

September 11 (Sun)

Lobby in Kanazawa Bunka Hall (1F)

3:00 - 6:00 p.m.

Reception

6:00 - 7:30 p.m.

Ice Breaker Party

September 12 (Mon)

Lobby and Conference Hall in Kanazawa Bunka Hall (1F)

8:30AM

Open & Reception

9:30AM - 9:40AM

Opening Ceremony:

Seiya Nagao (Chair of 18-th IHSS)

9:40AM - 9:50AM

Opening Remark:

E. Michael Perdue

Gudrun Abbt-Braun

Chair person: Seiya NAGAO

9:50AM - 10:30AM

Plenary talk: Condensed aromatic structures in humic substances as key, inherently recalcitrant structures

Akira WATANABE

10:30AM - 11:00AM Coffee Break

Session 1. Characterization of NOM in diverse environments

Chair person: Nobuhide FUJITAKE and Irina V. PERMINOVA

11:00AM - 11:30AM

INV1: Exceptional Organic Molecular Diversity in Terrestrial Extreme

Michael GONSIOR, Norbert HERTKORN, Nancy HINMAN, William J.

COOPER, Sabine DVORSKI, and Philippe SCHMITT-KOPPLIN

11:30AM - 11:45AM

O1-1: The Unique Structural Chemistry of Humic Substances

Jerry LEENHEER

11:45AM - 0:00PM

O1-2: Modern solid-state NMR spectroscopy can do more than only quantifying aromatic C in NOM-derived charcoal and biochar

Heike KNICKER, Marina PANEQUE-CARMONA, Marta VELASCO-MOLINA,

José-Maria DE LA ROSA, Laura Regina LEÓN OVELAR, and Elena

0:00PM - 0:15PM

O1-3: Is Humic the same everywhere?

Michael H.B Hayes and Roger S. Swift

0:15PM - 0:30PM

O1-4: Characterization and thermodynamic study of the protonation of humic acid dissolved in deep groundwater at Horonobe, Hokkaido, Japan

Shingo Kimuro, Akira Kirishima, Daisuke Akiyama, Nobuaki Sato, Seiya Nagao,

Takumi Saito, Yuki Amano and Kazuya Miyakawa

0:30PM - 2:00PM

Lunch (New Grand Hotel)

2:00PM - 3:00PM

Poster session: P-1 ~ P-53 (Odd number) at Large Assembly Room (2F)

Chair person: Akira WATANABE and Norbert HERTKORN

3:00PM - 3:15PM

O1-5: A Novel Method for Source Identification of Organic Matters Based on Fluorescence Fine Features, Polarity and Molecular Weight

Jiu-Kai Tang, Jing Wu, Bo Liu, Cheng Cheng, Khan Muhammad Farooq Saleem,

and Yong-Jin Liu

3:15PM - 3:30PM

O1-6: Quantification of aquatic humic substances in diverse river systems and their relationships with some trace metals and optical indices

Morimaru KIDA, Hajime SATO, Toshiyuki OHTSUKA, Masayuki

KAWAHIGASHI, Mitsuru HIROTA, Takayuki NAKATSUBO, Bolormaa

OYUNTSETSEG, Viacheslav Victorovich KHAKHINOV, Sasitorn

3:30PM - 3:45PM

O1-7: On the path forward to molecular systematics of non-living organic

Irina V. PERMINOVA

3:45PM - 4:00PM

O1-8: Direct humeone extraction from two German soils and molecular characterization by Electrospray-Orbitrap-Mass Spectrometry

Antonio NEBBIOSO, Marios DROSOS, Sebastian Z Ü HLKE, Michael

SPIPELLER and Alessandro PICCOLO

4:00PM - 4:15PM

O1-9: Multi-dimensional NMR and ESI-FTICRMS analysis of soil humic acid: an investigation of aliphatic carboxylic acids

Nicole DIDONATO and Patrick HATCHER

4:15PM - 4:30PM

O1-10: Fluorescent properties of soil humic and fulvic acids revealed by hydrophilic interaction chromatography and excitation-emission matrix

