



OTTO VON GUERICKE
UNIVERSITÄT
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VST

FAKULTÄT FÜR VERFAHRENS-
UND SYSTEMTECHNIK

Publikationsbericht 2022

Fakultät für Verfahrens- und Systemtechnik

FAKULTÄT FÜR VERFAHRENS- UND SYSTEMTECHNIK

1. LEITUNG

Prof. Dr.-Ing. habil. Evangelos Tsotsas (Dekan)

Prof. Dr.-Ing. habil. Dominique Thévenin (Prodekan)

Prof. Dr. rer. nat. Franziska Scheffler (Studiendekanin)

2. VERÖFFENTLICHUNGEN

HABILITATIONEN

Zinke, Ronald; Krause, Ulrich [AkademischeR BetreuerIn]

Unsicherheitsbetrachtungen und Fehlerfortpflanzung in quantitativen Risikoanalysen

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (xv, 214 Seiten, 11,97 MB), Illustrationen;

DISSERTATIONEN

Ahmad, Faez; Kharaghani, Abdolreza [AkademischeR BetreuerIn]; Tsotsas, Evangelos [AkademischeR BetreuerIn]

Development and assessment of advanced continuum models for drying porous media on the basis of discrete pore network simulations

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (xv, 125 Seiten, 3,27 MB), Illustrationen;

Ahmad, Raheel; Sundmacher, Kai [AkademischeR BetreuerIn]

Integration of a light-switchable ATP regeneration system with motility modules - toward building an artificial cell and bio-hybrid micro-swimmer - Integration eines durch Licht schaltbaren ATP-Regenerationssystems mit Motilitätsmodulen - auf dem Weg zu einer künstlichen Zelle und einem Biohybriden Mikro-Schwimmer

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (vii, 195 Seiten, 15,57 MB), Illustrationen;

Cleynen, Olivier; Thévenin, Dominique [AkademischeR BetreuerIn]

Optimization of low-impact hydropower devices

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (153 Seiten, 25,35 MB), Illustrationen;

Franke, Georg; Wachem, Berend [AkademischeR BetreuerIn]; Mörl, Lothar [AkademischeR BetreuerIn]

Entwicklung einer neuartigen Austrageinrichtung zur Steuerung der Verweilzeitverteilung in Schüttgutapparaten

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (166 Seiten, 13,74 MB), Illustrationen;

Gerlach, Martin; Seidel-Morgenstern, Andreas [AkademischeR BetreuerIn]

Reaktionsanalyse und Modellierung der Rhodium-BiPhePhos-katalysierten Hydroformylierung langkettiger Alkene

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (1 Band (verschiedene Seitenzählungen, 6,58 MB)), Illustrationen;

Hein, Marc Dominique; Reichl, Udo [AkademischeR BetreuerIn]

Cell culture-based production of influenza A virus-derived defective interfering particles

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XV, 98, XVII-L Seiten, 5,1 MB), Illustrationen;

Huskova, Nadiia; Seidel-Morgenstern, Andreas [AkademischeR BetreuerIn]

Dynamic modeling and optimization of a continuous fluidized bed process for the separation of enantiomers by preferential crystallization

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (130 Seiten, 2,76 MB), Illustrationen;

Künzel, Christian; Scheffler, Franziska [AkademischeR BetreuerIn]; Scheffler, Michael [AkademischeR BetreuerIn]; Sauerhering, Jörg [AkademischeR BetreuerIn]

Entwicklung eines dispersionsbasierten Druckverfahrens zur Herstellung von thermoelektrischen Mikroschichten
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XII, 146, Seite IX-LXXVII, 98,21 MB),
Illustrationen;

Lizzadro, Luca; Schinzer, Dieter [AkademischeR BetreuerIn]; Haak, Edgar [AkademischeR BetreuerIn]

(-)-disorazole C1 and new analogs - total synthesis and biological evaluation
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (viii, 199 Seiten, 9,53 MB), Illustrationen;

Mahmood, Hafiz Tariq; Kharaghani, Abdolreza [AkademischeR BetreuerIn]; Tsotsas, Evangelos [AkademischeR BetreuerIn]

