

**Annual meeting of the DECHEMA/VDI Group Fluid Separations
3th -5th February 2025
Ruhr-Universität Bochum, Veranstaltungszentrum**

Monday, 3th February 2025

11:30

Welcome & Possibility to have lunch

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Monday, 3th February 2025		
12:30	Fluid Dynamics, Chair: Repke	Introductory Words
12:35		Untersuchung zur Vergleichbarkeit von verschiedenen Methoden zur Bestimmung der effektiven Phasengrenzflächen (Christopher Dechert, Patrick Franke, Julia Riese // Universität Paderborn, Lehrstuhl für Fluidverfahrenstechnik, Paderborn/Deutschland)
13:00		Application of Film Thickness Sensors in Miniaturized Experimental Setups (Pascal Pötter, Kristina Mielke, Marcus Grünewald, Maria Polyakova // Ruhr-Universität Bochum, Bochum RWTH Aachen, Aachen)
13:25		Significance of the contact angle of water-based mixtures on conventional vs. 3D-printed surfaces under vapor-liquid equilibrium (Mohamed Adel Ashour, Chiara Lukas, Dennis Stucke, Thomas Grützner // Institute of Chemical Engineering, Laboratory of Thermal Process Engineering, Ulm University, 89081 Ulm, Germany)
13:50		Höhere Reproduzierbarkeit bei der Kontaktwinkelmessung durch neues Gasreinigungsverfahren (Eva Mühlegger, Benjamin Heim, Kai Langenbach // TU Dortmund, Dortmund/Deutschland, Universität Innsbruck, Innsbruck/Österreich)
14:15		Coffee Break
14:45	Poster Session, Chair: Polyakova	- News from Fachgruppe & Fachsektion: - Introduction to poster session
15:15		Poster presentation (12 poster, each 5 min.)
16:15		Posterparty with snack & refreshment (from 17:30 Beiratssitzung Fachgruppe)
ab 20:00		Recommendations for meeting places in Bermuda-Dreieck Bochum & Meeting YoungFluidSeps

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Tuesday, 4th February 2025			
08:45	Structured Packing, Chair: Ohligschläger	Shape optimization and experimental analysis of structured packings for thermal separation processes (A. Dobschall, E. Michaelis, M. Skiborowski // Hamburg University of Technology, Hamburg/Germany)	V06
09:10		Enhancing Separation Efficiency of Structured Packings using CFD-based Shape Optimization (Dennis Stucke, Sebastian Blauth, Mohamed Adel Ashour, Johannes Schnebele, Christian Leithäuser, Thomas Grützner // Institute of Chemical Engineering, Laboratory for Thermal Process Engineering, Ulm University, 89081 Ulm, Germany Fraunhofer ITWM, Department Transport Processes, 67663 Kaiserslautern, Germany)	V29
09:35		Modellierung der Reaktivabsorption in Anstaupackungen (Patrick Franke ¹ , Markus Schubert ^{2,3} , Uwe Hampel ^{3,4} , Eugeny Y. Kenig ¹ // 1 Universität Paderborn, Lehrstuhl für Fluidverfahrenstechnik, Paderborn/Deutschland 2 Technische Universität Dresden, Lehrstuhl für Chemische Verfahrenstechnik, Dresden 3 Helmholtz-Zentrum Dresden-Rossendorf, Institut für Fluidodynamik, Dresden 4 Technische Universität Dresden, Lehrstuhl für Bildgebende Messverfahren für die Energie- und Verfahrenstechnik, Dresden)	V10
10:00		Experimentelle Untersuchung des dynamischen Auslaufverhaltens von regellosen und strukturierten Packungen (Hannes Raddant*, Christian Hoffmann, Markus Illner, Jens-Uwe Repke, Bernd Metzgen // Technische Universität Berlin, Berlin/Deutschland BASF SE, Ludwigshafen am Rhein/Deutschland)	V24
10:25	Coffee Break		
10:55	Struct. Packing, Chair: Ohligschläger	Novel insights into the liquid distribution in structured packings (H. S. Rennebaum, A. Dobschall, F. Conje, M. Skiborowski, A. Penn, // Hamburg University of Technology, Hamburg/Germany)	V26
11:20		Distillation performance of RMP SP 350 high capacity structured packing at the FRI test facility (Jose Luis Solá, Benjamin Pechtold, Christian Geipel // RVT Process Equipment GmbH, Marktrodach, Germany)	V28
11:45	Plenarvortrag, Chair: Grünewald	Thermische Energiespeicher (Jörg Worlitschek // Hochschule Luzern, CC Thermische Energiespeicher)	V50
ca. 12:20	Lunch time in canteen		

