October 2015 News from the International Biochar Initiative

California Air Pollution Control Officers Association (CAPCOA) Approves Methodology for Emissions Reductions from Biochar Projects

IBI is pleased to announce that on September 28th the California Air Pollution Control Officers Association (CAPCOA) Board formally approved a Biochar Greenhouse Gas Quantification Protocol as an approved offset protocol within its Greenhouse Gas Reduction Exchange (GHG Rx). The Protocol—developed by IBI in partnership with The Climate Trust and The Prasino Group—was sponsored by the Placer County Air Pollution Control District (APCD). CAPCOA's GHG Rx is a registry for GHG emission reduction credits generated in the state of California and designed to benefit participating air control districts to offset the GHG impacts of development and other activities that increase GHG emissions in their districts.

This effort marks one of the first instances globally of a biochar carbon offset methodology approved for use by entities seeking to reduce their carbon footprint. "We are ecstatic that CAPCOA's Board has recognized the important contribution that biochar projects can make in reducing greenhouse gases while also contributing to clean air through pyrolysis of biomass that would otherwise have been burned," said IBI's Board Chair, Marta Camps. "It is our intent that this methodology serve as demonstration of the technical requirements to produce biochar and quantify its carbon offset potential."

The Protocol builds on work to develop a biochar carbon offset methodology for validation with the American Carbon Registry (ACR). A core component of the Protocol is the Test Method for Estimating Biochar Carbon Stability (BC_{+100}), which uses the ratio of hydrogen to organic carbon to estimate the fraction of biochar carbon that will persist in soil for 100 years. The Protocol allows for projects that produce biochar from woody and agricultural residues in California. The Placer County APCD sought approval of the Protocol with the intention of supporting development of a biochar project in partnership with Phoenix Energy—an established biochar production equipment manufacturer—in its jurisdiction.

IBI is grateful to the Blue Moon Fund and the David and Lucile Packard Foundation for their generous financial support that enabled IBI to support this important milestone. For more information on CAPCOA's GHG Rx and to view the Protocol, see http://www.ghgrx.org/.

Renewing Business Member: Carbon Gold; Renewing Organization Members: ICBA and Alberta Biochar Initiative

A listing of all current IBI Business and Organization Members can be found on our website. For more information on membership opportunities and benefits, or to join, please see: http://www.biochar-international.org/join. Please note, Business and Organization descriptions are submitted by each individual entity, and are not developed or written by IBI.

Carbon Gold is the world's leading biochar company. We supply value-added biochar products, biochar-making kilns and project expertise internationally. Sales of our biochar-based 'GroChar' products are growing year-over-year. Our expanding range of economical biochar-making kilns is designed for mobility, high efficiency and ease of use. Our unique low-temperature charring process can transform a wide variety of feedstocks into high-value biochar or charcoal with attractive yields. The kilns recycle and burn the charring gases so emissions are greatly reduced compared to ring or pit kilns. Please get in touch to discuss how we could help with your project.

For more information, please contact Simon Manley or Seb Burn through www.carbongold.com or at info@carbongold.com. Follow us on Twitter @CarbonGold.

The International Center for Biosaline Agriculture (ICBA) is an international, non-profit agricultural research center. Based in Dubai, the U.A.E, the center conducts applied research and development programs focused on improving agricultural productivity and sustainability in marginal and saline environments.

Established in 1999, ICBA takes innovation as one of its core principles and adopts a multi-pronged approach to addressing the closely-linked challenges of ensuring water, environment, income, food, and nutrition security. The center's research innovations focus on assessment of natural resources, climate change adaptation, crop productivity and diversification, aquaculture and bio-energy, and policy analysis. ICBA contributes to achieving the global Sustainable Development Goals (in particular SDGs 1, 7, 12 and 13) by working on a number of technologies and innovations, including the use of conventional and non-conventional water such as saline, treated wastewater, industrial water, agricultural drainage, and seawater; water and land management technologies; and remote sensing and modeling for climate change adaptation.

Improving the generation and dissemination of knowledge is one of ICBA's strategic objectives and the center is committed to establishing itself as a knowledge hub on sustainable management and use of marginal resources for agricultural production and environmental protection in marginal environments.

ICBA's work reaches many countries around the world, including the Gulf Cooperation Council countries, the Middle East and North Africa, Central Asia and the Caucasus, South and South-East Asia, and Sub-Saharan Africa. For more information about ICBA, please visit www.biosaline.org.

Alberta Biochar Initiative (ABI): Lakeland College and Alberta Innovates Technology Futures (AITF) with assistance from Western Economic Diversification Canada and industry support have developed the Alberta Biochar Initiative. The ABI is intended to develop and demonstrate technologies that will enable the large scale commercial deployment of biochar products and biochar applications for the benefit of Albertans.

Established in Dec 2011, the ABI consists of small-to-medium sized enterprises (SMEs), industry, academia and government sharing information and producing and generating biochar for end-use applications including soil amendments, reclamation, remediation, horticultural growth media and conducting biochar lifecycle analysis for potential carbon sequestration applications. For more information, please contact Don Harfield at Don.Harfield@albertainnovates.ca or go to: http://albertabiochar.ca.

"Biochar – Chicken Soup for the Soil"

Reminder: Participate in the 2015 IBI Biochar Business Survey

Thank you to those businesses who have already submitted information for our annual survey used to produce the *State of the Biochar Industry* Report. We are conducting this survey to collect data on activities related to the commercial production, distribution, and marketing of biochar and biochar-related products and services. We plan to use the data collected in this survey to produce a 2015 *State of the Biochar Industry Report*. This survey should take, at most, 20 minutes to complete. **The deadline for input is November 6, 2015**. You may review the published results from prior years at: http://www.biochar-international.org/commercialization.

The survey is intended to gather information from three biochar business sectors: biochar production and/or sales; biochar production equipment manufacturers; and other biochar-related enterprises. Once you start the survey, you will be directed to survey questions related to your sector selection.

We recognize that many biochar enterprises want to be sure that the information they submit is private. **IBI will maintain the confidentiality of all information collected in this survey**. Data will be presented in aggregate for trending analysis and the only personal information shared will be basic contact information such as website and location, in order to illustrate the growth in biochar/biochar-related businesses. In addition, we are launching a 4-question anonymous survey to ask biochar producers about the volume of biochar produced and sold. To access the 2015 business survey, please go to: http://www.surveygizmo.com/s3/2260737/Biochar-Business-Survey-for-2015

November IBI Webinar Series Event: Myles Gray presents "Biochar for Stormwater Treatment: Technology Overview and Case Study Review"

Are you interested in learning about the process and effectiveness of treating stormwater with biochar? If so, this webinar is for you! IBI welcomes Myles Gray, Faculty Research Assistant at Oregon State University, for our November *IBI Webinar Series* event. Mr. Gray will discuss how biochar-based filtration is an emerging stormwater treatment approach and has generated significant interest among stormwater professionals, particularly for removal of dissolved contaminants including heavy metals. This presentation will include: 1) A brief introduction to biochar science and its potential application in stormwater filtration; 2) Biochar-specific design considerations for successful installations; and 3) A survey of stormwater treatment projects that have utilized biochar-based filtration with a focus on projects in the Pacific Northwest in the United States.

