

Malte Kaspereit – Publications

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Journal articles

- [1] M. Munoz, M. Kaspereit, B. J. Etzold. Deducing kinetic constants for the hydrodechlorination of 4-chlorophenol using high adsorption capacity catalysts. *Chemical Engineering Journal* 285 (2016) 228 – 235.
- [2] S. Swernath, M. Kaspereit, A. Kienle. Coupled Continuous Chromatography and Racemization Processes for the Production of Pure Enantiomers. *Chemical Engineering & Technology* 37 (2014) 1–10.
- [3] D. Flockerzi, M. Kaspereit, A. Kienle. Spectral properties of modified Langmuir and Bi-Langmuir isotherms. *Chemical Engineering Science* 104 (2013) 957–959.
- [4] S. Swernath, M. Kaspereit, A. Kienle. Dynamics and Control of Coupled Continuous Chromatography and Crystallization Processes for the Production of Pure Enantiomers. *Chemical Engineering & Technology* 36 (2013) 1417–1429.
- [5] J. Kiefer, M. Kaspereit. Determination of the Raman depolarization ratio in optically active samples. *Analytical Methods* 5 (2013) 797–800.
- [6] M. Kaspereit A. Gorak. A special issue on hybrid and reactive separations. *Chemical Engineering and Processing: Process Intensification* 67 (2013) 1.
- [7] S. Nimmig, M. Kaspereit. Continuous Production of Single Enantiomers at High Yields by Coupling Single Column Chromatography, Racemization, and Nanofiltration. *Chemical Engineering & Processing: Process Intensification* 67 (2013) 89–98.
- [8] B. Sreedhar, A. Wagler, M. Kaspereit, A. Seidel-Morgenstern. Optimal cut-times finding strategies for collecting a target component from overloaded elution chromatograms. *Computers & Chemical Engineering* 49 (2013) 158–169.
- [9] M. Kaspereit, S. Swernath, A. Kienle. Evaluation of competing process concepts for the production of pure enantiomers. *Organic Process Research & Development* 16 (2012) 353–363.
- [10] J. von Langermann, M. Kaspereit, M. Shakeri, H. Lorenz, M. Hedberg, M. J. Jones, K. Larson, B. Herrschend, R. Arnell, E. Temmel, J.-E. Bäckvall, A. Kienle, A. Seidel-Morgenstern. Design of an Integrated Process of Chromatography, Crystallisation and Racemisation for the Resolution of 2',6'-Pipecoloxylidide (PPX). *Organic Process Research & Development* 16 (2012) 343–352.

- [11] H. Kaemmerer, Z. Horvath, J. W. Lee, M. Kaspereit, R. Arnell, M. Hedberg, B. Herschend, M. J. Jones, K. Larson, H. Lorenz, A. Seidel-Morgenstern. Separation of racemic bicalutamide by an optimized combination of continuous chromatography and selective crystallization. *Organic Process Research & Development* 16 (2012) 331–342.
- [12] M. Kaspereit, T. Sainio. Simplified Design of Steady-State Recycling Chromatography Under Ideal and Nonideal Conditions. *Chemical Engineering Science* 66 (2011) 5428–5438.
- [13] J. García Palacios, B. Kramer, A. Kienle, M. Kaspereit. Experimental Validation of a new Integrated Simulated Moving Bed Process for the Production of Single Enantiomers. *Journal of Chromatography A* 1218 (2011) 2232–2239.
- [14] J. García Palacios, M. Kaspereit, A. Kienle. Integrated Simulated Moving Bed Processes for the Production of Single Enantiomers. *Chemical Engineering & Technology* 34 (2011) 688–698.
- [15] J. Siitonen, T. Sainio, M. Kaspereit. Theoretical analysis of steady state recycling chromatography with solvent removal. *Separation & Purification Technology* 78 (2011) 21–32.
- [16] T. Sainio, M. Kaspereit. Analysis of steady state recycling chromatography using equilibrium theory. *Separation and Purification Technology* 66 (2009) 9–18.
- [17] J. García Palacios, M. Kaspereit, A. Kienle. Conceptual Design of Integrated Chromatographic Processes for the Production of Single (Stereo-) Isomers. *Chemical Engineering & Technology* 32 (2009) 1392–1402.
- [18] J. García Palacios, M. Kaspereit, G. Ziomek, D. Antos, A. Seidel-Morgenstern. Optimization and Analysis of Possible Column Arrangements for Multicomponent Separations by Preparative Chromatography. *Industrial & Engineering Chemistry Research* 48 (2009) 11.148–11.157.
- [19] P. Forssén, R. Arnell, M. Kaspereit, A. Seidel-Morgenstern, T. Fornstedt. Effects of a Strongly Adsorbed Additive on Process Performance in Chiral Preparative Chromatography. *Journal of Chromatography A* 1212 (2008) 89–97.
- [20] A. Kulkarni, K. P. Zeyer, T. Jacobs, M. Kaspereit, A. Kienle. Feasibility Studies and Dynamics of Catalytic Liquid Phase Esterification Reactions in a Micro Plant. *Chemical Engineering Journal* 185S (2008) S270–S275.
- [21] M. Kaspereit, A. Seidel-Morgenstern, A. Kienle. Design of Simulated Moving Bed Chromatography Under Reduced Purity Requirements. *Journal of Chromatography A* 1162 (2007) 2–13.