Discrete modeling of capillary ring structures during drying of particle aggregates
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (xvi, 117 Blätter, 8,52 MB), Illustrationen;

Müller, Daniel; Tsotsas, Evangelos [AkademischeR BetreuerIn]

Processing strategies and limitations of continuous Wurster coating with product classification
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XVI, 301 Seiten, 9,84 MB), Illustrationen;

Otrin, Nika; Sundmacher, Kai [AkademischeR BetreuerIn]

A modular platform for growth of hybrid and polymer membrane systems by vesicle fusion
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XV, 254 Seiten, 17,3 MB), Illustrationen;

Pramudita, Daniel; Tsotsas, Evangelos [AkademischeR BetreuerIn]; Dièguez Alonso, Alba [AkademischeR BetreuerIn]

Process intensification during powder production in pulsated gas flow
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (xviii, 157 Seiten, 8,57 MB), Illustrationen;

Rüdiger, Daniel; Tsotsas, Evangelos [AkademischeR BetreuerIn]; Reichl, Udo [AkademischeR BetreuerIn]

Mathematical models of influenza A virus infection - multiplicity of infection and its impact on co-infection and virus production
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XVIII, 179 Seiten, 8,16 MB), Illustrationen;

Schulze-Niemand, Eric; Naumann, Michael [AkademischeR BetreuerIn]

Molecular recognition and selectivity - computational investigations on the dynamics of non-bonded interactions
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (192, XV, 13,18 MB), Illustrationen;

Voß, Samuel; Thévenin, Dominique [AkademischeR BetreuerIn]; Preim, Bernhard [AkademischeR BetreuerIn]; Behme, Daniel [AkademischeR BetreuerIn]

Unsicherheit in der hämodynamischen Charakterisierung intrakranieller Aneurysmen
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XVI, 202 Seiten, 18,77 MB), Illustrationen;

Wang, MinHui; Sundmacher, Kai [AkademischeR BetreuerIn]

Bottom-up synthesis of Nicotinamide Adenine Dinucleotide (NAD) regeneration modules for artificial cells
Magdeburg, 2022, 1 Online-Ressource (xiii, 110 Seiten, 6,51 MB), Illustrationen;

Weigel, Thomas; Reichl, Udo [AkademischeR BetreuerIn]

Development of chromatography-based purification processes for cell culture-derived influenza virus particles
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XXII, 145 Seiten, 2,22 MB), Illustrationen;

INSTITUT FÜR APPARATE- UND UMWELTTECHNIK

1. LEITUNG

Prof. Dr.-Ing. habil. Ulrich Krause (geschäftsführender Leiter)

2. VERÖFFENTLICHUNGEN

BEGUTACHTETE ZEITSCHRIFTENAUFsätze

Abbas, Zaheer; Gabel, Dieter; Krietsch, Arne; Krause, Ulrich

Quasi-static dispersion of dusts for the determination of lower explosion limits of hybrid mixtures
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 74 (2022);
[Imp.fact.: 3.66]

Amano, Kofi Owusu Ansah; Hahn, Sarah-K.; Tschirschwitz, Rico; Rappsilber, Tim; Krause, Ulrich

An experimental investigation of thermal runaway and gas release of NMC lithium-Ion pouch batteries depending on the state of charge level
Batteries - Basel: MDPI, Bd. 8 (2022), 5, insges. 16 S.;

Gabel, Dieter; Geoerg, Paul; Napetsching, Philipp; Krause, Ulrich

Minimum ignition temperature of hybrid mixtures
Chemical engineering transactions - Milano: AIDIC, Bd. 90 (2022), S. 373-378;

Geoerg, Paul; Schumann, Jette; Boltes, Maik; Kinateder, Max

How people with disabilities influence crowd dynamics of pedestrian movement through bottlenecks
Scientific reports - [London]: Macmillan Publishers Limited, part of Springer Nature, 2011, Bd. 12 (2022), insges. 16 S.;

Klippel, Andrea; Hofmann, Anja; Gnutzmann, Tanja; Piechnik, Kira

Reaction-to-fire testing of bus interior materials - assessing burning behaviour and smoke gas toxicity
Fire and materials - New York, NY [u.a.]: Wiley . - 2022, insges. 16 S. ;
[Imp.fact.: 1.979]