Registration is open now. The webinar will be held on **Tuesday, November 17th at 18:00 GMT** (which is 1:00p.m. Eastern Time or the time in New York City). Note: Please convert the 1:00p.m.ET start time to

your local time by using this time converter tool. You must be a dues-paying member to participate in these special events. If you are not an IBI member and would like to join, please click here.

IBI members can view this and all prior *IBI Webinar Series* presentations by logging into the IBI member's only site at https://ibi.memberclicks.net/login. If you are not an IBI member and would like to join in order to view presentations, please click here. For more information on *IBI's Webinar Series*, please see: http://www.biochar-international.org/webinar_series.

Did you know that the IBI Online Biochar Training Course is Ongoing?

If you are interested in gaining more in-depth knowledge on biochar and biochar systems, consider registering for IBI's recently launched online course, *Biochar Training for Environmental Sustainability and Economic Development*. This ten week, ongoing course provides participants an intensive training series on all aspects of biochar, presented by leading biochar experts. Participants have the opportunity to learn about best-science updates on biochar to promote the uptake of biochar production and use, and actions necessary to overcome the barriers to commercialization of the biochar industry. The course contains 19 separate lessons—each with a subject overview, a recorded audio/video presentation lasting 30 – 45 minutes (some lessons contain more than one video), and quizzes to test comprehension and retention. There is also an optional introductory presentation on the basics of biochar and the IBI so that all participants start the course with a common understanding of both. Course materials are presented in a user-friendly online format and participants can access the course at their convenience over ten weeks and will receive a certificate of completion at the conclusion of the course.

Course materials are based on presentations from the June 2014 in-person biochar training course titled, "*Biochar for Environmental Sustainability and Economic Development,*" hosted by the University of Santiago de Compostela, Spain, and developed and presented by IBI and collaborators. For more information on member and non-member pricing and registration, please see www.biochar-international.org/online_course.

Biochar Approved as an Ag Soil Amendment in Italy

The Italian Ministry of Agriculture has recently approved the inclusion of biochar in the list of soil amendments allowed in Italian agriculture and published the technical specifications on the Gazzetta Ufficiale, Serie Generale n° 186 del 12-8-2015.

"This is a great success for the Italian Biochar Association (ICHAR) who elaborated the technical documentation and presented the request to the Ministry of Agriculture in 2012, and for all the Italian researchers who devoted a large effort to contribute to increase our knowledge on biochar" states ICHAR's President Vittorino Crivello. "Italian agriculture is now in the position to provide an effective contribution in mitigating climate change" continues Crivello, "and we hope that this will be an example for other European countries to approve the use of biochar". For more information on the Italian Biochar Association, please see www.ichar.org or contact info@ichar.org.

Last Chance to Register for the *Aqueous Solutions* Training on Water Treatment using Biochar

Aqueous Solutions is offering a 10-day intensive training course in water treatment using biochar. The workshop will take place from January 3-12 2016, and will be held at Pun Pun Centre for Self-Reliance, located in northern Thailand. The registration deadline is Thursday November 12, 2015.

The workshop will provide participants with comprehensive practical training in the generation and application of biochar adsorbent for control of organic chemical contaminants in low cost household and community water treatment. The course will combine lecture/discussion sessions with a great deal of participatory hands-on activities. Participants will gain technical competence in generation of biochar adsorbent using common local materials and tools, as well as methods for integration of biochar adsorption in multi-barrier treatment systems that address both biological and chemical water contaminants. See http://aqsolutions.org for more information including how to apply to the workshop.

Opportunities in Biochar

- Take advantage of a free subscription to Biomass Magazine. More information is available at http://www.biochar-international.org/node/5537
- Download the open access biochar book: *Biochar Culture*, by Dr Sai Bhaskar Reddy Nakka. The text highlights the use of biochar in communities and its potential for increased sustainable agriculture in smaller scale farmsteads and homes, focusing on work in India. The book can be accessed at http://www.biocharculture.com
- Job postings in biochar (as well as research/educational opportunities) can be accessed at http://www.biochar-international.org/network/jobs
- Looking for potential grant funding? Check out the Terra Viva Grants Directory which develops and manages information about grants for agriculture, energy, environment, and natural resources in the world's developing countries at http://www.terravivagrants.org/Home

Upcoming Calendar Events

- November 15 – 18: 2015 American Society of Agronomy meeting (includes 5 biochar sessions). Location: Minneapolis, MN, USA. For more information: http://www.biochar-international.org/node/6553
- November 17: *IBI Webinar Series* Event: Myles Gray presents “Biochar for Stormwater Treatment: Technology Overview and Case Study Review”. For more information: http://www.biochar-international.org/node/7523
- March 30 – April 1, 2016: Northeast Biomass Heating Expo 2016. Location: Burlington, VT, USA. For more information: http://www.biochar-international.org/node/7389
- April 11 – 14, 2016: 9th Annual International Biomass Conference & Expo. Location: Charlotte, NC, USA. For more information: http://www.biochar-international.org/node/7430

- Save the Date: August 2016. Biochar 2016: The Synergy of Science and Industry: Biochar's Connection to Ecology, Soil, Food, and Energy. Location: Corvalis, OR, USA. For more information: http://usbi2016.org/

See the IBI Calendar page for more events. To add an event to the calendar, send the information to info@biochar-international.org.

Recently Published Biochar Research

IBI tracks all published research on biochar and includes it in our online bibliography. The following articles were added in the last month. Please visit the website bibliography for more information on any of these articles. Due to copyright infringement laws, we cannot provide full copies of articles unless we have permission from the publisher. If you have published work that is not included, please email us.

