

INTERNATIONAL HUMIC SUBSTANCES SOCIETY



NEWSLETTER

Number 51

1st Quarter 2016

Dear Colleagues in IHSS,

Let me begin by expressing my thanks to our Board members, who have continued their efforts on your behalf. In particular, I wish to thank Gudrun Abbt-Braun (Vice-President), who has been especially active as we prepare for upcoming elections, solicitation of travel bursaries, the biennial meeting in Japan, and this Newsletter. Ray Hozalski (Treasurer) and Paul Bloom (Chairman, Samples Collection) are preparing for the Society's fourth expedition to the Suwannee River – this time to replenish our standard humic and fulvic acids. They and other scientists on their team will work in the field for approximately one month in May-June, 2016. The Nominating Committee (Claudio Ciavatta (Chair), Etelvino Novotny, Fernando Rosario-Ortiz, and Olga Yakimenko) has submitted a slate of candidates for the upcoming election, and you will very soon be able to cast your votes.

The Board continues to work with Prof. Seiya Nagao to offer a stimulating scientific experience to our Society at the 18th IHSS meeting in Kanazawa, Japan in September, 2016. I very strongly encourage you to participate in this conference. Since IHSS began awarding student travel awards in 1996, 132 students from 33 countries have been supported to attend and participate in IHSS meetings. The call for IHSS Travel Support Awards has already been posted on our website. Student members of IHSS who have not yet received a travel award are strongly encouraged to apply for a travel award to attend the upcoming meeting in Japan. Graduate advisors should encourage their highly qualified students to apply for travel support.

A symposium entitled "Humic Substances and Its Critical Role in Environmental Chemistry: The Past 50 Years, Present Knowledge and Future Research Opportunities" was held at the 248th meeting of the American Chemical Society in San Francisco. Several presentations made excellent use of chemical and spectroscopic data from the IHSS

website. To provide other relevant chemical data for our samples, IHSS has contracted with Prof. Karl Kaiser at Texas A&M University to quantify hydrolysable amino acids, hydrolysable neutral sugars, lignin and cutins/suberins, acidic sugars, and benzenecarboxylic acids for all samples in the IHSS Standard and Reference Collection. Prof. Kaiser worked with Prof. Ron Benner at the University of South Carolina for several years before establishing his own research laboratory at Texas A&M. IHSS is very pleased to have established this relationship with his laboratory. Prof. Kaiser has already received the samples and will complete the analyses in the spring of 2016. Please check the website from time to time to get access to these data as soon as they are available.

IHSS has also collaborated informally with Philippe Schmitt-Kopplin, Norbert Hertkorn, and Mourad Harir at the Helmholtz Zentrum Muenchen to acquire FTICR mass spectra for all samples in the IHSS Standard and Reference Collection. The data have been acquired and are being interpreted. When that work is completed, these mass spectra will be added to the website. If you can provide a chemical or spectroscopic analysis that is not currently on the website for all samples in the IHSS Standard and Reference Collection, please contact me to initiate a discussion. If the membership of IHSS would benefit significantly from having easy access to your data, we will try to facilitate your measurements.

I want to repeat my challenge to the young scientists who have already benefited from the support of IHSS. Contribute all that you can to insure the future of this small, specialized scientific society, so that students who follow in your footsteps can enjoy the same level of support. Whenever you give talks or publish papers on work that IHSS has helped to facilitate, or if you simply have used our standard and reference samples in your research, be sure to give acknowledgement to IHSS. This small recognition of the impact of IHSS in your professional development will be noted by other scientists who should be members of IHSS.