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12:40		Lunch time in canteen	
13:30	Heat Integration, Chair: Riese	<p>Electrified Separation: Advancing Heat Pump and Vapor Recompression Technologies in Process Industries (Johannes Neukäuffer¹, Armin Rix¹, Niklas Paul², Lea Wessner² // 1 Evonik Operations GmbH, Process Technology & Engineering, Marl, Germany 2 Evonik Oxeno GmbH & Co. KG, Marl, Germany)</p>	V20
13:55		<p>Influence of heat integration on the scheduling of batch processes (Johannes Wloch, Marcus Grünewald, Julia Riese // Ruhr University Bochum, Bochum/Germany Paderborn University, Paderborn/Germany)</p>	V32
14:20		<p>Modification of column internals as a key element in the optimization of energy management of distillation processes (Lea Wessner², Carmen De Santiago³, Niklas Paul², Armin Rix¹, Moritz Schröder¹, Ralf Höchemer³ // 1 Evonik Operations GmbH, Process Technology & Engineering, Marl, Germany 2 Evonik OXENO GmbH & CO KG, Marl, Germany 3 Sulzer Chemtech Ltd, Winterthur, Switzerland)</p>	V33
14:55		<p>Beyond dividing wall columns – Combining thermal coupling and heat integration (Momme Adami, Dennis Espert, Mirko Skiborowski // Hamburg University of Technology, Institute of Process Systems Engineering, Hamburg/Germany)</p>	V01
15:20		Coffee Break	
15:45	(New) Equipment, Chair: Grützner	<p>What can go wrong in a dividing wall column and how to detect it (Dr.-Ing. Lena-Marie Ränger^{1, former 2,3}, Prof. Ivar J. Halvorsen², Prof. Thomas Grützner³, Prof. Sigurd Skogestad² // 1 BASF SE, 67056 Ludwigshafen, Germany 2 Norwegian University of Science and Technology, 7034 Trondheim, Norway 3 Ulm University, 89081 Ulm, Germany)</p>	V25
16:10		<p>Control of a multiple dividing wall column – A theoretical and experimental study (Yannick Waibel, Thomas Grützner // Institute of Chemical Engineering, Laboratory of Thermal Process Engineering, Ulm University, Ulm/Germany)</p>	V31
16:35		<p>Simulative and Experimental Evaluation of Capacitive Flexibility in a Segmented Column Design (Niklas Breuer, Marcus Grünewald, Julia Riese // Ruhr University Bochum, Bochum, Germany Paderborn University, Paderborn/Germany)</p>	V04
17:00		<p>Investigating Distillation Performance of Rotating Zigzag Beds by Utilizing CFD to feed a Rate-based Modeling Approach (Niclas Rohde, Felix Febrian, Jonathan Mach, Georg Brösigke, Jens-Uwe Repke // Process Dynamics and Operation Group – TU Berlin, Germany)</p>	V27
17:25		<p>Process Intensification of Distillation by Single and Double-Rotor Rotating Packed Beds (Nico-Joel Greven, Vincent Backhaus, Jule Mülle, Christoph Held // TU Dortmund University, Laboratory of Thermodynamics, Dortmund, Germany TU Dortmund University, Laboratory of Plant and Process Design, Dortmund, Germany)</p>	V35
18:00		Posterparty with snack & refreshment	
ab 20:00		Get-together in city of Bochum	