Koch, Florian; Thurnherr, Peter; Markus, Detlev; Krause, Ulrich

Thermal evaluation of junction and connection boxes in explosion protection
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 81 (2023);
[Imp.fact.: 3.916]

Kombe, Emmanuel Yeri; Lang'at, Nickson; Njogu, Paul; Malessa, Reiner; Weber, Christian-Toralf; Njoka, Francis; Krause, Ulrich

Numerical investigation of sugarcane bagasse gasification using Aspen Plus and response surface methodology
Energy conversion and management - Amsterdam [u.a.]: Elsevier Science, Bd. 254 (2022);
[Imp.fact.: 9.709]

Kombe, Emmanuel Yeri; Lang'at, Nickson; Njogu, Paul; Malessa, Reiner; Weber, Christian-Toralf; Njoka, Francis; Krause, Ulrich

Process modeling and evaluation of optimal operating conditions for production of hydrogen-rich syngas from air gasification of rice husks using aspen plus and response surface methodology
Bioresource technology - Amsterdam [u.a.]: Elsevier Science, Bd. 361 (2022);
[Imp.fact.: 11.889]

Krause, Ulrich; Grosshans, Holger

13th International Symposium on Hazards, Prevention, and Mitigation of Industrial Explosions
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 74 (2022);
[Imp.fact.: 3.916]

Schick, R.; Götze, O.; Ziman, T.; Zinke, Ronald; Richter, Johannes; Zhitomirsky, M. E.

Ground-state selection by magnon interactions in a fcc antiferromagnet
Physical review - Woodbury, NY: Inst., Bd. 106 (2022), 9, insges. 10 S.;
[Imp.fact.: 3.908]

Spitzer, Stefan H.; Askar, Enis; Benke, Alexander; Cloney, Chris; D'Hyon, Sebastian; Dufaud, Olivier; Dyduch, Zdzislaw; Gabel, Dieter; Geoerg, Paul; Heilmann, Vanessa; Jankuj, Wojtech; Jian, Wang; Krause, Ulrich; Krietsch, Arne; Mynarz, Miroslav; Norman, Frederik; Skrinsky, Jan; Taveau, Jerome; Vignes, Alexis; Zakel, Sabine; Zhong, Shengjun

1st international round robin test on safety characteristics of hybrid mixtures
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science . - 2022;
[Imp.fact.: 3.916]

Spitzer, Stefan H.; Askar, Enis; Hecht, Kristin J.; Gabel, Dieter; Zakel, Sabine; Krietsch, Arne

Requirements for a hybrid dust-gas-standard - influence of the mixing procedure on safety characteristics of hybrid mixtures
Fire - Basel: MDPI, Bd. 5 (2022), 4, insges. 10 S.;
[Imp.fact.: 2.726]

Vorwerk, Pascal; Hahn, Sarah-Katharina; Daniel, Christian; Krause, Ulrich; Keutel, Karola

Detection of critical conditions in pouch cells based on their expansion behavior
Batteries - Basel: MDPI, Bd. 8 (2022), 5, insges. 18 S.;

Wu, Dejian; Krietsch, Arne; Schmidt, Martin; Krause, Ulrich

Effect of oxygen concentration, inert gas and CH₄/H₂ addition on the minimum ignition energy of coal dusts
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 77 (2022);

Wu, Wenying; Huang, Weixing; Wei, Aizhu; Schmidt, Martin; Krause, Ulrich; Wu, Dejian

Inhibition effect of N₂/CO₂ blends on the minimum explosion concentration of agriculture and coal dusts
Powder technology - Amsterdam [u.a.]: Elsevier Science, Bd. 399 (2022);
[Imp.fact.: 5.134]

Zinke, Ronald; Wothe, Kevin; Dugarev, Dmitry; Götze, Oliver; Köhler, Florian; Schalau, Sebastian; Krause, Ulrich

Uncertainty consideration in CFD-models via response surface modeling - application on realistic dense and light gas dispersion simulations
Journal of loss prevention in the process industries - Amsterdam [u.a.]: Elsevier Science, Bd. 75 (2022);
[Imp.fact.: 3.916]