Best regards

E. Michael Perdue
President of IHSS

TABLE OF CONTENTS

- 🌱 Professor Konrad M. Haider – a pioneer of soil humic sciences 1928 -2015
- 🌱 Upcoming elections in 2016
- 🌱 News from the chapters
 - Renewal of the office of the French Chapter
- 🌱 Upcoming meetings
 - IHSS 18: 18th International Conference of the International Humic Substance Society
 - Meeting of the Bulgarian Chapter (BHSS); 4th National conference with international participation
 - Biannual meeting of the French Chapter
 - Special session on humic substances and organic matter at the European Geoscience Union General Assembly 2016
- 🌱 IHSS sponsorship for scientific meetings
- 🌱 Call for papers for a special issue honoring the achievements of Frank J. Stevenson
- 🌱 Activities of IHSS members
 - Recent publications of IHSS members

Attached to this Newsletter: Statements of the candidates

PROFESSOR KONRAD M. HAIDER – A PIONEER OF SOIL HUMIC SCIENCES 1928 - 2015

Dr. Konrad M. Haider, honorary member of IHSS died on September 3, 2015 at the age of 87. He was one of the pioneers on the formation and dynamics of organic matter in soil.

Born in July 1928 in Munich, Konrad Haider had to face the troubles of the end of World War II in his early youth, before he could start his academic education.



He studied botany at the Ludwig Maximilian University (LMU) in Munich where he finished his PhD in 1954. This was also the time when he married Gudrun Joos. The young couple moved to Frankfurt/Main, where Lady Gudrun had a position as biology teacher. Dr. Konrad Haider started again as a student at the University of Frankfurt and finished with a diploma in chemistry in 1959. Two daughters and a son had completed the family before it moved to Braunschweig, where Dr. Haider joined the “Research Institute of Agriculture”. Several research visits to foreign countries followed: 1963 Michigan (USA), then Pakistan, Iran, Korea etc

The profound academic education and the broad international experience made Dr. Haider into a brilliant and understandable leader in his scientific field. He was one of the first scientists who revealed the biochemical processes of the formation and dynamics of humic substances in soil. He investigated the role of fungi, elucidated the fate of pesticides, he applied innovative tracers and isotope-labelled xenobiotics, and used advanced chromatographic and spectrometric methods to study the manifold molecular interactions with humic matter. From the early 1960s on, he published the results in several books and more than 120 research papers.

In 1987, Dr. Haider was one of the participants of the legendary Dahlem Conference on “Humic Substances and Their Role in the Environment”, which brought world leading peers and some promising tailor strategies for further research. I remember Konrad Haider sharing enthusiastically his broad knowledge with the crowd. Some years later he acted as one of the chief reviewers for a huge research project with more than 90 scientists, founded by the DFG (German Research Foundation) for nearly a decade. “Refractory Organic Substances

in the Environment” was the title of the program, which I had the privilege to chair and coordinate and, by this, to interact intensively with Dr. Haider. I’m grateful to Konrad for giving us a great and unique example of scholarly disposition and of fair criticism. His honest and cautious way, combined with his always supportive and inspiring understanding decisively contributed to the success of the project and its two major international conferences.



Standing, left to right: Hans-Rolf Schulten, Konrad Haider, George Harvey, Fred Pfaender;

seated (center), left to right: John Ertel, Russ Christman, Wolfgang Flaig, Jim Martin;

seated (front), left to right: Pat Hatcher, Peter Behmel, Joh Hedges;

(picture taken from the book “Humic Substances and their Role in the Environment, Frimmel, F. H., Christman, R.F., John Wiley & Sons, 1988).

Besides that, he was lecturing at the University of Hannover and at the University of Bayreuth and he cooperated with the Helmholtz Center in Munich. For his excellent contributions to humic sciences, Prof. K. M. Haider was conferred as honorary member of IHSS in 2011.

When he formally retired in 1992, he and his wife Gudrun returned to their roots and to the old family house in Bavaria where both finally entered an elderly home.

The “show” never has had a chance in Konrad Haider`s personality. He was devoted to truth and nature. Adding his deep kindness and sincere friendliness, he was one of the dying-out species and he was a fine example of a reliable colleague. Those who met him will remember him gratefully and with respect.

*Fritz H. Frimmel
Karlsruhe Institute of Technology*

UPCOMING ELECTIONS IN 2016

As announced in the last Newsletter, we will be conducting elections for Vice President, Secretary, and Board Member for the term 2016 to 2018 for Vice-President, and Secretary and Board Member for the term of 2016 to 2020.