Wednesday, 5th Februar 2025

08:45	Trays & Droplets, Chair: Polyakova	<p>Analysis of droplet formation and entrainment using variable-length orifices in a forced circulation flash evaporator (Anna Denecke, Stephan Scholl, Katharina Jasch // Technische Universität Braunschweig, Germany Institut für Chemische und Thermische Verfahrenstechnik)</p>	V05
09:10		<p>Druckverlust und Flutpunkte von Tropfenabscheidern bei relevanten Stoffwerten (Alexander Döß¹, Markus Schubert^{1,2}, Holger Kryk¹, Felix Flegiel³, Uwe Hampel^{1,2} // 1 Helmholtz-Zentrum Dresden-Rossendorf e.V 2 Technische Universität Dresden 3 Linde Engineering, Linde GmbH)</p>	V07
09:35		<p>Fluiddynamischer Vergleich verschiedener Ventilgeometrien in einer DN1200-Bodenkolonne (Felicitas S. Engel, Harald Klein, Sebastian Rehfeldt // Technische Universität München, TUM School of Engineering and Design, Department of Energy and Process Engineering, Lehrstuhl für Anlagen- und Prozesstechnik, Garching bei München)</p>	V08
10:00		<p>Entwicklung eines neuen Modellierungsansatzes zur Beschreibung des Abregensverhaltens und des Druckverlusts von Siebböden unterhalb der minimalen Gasbelastungsgrenze (Patricia Polgár; Hannes Raddant; Christian Hoffmann; Markus Illner; Jens-Uwe Repke // Technische Universität Berlin, Berlin/Deutschland)</p>	V23
10:25	Coffee Break		
10:55	Trays	<p>Untersuchung von Kristallisationsfouling an Kolonneneinbauten (Korbinian Inderwies, Prof. Dr.-Ing. Harald Klein, Dr.-Ing. Sebastian Rehfeldt // Technische Universität München, TUM School of Engineering and Design, Department of Energy and Process Engineering, Lehrstuhl für Anlagen- und Prozesstechnik, Garching bei München)</p>	V14
11:20	Process Design, Chair: Skiborowski	<p>Multiple short path distillation vs high vacuum rectification (Dr. Ralf Proplesch // DSM-Firmenich, Asset Technology, Sisseln/Schweiz)</p>	V34
11:45		<p>Pathways to industrial decarbonization: Renewable energy integration and electrified hydrogen production (Haryn Park, Joowha Lee, Jin-Kuk Kim // Department of Chemical Engineering, Hanyang University, Seoul, Republic of Korea, Bogdan Dorneanu, Harvey Arellano-Garcia FG Prozess- und Anlagentechnik, Brandenburgische Technische Universität Cottbus-Senftenberg, Cottbus, Germany)</p>	V21
12:10		<p>Neuer methodischer Ansatz für die Auslegung robuster Trennsequenzen: Beispiel der Aufbereitung von Polystyrol-Pyrolyseöl (Meike Islamoğlu, Lucas Wiczorek, Philip Biessey // Ruhr-Universität Bochum, Bochum/Deutschland)</p>	V15
12:35	<p>Awards for best poster & presentation & Closing remarks</p>		

Wednesday, 5th Februar 2025

12:35	Awards for best poster & presentation & Closing remarks
13:00	End of the annual meeting & Possibility to have lunch
14:00	Possibility for bilateral meetings or project meetings, PhD seminars, etc. For room booking and/or further advice please contact: marcus.gruenewald@fluidvt.rub.de
13:20	
14:25	
14:50	
15:15	
15:45	
16:15	
16:40	
17:05	