Masakazu AOYAMA

4:30PM - 5:00PM **Coffee Break**

Session 2. Various functions of NOM in diverse environments

Chair person: Jianming XU and Yuko SUGIYAMA

- 5:00PM - 5:30PM **INV2: Effect of humic substances on the migration of cesium and iodine related to Fukushima Daiichi Nuclear Power Plant (FDNPP) accident revealed by applications of X-ray spectroscopies**
Yoshio TAKAHASHI
- 5:30PM - 5:45PM **O2-1: Humic-(Metal)-Phosphate complexes characterization and ecological role in phosphorus bioavailability on plant nutrition**
Roberto BAIGORRI, Óscar URRUTIA, Javier ERRO, Nicolás PAZOS-PÉREZ and José María GARCÍA-MINA
- 5:45PM - 6:00PM **O2-2: Relationships between charred plant fragments and active aluminum components in non-allophanic and allophanic Andosols of Japan**
Haruo SHINDO
- 6:00PM - 6:15PM **O2-3: Interaction of Atmospheric Humic-Like Substances with Polycyclic Aromatic Hydrocarbons: An Aerosol Chamber Study**
Daichi ASAKAWA
- 6:15PM - 6:30PM **O2-4: Effect of effluent dissolved organic matter on trace metals and polycyclic aromatic hydrocarbons sorption by mineral particles in aquatic systems under strong urban pressure**
Gilles VARRAULT, Caroline SOARES-PEREIRA, and Adèle BRESSY

Special Session

Chair person Roger Swift and Mike Perdue

- 6:45PM - 8:00PM **Concepts, Rationale, and Evidence for the Existence of Humic Substances**
Roger Swift

September 13 (Tue)

Lobby and Conference Hall in Kanazawa Bunka Hall (1F)

8:30AM **Open & Reception**

Session 2. Various functions of NOM in diverse environments

Chair person: Nagamitsu MAIE and Rolf David VOGT

9:15AM - 9:30AM **O2-5: Effects of organic matter application on the absorption and behavior of cadmium in a volcanic ash soil.**

Kiyoshi Tsutsuki, Nana Nagasawa, and Yukiko Sato (Hirano)

9:30AM - 9:45AM **O2-6: Structural and thermodynamic aspects of binding of charged aromatic compounds to humic acids**

Petr SEDLACEK, Jiri SMILEK, Michal KALINA, Vojtech ENEV and Martina KLUCAKOVA

9:45AM - 10:00AM **O2-7: Exploring functions of humic substances via computational modeling**

Elena A. VIALYKH, Cooper H. LANGFORD, Sriram GOVERAPET SRINIVASAN, Dennis SALAHUB, and Gopal ACHARI.

10:00AM - 10:15AM **O2-8: Temporal and spatial variations of dissolved organic matter induced singlet oxygen in Lake Chaohu, a eutrophic Chinese lake**

Wei HE, Wenxiu LIU, Yilong LI, Lei Kang, and Fuli XU

10:15AM - 10:30AM **O2-9: Transport behavior of humic acids in porous media—effects of pH, electrolyte concentration and cation valency**

Yuji YAMASHITA and Yasuhisa ADACHI

10:30AM - 11:00AM **Coffee Break**

Travel Award Presentation

Chair person: Gudrun ABBT-BRAUN

11:00AM - 11:10AM **T-1: Isolation of Humic substances (Humic acids, Fulvic acids and Humin) from soil under Different Tree Stands Plantation in Tropical Rainforest,**

S.I. Adebola, O.O. Awotoye, and J.K. Adesanwo

11:10AM - 11:20AM **T-2: Adsorption and fractionation of two types of dissolved organic matter (DOM) by clay soil**

Shani Avneri, Robert B. Young, Amy M. McKenna, Huan Chen, Yuri E. Corilo, Tamara Polubesova, Thomas Borch, and Benny Chefetz

11:20AM - 11:30AM **T-3: Thermodynamic study of the Hydrogen Atom Transfer (HAT) process of [Humic Acid] and [Humic Acid- analogues]-Hybrids**

Eleni Bletsas, Vasiliki Papapetrou, Maria Louloudi, and Yiannis Deligiannakis

11:30AM - 11:40AM **T-4: Spectroscopic investigation by fluorescence and FTIR spectroscopy of digestate obtained by co-treatment of fruit and vegetable waste in sludge**

