



OTTO VON GUERICKE  
UNIVERSITÄT  
MAGDEBURG

VST

FAKULTÄT FÜR VERFAHRENS-  
UND SYSTEMTECHNIK

# Publikationsbericht 2018

Fakultät für Verfahrens- und Systemtechnik

# FAKULTÄT FÜR VERFAHRENS- UND SYSTEMTECHNIK

Universitätsplatz 2, Gebäude 10, 39106 Magdeburg  
Tel. 49 (0)391 67 58443, Fax 49 (0)391 67 41252

## 1. LEITUNG

Prof. Dr.-Ing. habil. Dominique Thévenin (Dekan)  
Prof. Dr.-Ing. habil. Evangelos Tsotsas (Prodekan)  
Prof. Dr.-Ing. Eckehard Specht (Studiendekan)

## 2. VERÖFFENTLICHUNGEN

### DISSERTATIONEN

**Aydin, Erdal; Sundmacher, Kai [GutachterIn]; Sager, Sebastian [GutachterIn]**

Tailored indirect algorithms for efficient on-line optimization of batch and semi-batch processes  
Magdeburg, 2018, xx, 119 Seiten, Tabellen, Diagramme;  
[Literaturverzeichnis: Seite 107-113]

**Birth, Torsten; Seidel-Morgenstern, Andreas [GutachterIn]; Hamel, Christof [GutachterIn]; Caro, Jürgen [GutachterIn]**

Aufbereitung biogener und reststoffbasierter Gase - Untersuchung der trockenen Reformierung  
Barleben: docupoint Verlag, 2018, IV, 223 Seiten, Diagramme, Illustrationen, 21 cm, 978-3-86912-142-6;  
[Literaturverzeichnis: Seite 173-186]

**Buchholz, Hannes; Seidel-Morgenstern, Andreas [GutachterIn]**

Solid-liquid phase equilibria of chiral molecules - theory and experiment  
Magdeburg, 2018, xi, 171 Seiten, Diagramme, 30 cm;  
[Literaturverzeichnis: Seite 136-152]

**Buchtatj, Denis; Thévenin, Dominique [GutachterIn]; Hadler, Jens [GutachterIn]; Tschöke, Helmut [GutachterIn]**

CFD-basierte Analyse der Gemischbildung mit einem skalenauflösenden Turbulenzmodell  
Magdeburg, 2017, XVI, 140 Seiten, Illustrationen, Diagramme;  
[Literaturverzeichnis: Seite 126-133]

**Dülsen, Steffen; Krause, Ulrich [GutachterIn]**

Development of a combined experimental and simulative method for the assessment of fire scenarios in motor vehicles  
Magdeburg, 2018, XXIV, 83 Seiten, Illustrationen, Tabellen, Diagramme, 30 cm;  
[Literaturverzeichnis: Seite XI-XV]

**Eisenschmidt, Holger; Sundmacher, Kai [GutachterIn]**

A cyclic growth-dissolution process for the controlled manipulation of crystal shape distributions  
Magdeburg, 2018, x, 119 Seiten, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Seite 104-114]

**Farid, Muhammad Usman; Tsotsas, Evangelos [GutachterIn]; Bück, Andreas [GutachterIn]**

CFD modeling of combustion of solid waste materials with low melting points  
Magdeburg, 2018, xii, 204 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 163-173]

**Harder, Björn-Johannes**

Modellbasiertes Metabolic Engineering zur Optimierung der Itaconatproduktion in Escherichia coli  
Aachen: Shaker Verlag, 2018, [1. Auflage], IX, 130 Seiten, Illustrationen, 21 cm, 203 g - (Forschungsberichte aus dem Max-Planck-Institut für Dynamik Komplexer Technischer Systeme; Band 52), ISBN 978-3-8440-6360-8

**Jörke, Andreas**

Mechanisms and kinetics of petro- and oleochemicals in complex hydroformylation reaction networks  
Aachen: Shaker Verlag, 2018, [1. Auflage], xi, 145 Seiten, Seite xiii-xxxvii, 41 Illustrationen, Diagramme, 21 cm, 262 g - (Forschungsberichte aus dem Max-Planck-Institut für Dynamik Komplexer Technischer Systeme; Band 50), ISBN 978-3-8440-6059-1

**Khalid, Muhammad Kamran; Wachem, Berend [GutachterIn]; Scheffler, Franziska [GutachterIn]**

Processing and characterization of tailor-made superparamagnetic iron oxide nanoparticles (SPIO-NPs) for pharmaceutical applications  
Magdeburg, 2018, xx, 158 Seiten, Illustrationen, Tabellen, Diagramme;  
[Literaturverzeichnis: Seite 131-153]

**Kiedorf, Gregor; Seidel-Morgenstern, Andreas [GutachterIn]**

Mechanistic and kinetic analysis of homogeneously and heterogeneously catalyzed reactions  
Aachen: Shaker, 2018, 1. Auflage, xi, 189 Seiten, Illustrationen, Diagramme, 21 cm, 302 g - (Forschungsberichte aus dem Max-Planck-Institut für Dynamik komplexer technischer Systeme; Band 49), ISBN 978-3-8440-5768-3;  
[Literaturverzeichnis: Seite 147-161]

**Ludwig, Kristin; Sundmacher, Kai**

Assessment of innovative downstream processing methods for microalgal  $\beta$ -carotene production  
Magdeburg, 2018, xviii, 126 Seiten, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Seite 109-125]

**Meyer, Lennart; Specht, Eckehard; Krause, Ulrich [GutachterIn]; Beyer, Michael [GutachterIn]; Grätz, Rainer [GutachterIn]**

Die Entstehung von heißen Oberflächen in metallischen Reibsituationen und ihre Zündwirksamkeit  
Bremen: Fachverlag NW in der Carl Schünemann Verlag GmbH, 2018, VII, 131 Seiten, Illustrationen, Diagramme, 30 cm - (PTB-Bericht; Ex, Explosionsschutz; 9), ISBN 978-3-95606-402-9

**Mikalsen, Ragni Fjellgaard; Krause, Ulrich [GutachterIn]**

Fighting flameless fires - initiating and extinguishing self-sustained smoldering fires in wood pellets  
Magdeburg, 2018, XI, 85, iii Seiten, Illustrationen, 29 cm;  
[Literaturverzeichnis: Seite 76-85]

**Radicke, Susann; Scheffler, Franziska [GutachterIn]; Seidel-Morgenstern, Andreas [GutachterIn]**

Entwicklung und Testung modifizierter photokatalytisch aktiver TiO<sub>2</sub>-Beschichtungen für Glasformkörper  
Magdeburg, 2018, XXV, 198 Seiten, Illustrationen, Tabellen, Diagramme, 30 cm;  
[Im Titel ist "2" tiefgestellt; Literaturverzeichnis: Seite 169-179]

**Reichardt, Thomas**

Multiscale Euler/Lagrange approach to simulate finite-sized solid particles and bubbles as well as numerical and experimental studies to improve the modeling of complex bubble motion  
Aachen: Shaker Verlag, 2018, 1. Auflage, viii, 284 Seiten, Illustrationen, Diagramme, 21 cm, 447 g - (Berichte aus der Strömungstechnik), ISBN 978-3-8440-6013-3

**Schmidt, Martin; Tsotsas, Evangelos [GutachterIn]; Kienle, Achim [GutachterIn]**

Process dynamics and structure formation in continuous spray fluidized bed processes  
Magdeburg, 2018, XVII, 150 Seiten, Illustrationen, Diagramme, 24 cm;  
[Literaturverzeichnis: Seite 129-137]

**Schubert, Stefanie; Krause, Ulrich [GutachterIn]**

Untersuchung zum Einfluss der Strömungsführung auf den Brandverlauf in einem Gebäude moderner Bauweise  
Magdeburg, 2017, XXII, 182 Seiten, Illustrationen;  
[Literaturverzeichnis: Seite 142-153]

**Schulze, Peter**

Lignin separation from ethanol water pulping liquors  
Magdeburg, 2018, 179 Seiten, Illustrationen, Tabellen, Diagramme;  
[Literaturverzeichnis: Seite 155-163]

**Schwenke, Christian; Tsotsas, Evangelos; Schulze, Dietmar; Katterfeld, André**

Modellierung und experimentelle Validierung des Schwerkraftaustrags ultrafeiner kohäsiver Pulver  
Barleben: docupoint Verlag, 2018, IX, 215 Seiten, Seite X-XX, Illustrationen, Diagramme, 21 cm, ISBN  
978-3-86912-153-6;  
[Literaturverzeichnis: Seite 211-215]

**Voigt, Nadine; Wachem, Berend [GutachterIn]; Sabel, Bernhard A. [GutachterIn]**

Evaluierung pharmakokinetischer und toxikologischer Determinanten von Nanopartikeln mittels in vivo  
Neuroimaging  
Magdeburg, 2018, XIV, 111 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 87-96]

**Wenzel, Marcus; Sundmacher, Kai [GutachterIn]**

Reverse water-gas shift chemical looping for syngas production from CO<sub>2</sub>  
Magdeburg, 2018, xviii, 149 Seiten, 30 cm;  
[Im Titel ist "2" tiefgestellt; Literaturverzeichnis: Seite 129-141]

**Zhang, Xiwei; Wachem, Berend [GutachterIn]; Sabel, Bernhard A. [GutachterIn]**

In vitro and in vivo caspase-3 knock down by poly (butyl cyanoacrylate) nanoparticle-based RNA interference  
Magdeburg, 2018, ix, 95 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 78-88]

# INSTITUT FÜR APPARATE- UND UMWELTTECHNIK

Universitätsplatz 2, 39106 Magdeburg  
Tel. 49 (0)391 67 18831, Fax 49 (0)391 67 11128  
iaut@ovgu.de  
www.iaut.ovgu.de

## 1. LEITUNG

Prof. Dr.-Ing. habil. Ulrich Krause (geschäftsführender Leiter)  
Prof. Dr.-Ing. habil. Dr. h. c. Lothar Mörl  
Prof. Dr.-Ing. habil. Heinz Köser

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Addai, Emmanuel Kwasi; Clouthier, Martin; Amyotte, Paul; Safdar, Muddasar; Krause, Ulrich**

Experimental investigation of limiting oxygen concentration of hybrid mixtures

Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 57.2018, S. 120-130;

[Imp.fact.: 1.982]

**Farnell, D. J. J.; Götze, O.; Schulenburg, Jörg; Zinke, Ronald; Bishop, R. F.; Li, P. H. Y.**

Interplay between lattice topology, frustration, and spin quantum number in quantum antiferromagnets on Archimedean lattices

Physical review - Woodbury, NY: Inst, Vol. 98.2018, 22, Art. 224402;

[Imp.fact.: 3.955]

**Hecht, Kristin J.; Krause, Ulrich; Hofinger, J.; Bey, O.; Nilles, M.; Renze, P.**

Prediction of gas density effects on bubbly flow hydrodynamics - new insights through an approach combining population balance models and computational fluid dynamics

AIChE journal - Hoboken, NJ: Wiley, 2018;

[Online first]

**Idakiev, Vesselin; Steinke, Claudia; Sondej, Franziska; Bück, Andreas; Tsotsas, Evangelos; Mörl, Lothar**

Inductive heating of fluidized beds - spray coating process

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 328.2018, S. 26-37;

**Mikalsen, Ragni Fjellgaard; Hagen, Bjarne Christian; Steen-Hansen, Anne; Krause, Ulrich; Frette, Vidar**

Extinguishing smoldering fires in wood pellets with water cooling - an experimental study

Fire technology - New York, NY [u.a.]: Springer Science + Business Media B.V, insges. 28 S., 2018;

[Online first]

[Imp.fact.: 1.483]

**Mörl, Lothar; Idakiev, Vesselin; Schönherr, Michael; Jacob, Michael**

Vereinfachtes Modell zur Abschätzung der Arbeitsweise einer Wirbelschicht mit Eigenkeimbildung bei Flüssigkeitseindüsung

Chemie - Ingenieur - Technik: CIT - Weinheim: Wiley-VCH Verl, Bd. 90.2018, 8, S. 1080-1088;

**Zhang, Lanyue; Weigler, Fabian; Idakiev, Vesselin; Jiang, Zhaochen; Mörl, Lothar; Mellmann, Jochen; Tsotsas, Evangelos**

Experimental study of the particle motion in flighted rotating drums by means of Magnetic Particle Tracking Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 339.2018, S. 817-826;

**Zinke, Ronald; Köhler, Florian; Krause, Ulrich**

Long-term emission measurements at a floating roof tank for gasoline storage

Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 55.2018, S. 152-161;

## **NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze**

**Fischer, Thomas; Gabel, Dieter; Marx, Marcus**

Messung des Explosionsdrucks brennbarer Stäube

Technische Sicherheit - Düsseldorf: Springer-VDI-Verl, Vol. 8.2018, Januar/Februar, S. 31-37

## **BEGUTACHTETE BUCHBEITRäge**

**Zhang, Lanyue; Weigler, Fabian; Jiang, Zhaochen; Idakiev, Vesselin; Mörl, Lothar; Mellmann, Jochen; Tsotsas, Evangelos**

Investigation of 3D particle flow in a flighted rotating drum

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 253-260;

[Konferenz: IDS 2018]