BEGUTACHTETE BUCHBEITRÄGE

Heydick, Lukas; Piechnik, Kira; Köhler, Florian; Klippel, Andrea

Experimental studies on the fire behaviour and smoke toxicity of German pine vegetation (*Pinus sylvestris*)
Advances in Forest Fire Research 2022 - Imprensa da Universidade de Coimbra; Viegas, Domingos Xavier . - 2022, S. 1616-1621;

WISSENSCHAFTLICHE MONOGRAFIEN

Zinke, Ronald; Köhler, Florian

Emissionen leichtflüchtiger Kohlenwasserstoffe aus Schwimmdachtanks und deren lokale Ausbreitung - Betrachtungen zum bestimmungsgemäßen Betrieb und im Schadenfall : Forschungsbericht Emissionsverhalten von Schwimmdachtanks
Heidelberg: Berufsgenossenschaft Rohstoe, Chemische Industrie (BG- RCI), 2019, 139 Seiten;

NICHT BEGUTACHTETE BUCHBEITRÄGE

Hahn, Sarah-K.; Meinert, Marion; Festag, Sebastian

Detection of CO - results of the research project TEBRAS

2021 AUBE/SUPDET papers - National Fire Protection Association (NFPA) . - 2022, S. I-81-I-95;

HABILITATIONEN

Zinke, Ronald; Krause, Ulrich [AkademischeR BetreuerIn]

Unsicherheitsbetrachtungen und Fehlerfortpflanzung in quantitativen Risikoanalysen

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (xv, 214 Seiten, 11,97 MB), Illustrationen;

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Entwicklung einer neuartigen Austrageinrichtung zur Steuerung der Verweilzeitverteilung in Schüttgutapparaten

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (166 Seiten, 13,74 MB), Illustrationen;

1. LEITUNG

Prof. Dr. rer. nat. Julian Thiele
Prof. Dr. rer. nat. Franziska Scheffler
Prof. Dr. rer. nat. habil. Helmut Weiß
Prof. Dr. rer. nat. Nora Kulak (Institutsleitung)
Prof. Dr. rer. nat. Jan von Langermann
Prof. Dr. rer. biol. hum. Heike Walles

2. VERÖFFENTLICHUNGEN

BEGUTACHTETE ZEITSCHRIFTENAUFsätze

Al-Maatoq, Marwah; Facht, Melanie; Walles, Heike; Hoeschen, Christoph

Susceptibility artifacts evaluation for non-metallic biopsy needles in a biological-engineered 3D tumor model
Current directions in biomedical engineering - Berlin : De Gruyter, Bd. 8 (2022), 2, S. 289-292

Doniz Kettenmann, Sebastian; White, Matthew; Colard-Thomas, Julien; Kraft, Matilda; Feßler, Andrea T.; Danz, Karin; Wieland, Gerhard; Wagner, Sylvia; Schwarz, Stefan; Wiehe, Arno; Kulak, Nora

Investigating alkylated prodigiosenes and their Cu(II)-dependent biological activity - interactions with DNA, antimicrobial and photoinduced anticancer activity
ChemMedChem - Weinheim [u.a.]: Wiley-VCH, Bd. 17 (2022), 3, insges. 11 S.; <http://dx.doi.org/10.1002/cmdc.202100702>
10.25673/92118
[Imp.fact.: 3.466]

Edelmann, Frank T.; Wang, Sida; Liebing, Phil; Engelhardt, Felix; Hilfert, Liane; Busse, Sabine; Goldhahn, Rüdiger

Synthesis and structural characterization of a series of homoleptic firstrow transition metal tris(alkynylamidinates)
Zeitschrift für anorganische und allgemeine Chemie - Weinheim: Wiley-VCH . - 2022, insges. 26 S.;
[Imp.fact.: 1.492]

El Gaayda, Jamila; Ezzahra Titchou, Fatima; Oukhrib, Rachid; Karmal, Ilham; Abou Oualid, Hicham; Berisha, Avni; Zazou, Hicham; Swanson, Claudia; Hamdani, Mohamed; Ait Akbour, Rachid

Removal of cationic dye from coloured water by adsorption onto hematite-humic acid composite - experimental and theoretical studies
Separation and purification technology - Amsterdam [u.a.]: Elsevier Science, Bd. 288 (2022);
[Imp.fact.: 9.136]