Maria Rosaria Provenzano, Ornella Cavallo, Anna Daniela Malerba, Francesco Di Maria, Mirko Cucina, Luisa Massaccesi and Giovanni Gigliotti

11:40AM - 11:50AM **T-5: New Biotechnological Approach for Polycyclic Aromatic Hydrocarbon Degradation Using Bacteria from Tropical Peat**

A.C.F.S. Garcia, and L.P.C. Romão

11:50AM - 0:00PM **T-6: Soil Organic Matter chemical and isotopic composition as paleoenvironmental tracer in a subtropical South Brazilian toposequence**

Daniel Hanke, Deborah Pinheiro Dick, Heike Knicker, José Antonio Gonzalez-Pérez and Marta Velasco Molina

0:00PM - 0:10PM **T-7: The Characterization of Plant Cuticles and Their Usage in Simple Diffusion Processes for Simulation of Foliar Fertilizers**

Marcela LASTUVKOVA, Petr SEDLACEK, Jiří SMILEK and Martina

0:10PM - 0:20PM **T-8: Bacterial and plant DNA recovered in physically isolated, soil organic matter fractions: new insights towards understanding its mean residence time in agricultural soils**

Giulia MARTINO, Luciano BENEDEUCE, Concetta LOTTI, Micol BELLUCCI, Luigi RICCIARDI, Cesar PLAZA, and Claudio ZACCONE

0:20PM - 0:30PM **T-9: Effects of natural organic matter on silver nanoparticles aggregation at environmentally relevant concentrations**

M. Millour, E. Pelletier, and J.-P. Gagné

0:30PM - 2:00PM **Lunch (New Grand Hotel)**

2:00PM - 3:00PM **Poster session: P-1 ~ P-53 (Even number) at Large Assembly Room (2F)**

Session 3. Dynamics of NOM in diverse environments

Chair person: Masayuki KAWAHIGASHI and Gerd GLEIXNER

- 3:00PM - 3:30PM **INV3: Quantitative and qualitative distribution of fluorescent dissolved organic matter in the Pacific surface waters**
Youhei YAMASHITA, Fuminori HASHIHAMA, Hiroaki SAITO, Hideki FUKUDA, and Hiroshi OGAWA
- 3:30PM - 3:45PM **O3-1: Linking chemical and fluorescence properties of soil humic acids**
Nagamitsu MAIE, Akira WATANABE, Fusamitsu YAMAMOTO, Youhei YAMASHITA, and Eikichi SHIMA
- 3:45PM - 4:00PM **O3-2: Insight into the humification of HAs derived from landfills using two-dimensional FTIR and NMR correlation spectroscopy**
Guangxia QI, Masami FUKUSHIMA, Lianhai REN, and Dongbei YUE
- 4:00PM - 4:15PM **O3-3: Unravelling factors explaining trends in DOM**
Rolf David VOGT, Ståle Leif HAALAND and Gunnhild RIISE
- 4:15PM - 4:30PM **O3-4: How fast does organic matter may accumulate? The “mystery” of floating islands**
Claudio ZACCONE, Valeria D’ORAZIO, Daniela LOBIANCO, William SHOTYK, and Teodoro MIANO
- 4:30PM - 5:00PM **Coffee Break**