The members of the nominating committee appointed by the President are:

- Claudio Ciavatta (Chair), Italy
- Etelvino Novotny, Brazil
- Fernando Rosario-Ortiz, USA
- Olga Yakimenko, Russia

The committee was tasked to present a list of candidates. Members have been invited to send candidate names to the committee through their chapter coordinators or directly to the committee.

Candidates for Vice-President

- **Yiannis Deligiannakis, Greece**
- **Antonio Patti, Australia**

Candidates for Secretary

- **Heike Knicker, Spain**
- **Viia Lepane, Estonia**

Candidates for Board Member

- **Deborah Dick, Brazil**
- **Stéphane Mounier, France**

The candidates' statements and CV's are enclosed.

You will have one vote for the position "Vice-President", one vote for "Secretary" and one vote for the position "Board Member".

For the election, the Society offers you the convenience of on-line balloting. You will receive an email, that balloting is open until midnight on March, 31st, 2016.

Instructions are on the first page, and you can download or print the instructions, election information, and ballot for study and consideration before voting online. To vote you will need your:

- Username (the e-mail address we have for you) and your password (member ID).

You can also reach the electronic ballot from the IHSS home page by selecting the "Election 2016" link under the Membership Tab.

*Gudrun Abbt-Braun
Vice President of IHSS
Karlsruher Institut für Technologie, Germany*

NEWS FROM THE CHAPTERS

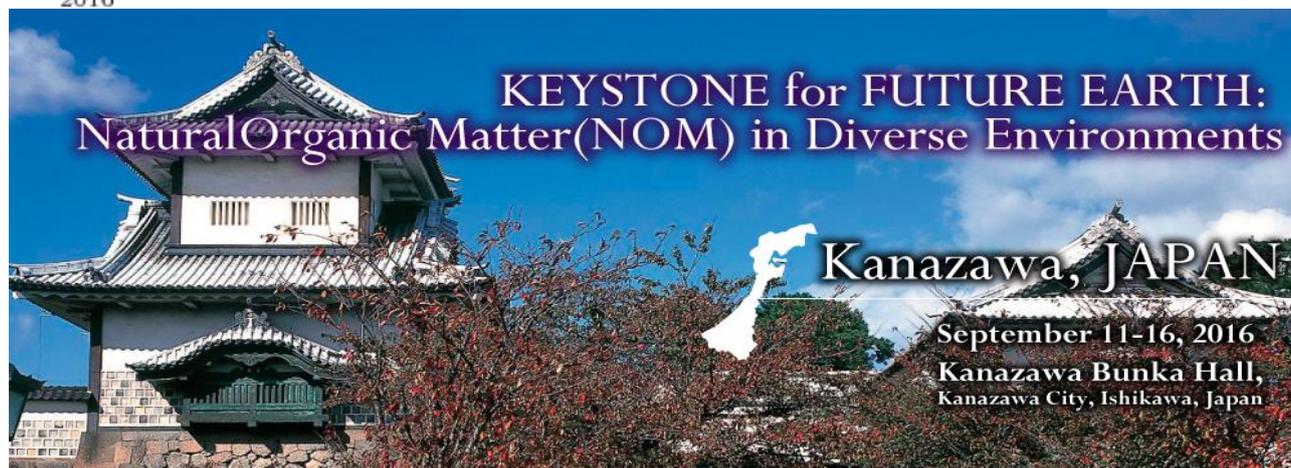
Renewal of the office of the French Chapter

During the last reunion of the French Chapter, their Board was selected: The president is still S. Mounier, and F. Coppin, F. Vouve and M. Abaker are members of the board.