Herminghaus, Anna; Kozlov, Andrey V.; Szabó, Andrea; Hantos, Zoltán; Gylstorff, Severin; Kuebart, Anne Konstanze Charlotte; Aghapour, Mahyar; Wissuwa, Bianka; Walles, Thorsten; Walles, Heike; Coldewey, Sina; Relja, Borna

A barrier to defend - models of pulmonary barrier to study acute inflammatory diseases
Frontiers in immunology - Lausanne: Frontiers Media, 2010, Bd. 13 (2022), insges. 16 S.;
[Imp.fact.: 8.786]

Liu, Zhe; Hartinger, Christian; Kulak, Nora

Editorial: Metals in medicine
Frontiers in Chemistry - Lausanne: Frontiers Media, Bd. 10 (2022), insges. 2 S.;
[Imp.fact.: 5.545]

Lizzadro, Luca; Spieß, Oliver; Collisi, Wera; Stadler, Marc; Schinzer, Dieter

Extending the structure-activity relationship of disorazole C1 - exchanging the oxazole ring by thiazole and influence of chiral centers within the disorazole core on cytotoxicity
ChemBioChem - Weinheim: Wiley-VCH, Bd. 23 (2022), 20, insges. 6 S.;

Möckel, Marion; Baldok, Nino; Walles, Thorsten; Hartig, Roland; Müller, Andreas Johann; Reichl, Udo; Genzel, Yvonne; Walles, Heike; Wiese-Rischke, Cornelia

Human 3D airway tissue models for real-time microscopy - visualizing respiratory virus spreading
Cells - Basel: MDPI, 2012, Bd. 11 (2022), 22, insges. 21 S.;

[Imp.fact.: 7.666]

Terazzi, Constanza; Laatz, Karoline; Langermann und Erlencamp, Jan; Werner, Thomas

Synthesis of cyclic carbonates catalyzed by $\text{CaI}_2\text{Et}_3\text{N}$ and studies on their biocatalytic kinetic resolution
ACS sustainable chemistry & engineering/ American Chemical Society - Washington, DC: ACS Publ., Bd. 10 (2022), 40, S. 13335-13342;

[Imp.fact.: 9.224]

Vogt, Jochen

Strain modulation in small molecule physisorption in two dimensions - LEED structure analysis and DFT modeling of the system $\text{NaCl}(100) / (3\sqrt{2} \times \sqrt{2})\text{R}45^\circ - \text{C}_2\text{H}_2$

Physical chemistry, chemical physics - Cambridge: RSC Publ. . - 2022, insges. 8 S.;

[Imp.fact.: 3.676]

Wang, Sida; Liebing, Phil; Engelhardt, Felix; Hilfert, Liane; Busse, Sabine; Goldhahn, Rüdiger; Edelmann, Frank T.

Synthesis and complexation study of new aminoalkynyl amidinate ligands

Zeitschrift für anorganische und allgemeine Chemie - Weinheim: Wiley-VCH . - 2022, insges. 10 S.;

[Imp.fact.: 1.414]

Wang, Yin-Hu; Noyer, Lucile; Kahlfuß, Sascha; Raphael, Dimitrius; Tao, Anthony Y.; Kaufmann, Ulrike; Zhu, Jingjie; Mitchell-Flack, Marisa; Sidhu, Ikjot; Zhou, Fang; Vaeth, Martin; Thomas, Paul G.; Saunders, Sean P.; Stauderman, Kenneth; Lafaille, Maria A. Curotto; Feske, Stefan

Distinct roles of ORA11 in T cell-mediated allergic airway inflammation and immunity to influenza A virus infection

Science advances - Washington, DC [u.a.]: Assoc., 2015, Bd. 8 (2022), 40, insges. 21 S.;

[Imp.fact.: 14.957]

BEGUTACHTETE BUCHBEITRÄGE

Wacker, Max; Riedel, Jan; Veluswamy, Priya; Scherner, Maximilian Philipp; Wippermann, Jens; Walles, Heike; Hülsmann, Jörn