## **NICHT BEGUTACHTETE BUCHBEITRäge**

**Gabel, Dieter**

Recent fields of interest in experimental explosions research

First Explosion Protection Conference 2018 in Turkey and Middle East: 06th of September, 2018, in the Amara Sealight Elite Hotel in Kusadasi/AYDIN - Kusadasi/AYDIN: Ex Proof TEKNO Turkey Ltd., insges. 22 S.;

[Konferenz: First Explosion Protection Conference 2018 in Turkey and Middle East, Kusadasi/AYDIN, 6. September 2018]

**Gabel, Dieter**

Uncertainty in the determination of the ignition energy of dusts below 10mJ

2018 AIChE Spring Meeting and 14th Global Congress on Process Safety: Orlando, Florida, USA, 22-25 April 2018 - Orlando, Florida, USA, insges. 6 S.;

[Kongress: 2018 AIChE Spring Meeting and 14th Global Congress on Process Safety, Orlando, Florida, USA, 22-25 April 2018]

**Gabel, Dieter; Krause, Ulrich**

Ignition temperature and ignition energy of humid dusts

12th International Symposium of Hazards, Prevention, and Mitigation of Industrial Explosions: Kansas City, USA : August 12-17, 2018 - Kansas City, USA, insges. 13 S.;

[Symposium: 12th International Symposium of Hazards, Prevention, and Mitigation of Industrial Explosions, ISHPMIE, Kansas City, USA, August 12-17, 2018]

## DISSERTATIONEN

### **Dülsen, Steffen; Krause, Ulrich [GutachterIn]**

Development of a combined experimental and simulative method for the assessment of fire scenarios in motor vehicles

Magdeburg, 2018, XXIV, 83 Seiten, Illustrationen, Tabellen, Diagramme, 30 cm;

[Literaturverzeichnis: Seite XI-XV]

### **Mikalsen, Ragni Fjellgaard; Krause, Ulrich [GutachterIn]**

Fighting flameless fires - initiating and extinguishing self-sustained smoldering fires in wood pellets

Magdeburg, 2018, XI, 85, iii Seiten, Illustrationen, 29 cm;

[Literaturverzeichnis: Seite 76-85]

### **Schubert, Stefanie; Krause, Ulrich [GutachterIn]**

Untersuchung zum Einfluss der Strömungsführung auf den Brandverlauf in einem Gebäude moderner Bauweise

Magdeburg, 2017, XXII, 182 Seiten, Illustrationen;

[Literaturverzeichnis: Seite 142-153]

# INSTITUT FÜR CHEMIE

Universitätsplatz 2, 39106 Magdeburg  
Tel. 49 (0)391 67 58672, Fax 49 (0)391 67 42223  
ich@uni-magdeburg.de

## 1. LEITUNG

Prof. Dr. rer. nat. habil. Dieter Schinzer (Institutsleiter)  
Prof. Dr. rer. nat. Franziska Scheffler  
Prof. Dr. rer. nat. habil. Helmut Weiß  
Prof. Dr. rer. nat. habil. Frank T. Edelmann

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

#### **Becker, Julia; Betke, Ulf; Wessel, Egbert; Krüger, Manja**

Alloying effects in Mo-5X (X=Zr, Ti,V) Microstructural modifications and mechanical properties  
Materials today / Communications - Amsterdam [u.a.]: Elsevier, Bd. 15.2018, S. 314-321

#### **Betke, Ulf; Klaus, Michael; Eggebrecht, Jakob G.; Scheffler, Michael; Lieb, Alexandra**

MOFs meet macropores - dynamic direct crystallization of the microporous aluminum isophthalate CAU-10 on reticulated open-cellular alumina foams  
Microporous and mesoporous materials : the official journal of the International Zeolite Association - Amsterdam [u.a.]: Elsevier, Bd. 265.2018, S. 43-56  
[Imp.fact.: 3.615]

#### **Betke, Ulf; Lieb, Alexandra**

Micro-macroporous composite materials - preparation techniques and selected applications - a review  
Advanced engineering materials - Weinheim : Wiley-VCH Verl, Vol. 20.2018, 9, Art. 1800252  
[Imp.fact.: 2.319]

#### **Danzmann, Sascha; Liebing, Phil; Engelhardt, Felix; Hilfert, Liane; Edelmann, Frank**

Azulene1carboxylate - a new azulene-based building block for coordination polymers  
Inorganic chemistry communications : an international journal dedicated to rapid publications in inorganic and organometallic chemistry - Amsterdam [u.a.]: Elsevier Science, Bd. 99.2018, S. 176-179  
[Imp.fact.: 1.81]

#### **Edelmann, Frank T.**

Lanthanides and actinides - annual survey of their organometallic chemistry covering the year 2017  
Coordination chemistry reviews - Amsterdam [u.a.]: Elsevier Science, Bd. 370.2018, S. 129-223  
[Imp.fact.: 13.324]

#### **Haak, Edgar**

Modern annulation strategies for the synthesis of cyclo[b]fused indoles  
Synlett : accounts and rapid communications in synthetic organic chemistry - Stuttgart [u.a.]: Thieme, 2018  
[Imp.fact.: 2.369]



**Haak, Edgar; Kaufmann, Julia; Jäckel, Elisabeth**

Ruthenium catalyzed cascade annulation of indole with propargyl alcohols

Angewandte Chemie / International edition : a journal of the Gesellschaft Deutscher Chemiker - Weinheim : Wiley-VCH, insges. 7 S., 2018

[Imp.fact.: 11.994]

**Hampel, Nelli; Royeva, Evgeniya; Bück, Andreas; Tsotsas, Evangelos**

Coating of finely dispersed particles by two-fluid nozzle

Particuology : science and technology of particles - Amsterdam : Elsevier, Bd. 38.2018, S. 80-93

[Imp.fact.: 2.785]

**Heidenreich, Niclas; Lieb, Alexandra; Stock, Norbert; Reinsch, Helge**

Green synthesis of a new layered aluminium citraconate - crystal structures, intercalation behaviour towards H<sub>2</sub>O and in situ PXRD studies of its crystallisation

Dalton transactions : a journal of inorganic chemistry, including bioinorganic, organometallic, and solid-state chemistry - London : Soc, Bd. 47.2018, 1, S. 215-223

[Imp.fact.: 4.029]

**Kaufmann, Julia; Jäckel, Elisabeth; Haak, Edgar**

Rutheniumkatalysierte Kaskadenanellierung von Indol mit Propargylalkoholen

Angewandte Chemie - Weinheim : Wiley-VCH, 2018 ;

[Online first]

[Imp.fact.: 11.994]

**Lorenz, Volker; Ehle, Sophie; Liebing, Phil; Engelhardt, Felix; Hashemi-Haeri, Haleh; Oehler, Florian; Hinderberger, Darius; Busse, Sabine; Urbaschok, Jens; Edelmann, Frank T.**

High-yield synthesis of a unique Mn(III) siloxide complex through KMnO<sub>4</sub> oxidation of a Mn(II) precursor

Dalton transactions : a journal of inorganic chemistry, including bioinorganic, organometallic, and solid-state chemistry - London : Soc, Bd. 47.2018, 1, S. 62-66

[Imp.fact.: 4.029]

**Lorenz, Volker; Liebing, Phil; Bathelier, Adrien; Engelhardt, Felix; Maron, Laurent; Hilfert, Liane; Busse, Sabine; Edelmann, Frank**

The Wanderlust of Me 3Si groups in rare-earth triple-decker complexes - a combined experimental and computational study

Chemical communications : ChemComm - Cambridge : Soc, Bd. 54.2018, 73, S. 10280-10283

[Imp.fact.: 6.29]

**Rädisch, Tim; Harmgarth, Nicole; Liebing, Phil; Beltrán-Leiva, Maria J.; Páez-Hernández, Dayán; Arratia-Pérez, Ramiro; Engelhardt, Felix; Hilfert, Liane; Oehler, Florian; Busse, Sabine; Edelmann, Frank**

Three new types of transition metal carboranylamidinate complexes

Dalton transactions : a journal of inorganic chemistry, including bioinorganic, organometallic, and solid-state chemistry - London : Soc, Bd. 47.2018, 19, S. 6666-6671

[Imp.fact.: 4.029]

**Wang, Sida; Liebing, Phil; Engelhardt, Felix; Hilfert, Liane; Busse, Sabine; Edelmann, Frank**

Synthesis and structural characterization of four dichloridobis(cyclopropylalkynylamidine)metal complexes

Acta crystallographica / E - Chester : International Union of Crystallography, Bd. 74.2018, S. 1658-1664

**ilinskas, Mindaugas; Kalkofen, Bodo; Balasubramanian, Ramasubramanian; Batmanov, Anatoliy; Burte, Edmund P.; Harmgarth, Nicole; Zörner, Florian; Edelmann, Frank T.; Garke, Bernd; Lisker, Marco**

Plasma-assisted atomic layer deposition of germanium antimony tellurium compounds

Journal of vacuum science & technology / A : JVST : the official journal of the American Vacuum Society - New York, NY : Inst, Vol. 36.2018, Art. 021510, insgesamt 7 S.

[Imp.fact.: 1.374]

## ARTIKEL IN ZEITSCHRIFT

**Haeri, Haleh H.; Duraisamy, Ramesh; Harmgarth, Nicole; Liebing, Phil; Lorenz, Volker; Hinderberger, Dariush; Edelmann, Frank T.**

Electronic and geometric structures of paramagnetic diazadiene complexes of lithium and sodium  
ChemistryOpen: including thesis treasury - Weinheim: Wiley-VCH-Verl, Bd. 7.2018, 9, S. 701-708;  
[Imp.fact.: 2.801]

## DISSERTATIONEN

**Radicke, Susann; Scheffler, Franziska [GutachterIn]; Seidel-Morgenstern, Andreas [GutachterIn]**

Entwicklung und Testung modifizierter photokatalytisch aktiver TiO<sub>2</sub>-Beschichtungen für Glasformkörper  
Magdeburg, 2018, XXV, 198 Seiten, Illustrationen, Tabellen, Diagramme, 30 cm;  
[Im Titel ist "2" tiefgestellt; Literaturverzeichnis: Seite 169-179]

# INSTITUT FÜR STRÖMUNGSTECHNIK UND THERMODYNAMIK

Universitätsplatz 2, 39106 Magdeburg  
Tel. 49 (0)391 67 58576, Fax 49 (0)391 67 12762  
frank.beyrau@ovgu.de

## 1. LEITUNG

Prof. Dr.-Ing. F. Beyrau (geschäftsführender Leiter)  
Prof. Dr.-Ing. D. Thévenin  
Prof. Dr.-Ing. E. Specht

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

#### **Abdelsamie, Abouelmagd; Thévenin, Dominique**

On the behavior of spray combustion in a turbulent spatially-evolving jet investigated by direct numerical simulation

Proceedings of the Combustion Institute - Amsterdam [u.a.]: Elsevier, 2018;

[Online first]

[Imp.fact.: 1.133]

#### **Abram, Christopher; Fond, Benoit; Beyrau, Frank**

Temperature measurement techniques for gas and liquid flows using thermographic phosphor tracer particles

Progress in energy and combustion science: an international review journal - Amsterdam [u.a.]: Elsevier Science, Bd. 64.2018, S. 93-156;

[Imp.fact.: 17.382]

#### **Abram, Christopher; Mezhericher, Maksim; Beyrau, Frank; Stone, Howard A.; Ju, Yiguang**

Flame synthesis of nanophosphors using sub-micron aerosols

Proceedings of the Combustion Institute - Amsterdam [u.a.]: Elsevier, 2018;

[Imp.fact.: 5.336]

#### **Al-Hasnawi, Adnan Ghareb Taaamah; Refaey, H. A.; Redemann, Tino; Attalla, Mohamed Attia Mahmoud; Specht, Eckehard**

Computational fluid dynamics simulation of flow mixing in tunnel kilns by air side injection

Journal of thermal science and engineering applications - New York, NY: ASME, Vol. 10.2018, 3, Art. 031007, insgesamt 9 S.;

[Imp.fact.: 0.985]

#### **Alkhalaf, Ali; Refaey, H. A.; Al-durobi, Nabeh; Specht, Eckehard**

Influence of contact point treatment on the cross flow mixing in a simple cubic packed bed - CFD simulation and experimental validation

Granular matter - Berlin: Springer, Vol. 20.2018, 2, Art. 22, insgesamt 13 S.;

#### **Behrendt, Benjamin; Berg, Philipp; Beuing, Oliver; Preim, Bernhard; Saalfeld, Sylvia**

Explorative blood flow visualization using dynamic line filtering based on surface features

Computer graphics forum: the international journal of the Eurographics Association - Oxford: Wiley-Blackwell, Bd. 37.2018, 3, S. 183-194;

[Konferenz: 20th EG/VGTC Conference on Visualization, EuroVis 2018, Brno, Czech Republic 4-8 June 2018]

[Imp.fact.: 2.046]

**Berg, Philipp; Beuing, Oliver**

Multiple intracranial aneurysms - a direct hemodynamic comparison between ruptured and unruptured vessel malformations

International journal of computer assisted radiology and surgery: a journal for interdisciplinary research, development and applications of image guided diagnosis and therapy - Berlin: Springer, Bd. 13.2018, 1, S. 83-93;