UPCOMING MEETINGS



IHSS 18: 18th International Conference of the International Humic Substances Society



Welcome Message from the Chair of 18th IHSS Meeting

We are delighted to announce the 18th Meeting of the International Humic Substances Society (IHSS), which will be held from September 11 to 16, 2016, in the beautiful city of Kanazawa, Japan. Kanazawa is located 300 km northwest of Tokyo, or 200 km northeast of Kyoto, and is accessible in ca. 2.5 h by train from both cities. It is the economic center of this region with a rich historical and cultural atmosphere. The climate of Kanazawa is very comfortable (average temperature of 23°C) in the middle of September. It is our pleasure to host the IHSS meeting for the second time in Japan since the 5th IHSS which was held in Nagoya in 1990. The focus of this meeting is "diversity", and will provide a forum for presentation and discussion of current and emerging science in all fields of natural organic matter (NOM) and its application to various fields. Scientists, engineers, and students from universities, institutes, laboratories and industries throughout the world are encouraged to participate and make contributions to this meeting. We will do our best to make your stay in Kanazawa fruitful and memorable. We are looking forward to seeing you in Kanazawa on September 11-16 in 2016. For more information please consult the IHSS homepage and:

<http://www.ihss2016.com/index.html>

Main theme:

KEYSTONE FOR FUTURE EARTH:
Organic matter in diverse environments

Sessions:

- (1) Characterization of NOM in diverse environments
- (2) Various functions of NOM in diverse environments
- (3) Dynamics of NOM in various environments
- (4) Applications of diverse OM, industrial and agricultural applications of organic matter
- (5) Diversity of NOM in water treatments

Important dates:

- *Deadline of submission of abstract: 30 April 2016*
- *Notification of acceptance (oral or poster): 30 June 2016*
- *Deadline of early registration: 30 April 2016*
- *Deadline of regular registration: 31 July 2016*

Seiya Nagoa
Kanazawa University, Japan



Bulgarian Humic Substances Society (BHSS)
Conference 2016

„HUMUS SUBSTANCES AND THEIR CONTRIBUTION TO THE
CLIMATE CHANGE MITIGATION“

FOURTH NATIONAL CONFERENCE WITH INTERNATIONAL PARTICIPATION,

September, 8 – 10, 2016,

Biological Faculty of Sofia University “St. Kliment Ohridski”, 8. “Dragan Tsankov” Bld.,
SOFIA

Main topics:

1. Organic carbon in soils and its contribution to mitigating the effects of climate change
2. Characteristics and functions of humus substances
3. Methods of research, evaluation, and increase of the soil organic matter
4. Conventional and biotechnological methods for preparing humic products
4. Application of humic and humus-like products in agriculture and industry

For more information please consult the IHSS homepage or contact:

Prof. dr Ekaterina Filcheva - filcheva@itp.bg; efilcheva@abv.bg and the Website: <http://bhss.itp.bg>

Biannual Meeting of the French Chapter:

“ORGANIC MATTER, HUMIC SUBSTANCE AND CONTAMINANTS”.

April, 26, 2016, Toulon, France

The objective of the day is to discuss via presentations (15 min), speed talks (3min) and two invited conferences, concerning Organic Matter, Humic Substances in different environment. This year a particular focus of the morning session will be on techniques for characterization of organic matter and humic substances in soils and coastal environment, whereas their interactions with contaminants will be the treated during the afternoon session.

For more information please contact:

Stéphane Mounier (stephane.mounier4@gmail.com)

**Special session on humic substances and organic matter at the
European Geosciences Union General Assembly 2016**

April, 17–22 2016, Vienna, Austria

“Natural and pyrogenic organic carbon and nitrogen in soils: Function, fate, analytical challenges and how this relates to the concept of humic substances”

Conveners: Heike Knicker, Teodoro Miano, Claudio Zaccane, Nicasio T. Jiménez-Morillo, Ingrid Kögel-Knabner, Marta Velasco-Molina, José María De la Rosa, María López-Martín, Cornelia Rumpel

Although the deadline for abstract submission is over, late abstracts can still be considered (but with a higher abstract processing fee). If you are interested in submitting abstracts please contact Heike Knicker (knicker@irnase.csic.es).

For further information about the venue, its location, deadlines etc. please consult the following webpage:

<http://egu2016.eu/home.html>

IHSS SPONSORSHIP FOR SCIENTIFIC MEETINGS

All members are encouraged to apply for IHSS sponsorship of scientific meetings. The respective guidelines are published on the webpage.