Abbruzzini, Thalita Fernanda (2015). The role of biochar on greenhouse gas offsets, improvement of soil attributes and nutrient use efficiency in tropical soils. Thesis; http://www.teses.usp.br/teses/disponiveis/11/11140/tde-30092015-115437/en.php

Ábrego, J.; M. Atienza-Martínez, J.R. Gimeno, J. Aibar, D. Quílez, G. Gea (2015). Phytotoxicity of Sewage Sludge Biochars Prepared at Different Pyrolysis Conditions. Conference Paper; http://www.researchgate.net/profile/Dolores_Quilez/publication/278031095_Phytotoxicity_of_sewage_sludge_biochars_prepared_at_different_pyrolysis_conditions/links/55ed3b3708ae65b6389f449b.pdf

Abubakari, A-H.; H. Bayor, I. Takyi, F. A. Chimsah, G. Nyarko, L Atuah and B. Banful (2015). Effect of compost-biochar mixes and irrigation on the growth and yield of Amaranthus (Amaranthus hybridus) under two growing temperatures. African Journal of Agricultural Research; http://www.researchgate.net/profile/Abdul_Halim_Abubakari/publication/281712170_Effect_of_compost-biochar_mixes_and_irrigation_on_the_growth_and_yield_of_Amaranthus_(Amaranthus_hybridus)_under_two_growing_temperatures/links/55f566f108ae63926cf34a40.pdf

Agarry, Samuel Enahoro; Kigho Moses Oghenejoboh, Bamidele Ogbe Solomon (2015). Kinetic Modelling and Half Life Study of Adsorptive Bioremediation of Soil Artificially Contaminated with Bonny Light Crude Oil. Journal of Ecological Engineering; http://www.jeeng.net/pdf-2799-2826?filename=KINETIC%20MODELLING%20AND.pdf

Andrenelli, M.C.; A. Maienza, L. Genesio, F. Miglietta, S. Pellegrini, F.P. Vaccari, N. Vignozzi (2015). Field application of pelletized biochar: Short term effect on the hydrological properties of a silty clay loam soil. Agricultural Water Management; DOI 10.1016/j.agwat.2015.09.017

Antonius, Sarjiya; Tirta Kumala Dewi, M Osaki (2015). The Synergy of Biochar, Compost and Biofertilizer for Development of Sustainable Agriculture. KnowledgeE Publishing Services; http://knepublishing.com/index.php/Kne-Life/article/view/247

Aon, Muhammad; Muhammad Khalid, Zahir Ahmad Zahir and Rashid Ahmad (2015). Low Temperature Produced Citrus Peel and Green Waste Biochar Improved Maize Growth and Nutrient Uptake, and Chemical Properties of Calcareous Soil. Pak. J. Agri. Sci; http://www.pakjas.com.pk/papers%5C2461.pdf

Ashraf, Umair; Adam Sheka Kanu, Zhaowen Mo, Saddam Hussain, Shakeel Ahmad Anjum, Imran Khan, Rana Nadeem Abbas, Xiangru Tang (2015). Lead toxicity in rice: effects, mechanisms, and mitigation strategies—a mini review. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5463-x

Ashworth, Amanda J.; Pat D. Keyser, Fred L. Allen, Donald D. Tyler, Adam M. Taylor and Charles P. West (2015). Displacing Inorganic Nitrogen in Lignocellulosic Feedstock Production Systems. Agronomy

Journal; https://dl.sciencesocieties.org/publications/aj/articles/0/0/agronj15.0033; DOI 10.2134/agronj15.0033

Bakar, Rosenani Abu; Zahidah Abdul Razak, Siti Hajar Ahmad, Bahi Jalili Seh-Bardan, Lim Chin Tsong, Cheah Poh Meng (2015). Influence of Oil Palm Empty Fruit Bunch Biochar on Floodwater pH and Yield Components of Rice Cultivated on Acid Sulphate Soil under Rice Intensification Practices. Plant Production Science; https://www.jstage.jst.go.jp/article/pps/18/4/18_491/_article

Basta, N. T.; D. M. Busalacchi, L. S. Hundal, K. Kumar, R. P. Dick, R. P. Lannoc, J. Carlson, A. E. Cox and T. C. Granato (2015). Restoring Ecosystem Function in Degraded Urban Soil Using Biosolids, Biosolids Blend, and Compost. Journal of Environmental Quality; DOI 10.2134/jeq2015.01.0009

Bergier, Ivan; Claudia Maria Branco De F Maia, Marcela Guiotoku, Paulo Paiva, Ana Paula Silva, Etelvino Henrique Novotny (2015). Pyrolysis Dynamics of Biomass Residues in Hot-Stage. BioResources; http://152.1.0.246/index.php/BioRes/article/view/BioRes_10_4_7604_Bergier_Pyrolysis_Dynamics_Biomass_Residues

Bock, Emily M.; Brady Coleman and Zachary M. Easton (2015). Effect of Biochar on Nitrate Removal in a Pilot-Scale Denitrifying Bioreactor. Journal of Environmental Quality; DOI 10.2134/jeq2015.04.0179

Boetjer, Scott (2015). Rootbound: Exploring Production in Seattle's Urban Forest Thesis: University of Washington; https://dlib.lib.washington.edu/researchworks/handle/1773/33626

Bound, SA; Eyles, A; Oliver, GS; Paterson, SC; Direen, JB; Corkrey, R; Hardie, MA; Close, DC (2015). Soil amendment with biochar: growth, physiology and fruit yield and quality of young 'Fuji' trees. Refereed Conference Paper: eCite; http://ecite.utas.edu.au/103194

Bundschuh, Mirco; Jochen P. Zubrod, Frank Seitz & Michael C. Newman (2015). Effects of two sorbents applied to mercurycontaminated river sediments on bioaccumulation in and detrital processing by Hyalella Azteca. Journal of Soils and Sediments; http://www.researchgate.net/profile/Mirco_Bundschuh/publication/275057660_Effects_of_two_sorbents_applied_to_mercury-contaminated_river_sediments_on_bioaccumulation_in_and_detrital_processing_by_Hyalella_azteca/links/553637ce0cf268fd00163065.pdf

Cavoski, Ivana; Ziad Al Chami, Mohammad Jarrar, Donato Mondelli (2015). Alternative solutions for soil fertility management to overcome the challenges of the Mediterranean organic agriculture: Tomato plant case study. Soil, Land Care & Environmental Research; http://www.publish.csiro.au/view/journals/dsp_journals_pip_abstract_scholar1.cfm?nid=84&pip=SR15067

Chen Miao, Tang Wenhao, Géchéngjun, Peng Lixu (2015). Effects of biochar made from bagasse on adsorption behavior of ofloxacin in latosols. Miscellaneous; http://www.cjee.ac.cn/teepc_cn/ch/reader/view_abstract.aspx?file_no=20151075

Chen W; Hu XY, Lu HN (2015). Impacts of Biochar Input on Mineralization of Native Soil Organic Carbon. Europe PubMed Central; http://europepmc.org/abstract/med/26387339

