take place on Sunday 17th of September. On Monday 18th and Tuesday 19th parallel ICCP-TSOP sessions will take place. A mid-conference excursion will take place on Wednesday to Olympia or Delphi or Mycenae. A joint ICCP-TSOP Session is organized for Thursday 21st, while the Conference Dinner will take place later that day. The technical program will continue till Friday 22nd. Post-meeting field trips are planned on Saturday 23rd, to Keri Mire or Saturday 23rd and Sunday 24th to NW. Greece. Below is the draft meeting schedule

Registration is now available please follow the link: <u>Registration Form for the 15th ICCP DOM Course</u> in Patras 2023 | ICCP (iccop.org)

Traveling to Patras

The city of Patras is in NW Peloponnese and can be reached by airplane from International Airport of Athens "Eleftherios Venizelos" or from Airport of Araxos for occasional charter flights (about 30 km west of Patras). Also, there is ship regular connections every week from the Italian ports of Ancona, Brindisi, and Venice to the city of Patras. For information on how to reach Patras from Athens International Airport please download the **Travel Guide to Patras** (<u>https://www.iccop.org/documents/athens-internationalairport to_patras.pdf/</u>). Additionally, a special offer for participants who would like to rent a car during their stay in Patras has been arranged with a car rental.



Accommodation

Participants will have to arrange their own accommodation. However, the organizers arranged special prices with the following Hotels: 1. Castello Hotel,

- 2. Kallirroe Patras Business Hotel,
- 3. Hotel Astir,
- 4. MOXY Patra Marina, and
- 5. Airotel Achaia Beach Hotel.

For any enquiries, please contact Stavros Kalaitzidis <u>skalait@upatras.gr</u>

TSOP Short Course

A TSOP short course is organized for Monday 18th of September 2023 addressed for professionals and students. The Short Course theme is "Organic Petrography in support of environmental studies: History, State of the Art and Future Opportunities".

Instructors will be Dr. George Siavalas & Dr. Małgorzata Wojtaszek-Kalaitzidi for more information about the short course and instructors please visit: 2023 Joint 74th ICCP and 39th TSOP Meeting Short Course Theme | ICCP (iccop.org)

TSOP Short Course

Organic Petrography in support of environmental studies: History, State of the Art and Future Opportunities

Instructors:

Dr. George Siavalas & Dr. Małgorzata Wojtaszek-Kalaitzidi





Topics

- Introduction, scope, sample preparation & analytical techniques.
- Petrography of industrial & manufactured materials for domestic use; environmental applications.
- Petrography of organic matter in soils and recent sediments.
- Tracing contamination sources, mitigation strategies and monitoring; nature-based solutions to net-zero carbon emissions
- Case studies.

	Sunday - Joint ICCP-TSOP day		Monday		Tuesday		Wednesday	Thursday	Friday	Saturday	Sunday
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Commission II Dispersed organic matter in sedimentary rocks WG

Dear ICCP Members.

Together with Paul Hackley (USGS, USA) and Paula Alexandra Goncalves (University of Porto Portugal) we are approaching you as the Convenors of the Dispersed organic matter in sedimentary rocks WG established within the Commission II.

https://www.iccop.org/workinggroup/dispersed-organic-matter-in-sedimentary-rocks-classificationidentification-and-thermal-maturity-white-paper/

We are in the last stages of finalising the review paper entitled: "Application studies of dispersed organic matter petrology in the 21st century: a review".

We would like to ask you to provide us with references from the last 23 years (oldest reference required should be dated 2000 or younger) of your own or co-authored published work regarding application of dispersed organic matter petrology (incident light mode only) in the following disciplines and irrespective of the published language:

- 1. DOM petrology applications Principles (any updated information regarding the following items: Sampling and sample preparation plus ISO Norms, polished rock pellets and block preparation plus ISO Norms, calibration and reflectance standards plus ISO Norms, Maceral concept, Classification and Terminology, Equipment for DOM analyses, Optical methods and ISO/ASTM Norms, Atlases, thermal maturity maps, etc.)
- 2. DOM petrology applications to hydrocarbon (oil and gas) exploration in North America
- 3. DOM petrology applications to hydrocarbon (oil and gas) exploration in South America
- 4. DOM petrology applications to hydrocarbon (oil and gas) exploration in China
- 5. DOM petrology applications to hydrocarbon (oil and gas) exploration in Russia
- 6. DOM petrology applications to hydrocarbon (oil and gas) exploration in Europe
- 7. DOM petrology applications to archaeology
- 8. DOM petrology applications to geobiology-fossilization
- 9. DOM petrology applications to paleoclimate refs converted
- 10. DOM petrology applications to geothermal exploration
- DOM petrology applications to disposal and management of radioactive waste

