

Publikationen des ITC im Jahr 2015 / Publications of ITC in 2015

Baris, D.; Gehrman, H.J.; Stapf, D.; Meiller, M.
Ashes - recovery of nutrients from ashes produced by thermochemical processes based on bagasse.
7th German-Brazilian Symposium on Sustainable Development, Heidelberg, October 4-10, 2015

Baris, D.; Gehrman, H.J.; Mätzing, H.; Stapf, D.; Seifert, H.; McGowan, T.
Characterization of the combustion behavior of 'DMC Fuel™'.
34rd International Conference on Thermal Treatment Technologies and Hazardous Waste Combustion (IT3/HWC), Houston, Tex., October 20-22, 2015

Baris, M.; Mätzing, H.; Gehrman, H.J.; Stapf, D.
Thermogravimetrische Untersuchung von Althölzern mit FTIR-MS-Kopplung.
Verbrennung und Feuerung : 27.Deutscher Flammentag, Clausthal-Zellerfeld, 16.-17.September 2015
Düsseldorf : VDI-Verl., 2015 S.709-717
(VDI-Berichte ; 2267)
ISBN 978-3-18-092267-6

Baumann, W.; Gehrman, H.J.; Teuscher, N.; Baris, D.; Lang, I.M.; Hauser, M.; Paur, H.R.
Freisetzung von synthetischen Nanopartikeln bei der thermischen Verwertung von Nanocomposites (AP2).
Clustertreffen NanoCare, Frankfurt, 19.-20.Mai 2015

Baumann, W.; Hauser, M.; Teuscher, N.; Lang, I.; Paur, H.R.
Investigation of the release of engineered nanoparticles in the pilot scale combustion chamber BRENDA.
European Aerosol Conference 2015 (EAC 2015), Milano, I, September 6-11, 2015

Bergfeldt, B.; Pfrang-Stotz, G.; Reichelt, J.
Chemical and mineralogical characterization of bottom ashes from the combustion of different biomass.
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Bologa, A.; Ecker, M.; Frei, U.; Rheinheimer, H.P.; Paur, H.R.
Influence of operation conditions of wood chips boiler and electrostatic precipitator on the reduction of particle mass concentration in the exhaust gas.
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Bologa, A.; Ecker, M.; Rheinheimer, H.P.; Paur, H.R.
Influence of particle concentration in the exhaust gas from wood combustion boiler on their charging and precipitation.
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Bologa, A.; Woletz, K.; Paur, H.R.
Investigation of corona discharge in high pressure helium.
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Bologa, A.; Woletz, K.; Paur, H.R.
Study of corona discharge in high pressure helium under various temperature conditions.
Aerosol Technology 2015, Tampere, SF, June 15-17, 2015

Bublinski, M.; Leibold, H.; Seifert, H.
Entwicklung von temperaturstabilen Membranen zur selektiven CO₂-Abscheidung

aus heißen Synthesegasen.

Jahrestreffen der Fachgruppen 'Gasreinigung' und 'Mechanische Flüssigkeitsabtrennung', Bremen, 24.-25.März 2015

Chaussonnet, G.; Braun, S.; Wieth, L.; Koch, R.; Bauer, H.J.; Sanger, A.; Djordjevic, N.; Kolb, T.

SPH simulation of a twin fluid atomizer operating with a high viscosity liquid.
13th Triennial International Conference on Liquid Atomization and Spray Systems (ICLASS 2015), Tainan, Taiwan, August 23-27, 2015

Dahmen, N.; Arnold, U.; Djordjevic, N.; Henrich, T.; Kolb, T.; Leibold, H.; Sauer, J.

High pressure in synthetic fuels production.
Journal of Supercritical Fluids, 96(2015) pp.124-132
DOI:10.1016/j.supflu.2014.09.031

[Volltext \(fur Abonnenten\)](#)

Fleck, S.; Hotz, C.; Kolb, T.; Geigle, K.P.; Kutne, P.
Formation and decay of hydrocarbon intermediates in an entrained flow gasifier.
27.Deutscher Flammentag, Clausthal-Zellerfeld, 16.-17.September 2015

Fleck, S.; Hotz, C.; Kolb, T.; Geigle, K.P.; Kutne, P.
Formation and decay of hydrocarbon intermediates in an entrained flow gasifier.
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Fleck, S.; Hotz, C.; Stoesser, P.; Kolb, T.
Gasification of biomass-based suspension fuels in an atmospheric entrained flow gasifier.
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Fleck, S.; Hotz, C.; Stoesser, P.; Kolb, T.
Gasification of biomass-based suspension fuels in an atmospheric entrained flow gasifier.
Verbrennung und Feuerung : 27.Deutscher Flammentag, Clausthal-Zellerfeld, 16.-17.September 2015
Dusseldorf : VDI-Verl., 2015 S.207-217
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Fleck, S.; Santo, U.; Hotz, C.; Boening, D.; Djordjevic, N.; Kolb, T.
Influence of fuel specification on gasification performance of biomass based suspension fuels in an atmospheric entrained flow gasifier.
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Grosu, F.P.; Bologna, M.K.; Motorin, O.V.; Bologna, A.M.; Paur, H.R.
Generalization of current-voltage characteristics of corona discharge by similarity theory methods.
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Grosu, F.P.; Bologna, A.M.; Bologna, M.K.; Motorin, O.V.
Similarity methods and generalizations in study of corona discharge.
11th International Scientific Conference on Modern Problems of Electrophysics and Electrohydrodynamics, St.Petersburg, Russia, June 29 - July 3, 2015