- [22] K. Gedicke, M. Kaspereit, W. Beckmann, U. Budde, H. Lorenz, A. Seidel-Morgenstern. Conceptual Design & Feasibility Study of Combining Continuous Chromatography and Crystallisation for Stereoisomer Separations. *Chemical Engineering Research and Design* 85 (2007) 928–936.
- [23] T. Sainio, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Thermal Effects in Reactive Liquid Chromatography. *Chemical Engineering Science* 62 (2007) 5674–5681.
- [24] M. Kaspereit, K. Gedicke, V. Zahn, A. W. Mahoney, A. Seidel-Morgenstern. Shortcut Method for Evaluation and Design of a Hybrid Process for Enantioseparations. *Journal of Chromatography A* 1092 (2005) 43–54.
- [25] G. Ziomek, M. Kaspereit, J. J. Jezowski, A. Seidel-Morgenstern, D. Antos. Effect of Mobile Phase Composition on the SMB Processes Efficiency – Stochastic Optimization of Isocratic and Gradient Operation. *Journal of Chromatography A* 1070 (2005) 111–124.
- [26] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Verbessertes Betrieb von Simulated Moving Bed-Prozessen durch zyklische Modulation der Feedkonzentration. *Chemie-Ingenieur-Technik* 75 (2003) 379–383.
- [27] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Simulated Moving Bed Process with Cyclic Modulation of the Feed Concentration. *Journal of Chromatography A* 1006 (2003) 77–86.
- [28] H. Schramm, A. Kienle, M. Kaspereit, A. Seidel-Morgenstern. Improved Operation of Simulated Moving Bed Processes Through Cyclic Modulation of Feed Flow and Feed Concentration. *Chemical Engineering Science* 58 (2003) 5217–5227.
- [29] M. Kaspereit, P. Jandera, M. Skavrada, A. Seidel-Morgenstern. Impact of Adsorption Isotherm Parameters on the Performance of Enantioseparation Using Simulated Moving Bed Chromatography. *Journal of Chromatography A* 944 (2002) 249–262.
- [30] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Improving Simulated Moving Bed Processes by Cyclic Modulation of the Feed Concentration. *Chemical Engineering & Technology* 25 (2002) 1151–1155.

Extended Conference Papers (peer-reviewed)

- [31] M. Kaspereit, J. García Palacios, T. Meixús Fernández, A. Kienle. Systematic Design of Production Processes for Enantiomers with Integration of Chromatography and Racemisation Reactions. In: B. Braunschweig X. Joulia (Eds.): *Computer-Aided Chemical Engineering*, vol. 25 – 18th European Symposium on Computer Aided Process Engineering. Chapter Systematic Design of Production Processes for Enantiomers with Integration of Chromatography and Racemisation Reactions 2008 p. 97–102.