[Imp.fact.: 1.961]

**Berg, Philipp; Saalfeld, Sylvia; Janiga, Gabor; Brina, Olivier; Cancelliere, Nicole M.; Machi, Paolo; Pereira, Vitor M.**

Virtual stenting of intracranial aneurysms - a pilot study for the prediction of treatment success based on hemodynamic simulations

The international journal of artificial organs - Thousand Oaks, Calif: Sage, 2018;

[Online first]

[Imp.fact.: 1.133]

**Berg, Philipp; Saalfeld, Sylvia; Voß, Samuel; Redel, Thomas; Preim, Bernhard; Janiga, Gábor; Beuing, Oliver**

Does the DSA reconstruction kernel affect hemodynamic predictions in intracranial aneurysms? - an analysis of geometry and blood flow variations

Journal of neuroInterventional surgery: JNIS : the journal of the Society of NeuroInterventional Surgery - London: BMJ Journals, Bd. 10.2018, 3, S. 290-296;

[Imp.fact.: 3.551]

**Berg, Philipp; Voß, Samuel; Saalfeld, Sylvia; Janiga, Gábor; Bergersen, Aslak W.; Valen-Sendstad, Kristian; Bruening, Jan; Goubergrits, Leonid; Spuler, Andreas; Cancelliere, Nicole M.; Steinman, David A.; Pereira, Vitor M.; Chiu, Tin Lok; Tsang, Anderson Chun On; Chung, Bong Jae; Cebra, Juan R.; Cito, Salvatore; Pallarès, Jordi; Copelli, Gabriele; Csippa, Benjamin; Paál, György; Fujimura, Soichiro; Takao, Hiroyuki; Hodis, Simona; Hille, Georg; Karmonik, Christof; Elias, Saba; Kellermann, Kerstin; Khan, Muhammad Owais; Marsden, Alison L.; Morales, Hernán G.; Piskin, Senol; Finol, Ender A.; Pravdivtseva, Mariya; Rajabzadeh-Oghaz, Hamidreza; Paliwal, Nikhil; Meng, Hui; Seshadhri, Santhosh; Howard, Matthew; Shojima, Masaaki; Sugiyama, Shin-ichiro; Niizuma, Kuniyasu; Sindeev, Sergey; Frolov, Sergey; Wagner, Thomas; Brawanski, Alexander; Qian, Yi; Wu, Yu-An; Carlson, Kent D.; Dragomir-Daescu, Dan; Beuing, Oliver**

Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH) - phase I : segmentation

Cardiovascular engineering and technology: CVET - New York, NY: Springer, Bd. 9.2018, 4, S. 565-581;

[Online first]

[Imp.fact.: 1.451]

**Chi, Cheng; Abdelsamie, Abouelmagd; Thévenin, Dominique**

Direct numerical simulations of hotspot-induced ignition in homogeneous hydrogen-air pre-mixtures and ignition spot tracking

Flow, turbulence and combustion: an international journal published in association with ERCOFTAC - Dordrecht [u.a.]: Springer Science + Business Media B.V, Bd. 101.2018, 1, S. 103-121;

[Imp.fact.: 2.207]

**Chi, Cheng; Janiga, Gabor; Zähringer, Katharina; Thévenin, Dominique**

DNS study of the optimal heat release rate marker in premixed methane flames

Proceedings of the Combustion Institute - Amsterdam [u.a.]: Elsevier, 2018;

[Online first]

[Imp.fact.: 5.336]

**Cleynen, Olivier; Kerikous, Emeel; Hoerner, Stefan; Thévenin, Dominique**

Characterization of the performance of a free-stream water wheel using computational fluid dynamics

Energy: the international journal - Amsterdam [u.a.]: Elsevier Science, Vol. 165.2018, Part B, S. 1392-1400;

[Imp.fact.: 4.968]

**Daróczy, László; Janiga, Gabor; Thévenin, Dominique**

Computational fluid dynamics based shape optimization of airfoil geometry for an H-rotor using a genetic algorithm

Engineering optimization - London: Taylor & Francis, Bd. 50.2018, 9, S. 1483-1499;

[Imp.fact.: 1.622]

**Dragomirov, Plamen; Mendieta, Aldo; Abram, Christopher; Fond, Benoit; Beyrau, Frank**

Planar measurements of spray-induced wall cooling using phosphor thermometry

Experiments in fluids: experimental methods and their applications to fluid flow : research journal - Berlin: Springer, Vol. 59.2018, 3, Art. 42, insgesamt 13 S.;

[Imp.fact.: 1.832]

**Eshghinejadfard, Amir; Zhao, Lihao; Thévenin, Dominique**

Lattice Boltzmann simulation of resolved oblate spheroids in wall turbulence

Journal of fluid mechanics - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 849.2018, S. 510-540;

**Fernandes, Leonardo S.; Jessen Werneck de Almeida Martins, Fábio; Azevedo, Luis F. A.**

A technique for measuring ensemble-averaged, three-component liquid velocity fields in two-phase, gas-liquid, intermittent pipe flows

Experiments in fluids: experimental methods and their applications to fluid flow : research journal - Berlin: Springer, Vol. 59.2018, 10, Art. 147, insgesamt 18 S.;

**Fond, Benoît; Xiao, Cheng-Nian; TJoen, Christophe; Henkes, Ruud; Veenstra, Peter; Wachem, Berend; Beyrau, Frank**

Investigation of a highly underexpanded jet with real gas effects confined in a channel - flow field measurements

Experiments in fluids: experimental methods and their applications to fluid flow : research journal - Berlin: Springer, Vol. 59. 2018, 10, Art. 160, insgesamt 21 S.;

**Harth, Kirsten; Trittel, Torsten; Wegner, Sandra; Stannarius, Ralf**

Free cooling of a granular gas of rodlike particles in microgravity

Physical review letters - College Park, Md: APS, Vol. 120.2018, 21, Art. 214301;

[Imp.fact.: 8.462]

**Herz, Fabian**

Prozessmodellierung von direkt befeuerten Drehrohröfen zur beurteilung der thermischen Belastung des Feuerfestmaterials

Keramische Zeitschrift - Wiesbaden: Springer Fachmedien GmbH, Bd. 70.2018, 1/2, S. 26-34;

**Hosseini, Seyed Ali; Darabiha, N.; Thévenin, Dominique**

Mass-conserving advection-diffusion Lattice Boltzmann model for multi-species reacting flows

Physica / A: euophysys journal - Amsterdam: North Holland Publ. Co, Bd. 499.2018, S. 40-57;

**Hütter, Sebastian; Hasemann, Georg; Al-Karawi, J.; Krüger, Manja; Halle, Thorsten**

Prediction of thermodynamic properties of Mo-Si-B alloys from first-principles calculations

Metallurgical and materials transactions / A - Boston: Springer, Bd. 49.2018, 12, S. 6075-6083;

[Imp.fact.: 1.887]

**Janiga, Gabor**

Quantitative assessment of 4D hemodynamics in cerebral aneurysms using proper orthogonal decomposition

Journal of biomechanics: affiliated with the American Society of Biomechanics, the European Society of Biomechanics, the International Society of Biomechanics, the Japanese Society for Clinical Biomechanics and Related Research and the Australian and New Zealand Society of Biomechanics - Amsterdam [u.a.]: Elsevier Science, 2018;

[Imp.fact.: 2.431]

**Jiang, Zhaochen; Hagemeyer, Thomas; Bück, Andreas; Tsotsas, Evangelos**

Color-PTV measurement and CFD-DEM simulation of the dynamics of poly-disperse particle systems in a pseudo-2D fluidized bed

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, Bd. 179.2018, S. 115-132;

**Jokiel, Michael; Kaiser, Nicolas Maximilian; Kováts, Péter; Mansour, Michael; Zähringer, Katharina; Nigam, Krishna Deo Prasad; Sundmacher, Kai**

Helically coiled segmented flow tubular reactor for the hydroformylation of long-chain olefins in a thermomorphic multiphase system

The chemical engineering journal - Amsterdam: Elsevier, 2018;

[Online first]

[Imp.fact.: 6.735]

**Karali, Mohamed A.; Specht, Eckehard; Herz, Fabian; Mellmann, Jochen; Refaey, Hassanein A.**

Unloading characteristics of flights in a flighted rotary drum operated at optimum loading

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 333.2018, S. 347-352;

**Kováts, P.; Pohl, D.; Thévenin, Dominique; Zähringer, Katharina**

Optical determination of oxygen mass transfer in a helically-coiled pipe compared to a straight horizontal tube

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, Bd. 190.2018, S. 273-285;

**Kováts, Péter; Thévenin, Dominique; Zähringer, Katharina**

Characterizing fluid dynamics in a bubble column aimed for the determination of reactive mass transfer

Heat and mass transfer: research journal - Berlin: Springer, Bd. 54.2018, 2, S. 453-461;

[Imp.fact.: 1.494]

**Mansour, Michael; Janiga, Gabor; Nigam, K. D. P.; Thévenin, Dominique; Zähringer, Katharina**

Numerical study of heat transfer and thermal homogenization in a helical reactor

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, Bd. 177.2018, S. 369-379;

**Mansour, Michael; Khot, Prafull; Thévenin, Dominique; Nigam, Krishna D. P.; Zähringer, Katharina**

Optimal Reynolds number for liquid-liquid mixing in helical pipes

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, 2018;

[Online first]

[Imp.fact.: 3.306]

**Mansour, Michael; Kováts, Péter; Wunderlich, Bernd; Thévenin, Dominique**

Experimental investigations of a two-phase gas/liquid flow in a diverging horizontal channel

Experimental thermal and fluid science: international journal of experimental heat transfer, thermodynamics and fluid mechanics : ETF science - New York, NY: Elsevier, Bd. 93.2018, S. 210-217;

**Mansour, Michael; Wunderlich, Bernd; Thévenin, Dominique**

Effect of tip clearance gap and inducer on the transport of two-phase air-water flows by centrifugal pumps

Experimental thermal and fluid science: international journal of experimental heat transfer, thermodynamics and fluid mechanics : ETF science - New York, NY: Elsevier, Bd. 99.2018, S. 487-509;

**Mendieta, Aldo; Dragomirov, Plamen; Schulz, Florian; Beyrau, Frank; Samenfink, Wolfgang; Schuenemann, Erik**

Laser-based measurements of surface cooling following fuel spray impingement

SAE technical papers - Warrendale, Pa: Soc, 2018, Paper 2018-01-0273, insgesamt 9 S.;

**Meuschke, Monique; Gunther, Tobias; Berg, Philipp; Wickenhofer, Ralph; Preim, Bernhard; Lawonn, Kai**

Visual analysis of aneurysm data using statistical graphics

IEEE transactions on visualization and computer graphics: TVCG - New York, NY: IEEE, 2018;

[Online first]

[Imp.fact.: 3.078]

**Meuschke, Monique; Voß, Samuel; Preim, Bernhard; Lawonn, Kai**

Exploration of blood flow patterns in cerebral aneurysms during the cardiac cycle

Computers & graphics - Amsterdam [u.a.]: Elsevier Science, Bd. 72.2018, S. 12-25;

[Imp.fact.: 1.176]

**Nafsun, Aainaa Izyan Binti; Herz, Fabian; Liu, Xiaoyan**

Influence of material thermal properties and dispersity on thermal bed mixing in rotary drums  
Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 331.2018, S. 121-128;

**Neuber, Gregor; Garcia, Carlos E.; Kronenburg, Andreas; Williams, Benjamin A. O.; Beyrau, Frank; Stein, Oliver T.; Cleary, Matthew J.**

Joint experimental and numerical study of silica particulate synthesis in a turbulent reacting jet  
Proceedings of the Combustion Institute - Amsterdam [u.a.]: Elsevier, 2018;  
[Online first]  
[Imp.fact.: 5.336]

**Oeltze-Jafra, Steffen; Meuschke, Monique; Neugebauer, M.; Saalfeld, Sylvia; Lawonn, K.; Janiga, Gábor; Hege, H.-C.; Zachow, S.; Preim, Bernhard**

Generation and visual exploration of medical flow data - survey, research trends and future challenges  
Computer graphics forum: the international journal of the Eurographics Association - Oxford: Wiley-Blackwell, 2018;  
[Online first]  
[Imp.fact.: 2.046]

**Oster, Timo; Abdelsamie, Abouelmagd; Motejat, Michael; Gerrits, Tim; Rössl, Christian; Thevenin, Dominique; Theisel, Holger**

Onthefly tracking of flame surfaces for the visual analysis of combustion processes  
Computer graphics forum: the international journal of the Eurographics Association - Oxford: Wiley-Blackwell, Bd. 37.2018, 6, S. 358-369;  
[Imp.fact.: 2.046]

**Otto, Hendrik; Kerst, Kristin; Roloff, Christoph; Janiga, Gábor; Katterfeld, André**

CFDDDEM simulation and experimental investigation of the flow behavior of lunar regolith JSC-1A  
Particuology - Amsterdam: Elsevier, insges. 10 S., 2018;

**Patil, Rohit; Daróczy, László; Janiga, Gábor; Thévenin, Dominique**

Large eddy simulation of an H-Darrieus rotor  
Energy: the international journal - Amsterdam [u.a.]: Elsevier Science, Bd. 160.2018, S. 388-398;