Cheng, Chih-Hsin; Zue-Ping Lin, Yu-Sheng Huang, Chih-Peng Chen, Chie-Te Chen, and Oleg V. Menyailo (2015). Reduction of Diuron Efficacy with Biochar Amendments. International Journal of Environmental Science and Development; http://search.proquest.com/openview/57a8427c67db2c3ea3dc125fa9291bdb/1?pq-origsite=gscholar

Chiodo, V.; G. Zafarana, S. Maisano, S. Freni, F. Urbani (2015). Pyrolysis of different biomass: Direct comparison among Posidonia Oceanica, Lacustrine Alga and White-Pine. Fuel; DOI 10.1016/j.fuel.2015.09.093

Colantoni, Andrea; Lavinia M.P. Delafanti, Leonardo Longo, Nicola Evic, Francesco Gallucci (2015). Use of hazelnut's pruning to produce biochar by gasifier small scale plant. International Journal of Renewable Energy Research-IJRER; http://www.ijrer.org/ijrer/index.php/ijrer/article/view/2460

Crane-Droesch, Andrew (2015). Technology diffusion, outcome variability, and social learning: Evidence from a field experiment in Kenya. Miscellaneous; http://andrewcd.berkeley.edu/research/ACD_JMP.pdf

da Silva Mendes, Jacqueline; Lúcia Helena Garófalo Chaves, Josely Dantas Fernandes, Iêde de Brito Chaves (2015). Using MB-4 rock powder, poultry litter biochar, silicate and calcium carbonate to amend different soil types. Australian Journal of Crop Science; http://www.cropj.com/chaves_9_10_2015_987_995.pdf

Dickinson, Dane; Pascal Boeckx, Katina Andrea Kiep, Jens Busse, Daniela Kruse, Frederik Ronsse, and Wolter Prins (2015). Biochar priming of native SOC and the net carbon balance: observations from a 13C-biochar microcosm study. Symposium des ANS e.V. 2015; https://biblio.ugent.be/publication/6951712

Doumer, M. E.; A. Rigol, M. Vidal, A. S. Mangrich (2015). Removal of Cd, Cu, Pb, and Zn from aqueous solutions by biochars. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5486-3

Dumbrell, Nikki P.; Marit E. Kragt, Fiona L. Gibson (2015). What carbon farming activities are West Australian farmers willing to adopt? Agronomy; http://www.agronomy2015.com.au/papers/agronomy2015final00429.pdf

EL-Tawil, A.A.; Hesham M. Ahmed, A.A. EL-Geassy, Bo. Bjorkman (2015). Effect of Volatile Matter on Reduction of Iron Oxide-Containing Carbon Composite. Conference Paper; http://www.researchgate.net/profile/Asmaa_Eltawil/publication/280102656_EFFECT_OF_VOLATILE_MATTER_ON_REDUCTION_OF_IRON_OXIDE-_CONTAINING_CARBON_COMPOSITE/links/55f0c1f608aedecb68ffc1c3.pdf

Fan Ru-Qin, Luo Jia, Yan Shao-Hua, Zhou Yun-Lai and Zhang Zhen-Hua (2015). Effects of biochar and super absorbent polymer on substrate properties and water spinach growth. Pedosphere; http://pedosphere.issas.ac.cn/trqen/ch/reader/view_abstract.aspx?file_no=20150512

Fei Gao, Yingwen Xue, Pinya Deng, Xiaoru Cheng & Kai Yang (2015). Removal of aqueous ammonium by biochars derived from agricultural residuals at different pyrolysis temperatures. Chemical Speciation & Bioavailability; DOI 10.1080/09542299.2015.1087162

Feng YanFang; Xue LiHong; Yang Bei; Sun HaiJun; He ShiYing; Yang LinZhang (2015). Optimized preparation of lanthanum uploaded biochar and its application in adsorbing pentavalent arsenic ions from aqueous solution. China Environmental Science; http://www.cabdirect.org/abstracts/20153314910.html;jsessionid=884132458603550B9DAAE2DEFAF7C84F

Forján, R.; V. Asensio, A. Rodríguez- Vila, E. F. Covelo (2015). Contributions of a compost-biochar mixture to the metal sorption capacity of a mine tailing. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5489-0

Forjána, R.; V. Asensiob, A. Rodríguez-Vilaa, E.F. Covelo (2015). Contribution of waste and biochar amendment to the sorption of metals in a copper mine tailing. CATENA; DOI 10.1016/j.catena.2015.09.010

Gámiz, Beatriz; Joseph J. Pignatello, Lucía Cox, María C. Hermosín, Rafael Celis (2015). Environmental fate of the fungicide metalaxyl in soil amended with composted olive-mill waste and its biochar: An enantioselective study. Science of the Total Environment; DOI 10.1016/j.scitotenv.2015.09.097

Guofeng Shang, Liang Liu, Ping Chen, Qiwu Li & Xiamei Huang (2015). Adsorption of hydrogen sulfide by biochars derived from pyrolysis of different agricultural/forestry wastes. Journal of the Air & Waste Management Association; DOI 10.1080/10962247.2015.1094429

Hailu Wu, Xiaodong Che, Zhuhong Ding, Xin Hu, Anne Elise Creamer, Hao Chen, Bin Gao (2015). Release of soluble elements from biochars derived from various biomass feedstocks. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5451-1

Hartatik, Wiwik; Heri Wibowo, Jati Purwani (2015). Aplikasi Biochar dan Tithoganic dalam Peningkatan Produktivitas Kedelai (Glycine max L.) pada Typic Kanhapludults di Lampung Timur [Biochar and Tithoganic Application for Improving Soybean (Glycine max L.) Productivity on Typic Kanhapludults in Lampung Timur. Jurnal Tanah dan Iklim; http://balittanah.litbang.pertanian.go.id/ind/dokumentasi/lainnya/wiwik%20vol39.pdf

Huck Ywih Ch'ng, Osumanu Haruna Ahmed and Nik Muhamad Ab. Majid (2015). Improving Phosphorus Availability, Nutrient Uptake and Dry Matter Production of Zea Mays L. on a Tropical Acid Soil Using Poultry Manure Biochar and Pineapple Leaves Compost. Experimental Agriculture; http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9986340&fileId=S0014479715000204

Huff, Matthew D.; James W. Lee(2015). Biochar-surface oxygenation with hydrogen peroxide. Journal of Environmental Management; DOI 10.1016/j.jenvman.2015.08.046