- [32] T. Jacobs, M. Kaspereit, K.-P. Zeyer, A. Kienle, P. Hauptmann. Thermal Flow Sensor Network for Real-Time Kinetic Analysis of Chemical Reactions in Micro Reactors. Eurosensors XXII, Dresden (Germany). In: Proc. Eurosensors. (2008) 777–780.
- [33] T. Jacobs, A. Gomide, M. Kaspereit, K.-P. Zeyer, A. Kienle, P. Hauptmann. In-line Analysis of Chemical Reactions in Micro Reactors Using Thermal Mass Flow Sensors. EUROCON 2007, Warsaw (Poland). In: IEEE Catalog. (2007) 571–574.
- [34] M. Kaspereit, H. Lorenz, A. Seidel-Morgenstern. Coupling of Simulated Moving Bed Technology and Crystallization to Separate Enantiomers. Fundamentals of Adsorption 7, May 2001, Nagasaki (Japan). In: K. Kaneko *et al.* (Ed.): Fundamentals of Adsorption 7. IK International Ltd., Chiba City, Japan (2002) 101–108.

Monographs

- [35] M. Kaspereit. Optimal Synthesis and Design of Advanced Chromatographic Process Concepts. Habilitation, Otto von Guericke University Magdeburg, 2011.
- [36] M. Kaspereit. Separation of Enantiomers by a Process Combination of Chromatography and Crystallisation. PhD thesis, Otto von Guericke Universität Magdeburg, Shaker Verlag, Aachen, Germany, 2006.

Book Contributions and Invited Reviews

- [37] M. Kaspereit, A. Seidel-Morgenstern. In: S. Fanali, P. Haddad, C. Poole, P. Schoenmakers, D. Lloyd (Eds.): Liquid Chromatography - Fundamentals and Instrumentation. Chapter 19: Process concepts in preparative chromatography. Elsevier, 2013 p. 427–452.
- [38] M. Kaspereit. In: H. Schmidt-Traub, M. Schulte, A. Seidel-Morgenstern (Eds.): Preparative Chromatography of Fine Chemicals and Pharmaceutical Agents (2nd ed). Chapter 5: Process concepts Wiley-VCH, Weinheim, 2012.
- [39] H. Schmidt-Traub, M. Kaspereit, S. Engell. In: H. Schmidt-Traub, M. Schulte, A. Seidel-Morgenstern (Eds.): Preparative Chromatography of Fine Chemicals and Pharmaceutical Agents (2nd ed). Chapter 7: Model based design, optimization and control. Wiley-VCH, Weinheim, 2012.
- [40] B. Schuur, A. B. de Haan, M. Kaspereit, M. Leemanc. In: M. Moo-Young (Ed.): Comprehensive Biotechnology (2nd ed). Chapter Downstream Processing and Product Recovery: Chiral Separations. Elsevier, 2011 Vol. II, 737–751.

- [41] M. Mangold, F. Zhang, M. Kaspereit, A. Kienle. In: A. Seidel-Morgenstern (Ed.): Membrane Reactors: Distributing Reactants to Improve Selectivity and Yield. Chapter 8: Nonlinear Dynamics of Membrane Reactors. Wiley-VCH, Weinheim, 2010 235–261.
- [42] M. Kaspereit. In: E. Grushka, N. Grinberg (Eds.): Advances in Chromatography. Chapter Advanced operating concepts for Simulated Moving Bed Processes CRC Press, Taylor & Francis, Boca Raton/Fla, USA, 2009 165–192.
- [43] A. Seidel-Morgenstern, L. C. Keßler, M. Kaspereit. Neue Entwicklungen auf dem Gebiet der simulierten Gegenstromchromatographie. *Chemie-Ingenieur-Technik* 80 (2008) 725–740.
- [44] A. Seidel-Morgenstern, L. C. Keßler, M. Kaspereit. New Developments in Simulated Moving Bed Chromatography. *Chemical Engineering & Technology* 31 (2008) 826–837.