Chair person: Claudio ZACCONE, Youhei YAMASHITA

- 5:00PM - 5:15PM **O3-5: Land-derived natural organic matter as an iron carrier in the estuarine mixing zone**
Anna Rathgeb, Regina Krachler, Tim Causon and Stephan Hann
- 5:15PM - 5:30PM **O3-6: Anaerobic decomposition of humic substances by bacteria obtained from the deep subsurface**
Akio UENO, Satoru Shimizu, Shuji TAMAMURA, Noritaka ARAMAKI, Shinichi YAMAMOTO, Hachiro SHIGEYOSHI, Takeshi NAGANUMA, and
- 5:30PM - 5:45PM **O3-7: Geochemical characterization of humic acids in sediments along a river-lagoon transect**
Carlo BRAVO, Elisa PETRANICH, Giada ZANUTTINI, Christian MILLO, Stefano COVELLI, Marco CONTIN and Maria DE NOBILI
- 5:45PM - 6:00PM **O3-8: Assessing the sources and quality of particulate organic matter in a turbid macrotidal estuary by optical analysis**
Weidong GUO, Jia WEI, Fengling YU, Zhiheng WANG, Chao WANG, Jing XU
- 6:00PM - 6:15PM **O3-9: Alteration of lignin Derived DOM by Reactive Oxygen Species**
D.C. Waggoner, A.S. Wozniak, P.G. Hatcher
- 6:15PM - 6:30PM **O3-10: Kinetics of hydrothermal transformation of humic substances**
Satoru NAKASHIMA, Takahiro OTSUKA and Yuki NAKAYA
- 6:30PM - 8:30PM **National Chapter Meeting**
Large Meeting Room (3F)

September 14 (Thu)

Excursion

Please come to the entrance of Kanazawa Bunka Hall during 8:00-8:30AM!!

8:30AM Kanazawa -----> 9:45AM Shirakawago, Walking 11:45AM

-----> 0:30PM Takayama, lunch, walking 3:30PM -----> 5:30PM Kanazawa

Banquet

Ball room (5F) in Kanazawa Tokyu Hotel (6:30 ~ opening the reception desk)

7:00PM - 9:00PM **Kanazawa Tokyu Hotel**

September 15

Lobby and Conference Hall in Kanazawa Bunka Hall (1F)

8:30AM **Open & Reception**

Session 3. Dynamics of NOM in diverse environments

Chair person: Heike KNICKER and Weidong GUO

- 9:15AM - 9:30AM **O3-11: Structural and isotopic changes in dissolved organic matter percolating through soil highlight microbial importance**
Gerd Gleixner, Vanessa-Nina Roth, Ashish A. Malik, Andrea Scheibe, Carsten Simon, Markus Lange and Thorsten Dittmar
- 9:30AM - 9:45AM **O3-12: Peat decomposition evaluated by detailed analysis using microscopic**
Mizuki Morishita and Masayuki Kawahigashi
- 9:45AM - 10:00AM **O3-13: Incorporation of the nitrogen from heteroaromatic compounds into microbial amino acids**
María LÓPEZ-MARTÍN, Anja MILTER and Heike KNICKER
- 10:00AM - 10:15AM **O3-14: Source apportionment of carbonaceous aerosols collected at Noto Peninsula, Japan using carbon isotopes**
Atsushi MATSUKI, Reina YAMADA, Kento KINOUCI, Risaki MIYAZAKI, Yoko IWAMOTO, Fumikazu IKEMORI, Masayo MINAMI and Toshio
- 10:15AM - 10:30AM **O3-15: A striking similarity between optical properties of humic substances and graphene oxide: is it due to a similar origin of fluorophores and their**
Evgeny SHIRSHIN, Sabir SHAKIROV, Stanislav EVLASHIN, Eugene Maksimov, Victor FADEEV, and Irina PERMINOVA
- 10:30AM - **Coffee Break**

