



**Final Symposium EU-COST Action “Biochar” & 76. Symposium des ANS e.V.**  
**“UNDERSTANDING BIOCHAR MECHANISMS FOR BENEFICIAL IMPLEMENTATION”**  
28<sup>th</sup> – 30<sup>th</sup> September 2015, Hochschule Geisenheim University, Germany



The **Joint International Biochar Symposium 2015** aims at understanding mechanisms that enable beneficial and safe biochar implementation, by uniting the two often co-existing “worlds” of practitioners, stakeholders and applicants with biochar scientists for inspiring exchange.



In the beautiful historical scenery of Geisenheim University on the shores of river Rhine, with its century-long tradition in viticulture and gardening, we seek to bring together biochar researchers and practitioners for mutual exchange of experience, knowledge, ideas and concepts to bring forward beneficial biochar implementation strategies.

**Important dates, registration and submission forms:**

**Abstract deadline:** Sunday, 2 August 2015 (final deadline)

**Abstract submission:** [call@european-biochar.org](mailto:call@european-biochar.org).

Abstract template: download word template from the conference homepage

(<http://cost.european-biochar.org/en/ct/165-Joint-International-Biochar-Symposium-2015>).

Please indicate the **session** you chose, and if you prefer an **oral or poster** presentation.

**Abstract selection:** During August 2015; **Session lead teams will select** abstracts for orals or posters; Authors of insight-providing topical abstracts may be asked to join the session leader teams for joint opinion/review paper writing.

**Abstract decision notification:** End of August 2015 (finalized program)

**Conference Chairperson and Host:**

Claudia Kammann, Geisenheim University, Germany (**Info Location:** see end of flyer)

**EU COST Action International Scientific Committee // ANS Scientific Committee:**

Nele Ameloot, Bruno Glaser, Ellen R. Graber, Jürgen Kern, Heike Knicker, Utra Mankasingh, Ruben Sakrabani, Hans Peter Schmidt, Saran Sohi, Frank Verheijen & Costanza Zavalloni // Achim Loewen, Ines Vogel and Rainer Wallmann

**Local organizing team:**

Tanja Borowiec (ANS e.V.), Julia Baumberger (Geisenheim University) and Luise Störmer (EU COST Action TD1107, “Biochar”)

**Preliminary Conference Program:****Introductory Lectures 1<sup>st</sup> and 2<sup>nd</sup> day:**

**Claudia Kammann**, Geisenheim University & **Wolfgang Lucht**, Co-Chair of PIK Research Domain I „Earth System Analysis“ and Alexander von Humboldt Chair in Sustainability Science, Humboldt University Berlin

**Johannes Lehmann**, Cornell University, NY, USA and Vice-Chair of the International Biochar Initiative

**First day: Monday, 28. September 2015: Understanding Mechanisms****Session 1: Time matters: Biochar persistence in soil and its effects on SOC stocks**

**Session lead:** **Saran Sohi**, UK Biochar Research Centre (UKBRC), Edinburgh, UK; Bruno Glaser, University Halle, Germany; Heike Knicker, CSIC, Sevilla, Spain

**Keynotes:** **Yakov Kuzyakov**, University Göttingen, Germany

**Session 2: Biochar Production Technology: Designing biochar properties**

**Session lead:** **Ondrej Masek**, UKBRC, UK; Hans-Peter Schmidt, Ithaka Institute, Switzerland; Jan Mumme, UKBRC, UK; Stephen Joseph, Australia

**Keynote:** **Stephen Joseph**, University of New South Wales, Australia

**Session 6\*: Biochar use for reducing GHG (N<sub>2</sub>O, CH<sub>4</sub>) emissions in soils, substrates and animal production**

**Session lead:** **Claudia Kammann**, Geisenheim University, Germany, Jürgen Kern, ATB Potsdam, Germany; Nele Ameloot, Ghent University, Belgium;

**Keynotes:** **Nele Ameloot**, Ghent University, Belgium  
**Kurt Spokas**, United States Department of Agriculture (USDA), Minnesota, USA

**1<sup>st</sup> Evening:** *Conference get-together with Geisenheim wine tasting, buffet dinner, TLUD stoves and Kon-Tiki firing at the old romantic park at Geisenheim University, Germany*

**Second day: Tuesday, 29. September 2015: Understanding Mechanisms****Session 3\*: The Janus face of Biochar: Risk of pollution versus pollution remediation tool?**

**Session lead:** **Thomas Bucheli**, Agroscope, Switzerland; Ana Catharina Bastos, University de Aveiro, Portugal; Gerard Cornelissen, Norwegian Geotechnical Institute, Norway

**Keynote:** **Gerard Cornelissen**, University Stockholm, Sweden and Norwegian Geotechnical Institute, Norway

**Session 4: Biochar use in horticulture: Designing biochar substrates for reduced peat use and improved plant health**

**Session lead:** **Ellen Graber**, The Volcani Center, Agricultural Research Organization, Bet Dagan, Israel; Jürgen Kern, Leibniz-Institute for Agricultural Engineering Potsdam-Bornim (ATB), Germany; Claudia Kammann, Geisenheim University, Germany

**Keynote:** **Omer Frenkel**, The Volcani Center, Agricultural Research Organization, Bet Dagan, Israel

*\*) Session 3 was moved to the second day for organizational reasons so that session 6 had to be moved to the first day.*