Patents

- [45] H. Schramm, A. Kienle, M. Kaspereit, A. Seidel-Morgenstern. Method and Device for Chromatographic Component Separation. US Patent US7479228 (2009).
- [46] H. Schramm, A. Kienle, M. Kaspereit, A. Seidel-Morgenstern. Method and Device for Chromatographic Component Separation. European Patent EP 1526907 (2003).
- [47] H. Schramm, A. Kienle, M. Kaspereit, A. Seidel-Morgenstern. Verfahren zur chromatographischen Trennung von Komponenten. German Patent DE 10235385 (2002).

Invited Talks & Keynote Lectures

- [48] M. Kaspereit. Single Columns and Beyond – Development of Efficient Process Concepts for Adsorption and Chromatography (keynote lecture). 27. Deutsche Zeolith-Tagung & Jahrestreffen der Fachgruppe Adsorption, Oldenburg/D, 2015, February, 2nd, 2015 (invited by M. Wark).
- [49] M. Kaspereit. Recycling Chromatography and Beyond: Clever Process Concepts for Preparative Enantiomer Production. Phenomenex Prep-LC-Day, Düsseldorf, December, 12th, 2014 (invited by Phenomenex).
- [50] T. Sainio M. Kaspereit. The Ideal Model of Chromatography as a Tool For Process Design - Part I: Single Column Processes (talk). MATHMOD 2012, Vienna (Austria), 2012 (invited by E. v. Lieres).

- [51] T. Sainio M. Kaspereit. The Ideal Model of Chromatography as a Tool For Process Design - Part II: Continuous Multi-Column Processes (talk). MATH-MOD 2012, Vienna (Austria), 2012 (invited by E. v. Lieres).
- [52] M. Kaspereit, J. von Langermann, S. Swernath, J. G. Palacios, H. Lorenz, M. Hedberg, A. Seidel-Morgenstern, A. Kienle. Integrated Processes for the Production of Pure Enantiomers (keynote lecture). ECCE 8 – 8th European Congress of Chemical Engineering together with ProcessNet-Annual Meeting, Berlin, Germany, September 25 - 29, 2011 (invited by A. Gorak).
- [53] M. Kaspereit. Synthesis and Design of Advanced Chromatographic Processes. Workshop on "Complex Systems - Theory and Applications in Sciences and Engineering", Ankara/Turkey, May 13, 2009 (invited by B. Karasözen).
- [54] M. Kaspereit. Integration of Chromatography and Racemisation Reactions for the Production of Pure Enantiomers. 1st Indo-German Workshop on Advances in Reaction and Separation Processes, Chennai/Indien, February 19, 2008 (invited by S. Pushpavanam).
- [55] M. Kaspereit. Optimisation Problems in Advanced Operating Modes of Continuous Chromatography. 23rd IFIP TC 7 Conference on System Modelling and Optimization, Cracow, Poland, July 25, 2007 (invited by L. Biegler).
- [56] M. Kaspereit. Process Intensification in Chromatography. Bioprocess Laboratory, Institute of Process Engineering, ETH Zurich, Schweiz, September 1, 2006 (invited by S. Panke).
- [57] M. Kaspereit. Novel Concepts in SMB Chromatography. AstraZeneca, Macclesfield, UK, September 3, 2004 (invited by C. Strawson).

Conference contributions

- [58] J. Vargas Schmitz, M. Kriesten, M. Hovestadt, M. Hartmann, M. Kaspereit. Theoretical and experimental investigation of adsorber dynamics in gas separations. Jahrestreffen der Fachgruppen Adsorption und Gasreinigung, Duisburg (Germany), February, 17–18, 2016.
- [59] B. Haider, O. Jonescheit, M. Kaspereit. Gas Permeability and Selectivity of Spin Casted Asymmetric Membranes. Jahrestreffen der Fachgruppen Adsorption und Gasreinigung, Duisburg (Germany), February, 17–18, 2016.
- [60] K. Müller, S. Nimmig, M. Kaspereit. Integration of Chromatographic and Membrane Reactors for the Effective Production of (Bio)Pharmaceuticals and Fine Chemicals. ECCE-10 (European Congress of Chemical Engineering) + ECAB3 + EPIC5, Nice (France), October, 1st, 2015.
- [61] S. Nimmig M. Kaspereit. Prozessintegration von Einzelsäulenchromatographie und Membranreaktoren zur effektiven Proteinrenaturierung. ProcessNet-Jahrestagung und 31. DECHEMA-Jahrestagung

der Biotechnologen, Aachen (Germany), September 20th – October 2nd, 2014.