Hyun Tae Kim, Dong Cheol Seo, Se Won Kang, Jong Soo Heo, Ju Sik Cho (2015). Evaluation of Biochar Applications on Growth Characteristics of Lettuce and Reduction of Greenhouse Gases in Lettuce Cultivation. Korea Environmental Agriculture Conference; http://www.papersearch.net/view/detail.asp?detail_key=09202813

Inyang, Mandu I.; Bin Gao, Ying Yao, Yingwen Xue, Andrew Zimmerman, Ahmed Mosa, Pratap Pullammanappallil, Yong Sik Ok & Xinde Cao (2015). A Review of Biochar as a Low-Cost Adsorbent for Aqueous Heavy Metal Removal. Critical Reviews in Environmental Science and Technology; DOI 10.1080/10643389.2015.1096880

Jiwan, M.; Henrita, S.; Petrus, B.; Abdulah, N.A.P.; Osumanu, H.A.; Wan Asrina, W.Y.; Kundat, F.R.; Maulana, M.M.; Mustapha, M.; (2015). Traditional Natural Farming System in the Production of Bario Rice (Adan Rice) by Lun Bawang Community in the Highland of Borneo, Sarawak, East Malaysia and Potential for Using Biochar, Paddy Straw and Buffalo Dung Bokashi. Proceeding - Kuala Lumpur International Agriculture, Forestry and Plantation; http://kliafp.com/wp-content/uploads/2015/09/KLIAFP2015_AG_37_ch3589qmFu.pdf

Johansson, Charlotte L.; Nicholas A. Paul, Rocky de Nys, David A. Roberts (2015). Simultaneous biosorption of selenium, arsenic and molybdenum with modified algal-based biochars. Journal of Environmental Management; DOI 10.1016/j.jenvman.2015.09.021

Joung Du Shin (2015). Effects of Biochar to Carbon Sequestration and Nitrogen Transformation in Soil Cooperated with Organic Composts and Biochar during Corn (Zea mays) Cultivation. Korea Environmental Agriculture Conference; http://www.papersearch.net/view/detail.asp?detail_key=09202855

Judd, Lesley A.; Brian E. Jackson, William C. Fonteno, Michael D. Boyette, and Michael R. Evans (2015). Comparison of Charred and Uncharred Wood Aggregates in Horticultural Substrates. SNA Research Conference; http://www.ncsu.edu/project/woodsubstrates/documents/research/comparison-charred-uncharred.pdf

Kim, Eunjung; Hyungbae Gil, Sangwon Park, Jinwon Park (2015). Bio-oil production from pyrolysis of waste sawdust with catalyst ZSM-5. Journal of Material Cycles and Waste Management; DOI 10.1007/s10163-015-0438-z

Kim, Jihyun (2015). Integrated adsorption, oxidation and biodegradation for treating emerging contaminants in wastewater and water. Thesis: M.S. University of Hawaii at Manoa; http://scholarspace.manoa.hawaii.edu/handle/10125/101099

Kirbiyik, Çisem; Ayse Eren Pütün and Ersan Pütün (2015). Comparative studies on adsorptive removal of heavy metal ions by biosorbent, bio-char and activated carbon obtained from low cost agro residue. Water Science & Technology; http://www.iwaponline.com/wst/up/wst2015504.htm

Kizha, Anil Raj Han-sup Han (2015). Cost and productivity for processing and sorting forest residues. Conference Paper; http://www.researchgate.net/profile/Anil_Raj_Kizha2/publication/281452862_Cost_and_productivity_for_processing_and_sorting_forest_residues/links/55e8791f08ae21d099c179b4.pdf

Kostic, Milan D.; Alireza Bazargan, Olivera S. Stamenkovic, Vlada B. Veljkovic, Gordon McKay (2015). Optimization and kinetics of sunflower oil methanolysis catalyzed by calcium oxide-based catalyst derived from palm kernel shell biochar. Fuel; DOI 10.1016/j.fuel.2015.09.042

Krishna, Bhavya B.; Bijoy Biswas, Jitendra Kumar, Rawel Singh, Thallada Bhaskar (2015). Role of Reaction Temperature on Pyrolysis of Cotton Residue. Waste and Biomass Valorization; DOI 10.1007/s12649-015-9440-x

Kunhikrishnan, Anitha; Gyeong Jin Kim, Won Il Kim, Nam Jun Cho (2015). Impact of Biochars and Red Soil on the Acute Toxicity of Arsenic on Daphnia Magna and Lactuca Sativa. Korea Environmental Agriculture Conference; http://www.papersearch.net/view/detail.asp?detail_key=09202858

Kupryianchyk, Darya; Sarah Hale, Andrew R. Zimmerman, Omar Harvey, David Rutherford, Samuel Abiven, Heike Knicker, Hans-Peter Schmidt, Cornelia Rumpel, Gerard Cornelissen (2015). Sorption of hydrophobic organic compounds to a diverse suite of carbonaceous materials with emphasis on biochar. Chemosphere; DOI 10.1016/j.chemosphere.2015.09.055

Kyung-Won Jung, Kyu-Hong Ahn (2015). Fabrication of porosity-enhanced MgO/biochar for removal of phosphate from aqueous solution: Application of a novel combined electrochemical modification method. Bioresource Technology; DOI 10.1016/j.biortech.2015.10.008

Kyung-Won Jung, Tae-Un Jeong, Min-Jin Hwang, Kipal Kim, Kyu-Hong Ahn (2015). Phosphate adsorption ability of biochar/Mg–Al assembled nanocomposites prepared by aluminum-electrode based electro-assisted modification method with MgCl2 as electrolyte. Bioresource Technology; DOI 10.1016/j.biortech.2015.09.068

Laskosky, Jorden (2015). Productivity and greenhouse gas emissions from longterm stockpiled soils treated with organic amendments. Thesis: University of Manitoba; http://mspace.lib.umanitoba.ca/handle/1993/30846

Li PeiChen; Wu Wei; Zhang FengSong; Wang DaiYi; He Jie (2015). Structural characteristics of straw biochars and sorption of 17ß-estradiol on straw biochar. Research of Environmental Sciences; http://www.cabdirect.org/abstracts/20153339861.html

Li YuMei; Song BaiQuan; Liu ZhengYu; Wang GenLin; Wei Dan; Jin Liang; Zhang Lei (2015). Effects of bio-char on sugar beet growth in clomazone residual soil. Journal of Agricultural Resources and Environment; http://www.cabdirect.org/abstracts/20153323570.html

Lu, Wenlong; Kang, Chunli; Wang, Yixue; Xie, Zhonglei (2015). Influence of Biochar on the Moisture of Dark Brown Soil and Yield of Maize in Northern China. International Journal of Agriculture & Biology