**Penumakala, Pavan Kumar; Nallathambi, Ashok; Specht, Eckehard; Urlau, Ulrich; Hamilton, Doug; Dykes, Charlie**

Influence of process parameters on solidification length of twin-belt continuous casting  
Applied thermal engineering: design, processes, equipment, economics - Amsterdam [u.a.]: Elsevier Science, Bd. 134.2018, S. 275-286;  
[Imp.fact.: 3.356]

**Roloff, Christoph; Lukas, Eduard; Wachem, Berend; Thévenin, Dominique**

Particle dynamics investigation by means of shadow imaging inside an air separator  
Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, 2018;  
[Online first]  
[Imp.fact.: 3.306]

**Roloff, Christoph; Stucht, Daniel; Beuing, Oliver; Berg, Philipp**

Comparison of intracranial aneurysm flow quantification techniques - standard PIV vs stereoscopic PIV vs tomographic PIV vs phase-contrast MRI vs CFD  
Journal of neuroInterventional surgery: JNIS : the journal of the Society of NeuroInterventional Surgery - London: BMJ Journals, 2018;  
[Online first]  
[Imp.fact.: 3.524]

**Saalfeld, Patrick; Luz, Maria; Berg, Philipp; Preim, Bernhard; Saalfeld, Sylvia**

Guidelines for quantitative evaluation of medical visualizations on the example of 3D aneurysm surface comparisons  
Computer graphics forum: the international journal of the Eurographics Association - Oxford: Wiley-Blackwell, Bd. 37.2018, 1, S. 226-238;

[Imp.fact.: 2.046]

**Saalfeld, Sylvia; Berg, Philipp; Niemann, Annika; Luz, Maria; Preim, Bernhard; Beuing, Oliver**

Semiautomatic neck curve reconstruction for intracranial aneurysm rupture risk assessment based on morphological parameters

International journal of computer assisted radiology and surgery: a journal for interdisciplinary research, development and applications of image guided diagnosis and therapy - Berlin: Springer, Bd. 13.2018, 11, S. 1781-1793;

[Imp.fact.: 1.961]

**Sandaka, Gourisankar; Specht, Eckehard**

Influence of material properties on the decomposition time of limestone under shaft kiln conditions

ZKG international: Bundesverband der Deutschen Zementindustrie ; Bundesverband der Deutschen Kalkindustrie ; Bundesverband der Gips- und Gipsbauplattenindustrie - Walluf: Bauverl, 3, S. 53-56, 2018

**Schulz, Florian; Beyrau, Frank**

Comparison of the spray and the spray/wall interaction of two gasoline injectors

International journal of automotive technology: IJAT - Berlin: Springer, Bd. 19.2018, 4, S. 615-622;

**Schulz, Florian; Beyrau, Frank**

Systematic investigation of fuel film evaporation

SAE technical papers - Warrendale, Pa: Soc, 2018, Paper 2018-01-0310, insgesamt 11S.;

**Sindeev, Sergey; Arnold, Philipp Georg; Frolov, Sergey; Prothmann, Sascha; Liepsch, Dieter; Balasso, Andrea; Berg, Philipp; Kaczmarz, Stephan; Kirschke, Jan Stefan**

Phase-contrast MRI versus numerical simulation to quantify hemodynamical changes in cerebral aneurysms after flow diverter treatment

PLOS ONE - San Francisco, California, US: PLOS, Vol. 13.2018, 1, Art. e190696, insgesamt 17 S.;

**Szabó, Balázs; Kovács, Zsolt; Wegner, Sandra; Ashour, Ahmed; Fischer, David; Stannarius, Ralf; Börzsönyi, Tamás**

Flow of anisometric particles in a quasi-two-dimensional hopper

Physical review - Woodbury, NY: Inst, Vol. 97.2018, 6, Art. 062904;

[Imp.fact.: 2.284]

**Szaszák, N.; Roloff, Christoph; Bordás, Róbert; Bencs, P.; Szabó, S.; Thévenin, Dominique**

A novel type of semi-active jet turbulence grid

Heliyon - London [u.a.]: Elsevier, Vol. 4.2018, 12, Art. e01026;

**Valen-Sendstad, Kristian; Bergersen, Aslak W.; Shimogonya, Yuji; Goubergrits, Leonid; Bruening, Jan; Pallares, Jordi; Cito, Salvatore; Piskin, Senol; Pekkan, Kerem; Geers, Arjan J.; Larrabide, Ignacio; Rapaka, Saikiran; Mihalef, Viorel; Fu, Wenyu; Qiao, Aike; Jain, Kartik; Roller, Sabine; Mardal, Kent-Andre; Kamakoti, Ramji; Spirka, Thomas; Ashton, Neil; Revell, Alistair; Aristokleous, Nicolas; Houston, J. Graeme; Tsuji, Masanori; Ishida, Fujimaro; Menon, Prahlad G.; Browne, Leonard D.; Broderick, Stephen; Shojima, Masaaki; Koizumi, Satoshi; Barbour, Michael; Aliseda, Alberto; Morales, Hernán G.; Lefèvre, Thierry; Hodis, Simona; Al-Smadi, Yahia M.; Tran, Justin S.; Marsden, Alison L.; Vaippummadhom, Sreeja; Einstein, G. Albert; Brown, Alistair G.; Debus, Kristian; Niizuma, Kuniyasu; Rashad, Sherif; Sugiyama, Shin-Ichiro; Owais Khan, M.; Updegrove, Adam R.; Shadden, Shawn C.; Cornelissen, Bart M. W.; Majoie, Charles B. L. M.; Berg, Philipp; Saalfeld, Sylvia; Kono, Kenichi; Steinman, David A.**

Real-world variability in the prediction of intracranial aneurysm wall shear stress - the 2015 international aneurysm CFD challenge

Cardiovascular engineering and technology: CVET - New York, NY: Springer, Bd. 9.2018, 4, S. 544-564;

[Imp.fact.: 2.046]

**Voss, Samuel; Arens, Christoph; Janiga, Gábor**

Assessing transitional air flow during human exhalation from Large Eddy Simulations based on spectral entropy

Flow, turbulence and combustion: an international journal published in association with ERCOFTAC - Dordrecht [u.a.]: Springer Science + Business Media B.V, Bd. 100.2018, insges. 12 S.;

[Imp.fact.: 2.207]



**Voß, Samuel; Saalfeld, Sylvia; Hoffmann, Thomas; Beuing, Oliver; Janiga, Gábor; Berg, Philipp**

Fluid-structure interaction in intracranial vessel walls - the role of patient-specific wall thickness  
Current directions in biomedical engineering - Berlin: De Gruyter, Bd. 4.2018, 1, S. 587-590;

**Waldeck, Steffen; Woche, Hermann; Specht, Eckehard; Fritsching, Udo**

Evaluation of heat transfer in quenching processes with impinging liquid jets  
International journal of thermal sciences: IJTS - Amsterdam [u.a.]: Elsevier Science, Bd. 134.2018, S. 160-167;

**Woche, Hermann; Fang, Yuan; Specht, Eckehard**

Heat transfer analysis during metal cooling with sprays and jets  
Heat processing: international magazine for industrial furnaces, heat treatment & equipment - Essen: Vulkan-Verl, Bd. 16.2018, 1, S. 41-47

**Wu, Wei-Ning; Liu, Xiao-Yan; Hu, Zhou; Herz, Fabian; Specht, Eckehard**

Measurement of the local material depth in a directly-heated pilot rotary kiln based on temperature fields  
Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, insges. 33 S., 2018;  
[Imp.fact.: 2.942]

**Zhou, Hao; You, Jiaping; Xiong, Shiyong; Yang, Yue; Thévenin, Dominique; Chen, Shiyi**

Interactions between the premixed flame front and the three-dimensional Taylor-Green vortex  
Proceedings of the Combustion Institute - Amsterdam [u.a.]: Elsevier, 2018;  
[Online first]  
[Imp.fact.: 5.336]

**Zähringer, Katharina; Wagner, Lisa-Maria; Thévenin, Dominique; Siegmund, Patrick; Sundmacher, Kai**

Particle-image-velocimetry measurements in organic liquid multiphase systems for an optimal reactor design and operation  
Journal of visualization - Berlin: Springer, Bd. 21.2018, 1, S. 5-17;  
[Imp.fact.: 0.971]

## **NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze**

**Woche, Hermann; Fang, Yuan; Specht, Eckehard**

Wärmeübergang von Sprays und Strahlen bei der Kühlung heißer Metalle  
Prozesswärme: Thermoprozesstechnik, Wärmebehandlung, Anlagenbau und -betrieb - Essen: Vulkan-Verlag, Bd. 1.2018, 1, S. 129-136

## **BEGUTACHTETE BUCHBEITRÄGE**

**Abdelsamie, Abouelmagd; Thévenin, Dominique**

DNS of burning N-heptane droplets - auto-ignition and turbulence modulation mechanisms  
Direct and Large-Eddy Simulation X - Cham: Springer International Publishing, S. 391-397, 2018 - (ERCOFTAC Series; 24);

**Berg, Philipp; Radtke, Livia; Voß, Samuel; Serowy, Steffen; Janiga, Gábor; Preim, Bernhard; Beuing, Oliver; Saalfeld, Sylvia**

3DRA reconstruction of intracranial aneurysms - how does voxel size influences morphologic and hemodynamic parameters  
Learning from the past, looking to the future: 2018 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society : July 17-21, 2018, Hawaii Convention Center, Honolulu, Hawaii - [Piscataway, NJ]: IEEE, S. 1327-1330;  
[Konferenz: 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Honolulu, HI, USA, 18-21 July 2018]

**Kulkarni, Gaurav A.; Specht, Eckehard**

Quantifying the parameters influencing heat transfer during quenching of metal plate  
Proceedings of the 4th World Congress on Mechanical, Chemical, and Material Engineering (MCM'18) - International ASET Inc., 2018, Paper-Nr. HTFF 167, insgesamt 10 S.;

**Mansour, Michael; Wunderlich, Bernd; Thevenin, Dominique**

Experimental study of two-phase air/water flow in a centrifugal pump working with a closed or a semi-open impeller

ASME Turbo Expo 2018: Turbomachinery Technical Conference and Exposition: Volume 9: Oil and gas applications, supercritical CO<sub>2</sub> power cycles, wind energy, Oslo, Norway, June 11-15, 2018 - New York, N.Y.: The American Society of Mechanical Engineers, 2018, Paper No. GT2018-75380, insgesamt 13 S.;  
[Konferenz: ASME Turbo Expo 2018: Turbomachinery Technical Conference and Exposition, Oslo, Norway, June 11-15, 2018]

**Misra, Anurag; Bonamy, Cyrille; Souza, Luís M.; Hohl, Lena; Illner, Markus; Kraume, Matthias; Repke, Jens-Uwe; Thévenin, Dominique**

A multi-fluid approach to simulate separation of liquid-liquid systems in a gravity settler  
Computer aided chemical engineering - Amsterdam [u.a.]: Elsevier, Bd. 43.2018, S. 31-36;  
[Symposium: 28th European Symposium on Computer Aided Process Engineering, Graz, Austria, 10-13 June 2018]

**Niemann, Uli; Berg, Philipp; Niemann, Annika; Beuing, Oliver; Preim, Bernhard; Spiliopoulou, Myra; Saalfeld, Sylvia**

Rupture status classification of intracranial aneurysms using morphological parameters  
31st IEEE International Symposium on Computer-Based Medical Systems: CBMS 2018 : 18-21 June 2018, Karlstad, Sweden : proceedings - Piscataway, NJ: IEEE;  
[Symposium: 31st IEEE International Symposium on Computer-Based Medical Systems, CBMS 2018, Karlstad, Sweden, 18-21 June 2018]

**Pliester, Stefan; Bauer, Wolfgang; Al-Karawi, Janan; Specht, Eckehard**

Ermittlung gesicherter Werte der Wärmeleitfähigkeit feuerfester Werkstoffe für die Auslegung von Industrieöfen und für die Prozessoptimierung  
Tagungsband zum 20. Werkstofftechnischen Kolloquium: 14. und 15. März 2018 in Chemnitz - Chemnitz: Eigenverlag Chemnitz, S. 326 - (Schriftenreihe Werkstoffe und werkstofftechnische Anwendungen; Band 72);  
[Tagung: 20. Werkstofftechnischen Kolloquium, Chemnitz, 14. und 15. März 2018]

**Ranga Dinesh, K. K. J.; Shalaby, H.; Luo, K. H.; Thévenin, Dominique**

DNS of turbulent lean premixed syngas flames at elevated pressures  
Direct and Large-Eddy Simulation X - Cham: Springer International Publishing, S. 399-405, 2018 - (ERCOFTAC Series; 24);

**Thévenin, Dominique**

DNS and LES of transitional and two-phase flows  
Direct and Large-Eddy Simulation X - Cham: Springer International Publishing, S. 35-42, 2018 - (ERCOFTAC Series; 24);