DOM petrology applications to environmental impact (Anthropogenically derived particles in stream, lake, and marine sediments, soil, ground, air). We are very much trying to include most recent publications but cannot guarantee to cover for all of the online available publications.

Therefore, we kindly request from you the respective references so that these can be included in the above review paper. Please, do sent your suggested references to J.Kus@bgr.de, phackley@usgs.gov and paula.goncalves@fc.up.pt In case of any questions or comments, please contact us.

We will be at your side and guide you through any of the requested items.

Thank you in advance! Best regards, Jolanta, Paul, and Paula

Dear ICCP Members,

The working group: Igneous intrusions in coal seams and shales WG was created in 2022 during the ICCP meeting in India. One of the main objectives of this WG is to investigate the petrographic changes in organic matter promoted by con- order to understand the optical chances in function of the rank. tact metamorphism. Currently, we are seeking for a suite of thermally affected coal (and the unaltered background coal included) at different distances from the igneous body, so that we can track the petrographic changes induced by the heating and emplacement of the magmatic body as we move away Conveners: Sandra Rodrigues, Jolanta Kus, Magdalena Miszfrom it. Since the initial rank of the coal at the time of the Kennan, Susan Rimmer

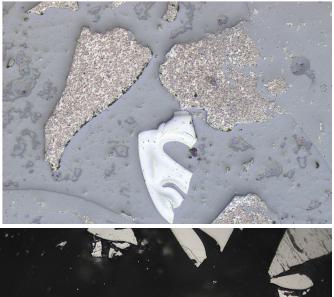
emplacement strongly affects the resulting petrographic characteristics, we are also seeking for coals with different ranks (lignite, subbituminous,

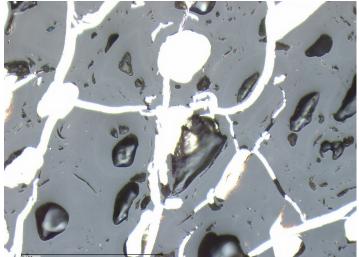
HVB, MVB, LVB, and anthracite) at the time of the intrusion in If you have a suite of samples with these conditions and if you would like also to participate in this WG, please contact us through this email: s.rodrigues@uq.edu.au

Can you assist these working aroups 2222

FUN PETROGRAPHIC IMAGES!

What do YOU find under your microscope?



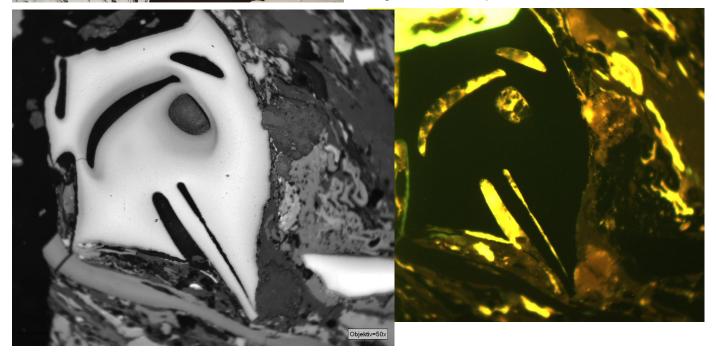


TL: The mask from the "Phantom of the Opera": fusinite fragment (x100, air) (courtesy Nikki Wagner)

TL: Dancing man: pyrite infilling cavities in medium rank C vitrinite (x500, oil) (courtesy Nikki Wagner)

Left: Swan: self-heated coal, vitrinite showing plasticity, Ro 5.59% (courtesy the 2022 3rd RR Exercise self-heating, permission from Jolanta Kus)

BL & BR: Pecking bird: fusinite (courtesy of Peter Crosdale). L: white light, monochromatic; R fluorescing image, possibly fluorescing mineral and not liptinite.



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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 <u>hackley paul@yahoo.com</u>.