- [62] K. Noack, H. Koch, J. Kiefer, M. Kaspereit, S. Will. Experimentelle und theoretische Untersuchung optisch aktiver Moleküle zur Online-Analyse der Enantiomertrennung mittels Raman-Spektroskopie. ProcessNet-Jahrestagung und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen (Germany), September 20th – October 2nd, 2014.
- [63] S. Nimmig M. Kaspereit. High yield protein refolding by integrating single-column chromatography and membrane filtration (talk). SPICA 2014 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Basel (Switzerland), October 5–8, 2014.
- [64] K. Müller M. Kaspereit. Improving Preparative Size Exclusion Chromatography Using Recycling Techniques (poster). SPICA 2014 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Basel (Switzerland), October 5–8, 2014.
- [65] S. Nimmig M. Kaspereit. Continuous High-Yield Production of Single Enantiomers by Combining Single-Column Chromatography, Racemization and Nanofiltration (poster, 1st poster award). SPICA 2012 – 14th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Brussels (Belgium), 2012.
- [66] M. Kaspereit, S. Nimmig, S. Swernath, A. Seidel-Morgenstern, A. Kienle. Integrated Chromatographic Processes for the Production of Pure Enantiomers (oral). SPICA 2012 – 14th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Brussels (Belgium), 2012.
- [67] S. Swernath, M. Kaspereit, A. Kienle. Design and Control of Combined Chemical Processes for the Production of Pure Enantiomers (poster). 2nd Indo-German Workshop on Advances in Reaction and Separation Processes, Bad Herrenalb (Germany), 2012.
- [68] M. Kaspereit. Development and Design of Advanced Chromatography-based Process Concepts (talk). 2nd Indo-German Workshop on Advances in Reaction and Separation Processes, Bad Herrenalb (Germany), 2012.
- [69] M. Kaspereit, J. G. Palacios, S. Swernath, A. Kienle. Optimierungsbasierte Synthese, Auslegung und Bewertung von Prozesskonzepten zur Herstellung reiner Enantiomere (poster). ProcessNet-Jahrestagung 2010 und 28. Jahrestagung der Biotechnologen, September 20-23, Aachen (Germany), abstract: Chemie-Ingenieur-Technik 82 (2010) 1430-1431, 2010.
- [70] M. Kaspereit, T. Sainio, A. Seidel-Morgenstern, A. Kienle. Simplified Design and Improved Operation of Steady-State Recycling Chromatography (oral). SPICA 2010 – 13th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Stockholm (Sweden), 2010.