Lujiang Xu, Qian Yao, Jin Deng, Zheng Han, Ying Zhang, Yao Fu, George W. Huber, and Qingxiang Guo (2015). Renewable N-Heterocycles Production by Thermocatalytic Conversion and Ammonization of Biomass over ZSM-5. ACS Sustainable Chemistry & Engineering; http://pubs.acs.org/doi/abs/10.1021/acssuschemeng.5b00841; DOI 10.1021/acssuschemeng.5b00841

Manikandan, A.; K.S. Subramanian (2015). DEVELOPMENT OF BIOCHAR BASED NOVEL SLOW RELEASE FERTILIZERS. Miscellaneous; http://www.researchgate.net/profile/Angamuthu_Manikandan/publication/281935216_DEVELOPMENT_OF_BIOCHAR_BASED_NOVEL_SLOW_RELEASE_FERTILIZERS/links/55feb7e708aec948c4f2e264.pdf

Manikandan, A.; K.S. Subramanian and K. Pandian (2015). Effect of high energy ball milling on particle size and surface area of adsorbents for efficient loading of fertilizer. An Asian Journal of Soil Science; http://www.researchgate.net/profile/Angamuthu_Manikandan/publication/267567591_Effect_of_High_Energy_Ball_Milling_on_Particle_Size_and_Surface_Area_of_Adsorbents_for_Efficient_Loading_of_Fertilizer/links/55febdc408aec948c4f3cf67.pdf

Marks, Evan A.N.; Stefania Mattana, Josep M. Alcañiz, Emilio Pérez-Herrero, Xavier Domene (2015). Gasifier biochar effects on nutrient availability, organic matter mineralization, and soil fauna activity in a multi-year Mediterranean trial. Agriculture, Ecosystems & Environment; DOI 10.1016/j.agee.2015.09.004

Maroušek, J.; A. Maroušková, K. Myšková, J. Váchal, M. Vochozka & J. Žák (2015). Techno-economic assessment of collagen casings waste management. International Journal of Environmental Science and Technology; http://www.researchgate.net/profile/Marek_Vochozka/publication/281174761_Techno-economic_assessment_of_collagen_casings_waste_management/links/55dcb84a08ae83e420ee4fa7.pdf

Mehmood, Khalid; Jiu-yu Li, Jun Jiang, M. M. Masud & Ren-kou Xu (2015). Effect of low energy-consuming biochars in combination with nitrate fertilizer on soil acidity amelioration and maize growth. Journal of Soils and Sediments; http://www.researchgate.net/profile/Khalid_Mehmood15/publication/280798549_Effect_of_low_energy-consuming_biochars_in_combination_with_nitrate_fertilizer_on_soil_acidity_amelioration_and_maize_growth/links/55d22e5308ae0a341720ea9f.pdf

Mingshan Wu, Jianfeng Ma, Zhiyong Cai, Genlin Tian, Shumin Yang, Youhong Wang and Xing'e Liu (2015). Rational synthesis of zerovalent iron/bamboo charcoal composites with high saturation magnetization. RSC Advances; DOI 10.1039/C5RA13236C

Mitchell, Karen Anne (2015). The effect of biochar on the growth of agricultural weed species. Thesis: Purdue University; http://gradworks.umi.com/15/98/1598059.html

Mohammad, Hadiuzamman; Mia Shamim, Ahmed Sultan, Abuyusuf Md., and Biswas Purnendu (2015). Effect of Biochar, Poultry Litter, Cow Dung and Vermicompost on Yield of Lentil. The Bangladesh Journal of Scientific Research; http://www.researchgate.net/profile/Shamim_Mia3/publication/281237921_EFFECT_OF_BIOCHAR_POULTRY_LITTER_COW_DUNG_AND_VERMICOMPOST_ON_YIELD_OF_LENTIL/links/55dc58f108aed6a199ad7cce.pdf

Nansubuga, Irene Genevieve (2015). Optimal recovery of resources from wastewater treatment: aspects of the developing world Thesis: Ghent University. Faculty of Bioscience Engineering; https://biblio.ugent.be/publication/6938827

Narzari, Rumi; Neonjyoti Bordoloi, Rahul Singh Chutia, Bikram Borkotoki, Nirmali Gogoi, Ajitabh Bora and Rupam Kataki (2015). Biochar: An Overview on its Production, Properties and Potential Benefits. Biology,

Biotechnology and Sustainable Development; http://www.researchgate.net/profile/Rahul_Singh_Chutia2/publication/281493453_Chapter_2-_Biochar_An_Overview_on_its_Production_Properties_and_Potential_Benefits/links/55eb1d1308ae21d099c5e5da.pdf

Ndindeng, S.A.; J.E.G. Mbassi, W.F. Mbacham, J. Manful, S. Graham-Acquaah, J. Moreira, J. Dossoud, K. Futakuchi (2015). Quality optimization in briquettes made from rice milling by-products. Energy for Sustainable Development; DOI 10.1016/j.esd.2015.09.003

Nguyen, Thi-Huong; Tong, Yan-An; Luc, Nhu-Trung; Liu, Cheng (2015). Effects of Different Ways to Return Biomass on Soil and Crop Nutrient Contents. Nature Environment and Pollution Technology ; http://search.proquest.com/openview/7cdf7dd07dbe11e64db5e440e5d62bc7/1?pq-origsite=gscholar

Obia, Alfred; Gerard Cornelissen, Jan Mulder, Peter Dörsch (2015). Effect of Soil pH Increase by Biochar on NO, N2O and N2 Production during Denitrification in Acid Soils. Plos One; http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0138781; DOI 10.1371/journal.pone.0138781

Olmo, Manuel; Rafael Villar, Pablo Salazar, José Antonio Alburquerque (2015). Changes in soil nutrient availability explain biochar's impact on wheat root development. Plant and Soil; DOI 10.1007/s11104-015-2700-5

Onana, Luc Gerard; Frederik Ronsse, Paul Raymond Ndongo and Julien Seka (2015). Production and characterization of slow pyrolysis biochar of tropical wood logs in Cameroon: case of okan, Cylicodiscus gabonensis. Symposium des ANS e.V. 2015; https://biblio.ugent.be/publication/6951704

Özbay, Günay; Ayhan Özçifçi, Erkan Sami Kökten, Hilmi Toker, Ergün Baysal (2015). Bio-Char Production from Pyrolysis of Furniture Products Waste. Miscellaneous; http://www.researchgate.net/profile/Guenay_Oezbay/publication/281863740_BIO-CHAR_PRODUCTION_FROM_PYROLYSIS_OF_FURNITURE_PRODUCTS_WASTE/links/55fc328208aeba1d9f3bd40d.pdf