**Voß, Samuel; Saalfeld, Patrick; Saalfeld, Sylvia; Beuing, Oliver; Janiga, Gábor; Preim, Bernhard**

Impact of gradual vascular deformations on the intra-aneurysmal hemodynamics  
Bildverarbeitung für die Medizin 2018: Algorithmen - Systeme - Anwendungen ; Proceedings des Workshops vom 11. bis 13. März 2018 in Erlangen - Berlin: Springer Vieweg, S. 359-364;  
[Workshop: Bildverarbeitung für die Medizin 2018, Erlangen, 11. bis 13. März 2018]

## HERAUSGEBERSCHAFTEN

**Wolter, Martin; Beyrau, Frank; Tsotsas, Evangelos; Klabunde, Christian; Dancker, Jonte; Gast, Nicola; Schröter, Tamara; Schulz, Florian; Rossberg, Jari; Richter, André**

Intelligentes Multi-Energie-System (SmartMES) - Statusbericht der Otto-von-Guericke-Universität Magdeburg zum Verbundprojekt ; 1. Statusseminar 28. März 2018 in Magdeburg

Magdeburg: Otto-von-Guericke-Universität, 2018, XII, 159 Seiten, Illustrationen, Diagramme, 21 cm - (Res electricae Magdeburgenses; Band 74), ISBN 978-3-944722-69-6;

Kongress: Statusseminar 1 (Magdeburg : 2018.03.28) [Literaturangaben: Seite 150-159]

## ABSTRACTS

**Abram, Christopher; Fond, Benoit; Pougin, Miriam; Beyrau, Frank**

Characterising dispersed phosphor particles for fluid thermometry

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

**Fond, Benoit; Xiao, Cheng; Abram, Christopher; T'Joen, Christophe; Wachem, Berend; Beyrau, Frank**

Phosphor thermometry for the validation of computational fluid dynamics simulations of heat transfer in compressible real-gas flows

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

**Harth, Kirsten; Trittel, Torsten; Wegner, Sandra; Stannarius, Ralf**

Free cooling of a granular gas in microgravity

Bulletin of the American Physical Society - New York, NY: Soc, 2018, Abstract: L60.00202;

[APS March Meeting 2018, Los Angeles, California, March 59, 2018]

**Mendieta, Aldo; Fond, Benoit; Dragomirov, Plamen; Beyrau, Frank**

Exploiting optical signals from single-phosphor particles for simultaneous point measurements of flow temperature and velocity

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

**Ojo, Anthony; Fond, Benoit; Abram, Christopher; Wachem, Berend; Heyes, Andrew; Beyrau, Frank**

Simultaneous measurements of the thermal and velocity boundary layer over a heated flat plate using thermographic laser Doppler velocimetry

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

**Voß, Samuel; Saalfeld, Sylvia; Hoffmann, Thomas; Janiga, Gábor; Beuing, Oliver; Berg, Philipp**

Fluid-structure interaction in intracranial vessel walls - the role of patient-specific wall thickness

Biomedical engineering: joint journal of the German Society for Biomedical Engineering in VDE and the Austrian and Swiss Societies for Biomedical Engineering - Berlin [u.a.]: de Gruyter, Vol. 63.2018, Suppl.1, S. S378;

[Kongress: BMT 2018, Aachen, September 26-28, 2018]

[Imp.fact.: 1.088]

## DISSERTATIONEN

**Buchtatj, Denis; Thévenin, Dominique [GutachterIn]; Hadler, Jens [GutachterIn]; Tschöke, Helmut [GutachterIn]**

CFD-basierte Analyse der Gemischbildung mit einem skalenauflösenden Turbulenzmodell

Magdeburg, 2017, XVI, 140 Seiten, Illustrationen, Diagramme;

[Literaturverzeichnis: Seite 126-133]

**Meyer, Lennart; Specht, Eckehard; Krause, Ulrich [GutachterIn]; Beyer, Michael [GutachterIn]; Grätz, Rainer [GutachterIn]**

Die Entstehung von heißen Oberflächen in metallischen Reibsituationen und ihre Zündwirksamkeit

Bremen: Fachverlag NW in der Carl Schünemann Verlag GmbH, 2018, VII, 131 Seiten, Illustrationen, Diagramme,

30 cm - (PTB-Bericht; Ex, Explosionsschutz; 9), ISBN 978-3-95606-402-9

# INSTITUT FÜR VERFAHRENSTECHNIK

Universitätsplatz 2, 39106 Magdeburg  
Tel. 49 (0)391 67 58402, Fax 49 (0)391 67 11209  
udo.reichl@ovgu.de

## 1. LEITUNG

Prof. Dr.-Ing. Udo Reichl (geschäftsführender Leiter)  
Prof. Dr.-Ing. habil. Dr.h.c. Andreas Seidel-Morgenstern  
Prof. Dr.-Ing. habil. Martin Sommerfeld  
Prof. Dr.-Ing. habil. Kai Sundmacher  
Prof. Dr.-Ing. habil. Evangelos Tsotsas  
Prof. Dr. Ir. Berend van Wachem

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

#### **Abdol Azis, Mohd Hazmil; Evrard, Fabien; Wachem, Berend**

An immersed boundary method for flows with dense particle suspensions  
Acta mechanica - Wien: Springer, 2018;  
[Online first]  
[Imp.fact.: 2.113]

#### **Ariane, M.; Sommerfeld, Martin; Alexiadis, A.**

Wall collision and drug-carrier detachment in dry powder inhalers - using DEM to devise a sub-scale model for CFD calculations  
Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 334.2018, S. 65-75;

#### **Aydin, Erdal; Bonvin, Dominique; Sundmacher, Kai**

Computationally efficient NMPC for batch and semi-batch processes using parsimonious input parameterization  
Journal of process control: a journal affiliated with IFAC, the International Federation of Automatic Control - Amsterdam [u.a.]: Elsevier Science, Bd. 66.2018, S. 12-22;

#### **Aydin, Erdal; Bonvin, Dominique; Sundmacher, Kai**

NMPC using ponyragins minimum principle-application to a two-phase semi-batch hydroformylation reactor under uncertainty  
Computers & chemical engineering: an international journal of computer applications in chemical engineering - Amsterdam [u.a.]: Elsevier Science, Bd. 108.2018, S. 47-56;

#### **Aydin, Erdal; Bonvin, Dominique; Sundmacher, Kai**

Toward fast dynamic optimization - an indirect algorithm that uses parsimonious input parameterization  
Industrial & engineering chemistry research - Columbus, Ohio: American Chemical Society, Bd. 57.2018, 30, S. 10038-10048;

#### **Bartholomew, Paul; Denner, Fabian; Abdol-Azis, Mohd Hazmil; Marquis, Andrew; Wachem, Berend**

Unified formulation of the momentum-weighted interpolation for collocated variable arrangements  
Journal of computational physics - Amsterdam: Elsevier, Bd. 375.2018, S. 177-208;  
[Imp.fact.: 2.864]

**Bechtel, Simon; Vidakovic-Koch, Tanja; Sundmacher, Kai**

Novel process for the exergetically efficient recycling of chlorine by gas phase electrolysis of hydrogen chloride  
The chemical engineering journal - Amsterdam: Elsevier, Bd. 346.2018, S. 535-548;

**Beneyton, Thomas; Krafft, Dorothee; Bednarz, Claudia; Kleineberg, Christin; Woelfer, Christian; Ivanov, Ivan; Vidakovi-Koch, Tanja; Sundmacher, Kai; Baret, Jean-Christophe**

Out-of-equilibrium microcompartments for the bottom-up integration of metabolic functions  
Nature Communications - [London]: Nature Publishing Group UK, Vol. 9.2018, Art. 2391, insgesamt 10 S.;

**Brächer, Alexander; Kreußer, Lisa Maria; Qamar, Shamsul; Seidel-Morgenstern, Andreas; Harbou, Erik**

Application of quantitative inline NMR spectroscopy for investigation of a fixed-bed chromatographic reactor process  
The chemical engineering journal - Amsterdam: Elsevier, Bd. 336.2018, S. 518-530;

**Buchbinder, Jörn Holger; Pischel, Dennis; Sundmacher, Kai; Flassig, Robert J.; Lavrik, Inna N.**

Quantitative single cell analysis uncovers the life/death decision in CD95 network  
PLoS Computational Biology: a new community journal - San Francisco, Calif: Public Library of Science, Vol. 14.2018, 9, Art. e1006368, insgesamt 21 S.;

[Imp.fact.: 3.955]

**Böhmert, Linda; König, Laura; Sieg, Holger; Lichtenstein, Dajana; Paul, Niklas; Braeuning, Albert; Voigt, Andreas; Lampen, Alfonso**

In vitro nanoparticle dosimetry for adherent growing cell monolayers covering bottom and lateral walls  
Particle and fibre toxicology: pft - London: BioMed Central, Vol. 15.2018, Art. 42, insgesamt 20 S.;

[Imp.fact.: 6.105]

**Carvalho, Sofia B.; Fortuna, A. Raquel; Wolff, Michael W.; Peixoto, Cristina; Alves, Paula M.; Reichl, Udo**

Purification of influenza viruslike particles using sulfated cellulose membrane adsorbers  
Journal of chemical technology & biotechnology - Chichester: Wiley, Bd. 93.2018, 7, S. 1988-1996;  
[Special issue: Bioseparations]

**Charogiannis, Alexandros; Denner, Fabian; Wachem, Berend; Kalliadasis, Serafim; Scheid, Benoit; Markides, Christos N.**

Experimental investigations of liquid falling films flowing under an inclined planar substrate  
Physical review fluids - College Park, MD: APS, Vol. 3.2018, 11, Artikel 114002;  
[Imp.fact.: 2.021]

**Cui, Yan; Sommerfeld, Martin**

Application of Lattice-Boltzmann method for analysing detachment of micron-sized particles from carrier particles in turbulent flows  
Flow, turbulence and combustion: an international journal published in association with ERCOFTAC - Dordrecht [u.a.]: Springer Science + Business Media B.V, Bd. 100.2018, 1, S. 271-297;

**David, Uche Ugochukwu; Qamar, Shamsul; Seidel-Morgenstern, Andreas**

Analytical and numerical solutions of two-dimensional general rate models for liquid chromatographic columns packed with coreshell particles  
Chemical engineering research and design: CERD - Amsterdam: Elsevier, Bd. 130.2018, S. 295-320;

**Denner, Fabian; Charogiannis, Alexandros; Pradas, Marc; Markides, Christos N.; Wachem, Berend; Kalliadasis, Serafim**

Solitary waves on falling liquid films in the inertia-dominated regime  
Journal of fluid mechanics - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 837.2018, S. 491-519;  
[Imp.fact.: 2.821]

**Denner, Fabian; Xiao, Cheng-Nian; Wachem, Berend**

Pressure-based algorithm for compressible interfacial flows with acoustically-conservative interface discretisation  
Journal of computational physics - Amsterdam: Elsevier, Bd. 367.2018, S. 192-234;  
[Imp.fact.: 2.744]

**Diez, E.; Meyer, K.; Bück, A.; Tsotsas, Evangelos; Heinrich, S.**

Influence of process conditions on the product properties in a continuous fluidized bed spray granulation process  
Chemical engineering research and design: CERD - Amsterdam: Elsevier, Bd. 139.2018, S. 104-115;

**Duvigneau, Stefanie; Dürr, Robert; Laske, Tanja; Bachmann, Mandy; Dostert, Melanie; Reichl, Udo; Kienle, Achim**

Mathematical modeling as a tool to improve influenza vaccine production processes  
IFAC-PapersOnLine - Frankfurt: Elsevier, Bd. 51.2018, 19, S. 1-4;  
[Konferenz: 7th Conference on Foundation of Systems Biology in Engineering, FOSBE 2018, Chicago, Illinois, USA, 05-08 August 2018]  
[Imp.fact.: 0.434]

**Evrard, Fabien; Denner, Fabian; Wachem, Berend**

Surface reconstruction from discrete indicator functions  
IEEE transactions on visualization and computer graphics: TVCG - New York, NY: IEEE, 2018;  
[Online first]  
[Imp.fact.: 3.078]

**Fischer, Laura M.; Wolff, Michael; Reichl, Udo**

Purification of cell culture-derived influenza A virus via continuous anion exchange chromatography on monoliths  
Vaccine - Amsterdam: Elsevier, Bd. 36.2018, 22, S. 3153-3160;

**Fortuna, Ana Raquel; Taft, Florian; Villain, Louis; Wolff, Michael W.; Reichl, Udo**

Optimization of cell culture-derived influenza A virus particles purification using sulfated cellulose membrane adsorbers  
Engineering in life sciences - Weinheim: Wiley-VCH, Bd. 18.2018, 1, S. 29-39;

**Gerlach, Martin; Kirschtowski, Sabine; Seidel-Morgenstern, Andreas; Hamel, Christof**

Kinetic modeling of the palladiumcatalyzed isomerizing methoxycarbonylation of 1decene  
Chemie - Ingenieur - Technik: CIT - Weinheim: Wiley-VCH Verl, Bd. 90.2018, 5, S. 673-678;  
[Imp.fact.: 1.1]

**Golovin, Ievgen; Strenzke, Gerd; Dürr, Robert; Palis, Stefan; Bück, Andreas; Tsotsas, Evangelos; Kienle, Achim**

Parameter identification for continuous fluidized bed spray agglomeration  
Processes: open access journal - Basel: MDPI, Vol. 6.2018, 12, Artikel 246;