- [71] J. Siitonen, T. Sainio, M. Kaspereit. Theoretical analysis of steady state recycling chromatography with solvent removal (poster, 1st poster award). SPICA 2010 – 13th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Stockholm (Sweden), 2010.
- [72] S. Swernath, M. Kaspereit, A. Kienle. Economical Optimization of Process Combinations Based on SMB Chromatography for the Production of Pure Enantiomers (poster). SPICA 2010 – 13th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Stockholm (Sweden), 2010.
- [73] J. García Palacios, B. Kramer, M. Kaspereit, A. Kienle. Production of single enantiomers by integrating simulated moving bed chromatography and racemization reactions (oral). SPICA 2010 – 13th Symposium on Preparative and Industrial Chromatography and Allied Techniques, Stockholm (Sweden), 2010.
- [74] S. Swernath, M. Kaspereit, A. Kienle. MINLP optimization of process combinations for the production of pure enantiomers (oral). 7th European Congress of Chemical Engineering ECCE-7 and 19th International Congress of Chemical and Process Engineering CHISA 2010, Prague (Czech Republic), abstract in: CHISA 2010 & ECCE 7 Summaries 3 – Hydrodynamic processes and system engineering (ISBN 978-80-02-02248-0), p. 821–822, Process Engineering Publisher, Prague, Czech Republic, 2010.
- [75] M. Kaspereit, T. Sainio, A. Kienle. Steady State Recycling Chromatography – Simplified Optimal Design and Options for Process Improvement (oral). PREP 2010 : 24th International Symposium on Preparative and Process Chromatography, Philadelphia (USA), 2010.
- [76] M. Kaspereit. Optimale Synthese und Auslegung neuer chromatographischer Prozesskonzepte (oral). 2. Symposium Bildung und Innovation in Biotechnologie, Chemie und Verfahrenstechnik und Hochschullehrernachwuchstreffen, Dresden (Germany), 2010.
- [77] H. Kaemmerer, H. Lorenz, A. Seidel-Morgenstern, M. Kaspereit, A. Kienle. Auslegung eines gekoppelten Prozesses zur chiralen Trennung eines API mittels selektiver Kristallisation und Chromatographie (poster). Jahrestreffen des ProcessNet-Fachausschusses Kristallisation, 2010.
- [78] J. von Langermann, M. Kaspereit, H. Lorenz, A. Kienle, A. Seidel-Morgenstern. Darstellung einer pharmazeutisch relevanten Verbindung über einen integrierten Prozess aus Chromatographie und Kristallisation. Jahrestreffen des ProcessNet-Fachausschusses Kristallisation, 2010.
- [79] M. Kaspereit T. Sainio. Influence of Column Efficiency On Process Performance in Steady-State Recycling Chromatography (oral). AIChE Annual meeting 2009, Nashville/TN (USA), 2009.

- [80] M. Kaspereit, T. Sainio, M. Pieper, A. Seidel-Morgenstern, A. Kienle. Analyse und Auslegung chromatographischer Trennverfahren mit Rückläufen (oral). ProcessNet-Jahrestagung 2009 und 27. Jahrestagung der Biotechnologen, Mannheim (Germany), in: Chemie-Ingenieur-Technik 81 (2009) 1072–1073, 2009.
- [81] J. García Palacios, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Production of single enantiomers by integrating simulated moving bed chromatography and racemization reactions (oral). 22nd International Symposium on Preparative/Process chromatography (PREP2009), Philadelphia (USA), 2009.
- [82] M. Kaspereit. Optimal design of advanced chromatographic processes (oral). GPE-EPIC 2009 - International Green Process Engineering Congress and The European Process Intensification Conference, Venice (Italien), 2007.
- [83] T. Sainio M. Kaspereit. Design of Steady State Recycling (SSR) Chromatography Processes Under Arbitrary Yield and Purity Constraints (poster). SPICA 2008 - 12th Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Zurich (Schweiz), 2008.
- [84] M. Kaspereit, R. Arnell, P. Forssén, A. Seidel-Morgenstern, T. Fornstedt, A. Kienle. Theoretical Analysis of Continuous Chromatography with Adsorbing Additives (oral). SPICA 2008 - 12th Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Zurich (Schweiz), 2008.
- [85] T. Fornstedt, P. Forssén, R. Arnell, M. Kaspereit, A. Seidel-Morgenstern. Utilisation of Peak Shape Tuning to Optimize Preparative Batch Chromatography (oral). (oral), SPICA 2008 - 12th Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Zurich (Schweiz), 2008.
- [86] J. García Palacios, M. Kaspereit, A. Kienle. Systematic Study of Production Processes Integrating Chromatographic Separation and Isomerisation Reactions (poster). SPICA 2008 - 12th Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Zurich (Schweiz), 2008.
- [87] M. Kaspereit, R. Arnell, P. Forssén, A. Seidel-Morgenstern, T. Fornstedt, A. Kienle. Theoretische Analyse zum Einsatz von Additiven in der kontinuierlichen Chromatographie (oral). ProcessNet - Jahrestagung, Karlsruhe, 2008.
- [88] J. García Palacios, M. Kaspereit, A. Kienle. Conceptual Design of Integrated Chromatographic Processes for the Production of Isomers (oral). ProcessNet - Jahrestagung, Karlsruhe, 2008.
- [89] M. Kaspereit, J. García Palacios, T. Meixús Fernández, A. Kienle. Systematic Design of Production Processes for Enantiomers with Integration of Chromatography and Racemisation Reactions (oral). 18th European Symposi-

um on Computer Aided Process Engineering (ESCAPE 18), Lyon (France), 2008.