Patel, Bhavish; Miao Guo, Arash Izadpanah, Nilay Shah, Klaus Hellgardt (2015). A Review on Hydrothermal Pre-treatment Technologies and Environmental Profiles of Algal Biomass Processing. Bioresource Technology; DOI 10.1016/j.biortech.2015.09.064

Peckyte, Julija; Edita Baltrenaite (2015). Assessment of heavy metals leaching from (bio)char obtained from industrial sewage sludge. Science – Future of Lithuania; http://www.mla.vgtu.lt/index.php/mla/article/view/811

Peng Yi, Joseph J. Pignatello, Minori Uchimiya, and Jason C. White (2015). Heteroaggregation of Cerium Oxide Nanoparticles and Nanoparticles of Pyrolyzed Biomass. Environmental Science and Technology; DOI 10.1021/acs.est.5b03541

Pituello, Chiara; Ornella Francioso, Gianluca Simonetti, Annamaria Pisi, Armida Torreggiani, Antonio Berti & Francesco Morari (2015). Characterization of chemical–physical, structural and morphological properties of biochars from biowastes produced at different temperatures. Journal of Soils and Sediments; http://www.researchgate.net/profile/Ornella_Francioso/publication/271918621_Characterization_of_chemicalphysical_structural_and_morphological_properties_of_biochars_from_biowastes_produced_at_different_temperatures/links/55e75dee08aeb6516262e131.pdf

Prabha, Santhi V. (2015). A study on carbon and green house gas dynamics of wetland rice soils with special reference to biochar application. Thesis: Mahatma Gandhi University; http://ir.inflibnet.ac.in:8080/jspui/handle/10603/50719

Putu, Sujana (2015). The Effect Combination of Dose Biochar with Dose Organic Matters on Soil Characteristics and Maize Plants Growth on Land Degraded by Garments Liquid Waste. International Journal of Research in Agriculture and Forestry; http://www.ijraf.org/pdf/v2-i8/7.pdf

Reyes-Escobar, Jhónatan; Erick Zagal, Marco Sandoval, Rodrigo Navia and Cristina Muñoz (2015). Development of a Biochar-Plant-Extract-Based Nitrification Inhibitor and Its Application in Field Conditions. Sustainability; http://www.mdpi.com/2071-1050/7/10/13585

Ro, Kyoung S.; Isabel M. Lima, Guidqopuram B. Reddy, Michael A. Jackson and Bin Gao (2015). Removing Gaseous NH3 Using Biochar as an Adsorbent. Agriculture; http://www.mdpi.com/2077-0472/5/4/991/htm; DOI 10.3390/agriculture5040991

Sadeghi, Seyed Hamidreza; Zeinab Hazbavi, Mahboobeh Kiani Harchegani (2015). Controllability of runoff and soil loss from small plots treated by vinasse-produced biochar. Science of The Total Environment; DOI 10.1016/j.scitotenv.2015.09.068

Scislowska, Mariola; Renata Wlodarczyk, Rafal Kobylecki, Zbigniew Bis (2015). Biochar to Improve the Quality and Productivity of Soils. Journal of Ecological Engineering; http://www.jeeng.net/pdf-2802-2800?filename=BIOCHAR%20TO%20IMPROVE%20THE.pdf

Shen, Zhengtao; Som, Amelia M. D.; Wang, Fei; Jin, Fei; McMillan, Oliver; Al-Tabbaa, Abir (2015). Long-term impact of biochar on the immobilisation of nickel (II) and zinc (II) and the revegetation of a contaminated site. Science of the Total Environment; https://www.repository.cam.ac.uk/handle/1810/251418?show=full

Shih-Hao Jien, Chung-Chi Wang, Chia-Hsing Lee and Tsung-Yu Lee (2015). Stabilization of Organic Matter by Biochar Application in Compost-amended Soils with Contrasting pH Values and Textures. Sustainability; http://www.mdpi.com/2071-1050/7/10/13317/htm

Silvennoinen, Emmi (2015). Water retention performance of newly constructed green roofs in cold climates. Thesis: University of Helsinki, Department of Environmental Sciences, Environmental Ecology; https://helda.helsinki.fi/handle/10138/156612

Singh, Rishikesh; Pratap Srivastava, Shweta Upadhyay, Pardeep Singh, A.S. Raghubanshi (2015). Integrating Biochar as Conservation Agriculture Tool Under Climate Change Mitigation Scenario. Miscellaneous; http://www.researchgate.net/profile/Rishikesh_Singh4/publication/280245125_Integrating_biochar_as_conservation_agriculture_tool_under_climate_change_mitigation_scenario/links/55af56d008aee0799220f8a3.pdf

Subedi, R.; C. Kammann, S. Pelissetti, N. Taupe, C. Bertora, S. Monaco andC. Grignani (2015). Does soil amended with biochar and hydrochar reduce ammonia emissions following the application of pig slurry? European Journal of Soil Science; DOI 10.1111/ejss.12302

Subedi, R.; Taupe, N.; Ikoyi, I.; Bertora, C.; Zavattaro, L.; Schmalenberger, A.; Leahy, J.J.; Grignani, C. (2015). Manure-derived biochars behave also as fertilizer. RAMIRAN 2015 – 16th International Conference; http://www.researchgate.net/profile/Chiara_Bertora/publication/282003596_Manure-derived_biochars_behave_also_as_fertilizer/links/5603cd8808ae460e2704fab4.pdf

Sun, Zhencai; Arthur, Emmanuel; de Jonge, Lis Wollesen; Elsgaard, Lars; Moldrup, Per (2015). Pore Structure Characteristics After 2 Years of Biochar Application to a Sandy Loam Field. Soil Science; http://journals.lww.com/soilsci/Abstract/2015/02000/Pore_Structure_Characteristics_After_2_Years_of.1.aspx

Suroshe, Pravin; Hiralal Pramanik (2015). Recovery of valuable bio-oil and char via pyrolysis of Sugarcane Bagasse. International Journal of Chemical and Environmental Engineering; http://www.cabdirect.org/abstracts/20153347243.html

Tan Dang, Luke M. Mosley, Rob Fitzpatrick, Petra Marschner (2015). Organic Materials Differ in Ability to Remove Protons, Iron and Aluminium from Acid Sulfate Soil Drainage Water. Water, Air, & Soil Pollution; DOI 10.1007/s11270-015-2595-z