Bacterial nanocellulose-based grafts for cell colonization studies - an in vitro bioreactor perfusion model
Bioreactors in Stem Cell Biology - New York, NY: Springer US; Turksen, Kursad . - 2022, S. 205-222;

DISSERTATIONEN

Künzel, Christian; Scheffler, Franziska [AkademischeR BetreuerIn]; Scheffler, Michael [AkademischeR BetreuerIn]; Sauerhering, Jörg [AkademischeR BetreuerIn]

Entwicklung eines dispersionsbasierten Druckverfahrens zur Herstellung von thermoelektrischen Mikroschichten
Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XII, 146, Seite IX-LXXVII, 98,21 MB), Illustrationen;

Lizzadro, Luca; Schinzer, Dieter [AkademischeR BetreuerIn]; Haak, Edgar [AkademischeR BetreuerIn]

(-)-disorazole C1 and new analogs - total synthesis and biological evaluation

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (viii, 199 Seiten, 9,53 MB), Illustrationen;

Sutygina, Alina; Scheffler, Michael [AkademischeR BetreuerIn]; Scheffler, Franziska [AkademischeR BetreuerIn]

Manufacturing and characterization of open-cell metal foams with high strut porosity

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XIV, 134 Blätter, 10,97 MB), Illustrationen;

Wilke, Markus; Halle, Thorsten [AkademischeR BetreuerIn]; Weiß, Helmut [AkademischeR BetreuerIn]

Pyroelektrische Röntgenquellen zur Materialanalyse

Magdeburg: Universitätsbibliothek, 2022, 1 Online-Ressource (XII, 118 Blätter, 22,27 MB), Illustrationen;

1. LEITUNG

Prof. Dr.-Ing. F. Beyrau (geschäftsführender Leiter)

Prof. Dr.-Ing. D. Thévenin

Jun.-Prof. Dr.-Ing. A. Diéguez-Alonso

2. VERÖFFENTLICHUNGEN

BEGUTACHTETE ZEITSCHRIFTENAUFsätze

Abbaszadeh, Shokoofeh; Leidhold, Roberto; Hoerner, Stefan

A design concept and kinematic model for a soft aquatic robot with complex bio-mimicking motion

Journal of bionic engineering - Cham: Springer International Publishing . - 2022, insges. 13 S.;

[Imp.fact.: 2.682]

Anca-Couce, Andrés; Berg, Lukas; Pongratz, Gernot; Scharler, Robert; Hochenauer, Christoph; Geusebroek, Marco; Kuipers, Johan; Vilela, Carlos Mourao; Kraia, Tzouliana; Panopoulos, Kyriakos; Funcia, Ibai; Dieguez-Alonso, Alba; Almuina-Villar, Hernán; Tsiotsias, Timotheos; Kienzl, Norbert; Martini, Stefan

Assessment of measurement methods to characterize the producer gas from biomass gasification with steam in a fluidized bed

Biomass and bioenergy - Amsterdam [u.a.]: Elsevier Science, Bd. 163 (2022), insges. 13 S.;

[Imp.fact.: 5.774]

Chi, Cheng; Abdelsamie, Abouelmagd; Thévenin, Dominique

Transient ignition of premixed methane/air mixtures by a pre-chamber hot jet - a DNS study

Flow, turbulence and combustion - Dordrecht [u.a.]: Springer Science + Business Media B.V., Bd. 108 (2022), 3, S. 775-795;

[Imp.fact.: 2.566]

Chi, Cheng; Han, Wang; Thévenin, Dominique

Effects of molecular diffusion modeling on turbulent premixed NH₃/H₂/air flames

Proceedings of the Combustion Institute/ Combustion Institute - Amsterdam [u.a.]: Elsevier . - 2022;

[Imp.fact.: 6.535]

Chi, Cheng; Sreekumar, Srijith; Thévenin, Dominique

Data-driven discovery of heat release rate markers for premixed NH₃/H₂/air flames using physics-informed machine learning

Fuel - New York, NY [u.a.]: Elsevier, Bd. 330 (2022);

[Imp.fact.: 8.035]

Chi, Cheng; Thévenin, Dominique; Smits, Alexander J.; Wolligandt, Steve; Theisel, Holger