**Gouaou, Imen; Shamaei, Samira; Koutchoukali, Mohamed Salah; Bouhelassa, Mohamed; Tsotsas, Evangelos; Kharaghani, Abdolreza**

Impact of operating conditions on a single droplet and spray drying of hydroxypropylated pea starch - process performance and final powder properties  
Asia-Pacific journal of chemical engineering - Hoboken, NJ: Wiley, Bd. 13.2018, 5;  
[Imp.fact.: 1.238]

**Hampel, Nelli; Royeva, Evgeniya; Bück, Andreas; Tsotsas, Evangelos**

Coating of finely dispersed particles by two-fluid nozzle  
Particuology : science and technology of particles - Amsterdam : Elsevier, Bd. 38.2018, S. 80-93  
[Imp.fact.: 2.785]

**Hazmil Abdol Azis, Mohd; Evrard, Fabien; Wachem, Berend**

An immersed boundary method for incompressible flows in complex domains  
Journal of computational physics - Amsterdam: Elsevier, 2018;  
[Online first]  
[Imp.fact.: 2.864]

**Hoffmann, Marcus; Pioch, Markus; Pralow, Alexander; Henning, René; Kottler, Robert; Reichl, Udo; Rapp, Erdmann**

The fine art of destruction - a guide to indepth glycoproteomic analyses-exploiting the diagnostic potential of fragment ions  
Proteomics - Weinheim: Wiley VCH, Vol. 18.2018, 24, Art.-Nr. 1800282;

**Idakiev, Vesselin; Steinke, Claudia; Sondej, Franziska; Bück, Andreas; Tsotsas, Evangelos; Mörl, Lothar**

Inductive heating of fluidized beds - spray coating process

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 328.2018, S. 26-37;

**Jiang, Zhaochen; Bück, Andreas; Tsotsas, Evangelos**

CFDDEM study of residence time, droplet deposition, and collision velocity for a binary particle mixture in a Wurster fluidized bed coater

Drying technology: an international journal - Philadelphia, Pa: Taylor & Francis, Bd. 36.2018, 6, S. 638-650;

**Jiang, Zhaochen; Hagemeyer, Thomas; Bück, Andreas; Tsotsas, Evangelos**

Color-PTV measurement and CFD-DEM simulation of the dynamics of poly-disperse particle systems in a pseudo-2D fluidized bed

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, Bd. 179.2018, S. 115-132;

**Jokiel, Michael; Kaiser, Nicolas Maximilian; Kováts, Péter; Mansour, Michael; Zähringer, Katharina; Nigam, Krishna Deo Prasad; Sundmacher, Kai**

Helically coiled segmented flow tubular reactor for the hydroformylation of long-chain olefins in a thermomorphic multiphase system

The chemical engineering journal - Amsterdam: Elsevier, 2018;

[Online first]

[Imp.fact.: 6.735]

**Kaiser, Nicolas Maximilian; Flassig, Robert; Sundmacher, Kai**

Reactor-network synthesis via flux profile analysis

The chemical engineering journal - Amsterdam: Elsevier, Bd. 335.2018, S. 1018-1030;

**Khalid, Muhammad Kamran; Asad, Muhammad; Henrich-Noack, Petra; Sokolov, Maxim; Hintz, Werner; Grigartzik, Lisa; Zhang, Enqi; Dityatev, Alexander; Wachem, Berend; Sabel, Bernhard A.**

Evaluation of toxicity and neural uptake in vitro and in vivo of superparamagnetic iron oxide nanoparticles

International journal of molecular sciences - Basel: Molecular Diversity Preservation International, Vol. 19.2018, 9, Art. 2613, insgesamt 14 S.;

[Imp.fact.: 3.687]

**Koullapis, P.; Kassinos, S. C.; Muela, J.; Perez-Segarra, C.; Rigola, J.; Lehmkuhl, O.; Cui, Y.; Sommerfeld, Martin; Elcner, J.; Jicha, M.; Saveljic, I.; Filipovic, N.; Lizal, F.; Nicolaou, L.**

Regional aerosol deposition in the human airways - the SimInhale benchmark case and a critical assessment of in silico methods

European journal of pharmaceutical sciences: official journal of the European Federation for Pharmaceutical Sciences - New York, NY [u.a.]: Elsevier, Bd. 113.2018, S. 77-94;

**Le, Kieu Hiep; Hampel, Neli; Kharaghani, Abdolreza; Bück, Andreas; Tsotsas, Evangelos**

Superheated steam drying of single wood particles: A characteristic drying curve model deduced from continuum model simulations and assessed by experiments

Drying technology: an international journal - Philadelphia, Pa: Taylor & Francis, Bd. 36.2018, 15, S. 1866-1881; [Special Issue to Celebrate the 30th Anniversary of the Editorship of Prof. Arun S. Mujumdar]

**Le, Kieu Hiep; Tsotsas, Evangelos; Kharaghani, Abdolreza**

Continuum-scale modeling of superheated steam drying of cellular plant porous media

International journal of heat and mass transfer - Amsterdam [u.a.]: Elsevier, Bd. 124.2018, S. 1033-1044;

**Lee, Ju Weon; Seidel-Morgenstern, Andreas**

Model predictive control of simulated moving bed chromatography for binary and pseudo-binary separations - simulation study

IFAC-PapersOnLine - Frankfurt: Elsevier, Bd. 51.2018, 18, S. 530-535;

[Symposium: 10th IFAC Symposium on Advanced Control of Chemical Processes, ADCHEM 2018, Shenyang, China, 25-27 July 2018]

[Imp.fact.: 0.434]



**Liesche, Georg; Sundmacher, Kai**

Identification of key transport phenomena in high-temperature reactors - flow and heat transfer characteristics  
Industrial & engineering chemistry research - Columbus, Ohio: American Chemical Society, Bd. 57.2018, 46, S. 15884-15897;  
[Imp.fact.: 3.141]

**Liu, Daoyin; Wachem, Berend**

Comprehensive assessment of the accuracy of CFD-DEM simulations of bubbling fluidized beds  
Powder technology: an international journal on the science and technology of wet and dry particulate systems -  
Amsterdam [u.a.]: Elsevier Science, Bd. 343.2018, S. 145-158;  
[Imp.fact.: 3.23]

**Mahour, Reza; Klapproth, Jan; Rexer, Thomas F. T.; Schildbach, Anna; Klamt, Steffen; Pietzsch, Markus; Rapp, Erdmann; Reichl, Udo**

Establishment of a five-enzyme cell-free cascade for the synthesis of uridine diphosphate N-acetylglucosamine  
Journal of biotechnology - Amsterdam [u.a.]: Elsevier Science, Bd. 283.2018, S. 120-129;

**Moghaddam, Alireza Attari; Kharaghani, Abdolreza; Tsotsas, Evangelos; Prat, Marc**

A pore network study of evaporation from the surface of a drying nonhygroscopic porous medium  
AIChE journal - Hoboken, NJ: Wiley, Bd. 64.2018, 4, S. 1435-1447;

**Mueller, Ines; Kiedorf, Gregor; Runne, Eike; Pottratz, Ines; Seidel-Morgenstern, Andreas**

Process control and yield enhancement of the galactooligosaccharide formation  
Chemie - Ingenieur - Technik: CIT - Weinheim: Wiley-VCH Verl, Bd. 90.2018, 5, S. 725-730;

**Muth, Thilo; Kohrs, Fabian; Heyer, Robert; Benndorf, Dirk; Rapp, Erdmann; Reichl, Udo; Martens, Lennart; Renard, Bernhard Y.**

MPA portable - a stand-alone software package for analyzing metaproteome samples on the go  
Analytical chemistry: the authoritative voice of the analytical community - Columbus, Ohio: American Chemical Society, Bd. 90.2018, 1, S. 685-689;

**Müller, Daniel; Bück, Andreas; Tsotsas, Evangelos**

Influence of separation properties and processing strategies on product characteristics in continuous fluidized bed spray granulation  
Powder technology: an international journal on the science and technology of wet and dry particulate systems -  
Amsterdam [u.a.]: Elsevier Science, Bd. 342.2019, S. 572-584, 2018;  
[Online first]

**Müller, Ines; Kiedorf, G; Runne, E.; Seidel-Morgenstern, Andreas; Hamel, Christof**

Synthesis, kinetic analysis and modelling of galacto-oligosaccharides formation  
Chemical engineering research and design: CERD - Amsterdam: Elsevier, Bd. 130.2018, 02, S. 154-166;  
[Imp.fact.: 2.538]

**Neugebauer, Christoph; Bück, Andreas; Palis, Stefan; Mielke, Lisa; Tsotsas, Evangelos; Kienle, Achim**

Influence of thermal conditions on particle properties in fluidized bed layering granulation  
Processes: open access journal - Basel: MDPI, Vol. 6.2018, 12, Artikel 235;  
[Imp.fact.: 1.279]

**Nguyen, Duy; Rimmelgas, Johan; Björn, Ingela Niklasson; Wachem, Berend; Thalberg, Kyrre**

Towards quantitative prediction of the performance of dry powder inhalers by multi-scale simulations and experiments  
International journal of pharmaceuticals - New York, NY [u.a.]: Elsevier, Bd. 547.2018, 1, S. 31-43;  
[Imp.fact.: 3.649]

**Nguyen-Khuong, Terry; Pralow, Alexander; Reichl, Udo; Rapp, Erdmann**

Improvement of electrospray stability in negative ion mode for nano-PGC-LC-MS glycoanalysis via post-column make-up flow  
Glycoconjugate journal: official journal of the International Glycoconjugate Organization - Dordrecht [u.a.]: Springer Science + Business Media B.V, Bd. 35.2018, 6, S. 499-509;

**Nikolay, Alexander; Castilho, Leda R.; Reichl, Udo; Genzel, Yvonne**

Propagation of Brazilian Zika virus strains in static and suspension cultures using Vero and BHK cells  
Vaccine - Amsterdam: Elsevier, Bd. 36.2018, 22, S. 3140-3145;

**Nikolay, Alexander; Léon, Arnaud; Schwamborn, Klaus; Genzel, Yvonne; Reichl, Udo**

Process intensification of EB66<sup>®</sup> cell cultivations leads to high-yield yellow fever and Zika virus production  
Applied microbiology and biotechnology - Berlin: Springer, Bd. 102.2018, 20, S. 8725-8737;

**Pashminehazar, Reihaneh; Ahmed, Syed Jawwad; Kharaghani, Abdolreza; Tsotsas, Evangelos**

Spatial morphology of maltodextrin agglomerates from X-ray microtomographic data - real structure evaluation vs. spherical primary particle model

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 331.2018, S. 204-217;

**Pashminehazar, Reihaneh; Kharaghani, Abdolreza; Tsotsas, Evangelos**

Determination of fractal dimension and prefactor of agglomerates with irregular structure

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 343.2019, S. 765-774, 2018;

[First online]

[Imp.fact.: 3.23]

**Pioch, Markus; Hoffmann, Marcus; Prahlow, Alexander; Reichl, Udo; Rapp, Erdmann**

glyXtoolMS - an open-source pipeline for semiautomated analysis of glycopeptide mass spectrometry data

Analytical chemistry: the authoritative voice of the analytical community - Columbus, Ohio: American Chemical Society, Bd. 90.2018, 20, S. 11908-11916;

**Pischel, Dennis; Buchbinder, Jörn Holger; Sundmacher, Kai; Lavrik, Inna N.; Flassig, Robert J.**

A guide to automated apoptosis detection - how to make sense of imaging flow cytometry data

PLOS ONE - San Francisco, California, US: PLOS, Vol. 13.2018, 5, Art. e0197208, insgesamt 17 S.;

[Imp.fact.: 2.766]

**Qamar, Shamsul; Kiran, Nadia; Anwar, Talha; Bibi, Sameena; Seidel-Morgenstern, Andreas**

Theoretical investigation of thermal effects in an adiabatic chromatographic column using a lumped kinetic model incorporating heat transfer resistances

Industrial & engineering chemistry research - Columbus, Ohio: American Chemical Society, Bd. 57.2018, 6, S. 2287-2297;

**Radeva, Zheni; Lukas, Eduard; Aman, Sergej**

Influence of the pelletizing process parameters on the breakage behaviour of the received alumina oxide pellets

Granular matter - Berlin: Springer, Vol. 20.2018, 2, Art. 23, insgesamt 23 S.;

**Rexer, Thomas F. T.; Schildbach, Anna; Klapproth, Jan; Schierhorn, Angelika; Mahour, Reza; Pietzsch, Markus; Rapp, Erdmann; Reichl, Udo**

One pot synthesis of GDP-mannose by a multi-enzyme cascade for enzymatic assembly of lipid-linked oligosaccharides

Biotechnology & bioengineering - New York, NY [u.a.]: Wiley, Bd. 115.2018, 1, S. 192-205;

[Online first]

**Rieck, Christian; Schmidt, Martin; Bück, Andreas; Tsotsas, Evangelos**

Monte Carlo modeling of binderless spray agglomeration in fluidized beds

AIChE journal - Hoboken, NJ: Wiley, Bd. 64.2018, 10, S. 3582-3594;

[Imp.fact.: 3.326]

**Roloff, Christoph; Lukas, Eduard; Wachem, Berend; Thévenin, Dominique**

Particle dynamics investigation by means of shadow imaging inside an air separator

Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, 2018;

[Online first]

[Imp.fact.: 3.306]

**Rüdiger, D.; Kupke, S. Y.; Reichl, Udo**

A multiscale model of influenza A virus replication covering highly different infection conditions in cell cultures  
IFAC-PapersOnLine - Frankfurt: Elsevier, Bd. 51.2018, 19, S. 32-33;  
[Konferenz: 7th Conference on Foundation of Systems Biology in Engineering, FOSBE 2018, Chicago, Illinois, USA, 05-08 August 2018]

**Sadegh-Vaziri, Ramiar; Ludwig, Kristin; Sundmacher, Kai; Babler, Matthaus U.**

Mechanisms behind overshoots in mean cluster size profiles in aggregation-breakup processes  
Journal of colloid and interface science: JCIS - Amsterdam [u.a.]: Elsevier, Bd. 528.2018, S. 336-348;

**Schack, Dominik; Rihko-Struckmann, Liisa; Sundmacher, Kai**

Linear programming approach for structure optimization of renewable-to-chemicals (R2Chem) production networks  
Industrial & engineering chemistry research - Columbus, Ohio: American Chemical Society, Bd. 57.2018, 30, S. 9889-9902;

**Seidel, Carsten; Jörke, A.; Vollbrecht, B.; Seidel-Morgenstern, Andreas; Kienle, Achim**

Kinetic modeling of methanol synthesis from renewable resources  
Chemical engineering science - Amsterdam [u.a.]: Elsevier Science, Bd. 175.2018, S. 130-138;  
[Imp.fact.: 2.895]

**Shen, Li; Denner, Fabian; Morgan, Neal; Wachem, Berend; Dini, Daniele**

Capillary waves with surface viscosity  
Journal of fluid mechanics - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 847.2018, S. 644-663;  
[Imp.fact.: 2.893]

**Sommerfeld, Martin; Lain, S.**

Stochastic modelling for capturing the behaviour of irregular-shaped non-spherical particles in confined turbulent flows  
Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 332.2018, S. 253-264;

**Sommerfeld, Martin; Muniz, Marcelo; Reichardt, Thomas**

On the importance of modelling bubble dynamics for point-mass numerical calculations of bubble columns  
Journal of chemical engineering of Japan: JCEJ - Tokyo, Bd. 51.2018, 4, S. 301-317;

**Sommerfeld, Martin; Qadir, Z.**

Fluid dynamic forces acting on irregular shaped particles - simulations by the Lattice-Boltzmann method  
International journal of multiphase flow - Oxford: Pergamon Press, Bd. 101.2018, S. 212-222;

**Sondej, Franziska; Peglow, Mirko; Bück, Andreas; Tsotsas, Evangelos**

Experimental investigation of the morphology of salt deposits from drying sessile droplets by whitelight interferometry  
AIChE journal - Hoboken, NJ: Wiley, Bd. 64.2018, 6, S. 2002-2016;

**Trüe, Michael; Aman, Sergej; Müller, Peter; Hintz, Werner; Hirsch, Sören**

Herstellung von mehrschichtigem Graphen in einer Scheibenschwingmühle  
Chemie - Ingenieur - Technik: CIT - Weinheim: Wiley-VCH Verl, Bd. 90.2018, 4, S. 533-539;

**Trüe, Michael; Böttcher, Ronny; Faßhauer, Oliver; Aman, Sergej; Wachem, Berend; Müller, Peter**

Comparison of measurement systems for free fall tests and calculations of the coefficient of restitution  
Measurement science and technology: devoted to the theory, practice and application of measurement in physics, chemistry, engineering and the environmental and life sciences from inception to commercial exploitation - Bristol: IOP Publ, Vol. 29.2018, 10, Art. 105403, insgesamt 14 S.;  
[Imp.fact.: 1.685]

**Vodovnik, Maa; Vrabec, Katja; Hellwig, Patrick; Benndorf, Dirk; Seun, Mija; Gregori, Andrej; Gottumukkala, Lalitha D.; Anderson, Robin C.; Reichl, Udo**

Valorisation of deinking sludge as a substrate for lignocellulolytic enzymes production by *Pleurotus ostreatus*  
Journal of cleaner production - Amsterdam [u.a.]: Elsevier Science, Vol. 197.2018, Part 1, S. 253-263;

**Vorhauer, Nicole; Tsotsas, Evangelos; Prat, Marc**

Drying of thin porous disks from pore network simulations

Drying technology: an international journal - Philadelphia, Pa: Taylor & Francis, Bd. 36.2018, 6, S. 651-663;

**Vorhauer, Nicole; Tsotsas, Evangelos; Prat, Marc**

Temperature gradient induced double stabilization of the evaporation front within a drying porous medium

Physical review fluids - College Park, MD: APS, Vol. 3.2018, 11, Artikel 114201, insgesamt 24 Seiten;

**Vu, Hong Thai; Tsotsas, Evangelos**

Mass and heat transport models for analysis of the drying process in porous media: a review and numerical implementation

International journal of chemical engineering - New York, NY [u.a.]: Hindawi Publ. Corp, Vol. 2018, Article ID 9456418, insgesamt 13 Seiten;

**Vázquez-Ramírez, Daniel; Genzel, Yvonne; Jordan, Ingo; Sandig, Volker; Reichl, Udo**

High-cell-density cultivations to increase MVA virus production

Vaccine - Amsterdam: Elsevier, Bd. 36.2018, 22, S. 3124-3133;

[Online first]

[Imp.fact.: 3.235]

**Wang, MinHui; Wölfer, Christian; Otrin, Lado; Ivanov, Ivan; Vidakovi-Koch, Tanja; Sundmacher, Kai**

Transmembrane NADH oxidation with tetracyanoquinodimethane

Langmuir - Washington, DC: ACS Publ, Bd. 34.2018, 19, S. 5435-5443;

**Weiss, Marian; Frohnmayer, Johannes Patrick; Benk, Lucia Theresa; Haller, Barbara; Janiesch, Jan-Willi; Heitkamp, Thomas; Börsch, Michael; Lira, Rafael B.; Dimova, Rumiana; Lipowsky, Reinhard; Bodenschatz, Eberhard; Baret, Jean-Christophe; Vidakovic-Koch, Tanja; Sundmacher, Kai; Platzman, Iliia; Spatz, Joachim P.**

Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics

Nature materials - Basingstoke: Nature Publishing Group, Bd. 17.2018, S. 89-96;

**Wenzel, Lisa; Heyer, Robert; Schallert, Kay; Löser, Lucy; Wünschiers, Röbbbe; Reichl, Udo; Benndorf, Dirk**

SDSPAGE fractionation to increase metaproteomic insight into the taxonomic and functional composition of microbial communities for biogas plant samples

Engineering in life sciences - Weinheim: Wiley-VCH, Bd. 18.2018, 7, S. 498-509;

**Wenzel, Marcus; Rihko-Struckmann, Liisa; Sundmacher, Kai**

Continuous production of CO from CO<sub>2</sub> by RWGS chemical looping in fixed and fluidized bed reactors

The chemical engineering journal - Amsterdam: Elsevier, Bd. 336.2018, S. 278-296;

[Imp.fact.: 6.216]

**Wrzosek, Katarzyna; Harriehausen, Isabel; Seidel-Morgenstern, Andreas**

Combination of enantioselective preparative chromatography and racemization - experimental demonstration and model-based process optimization

Organic process research & development: web edition - Washington, DC: ACS Publ, Bd. 22.2018, 12, S. 1761-1771;

**Zhang, Lanyue; Weigler, Fabian; Idakiev, Vesselin; Jiang, Zhaochen; Mörl, Lothar; Mellmann, Jochen; Tsotsas, Evangelos**

Experimental study of the particle motion in flighted rotating drums by means of Magnetic Particle Tracking

Powder technology: an international journal on the science and technology of wet and dry particulate systems - Amsterdam [u.a.]: Elsevier Science, Bd. 339.2018, S. 817-826;

**Zhang, Xiwei; Zhang, Enqi; Grigartzik, Lisa; Henrich-Noack, Petra; Hintz, Werner; Sabel, Bernhard A.**

Antiapoptosis function of PBCA nanoparticles containing caspase3 siRNA for neuronal protection

Chemie - Ingenieur - Technik: CIT - Weinheim: Wiley-VCH Verl, Bd. 90.2018, 4, S. 451-455;

[Imp.fact.: 1.1]

**Zähringer, Katharina; Wagner, Lisa-Maria; Thévenin, Dominique; Siegmund, Patrick; Sundmacher, Kai**

Particle-image-velocimetry measurements in organic liquid multiphase systems for an optimal reactor design and operation

Journal of visualization - Berlin: Springer, Bd. 21.2018, 1, S. 5-17;  
[Imp.fact.: 0.971]

## NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Benner, Peter; Seidel-Morgenstern, Andreas; Zuyev, Alexander**

Computation of periodic switching strategies for the optimal control of chemical reactors

ResearchGATE: scientific network : the leading professional network for scientists - Cambridge, Mass: ResearchGATE Corp, insges. 8 S., 2018;

[Konferenz: 14th International Conference "Dynamical Systems Theory and Applications" (DSTA 2017), At ód, Poland]

## BEGUTACHTETE BUCHBEITRäge

**Bechtel, Simon; Song, Zhen; Zhou, Teng; Vidakovic-Koch, Tanja; Sundmacher, Kai**

Integrated process and ionic liquid design by combining flowsheet simulation with quantum-chemical solvent screening

Computer aided chemical engineering - Amsterdam [u.a.]: Elsevier, Bd. 44.2018, S. 2167-2172;  
[Symposium: 13th International Symposium on Process Systems Engineering, PSE 2018]

**Dancker, Jonte; Wolter, Martin; Rosberg, Jari; Tsotsas, Evangelos**

Increasing self-sufficiency in a micro grid - integrated vs. non-integrated energy system approach

2018 53rd International Universities Power Engineering Conference (UPEC): 4th-7th September 2018, Glasgow, United Kingdom : proceedings - [Piscataway, NJ]: IEEE, insges. 6 S.;

[Kongress: 53rd International Universities Power Engineering Conference (UPEC) , Glasgow, UK, 4-7 September 2018]

**Du, Jiajie; Bück, Andreas; Tsotsas, Evangelos**

Investigation of spray agglomeration process in continuously operated horizontal fluidized bed

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 1855-1862;

[Konferenz: IDS 2018]

**Golovin, Ivgen; Strenzke, Gerd; Wegner, Maximilian; Palis, Stefan; Bück, Andreas; Kienle, Achim; Tsotsas, Evangelos**

Parameter identification for continuous fluidized bed spray agglomeration

6th International Conference on Population Balance Modelling: PBM 2018 ; Conference proceedings ; Ghent, Belgium, May 6 - 9, 2018 - Ghent, Belgium: Ghent University, insges. 4 S.;

[Konferenz: PBM 2018, Ghent, Belgium, 6 - 9 May]

**Janki, Atin; Zoun, Roman; Schallert, Kay; Ravindran, Rohith; Broneske, David; Fenske, Wolfram; Heyer, Robert; Benndorf, Dirk; Saake, Gunter**

Connecting X! Tandem to a database management system

CEUR workshop proceedings - Aachen: RWTH, Bd. 2126.2018, S. 77-82;

[Workshop: 30th GI-Workshop Grundlagen von Datenbanken, Wuppertal, Germany, May 22-25, 2018]

**Jaskulski, Maciej; Tran, Tran Thi Hang; Tsotsas, Evangelos**

CFD model-supported design of monodisperse co-current spray dryers

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 213-220;

[Konferenz: IDS 2018]

**Jiang, Zaochen; Rieck, Christian; Bück, Andreas; Tsotsas, Evangelos**

Modeling of particle behavior in a Wurster fluidized bed - coupling CFD-DEM with Monte Carlo  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 205-212;  
[Konferenz: IDS 2018]

**Liesche, Georg; Schack, Dominik; Rätze, Karsten Hans Georg; Sundmacher, Kai**

Thermodynamic network flow approach for chemical process synthesis  
Computer aided chemical engineering - Amsterdam [u.a.]: Elsevier, Bd. 43.2018, S. 881-886;  
[Symposium: 28th European Symposium on Computer Aided Process Engineering, Graz, Austria, 10-13 June 2018]

**Lu, Xiang; Kharaghani, Abdolreza; Tsotsas, Evangelos**

Dependency of continuum model parameters on the spatially correlated pore structure studied by pore-network drying simulations  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 307-314;  
[Konferenz: IDS 2018]

**McBride, Kevin; Linke, Steffen; Xu, Shuang; Sundmacher, Kai**

Computer aided design of green thermomorphic solvent systems for homogeneous catalyst recovery  
Computer aided chemical engineering - Amsterdam [u.a.]: Elsevier, Bd. 44.2018, S. 1783-1788;  
[Symposium: 13th International Symposium on Process Systems Engineering, PSE 2018]

**Mencke, Nicole; Vorndran, Markus; Vorhauer, Nicole; Tsotsas, Evangelos**

Virtual reality-based training system for complex engineering processes on the example of a fractionating column  
EDULEARN18: 10th International Conference on Education and New Learning Technologies, Palma de Mallorca (Spain), 2nd-4th of July, 2018 : conference proceedings - [Valencia, Spain]: IATED Academy, insges. 10 S.;  
[Konferenz: EDULEARN18]