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Similarity methods and generalizations in study of corona discharge.
11th International Scientific Conference on Modern Problems of Electrophysics
and Electrohydrodynamics, St.Petersburg, Russia, June 29 - July 3, 2015
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Jakobs, T.
Einfluss des Reaktordrucks auf die Spraygüte außenmischender Zweistoffdüsen.
Dissertation, Karlsruher Institut für Technologie 2015

Jakobs, T.; Djordjevic, N.; Sanger, A.; Zarzalis, N.; Kolb, T.
Influence of reactor pressure on twin-fluid atomization: Basic investigations
on burner design for high-pressure entrained flow gasifier.
Atomization and Sprays, 25(2015) pp.1081-1105
DOI:10.1615/AtomizSpr.2015011558
[Volltext \(fur Abonnenten\)](#)

Karg, E.W.; Ferron, G.A.; Mulhopt, S.; Paur, H.R.; Zimmermann, R.
Is the deposited dose in an air-liquid-interface exposure system comparable to
the human lungs?
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Kolb, T.; Djordjevic, N.
Entrained flow gasification for biomass-based slurry.
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Improvement of three-phase methanation reactor performance for steady-state and
transient operation.
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Lutz, C.; Matthes, J.; Waibel, P.; Precht, U.; Garbev, K.; Schweike, U.;
Beuchle, G.; Stemmermann, P.; Keller, H.B.
Characterisation of the product quality of a novel environmental friendly
cementitious material by estimation of auxiliary quantities with near-infrared-
spectroscopy.
EST 2015 - Energy, Science and Technology, Karlsruhe, May 20-22, 2015

Matzing, H.; Baris, D.; Gehrman, H.J.; Seifert, H.; Stapf, D.
Fuel particle properties in biomass fired power plants.
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Impacts of fuel properties on the performance of grate firings.
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HTHP syngas cleaning at bioliq BTL process. Commissioning and first results.

EST 2015 - Energy, Science and Technology, Karlsruhe, May 20-22, 2015

Morgano, M.T.; Leibold, H.; Richter, F.; Seifert, H.
Pyrolyse von Biomasse im STYX-Reaktor.
Thome-Kozmiensky, K.J. [Hrsg.]
Energie aus Abfall Bd.12 S.507-526
Neuruppin : TK Verl.Karl Thome-Kozmiensky, 2015
ISBN 978-3-944310-18-3

Mülhopt, S.; Dilger, M.; Schlager, C.; Krebs, T.; Diabate, S.; Weiss, C.; Paur, H.R.
A lab scale measurement device for the air-liquid interface exposure cultured lung cells towards wood burning emissions.
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Mülhopt, S.; Diabate, S.; Schlager, C.; Dilger, M.; Weiss, C.; Krebs, T.; Paur, H.
A lab scale measurement technique for the air-liquid interface exposure of human lung cell cultures towards airborne nanoparticles.
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A lab scale measurement technique for the air-liquid interface exposure of human lung cell cultures towards airborne nanoparticles.
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Mülhopt, S.; Diabate, S.; Schlager, C.; Dilger, M.; Krebs, T.; Weiss, C.; Paur, H.R.
Automatisierte und definierte Deposition von Aerosolen auf Zellkulturen für eine Bewertung der biologischen Wirksamkeit von Feinstäuben.
Fachtagung Neue Entwicklungen bei der Messung und Beurteilung der Luftqualität, Nürnberg, 20.-21.Oktober 2015

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Automatisierte und definierte Deposition von Aerosolen auf Zellkulturen für eine Bewertung der biologischen Wirksamkeit von Feinstäuben.
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The Karlsruhe exposure system for assessment of lung toxicity of airborne submicron particles.
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Mueller, A.; Haustein, H.D.; Stoesser, P.; Kreitzberg, T.; Kneer, R.; Kolb, T.
Gasification kinetics of biomass- and fossil-based fuels: comparison study using fluidized bed and thermogravimetric analysis.
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Betriebs- und modelltechnische Untersuchungen zur Verbesserung des Gasphasenausbrandes bei der instationären Gebindeverbrennung in einer Rückstandsverbrennungsanlage.
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Particulate matter from both heavy fuel oil and diesel fuel shipping emissions show strong biological effects on human lung cells at realistic and comparable in vitro exposure conditions.
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Synthesis, variability and stability of nanoparticles.
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Paur, H.R.; Ecker, M.; Rheinheimer, H.; Bologna, A.
Ultra-low emission wood combustion by seamless adaptation of an electrostatic precipitator to a modern grate boiler.
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Reichelt, J.; Pfrang-Stotz, G.; Bergfeldt, B.
Influence of the thermal treatment of different biomasses on slags in combustion chambers and deposits in boiler systems of biomass power plants.
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Teuscher, N.; Baumann, W.; Hauser, M.; Lang, I.; Paur, H.R.

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Biological effects of combustion aerosols on human lung cells exposed at the air liquid interface: Comparison of the molecular biological effects of log wood and pellet combustion aerosols with the effect of ship engine emissions.

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