Travel Award Presentation

Chair person: Gudrun ABBT-BRAUN

- 10:55AM - 11:05AM **T-10: Synthesis of redispersible gold nanoparticles: humic substances as a powerful alternative to sodium citrate**
Alexander POLYAKOV, Artem RUMYANTSEV, Vasily LEBEDEV, Evgeny SHIRSHIN, Irina PERMINOVA, and Eugene GOODILIN
- 11:05AM - 11:15AM **T-11: Riverine mixing at the molecular scale – An ultrahigh-resolution mass spectrometry study on the fate of Dissolved Organic Matter (DOM) and selected metals in the Amazon confluence zone (Manaus, Brazil)**
Carsten SIMON, Andrea KOSCHINSKY, and Thorsten DITTMAR
- 11:15AM - 11:25AM **T-12: Production of beneficial materials based on humic acids: from investigation of model fractions to scaling of technology and field tests**
Tatiana Skripkina, Alexey Bychkov, and Oleg Lomovsky
- 11:25AM - 11:35AM **T-13: Changes in redox properties of humic acids upon sorption to redox inert sorbents**
Edisson SUBDIAGA, Silvia ORSETTI, and Stefan HADERLEIN
- 11:35AM - 11:45AM **T-14: Preliminary study on application of VIS-NIR spectroscopy to evaluate SOM fractions in agricultural soils under industrial impact**
Aleksandra UKALSKA-JARUGA, Bożena SMRECZAK, Guillaume DEBAENE, Barbara MALISZEWSKA-KORDYBACH
- 11:45AM - 11:55PM **T-15: Tracing sediment pore water dissolved organic matter during anaerobic respiration**
Juliana VALLE, Michael GONSIOR, Mourad HARIR, Philippe SCHMITT-KOPPLIN, Norbert HERTKORN, David BASTVIKEN, Ralf CONRAD and Alex
- 11:55PM - 0:05PM **T-16: A multi-spectral approach to differentiate the effects of adsorbent pretreatments on the characteristics of NOM and membrane fouling**
Longfei WANG, and Mark M. BENJAMIN
- 0:05PM - 0:15PM **T-17: Eco-toxicological assessment of arsenic and cobalt in fractions of aquatic humic substances of different molecular sizes**
Cláudia Hitomi Watanabe, Adnivia Santos Costa Monteiro, Erik Sartori Jeunon Gontijo, Vivian Silva Lira, Carolina de Castro Bueno, Nirmal Tej Kumar, Renata Fracácio, André Henrique Rosa
- 0:15PM - 0:30PM **T-18: <<Malcom Award>> Application of selective H/D exchange coupled to Fourier Transform Ion Cyclotron Resonance mass-spectrometry to investigation individual compartments of Humic Substances**
Alexander Zhrebkera, Oleg Kharibin, Derek Waggoner, Patrick G. Hatcher, Eugene Nikolaev, and Irina V. Perminova
- 0:30PM - 2:00PM **Lunch (New Grand Hotel)**

2:00PM - 3:00PM **Poster session: P-54 ~ P-92 (Odd number), T-1 ~ T-18 at Large Assembly**

Session 4. Application of Diverse OM, industrial and agricultural applications of organic matter

Chair person: Masakazu AOYAMA and Guangxia QI

3:00PM - 3:30PM **INV4: Antioxidant Hydrogen Atom (H⁺/e⁻) Transfer Dynamics at the [Humic Acid]/[Particle] Interface: Do we Understand it?**

Yiannis Deligiannakis, Eleni Bletsas

3:30PM - 3:45PM **O4-1: Toward A Global Network of Humic Product Field Trials**

Daniel C. Olk, José María García-Mina and Russell Taylor

3:45PM - 4:00PM **O4-2: Effects of Recent Forest Clearcut on Particulate Organic Matter**

Hamada ABDELRAHMAN, Anne E. BERNS, Kirsten UNGER, Inge WIEKENKAMP, Diana HOFMANN and Roland BOL

4:00PM - 4:15PM **O4-3: Effect of humic substances on the processes of adaptation of different kinds agricultural poultry**

Liliya STEPCHENKO, Ludmila GALUZINA, Evgeniya MIKHAYLENKO, Elizaveta LOSEVA and Susanna KOLYADA

4:15PM - 4:30PM **O4-4: Kinetics study of the antioxidant capacities of humic and humic-like**

Olga KOROLEVA, Olga KLEIN, Ivan FILIMONOV, Natalia KULIKOVA and Andrey KONSTANTINOV

4:30PM - 5:00PM **Coffee Break**

Chair person: Yona CHEN and Kiyoshi TSUTSUKI

5:00PM - 5:15PM **O4-5: Effects of pyrogenous organic matter on bacterial community structure and biogeochemical cycling genes in nutrient-sufficient and nutrient-deficient**

Jianming Xu, Zhongmin Dai and Philip C. Brookes

5:15PM - 5:30PM **O4-6: Preparation and characterisation of humified organo mineral blends for increasing nitrogen use efficiency**

Biplob K. SAHA, Michael T. ROSE, Vanessa WONG, Timothy R. CAVAGNARO, and Antonio F. PATTI

5:30PM - 5:45PM **O4-7: Fulvic-like product increased yield and decreased blossom end rot in**