Tan, Si-Si; Huang Yin-Zhang; Yao Qiang; Xiang Peng-Hua; Zhang Xiao-liang; Guo Wei; Long Shi-ping (2015). Research on FIoating Seedling Effects of Several Substitute Matrix in Flue -cured Tobacco. Crop Research; http://d.wanfangdata.com.cn/periodical/zuowuyj201505013

Tinwala, Farha; A.K. Joshi, Sanjeev Yadav, Pravakar Mohanty (2015). Thermo-chemical conversion of sawdust through in-situ quenching of pyro-vapor for green fuel Industrial Crops and Products; DOI 10.1016/j.indcrop.2015.09.024

Ulusal, Aysu; Basak Burcu Uzun, Esin Apaydin-Varol (2015). Influence of Pyrolysis Temperature on Physicochemical Properties of Oak Sawdust Biochar for Soil Application. Miscellaneous; http://www.scienceknowconferences.com/files/extended_abstracts/iccbe2015/Chemical%20Engineering/Influence%20of%20Pyrolysis%20Temperature%20on%20Physicochemical%20Properties%20of%20Oak%20Sawdust%20Biochar%20for%20Soil%20Application.pdf

Vu, Quynh Duong; Andreas de Neergaard, Toan Duc Tran, Quan Quang Hoang, Proyuth Ly, Tien Minh Tran, Lars Stoumann Jensen (2015). Manure, biogas digestate and crop residue management affects methane gas emissions from rice paddy fields on Vietnamese smallholder livestock farms. Nutrient Cycling in Agroecosystems; DOI 10.1007/s10705-015-9746-x

Wahyuni, Sri (2015). Effectiveness of Urea Coating on the Enriched with Charcoal Indigenus Microbes to Decrease and Residual Heksaklorobenzen Endrin. Thesis: Universitas Sebelas Maret; http://eprints.uns.ac.id/19911

Wan Azlina Wan Ab Karim Ghani, Nur Zalikha Rebitanim, Mohamad Amran Mohd Salleh, Azil Bahari Alias (2015). Carbon Dioxide Adsorption on Coconut Shell Biochar. Progress in Clean Energy; DOI 10.1007/978-3-319-16709-1_50

Wang Zhang Yong, Guo Haiyan (2015). Production of biochar by vermicompost carbonization and its adsorption to Rhodamine-B. Miscellaneous; http://www.actasc.cn/hjkxxb/ch/reader/view_abstract.aspx?file_no=20141110006

Wang, Shengsen (2015). Iron (Fe) and manganese (Mn) oxide mineral modified biochars: Characterization and removal of arsenate and lead. Thesis: University of Florida; http://gradworks.umi.com/37/16/3716993.html

Wei Ouyang, Xiaojun Geng, Wejia Huang, Fanghua Hao, Jinbo Zhao (2015). Soil respiration characteristics in different land uses and response of soil organic carbon to biochar addition in high-latitude agricultural area. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5306-9

Wei Ouyang, Xuchen Zhao, Mats Tysklind, Fanghua Hao, Fangli Wang (2015). Optimisation of corn straw biochar treatment with catalytic pyrolysis in intensive agricultural area. Ecological Engineering; DOI 10.1016/j.ecoleng.2015.09.003

Williams, Mary I.; R. Kasten Dumroese, Deborah S. Page-Dumroese, Stuart P. Hardegree (2015). Can biochar be used as a seed coating to improve native plant germination and growth in arid conditions? Journal of Arid Environments; DOI 10.1016/j.jaridenv.2015.09.011

Xiaoyun Xu, Ariette Schierz, Nan Xu, Xinde Cao (2015). Comparison of the characteristics and mechanisms of Hg(II) sorption by biochars and activated carbon. Journal of Colloid and Interface Science; DOI 10.1016/j.jcis.2015.10.003

Xinhao Ren, Peng Zhang, Lijie Zhao, Hongwen Sun (2015). Sorption and degradation of carbaryl in soils amended with biochars: influence of biochar type and content. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5518-z

Xiong Zhang, Shihong Zhang, Haiping Yang, Jingai Shao, Yingquan Chen, Ye Feng, Xianhua Wang, Hanping Chen (2015). Effects of hydrofluoric acid pre-deashing of rice husk on physicochemical properties and CO2 adsorption performance of nitrogen-enriched biochar. Energy; DOI 10.1016/j.energy.2015.08.028

Xun-Wen Chen, James Tsz-Fung Wong, Charles Wang-Wai Ng, Ming-Hung Wong (2015). Feasibility of biochar application on a landfill final cover—a review on balancing ecology and shallow slope stability. Environmental Science and Pollution Research; DOI 10.1007/s11356-015-5520-5

Yanbin Wang, Jian Lu, Jun Wu, Qing Liu, Hua Zhang and Song Jin (2015). Adsorptive Removal of Fluoroquinolone Antibiotics Using Bamboo Biochar. Sustainability; http://www.mdpi.com/2071-1050/7/9/12947/htm

Yang Yang, Shaoqiang Ma, yi Zhao, Ming Jing, Yongqiang Xu and Jiawei Chen (2015). A Field Experiment on Enhancement of Crop Yield by Rice Straw and Corn Stalk-Derived Biochar in Northern China. Sustainability; http://www.mdpi.com/2071-1050/7/10/13713/htm

Yaya, F. V.; Suh, C.; Lendzemo, V.; Akume, N. D. (2015). Plantain acclimatisation in relation to substrate type. International Journal of Agriculture Innovations and Research; http://www.cabdirect.org/abstracts/20153325102.html

Yong Su Choi, Seung Gil Hong, Sung Chul Kim, Joung Du Shin (2015). Adsorption Characteristics of Aqueous Phosphate using Biochar Derived from Oak Tree. Korea Environmental Agriculture Conference ; http://www.papersearch.net/view/detail.asp?detail_key=09202856

Yong Su Choi, Sun Il Lee, Sung Chul Kim, Joung Du Shin (2015). Adsorption Characteristics of Aqueous Ammonium using Rice Hull-Derived Biochar. Korea Environmental Agriculture Conference; http://www.papersearch.net/view/detail.asp?detail_key=09202857

Yong Su Choi, Sung Chul Kim, Joung Du Shin (2015). Adsorption Characteristics and Kinetic Models of Ammonium Nitrogen using Biochar from Rice hull in Sandy loam. Korea Environmental Agriculture Conference; http://www.papersearch.net/view/detail.asp?detail_key=09202801

Yuan Yuan, Duncan J Macquarrie (2015). Microwave assisted step-by-step process for the production of fucoidan, alginate sodium, sugars and biochar from Ascophyllum nodosum through a biorefinery concept. Bioresource Technology; DOI 10.1016/j.biortech.2015.09.090