**Session 5: Biochar use in temperate and tropical agriculture, animal husbandry and organic fertilizer management**

**Session lead:** Gerard Cornelissen, Norwegian Geotechnical Institute, Norway; Ruben Sakrabani, Cranfield University, UK; Bruno Glaser, Halle University, Germany; Costanza Zavalloni, University of Udine, Italy

**Keynote:** Alessandro Peresotti, University of Udine, Italy

**Closing Lecture, Day 2 “Lessons learned”**

Bruno Glaser, University Halle, Germany and Chair of COST Action Biochar

**2<sup>nd</sup> Evening:** “After work recreation”: Bus ride to Johannisberg cloister, guided cultural sightseeing tour in groups through beautiful vineyard landscapes, followed by a cosy Conference Dinner Barbecue at the cloister garden, overlooking the Rhine valley



The Program for the 3<sup>rd</sup> day has largely been finalized. Oral time slots will become free if speakers withdraw; additional poster presentations are welcome.

**Third day: Wednesday, 30. September 2015: Practical Implementation Concepts**

<b>76. ANS-Symposium: Practical implementation of biochar &amp; hydrochar technologies</b>		
9:00	Opening note Prof. Dr.-Ing. A. Loewen (HAWK Göttingen, DE), Chair ANS e.V.	
<b>Session 7 BC &amp; HTC production technologies for different fields of application</b>		
<b>Session 7 chair: Achim Loewen</b>		
9:15	<i>Challenges of modern pyrolysis technology for waste management, bioenergy production, biochar materials and designer biochar production: An industrial R&amp;D perspective (Keynote)</i>	S. O'Grady, Premier Green Energies, Tipperary, Ireland
9:45	<i>Pathways to successful carbonizing technology for P recycling from sewage sludge for agricultural use.</i>	T. Appel, K. Friedrich, FH Bingen, Germany
10:05	<i>P-Recycling by combining low temperature conversion and thermochemical treatment of sewage sludge.</i>	D. Steckenmesser et al., Uni Gießen, Germany
10:20	<i>Hydrothermal carbonisation of digestate for ameliorating local surplus nutrient loads?</i>	H. Brookmann et al., HAWK Göttingen, Germany
10:35	Poster presentation and coffee break	
<b>Session 8 Use of biochar and hydrochar in soils, substrates and horticulture</b>		
<b>Session 8 chair: Rainer Wallmann</b>		
11:05	<i>Free to copy and distribute: Production, markets and implementation of biochar-compost substrates (Keynote)</i>	S. Kurhan, Firma Terra Magica, Fürth, Germany
11:35	Five years of biochar research at the FU Berlin: Results for horticultural use and remediation of contaminated soils	I. Vogel et al., FU Berlin, Germany
11:50	HTC-coal mixtures as peat substitute materials	M. Röhrdanz & R. Buchwald, Uni Oldenburg, Germany

12:05	Biochar under farming conditions in Zambia: Impacts on soil properties and crop yields	A. Obia et al., University of Life Sciences, Norway
<b>12:20</b>	<b>Lunch 3<sup>rd</sup> day</b>	
13:20	Poster presentation and coffee break	
<b>Session 9</b>	<b>Innovative and unconventional uses and use-cascades of biochar</b>	
	<b>Session 9 chair: Dr. Ines Vogel</b>	
13:50	<i>Production, implementation and experiences with the administration of fermented carbon-feed additives in animal husbandry (Keynote)</i>	U. Rothenbühler, EM Schweiz AG, Switzerland
14:20	<i>Biochar as building material: NO-x adsorption, fire resistance and CO<sub>2</sub> sequestration of high performance, high durability concrete-containing activated char (Keynote)</i>	M. DiTommaso, Istituto Meccanica dei Materiali SA, Switzerland
14:50	<i>Magnetically responsive biochar for environmental technology applications</i>	I. Safarik et al., Ceske Budejovice, Czech Republic
15:05	<i>A high-moisture biochar reactor for sanitation in developing regions</i>	B. von Herzen et al., Climate Foundation, Woods Hole, USA
15:20	Poster presentation and coffee break	
<b>Session 10</b>	<b>Direct and indirect use of biochar and hydrochar in bioenergy generation</b>	
	<b>Session 10 chair: N.N.</b>	
15:50	<i>Development of EU/MS/REACH mandatory permits and policy support towards improved European regulations and law harmonization for biochar industrial production, safe products and placing on the market.</i>	E. Someus, Terra Humana Ltd., Biofarm Agri Center, Hungary
16:20	<i>Biochar and hydrochar additives in biogas production</i>	J Mumme, UKBRC, Edinburgh, UK
16:35	<i>Vapothermal carbonization of wet biogenic waste for bioenergy generation in Shanghai, China</i>	K. Serfass, Federal Association HTC

**Final Discussion: Moving forward: Identification of the most promising R & D pathways for beneficial biochar and hydrochar implementation – taking the next steps**

**Official “Take-home messages”, final acknowledgements and farewell to all participants**

**- END OF SYMPOSIUM -**



More info conference location Geisenheim University: <http://www.hs-geisenheim.de/en/homepage.html>

More info Rheingau Region: <https://www.hessen-tourismus.de/holiday-regions/rheingau>