**Mielke, Lisa; Bück, Andreas; Tsotsas, Evangelos**

Multi-zone & multi-compartment model for dynamic simulation of horizontal fluidized bed granulator  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 123-130;  
[Konferenz: IDS 2018]

**Müller, Daniel; Bück, Andreas; Tsotsas, Evangelos**

Heat and mass transfer modelling of continuous Wurster spray granulation with external product classification  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 1383-1390;  
[Konferenz: IDS 2018]

**Neugebauer, Christoph; Bück, Andreas; Palis, Stefan; Mielke, Lisa; Tsotsas, Evangelos; Kienle, Achim**

Influence of thermal conditions on particle properties in fluidized bed layering granulation  
6th International Conference on Population Balance Modelling: PBM 2018 ; Conference proceedings ; Ghent, Belgium, May 6 - 9, 2018 - Ghent, Belgium: Ghent University, insges. 8 S.;  
[Konferenz: PBM 2018, Ghent, Belgium, 6 - 9 May]

**Pham, Thai Son; Chareyre, B.; Tsotsas, Evangelos; Kharaghani, Abdolreza**

A pore-scale study on the drying kinetics and mechanical behavior of particle aggregates  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 245-252;  
[Konferenz: IDS 2018]

**Rahimi, Arman; Metzger, Thomas; Kharaghani, Abdolreza; Tsotsas, Evangelos**

Discrete modeling of ion transport and crystallization in layered porous media during drying  
IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 299-306;  
[Konferenz: IDS 2018]

**Seidel, Carsten; Jörke, Andreas; Vollbrecht, Bert; Seidel-Morgenstern, Andreas; Kienle, Achim**

Kinetic modeling of methanol synthesis - impact of catalyst deactivation

Computer aided chemical engineering - Amsterdam [u.a.]: Elsevier, Bd. 43.2018, S. 85-90;

[Symposium: 28th European Symposium on Computer Aided Process Engineering, Graz, Austria, 10-13 June 2018]

**Strenzke, Gerd; Golovin, Ievgen; Wegner, M.; Palis, Stefan; Bück, Andreas; Kienle, Achim; Tsotsas, Evangelos**

Influence of drying conditions on process properties and parameter identification for continuous fluidized bed spray agglomeration

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 579-586;

[Konferenz: IDS 2018]

**Tsotsas, Evangelos**

Wärmeleitfähigkeit von Schütttschichten

VDI-Wärmeatlas - Wiesbaden: Springer, insges. 13 S., 2018;

[Dies ist ein Kapitel der 12. Auflage des VDI-Wärmeatlas.]

**Tsotsas, Evangelos**

Wärmeleitung und Dispersion in durchströmten Schüttungen

VDI-Wärmeatlas - Wiesbaden: Springer, insges. 20 S., 2018;

[Dies ist ein Kapitel der 12. Auflage des VDI-Wärmeatlas.; First online]

**Tsotsas, Evangelos**

Wärmeübergang in Wirbelschichten

VDI-Wärmeatlas - Wiesbaden: Springer, insges. 12 S., 2018;

[Dies ist ein Kapitel der 12. Auflage des VDI-Wärmeatlas.; First online]

**Tsotsas, Evangelos**

Wärmeübergang von einer Heizfläche an ruhende oder mechanisch durchmischte Schüttungen

VDI-Wärmeatlas - Wiesbaden: Springer, insges. 21 S., 2018;

[Dies ist ein Kapitel der 12. Auflage des VDI-Wärmeatlas.; First online]

**Vorhauer, Nicole; Först, Petra; Schuchmann, Harald; Tsotsas, Evangelos**

Pore network model of primary freeze drying

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 221-228;

[Konferenz: IDS 2018]

**Zhang, Lanye; Weigler, Fabian; Jiang, Zaochen; Idakiev, Vesselin; Mörl, Lothar; Mellmann, Jochen; Tsotsas, Evangelos**

Investigation of 3D particle flow in a flighted rotating drum

IDS 2018: 21st International Drying Symposium : proceedings ; September, 2018, València, Spain - València, Spain: Universitat, S. 253-260;

[Konferenz: IDS 2018]

**Zoun, Roman; Durand, Gabriel; Schallert, Kay; Patrikar, Apoorva; Broneske, David; Fenske, Wolfram; Heyer, Robert; Benndorf, Dirk; Saake, Gunter**

Protein identification as a suitable application for fast data architecture

Database and Expert Systems Applications: DEXA 2018 : International Workshops BDMICS, BIOKDD, and TIR Regensburg, Germany, September 3-6, 2018 : proceedings - Cham: Springer Nature Switzerland, S. 168-178 - (Communications in Computer and Information Science; 903);

[Workshop: 9. International Workshop on Biological Knowledge Discovery from Data, BIOKDD, Regensburg, Germany, 03. - 06.09.2018]

**Zoun, Roman; Schallert, Kay; Janki, Atin; Ravindran, Rohith; Campero Durand, Gabriel; Fenske, Wolfram; Broneske, David; Heyer, Robert; Benndorf, Dirk; Saake, Gunter**

Streaming FDR calculation for protein identification

New Trends in Databases and Information Systems: ADBIS 2018 Short Papers and Workshops, AI\*QA, BIGPMED, CSACDB, M2U, BigDataMAPS, ISTREND, DC, Budapest, Hungary, September, 2-5, 2018, Proceedings - Cham: Springer International Publishing, S. 80-87 - (Communications in Computer and

Information Science; 909);

[Konferenz: European Conference on Advances in Databases and Information Systems, ADBIS, Budapest, Hungary, September, 2-5, 2018]

## HERAUSGEBERSCHAFTEN

**Wolter, Martin; Beyrau, Frank; Tsotsas, Evangelos; Klabunde, Christian; Dancker, Jonte; Gast, Nicola; Schröter, Tamara; Schulz, Florian; Rossberg, Jari; Richter, André**

Intelligentes Multi-Energie-System (SmartMES) - Statusbericht der Otto-von-Guericke-Universität Magdeburg zum Verbundprojekt ; 1. Statusseminar 28. März 2018 in Magdeburg

Magdeburg: Otto-von-Guericke-Universität, 2018, XII, 159 Seiten, Illustrationen, Diagramme, 21 cm - (Res electricae Magdeburgenses; Band 74), ISBN 978-3-944722-69-6;

Kongress: Statusseminar 1 (Magdeburg : 2018.03.28) [Literaturangaben: Seite 150-159]

## ABSTRACTS

**Fond, Benoit; Xiao, Cheng; Abram, Christopher; T'Joen, Christophe; Wachem, Berend; Beyrau, Frank**

Phosphor thermometry for the validation of computational fluid dynamics simulations of heat transfer in compressible real-gas flows

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

**Ojo, Anthony; Fond, Benoit; Abram, Christopher; Wachem, Berend; Heyes, Andrew; Beyrau, Frank**

Simultaneous measurements of the thermal and velocity boundary layer over a heated flat plate using thermographic laser Doppler velocimetry

Inaugural International Conference on Phosphor Thermometry: July 25th -27th, 2018, Technology and Innovation Centre, University of Strathclyde, Glasgow, Scotland - Glasgow;

[Konferenz: Inaugural International Conference on Phosphor Thermometry, IGET 2018, Glasgow, Scotland, July 25th -27th, 2018]

## DISSERTATIONEN

**Aydin, Erdal; Sundmacher, Kai [GutachterIn]; Sager, Sebastian [GutachterIn]**

Tailored indirect algorithms for efficient on-line optimization of batch and semi-batch processes

Magdeburg, 2018, xx, 119 Seiten, Tabellen, Diagramme;

[Literaturverzeichnis: Seite 107-113]

**Birth, Torsten; Seidel-Morgenstern, Andreas [GutachterIn]; Hamel, Christof [GutachterIn]; Caro, Jürgen [GutachterIn]**

Aufbereitung biogener und reststoffbasierter Gase - Untersuchung der trockenen Reformierung

Barleben: docupoint Verlag, 2018, IV, 223 Seiten, Diagramme, Illustrationen, 21 cm, 978-3-86912-142-6;

[Literaturverzeichnis: Seite 173-186]

**Buchholz, Hannes; Seidel-Morgenstern, Andreas [GutachterIn]**

Solid-liquid phase equilibria of chiral molecules - theory and experiment

Magdeburg, 2018, xi, 171 Seiten, Diagramme, 30 cm;

[Literaturverzeichnis: Seite 136-152]

**Eisenschmidt, Holger; Sundmacher, Kai [GutachterIn]**

A cyclic growth-dissolution process for the controlled manipulation of crystal shape distributions

Magdeburg, 2018, x, 119 Seiten, Illustrationen, Diagramme, 30 cm;

[Literaturverzeichnis: Seite 104-114]



**Farid, Muhammad Usman; Tsotsas, Evangelos [GutachterIn]; Bück, Andreas [GutachterIn]**

CFD modeling of combustion of solid waste materials with low melting points  
Magdeburg, 2018, xii, 204 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 163-173]

**Jörke, Andreas**

Mechanisms and kinetics of petro- and oleochemicals in complex hydroformylation reaction networks  
Aachen: Shaker Verlag, 2018, [1. Auflage], xi, 145 Seiten, Seite xiii-xxxvii, 41 Illustrationen, Diagramme, 21 cm, 262 g - (Forschungsberichte aus dem Max-Planck-Institut für Dynamik Komplexer Technischer Systeme; Band 50), ISBN 978-3-8440-6059-1

**Khalid, Muhammad Kamran; Wachem, Berend [GutachterIn]; Scheffler, Franziska [GutachterIn]**

Processing and characterization of tailor-made superparamagnetic iron oxide nanoparticles (SPIO-NPs) for pharmaceutical applications  
Magdeburg, 2018, xx, 158 Seiten, Illustrationen, Tabellen, Diagramme;  
[Literaturverzeichnis: Seite 131-153]

**Kiedorf, Gregor; Seidel-Morgenstern, Andreas [GutachterIn]**

Mechanistic and kinetic analysis of homogeneously and heterogeneously catalyzed reactions  
Aachen: Shaker, 2018, 1. Auflage, xi, 189 Seiten, Illustrationen, Diagramme, 21 cm, 302 g - (Forschungsberichte aus dem Max-Planck-Institut für Dynamik komplexer technischer Systeme; Band 49), ISBN 978-3-8440-5768-3;  
[Literaturverzeichnis: Seite 147-161]

**Radicke, Susann; Scheffler, Franziska [GutachterIn]; Seidel-Morgenstern, Andreas [GutachterIn]**

Entwicklung und Testung modifizierter photokatalytisch aktiver TiO<sub>2</sub>-Beschichtungen für Glasformkörper  
Magdeburg, 2018, XXV, 198 Seiten, Illustrationen, Tabellen, Diagramme, 30 cm;  
[Im Titel ist "2" tiefgestellt; Literaturverzeichnis: Seite 169-179]

**Reichardt, Thomas**

Multiscale Euler/Lagrange approach to simulate finite-sized solid particles and bubbles as well as numerical and experimental studies to improve the modeling of complex bubble motion  
Aachen: Shaker Verlag, 2018, 1. Auflage, viii, 284 Seiten, Illustrationen, Diagramme, 21 cm, 447 g - (Berichte aus der Strömungstechnik), ISBN 978-3-8440-6013-3

**Schmidt, Martin; Tsotsas, Evangelos [GutachterIn]; Kienle, Achim [GutachterIn]**

Process dynamics and structure formation in continuous spray fluidized bed processes  
Magdeburg, 2018, XVII, 150 Seiten, Illustrationen, Diagramme, 24 cm;  
[Literaturverzeichnis: Seite 129-137]

**Schwenke, Christian; Tsotsas, Evangelos; Schulze, Dietmar; Katterfeld, André**

Modellierung und experimentelle Validierung des Schwerkraftaustrags ultrafeiner kohäsiver Pulver  
Barleben: docupoint Verlag, 2018, IX, 215 Seiten, Seite X-XX, Illustrationen, Diagramme, 21 cm, ISBN 978-3-86912-153-6;  
[Literaturverzeichnis: Seite 211-215]

**Voigt, Nadine; Wachem, Berend [GutachterIn]; Sabel, Bernhard A. [GutachterIn]**

Evaluierung pharmakokinetischer und toxikologischer Determinanten von Nanopartikeln mittels in vivo Neuroimaging  
Magdeburg, 2018, XIV, 111 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 87-96]

**Wenzel, Marcus; Sundmacher, Kai [GutachterIn]**

Reverse water-gas shift chemical looping for syngas production from CO<sub>2</sub>  
Magdeburg, 2018, xviii, 149 Seiten, 30 cm;  
[Im Titel ist "2" tiefgestellt; Literaturverzeichnis: Seite 129-141]

**Zhang, Xiwei; Wachem, Berend [GutachterIn]; Sabel, Bernhard A. [GutachterIn]**

In vitro and in vivo caspase-3 knock down by poly (butyl cyanoacrylate) nanoparticle-based RNA interference  
Magdeburg, 2018, ix, 95 Blätter, Illustrationen, Diagramme, 30 cm;  
[Literaturverzeichnis: Blatt 78-88]