CALL FOR PAPERS FOR A SPECIAL ISSUE HONORING THE ACHIEVEMENTS OF FRANK J. STEVENSON

The Editor in Chief of the Journal of Soil and Sediments agreed to support a special issue honoring the achievements of Frank J. Stevenson with the guest editors: Claudio Zaccane, Fernando L. Rosario-Ortiz..

The current title of the special issue will be:

Natural organic matter: chemistry, function and fate in the environment - Special issue in memory of Frank I. Stevenson

Again we invite all IHSS members to contribute to this special and submit related manuscripts which are prepared according to the guideline of the journals.

All manuscripts will go through a peer –reviewing process following the rules of the journal. For more information consult the following webpage:

<http://www.springer.com/environment/soil+science/journal/11368>

and Heike Knicker (knicker@irnase.csic.es)

The final deadline for Manuscript submission will be extended to **March, 15th 2016**

ACTIVITIES OF IHSS MEMBERS

Recent Publications of IHSS Members:

Antilen, M., Silva, K., Acevedo, S., Amiama, F., Faundez, M., Knicker, H., Pizarro, C., (2015) Characterization of humic acids extracted from biosolid amended soils. *Journal of Soil Science and Plant Nutrition* 14, 1005-1020.

Jerzykiewicz M., Witwicki M., Jezierska J. (2015) pH-dependent formation of Hg(II)-semiquinone complexes from natural phenols. *Chemosphere*, 138, 233-238

Kwiatkowska-Malina J. The Comparison of structure of the humic acids from soil amended with diverse sources of organic matter using the Electron Paramagnetic Resonance (EPR) technique. *Innovative strategies and policies for soil conservation (2015)* *Advances in GeoEcology* 44, 35-41

Kulikowska D., Gusiatin Z.M., Bułkowska K., Klik B. (2015) Feasibility of using humic substances from compost to remove heavy metals (Cd, Cu, Ni, Pb, Zn) from contaminated soil aged for different periods of time. *Journal of Hazardous Materials*, 300, 882-891.

Kulikowska D., Gusiatin Z.M., Bułkowska K., Kierklo K. (2015) Humic substances from sewage sludge compost as washing agent effectively remove Cu and Cd from soil. *Chemosphere*, 2015, 136:42-49.

Leal, O.d.A., Dick, D.P., Lombardi, K.C., Maciel, V.G., Antonio Gonzalez-Perez, J., Knicker, H., (2015). Soil chemical properties and organic matter composition of a subtropical Cambisol after charcoal fine residues incorporation. *Journal of Soils and Sediments* 15, 805-815.

López-Martín, M., Velsco-Molina, M., Knicker, H. (2016) Variability of the quality and quantity of organic matter in soil affected by multiple wildfires. Journal of Soils and Sediments, 16(2), 360-370.

Pytel B., Filipiak A., Pisarek I., Olchowa R., Man D. (2015) Impact of humic acids on EYL liposome membranes: ESR method., Nukleonika, 2015, 60(3), 455-459.

Velasco-Molina, M., Berns, A.E., Macias, F., Knicker, H., (2016). Biochemically altered charcoal residues as an important source of soil organic matter in subsoils of fire-affected subtropical regions. Geoderma 262, 62-70

Witwicki M., Jerzykiewicz M., Ozarowski A. (2015) Understanding natural semiquinone radicals–multifrequency EPR and relativistic DFT studies of the structure of Hg(II) complexes. Chemosphere, 119, 479-484.

IMPRESSUM

Editor: INTERNATIONAL HUMIC SUBSTANCES SOCIETY
NEWSLETTER 51

President

Dr. E. Michael Perdue
Ball State University
Muncie, IN 47306, USA
Tel: +1 765 285 8096
E-mail: emperdue@bsu.edu

Secretary

Dr. Heike Knicker
IRNAS-CSIC
Avenida Reina Mercedes 10
41012 Sevilla, Spain
Tel: +34 95 4624711
E-mail: knicker@irnase.csic.es