Karen LITTLE, William Roy JACKSON and Antonio PATTI

5:45PM - 6:00PM **O4-8: Growth and Symbiosis of Plants with Arbuscular Mycorrhizal Fungi in Soil Submitted to Biochar Application**

Cristiano Dela PICCOLLA, Etelvino Henrique NOVOTNY, Tajima RYOSUKE, Masanori SAITO

Chair person: E. Michael PERDUE

6:00PM - 6:30PM **The life and legacy of Frank Stevenson: an IHSS pioneer**

Yona CHEN

6:30PM - 7:30PM **IHSS General Assembly**

Conference Hall in Kanazawa Bunka Hall (1F)

September 16 (Fri)

Lobby and Conference Hall in Kanazawa Bunka Hall (1F)

8:30AM **Open & Reception**

Session 5. Diversity of NOM in water treatment

Chair person: Yiannis DELIGIANNAKIS and Yeonghee AHN

- 9:15AM - 9:45AM **INV5: Stability and risk assessments of coupling products between humic acid and tetrahalobisphenol A**
Masami FUKUSHIMA, Ritsu KODAMA, Mami IGARASHI, Kohki ODA, Kazuto SAZAWA and Hideki KURAMITZ
- 9:45AM - 10:00AM **O5-1: Synthesis of Humic-Like Substances Intercalated Layered Double Hydroxides Nanocomposite via In-situ Abiotic Humification**
Lei Li, Guangxia Qi, and Yi wang
- 10:00AM - 10:15AM **O5-2: Assessment of coastal environment for introducing the method of seaweed bed restoration using a mixture of steelmaking slag and compost**
Mitsuo YAMAMOTO and Dan LIU
- 10:15AM - 10:30AM **O5-3: Suspended natural organic matter originating from treated wastewater utilized in agriculture and its characterization**
Sagi KATZ, Jorge TARCHITZKY and Yona CHEN
- 10:30AM - **Coffee Break**
- 11:00AM - **Poster session: P-54 ~ P-92 (Even number), T-1 ~ T-18 at Large Assembly**

Session 5. Diversity of NOM in water treatment

Chair person: Masami FUKUSHIMA

- 0:00PM - 0:15PM **O5-4: Natural organic matter-rich groundwater contaminated with both metals and organic material: evaluation of permeable barrier materials for**
Ivan KOZYATNYK, Lars LÖVGREN, Mats TYSKLIND, Peter HAGLUND
- 0:15PM - 0:30PM **O5-5: Soil organic matter dissolution and biodegradation: Batch studies**
Joanna Lyn ANCORDA, Patrick RAMOSO, Maria Lourdes DALIDA and
- 0:30PM - 2:00PM **Lunch (New Grand Hotel)**

Chair person: Antonio NEBBIOSO and Masami FUKUSHIMA

- 2:00PM - 2:15PM **O5-6: Dissolved organic matter quality influences toxicity of nickel to cardinal tetra in waters of the Amazon Basin**
Aleicia Holland, Chris M Wood, Scott Smith and Adalberto Val
- 2:15PM - 2:30PM **O5-7: Structural changes of humic substances in Podzols affected by alkali fly-ash blown out from dumping site**
Maria JERZYKIEWICZ, Jerzy WEBER, Elżbieta JAMROZ, Andrzej KOCOWICZ, Magdalena DEBICKA and Irmina C̄WIELAŁG-PIASECKA
- 2:30PM - 2:45PM **O5-8: Effect of humic substances and iron on the complexation of arsenic in aquatic systems**
Erik Sartori Jeunon GONTIJO, Cláudia Hitomi WATANABE, Adnivia Santos Costa MONTEIRO, Paulo Sérgio TONELLO, Gilmare Antônia DA SILVA, Hubert Mathias Peter ROESER, Kurt FRIESE and André Henrique ROSA
- 2:45PM - 3:00PM **O5-9: Impact of agricultural activities on the amount, composition and dynamic of dissolved organic matter in temperature rivers (Brittany-France)**
Lauriance MARIE, Benoit PERNET-COUDRIER, Matthieu WAELES and
- 3:00PM - 4:00PM **Closing remark**