Identification and analysis of very-large-scale turbulent motions using multiscale proper orthogonal decomposition

Physical review fluids - College Park, MD: APS, Bd. 7 (2022), 8, insges. 19 S.;

[Imp.fact.: 2.895]

Chi, Cheng; Xu, Xiaopeng; Thévenin, Dominique

Efficient premixed turbulent combustion simulations using flamelet manifold neural networks - a priori and a posteriori assessment

Combustion and flame - Amsterdam [u.a.]: Elsevier Science, Bd. 245 (2022);

[Imp.fact.: 5.767]

Cleyen, Olivier; Powalla, Dennis; Hoerner, Stefan; Thévenin, Dominique

An efficient method for computing the power potential of bypass hydropower installations
Energies - Basel: MDPI, Bd. 15 (2022), 9, insges. 13 S.;
[Imp.fact.: 3.004]

Das, Tapas K.; Kerikous, Emeel; Venkatesan, Nithya; Janiga, Gábor; Thévenin, Dominique; Samad, Abdus

Performance improvement of a Wells turbine through an automated optimization technique
Energy conversion and management: X - Amsterdam: Elsevier, Bd. 16 (2022);

Deylen, Jan; Köpplin, Jessica; Thévenin, Dominique

Development and validation of a design tool for an improved pitot-tube jet-pump allowing continuous fluid-fluid separation
Journal of fluids engineering - New York, NY: ASME, Bd. 144 (2022), 1, insges. 11 S.;
[Imp.fact.: 1.998]

Graichen, Henrik-Christian; Sauerhering, Jörg; Stamann, Olena; Beyrau, Frank; Boye, Gunar

Influence of adhesive tapes as thermal interface materials on the thermal load of a compact electrical machine
World electric vehicle journal - Basel: MDPI, Bd. 13 (2022), 2, insges. 23 S.;
[Imp.fact.: 2.2]

Hellmeier, Florian; Brüning, Jan; Berg, Philipp; Saalfeld, Sylvia; Spuler, Andreas; Sandalcioglu, Ibrahim Erol; Beuing, Oliver; Larsen, Naomi; Schaller, Jens; Goubergrits, Leonid

Geometric uncertainty in intracranial aneurysm rupture status discrimination - a two-site retrospective study
BMJ open - London: BMJ Publishing Group, Bd. 12 (2022), 11, insges. 10 S.;
[Imp.fact.: 3.007]

Hosseini, Seyed Ali; Darabiha, Nasser; Thévenin, Dominique

Low mach number lattice Boltzmann model for turbulent combustion - flow in confined geometries
Proceedings of the Combustion Institute/ Combustion Institute - Amsterdam [u.a.]: Elsevier . - 2022, insges. 8 S.;
[Imp.fact.: 6.535]

Hosseini, Seyed Ali; Huang, F.; Thévenin, Dominique

Lattice Boltzmann model for simulation of flow in intracranial aneurysms considering non-Newtonian effects
Physics of fluids - [S.l.]: American Institute of Physics, Bd. 34 (2022), 7, insges. 14 S.;
[Imp.fact.: 4.98]

Huang, Feng; Noel, Romain; Berg, Philipp; Hosseini, Seyed Ali

Simulation of the FDA nozzle benchmark: A lattice Boltzmann study
Computer methods and programs in biomedicine - Amsterdam: Elsevier, Bd. 221 (2022);
[Imp.fact.: 7.027]

Hundshagen, Markus; Rave, Kevin; Nguyen, Bich-Diep; Popp, Sebastian; Hasse, Christian; Mansour, Michael; Thévenin, Dominique; Skoda, Romuald

Two-phase flow simulations of liquid/gas transport in radial centrifugal pumps with special emphasis on the transition from bubbles to adherent gas accumulations
Journal of fluids engineering - New York, NY: ASME, Bd. 144 (2022), 10, insges. 15 S.;
[Imp.fact.: 1.998]

Khan, Ali Hassan; Hussmann, Karla Ruiz; Powalla, Dennis; Hoerner, Stefan; Kruusmaa, Maarja; Tuhtan, Jeffrey A.

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ABSTRACTS

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1. LEITUNG

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

2. VERÖFFENTLICHUNGEN

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