- [90] M. Kaspereit, A. Seidel-Morgenstern, A. Kienle. Zur Integration von chromatographischen Verfahren und Racemisierungsreaktionen zur Herstellung reiner Enantiomere (oral). Jahrestreffen der ProcessNet-Fachausschüsse Adsorption und Fluidverfahrenstechnik, Bingen am Rhein, 2008.
- [91] M. Kaspereit. Integration of Chromatography and Racemisation Reactions for the Production of Pure Enantiomers (oral). 1st Indo-German Workshop on Advances in Reaction and Separation Processes, Chennai (India), 2008.
- [92] T. Jacobs, M. Kaspereit, K.-P. Zeyer, A. Kienle, P. Hauptmann. Thermal Mass Flow Sensors for Monitoring Esterification Reactions in Residence Time Micro Reactors (oral). IMRET-10 / AIChE Spring National Meeting, New Orleans (USA), 2008.
- [93] T. Jacobs, M. Kaspereit, K.-P. Zeyer, A. Kienle, P. Hauptmann. Thermal Flow Sensor Network for Real-Time Kinetic Analysis of Chemical Reactions in Micro Reactors. Eurosensors XXII, Dresden (Germany), in: Proc. Eurosensors, p. 777–780, 2008.
- [94] A. Seidel-Morgenstern, L. C. Keßler, M. Kaspereit. New Developments In Simulated Moving Bed Chromatography (oral). AIChE Annual Meeting, Philadelphia (USA), 2008.
- [95] M. Kaspereit, J. García Palacios, T. Meixús Fernández, T. Sainio, A. Seidel-Morgenstern, A. Kienle. Production of Pure Enantiomers by Integrating (Continuous) Chromatography and Racemisation Reactions (oral). AIChE Annual Meeting, Salt Lake City (USA), 2007.
- [96] T. Sainio M. Kaspereit. Optimization Of Steady-State Recycling Chromatography Under Reduced Purity Constraints (oral). AIChE Annual Meeting, Salt Lake City (USA), 2007.
- [97] G. Ziomek, M. P. Elsner, M. Kaspereit, D. Antos, A. Seidel-Morgenstern. Assessment of Coupling Chromatography and Crystallization for Productivity Enhancement (oral). ECCE-6 (European Congress of Chemical Engineering), Copenhagen (Denmark), 2007.
- [98] T. Sainio, L. Zhang, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Continuous Reactive Chromatography Under Non-isothermal Conditions (oral). ECCE-6 (European Congress of Chemical Engineering), Copenhagen, Denmark, 2007.
- [99] M. Kaspereit. Optimisation Problems in Advanced Operating Modes of Continuous Chromatography (oral, invited). 23rd IFIP TC 7 (Conference on System Modelling and Optimization), Cracow (Poland), 2007.

- [100] G. Ziomek, M. P. Elsner, M. Kaspereit, D. Antos, A. Seidel-Morgenstern. Theoretical and Experimental Investigations of Coupling Chromatography with Preferential Crystallization for Enantioseparation (oral). 19th Polish Conference of Chemical and Process Engineering, Rzeszow (Poland), 2007.
- [101] T. Sainio, L. Zhang, M. Kaspereit, T. Vu, P. Mai, A. Kienle, A. Seidel-Morgenstern. Nonisothermal Reactive Chromatography (oral). FOA9 - Fundamentals of Adsorption, Giardini Naxos, Sicily (Italien), 2007.
- [102] M. Kaspereit, A. Kulkarni, A. Kienle. Dynamics and Operation of a Micro-Scale Chromatographic Reactor for Heterogeneously Catalysed Liquid Phase Reactions (oral). CAMURE-6 & ISMR-5 (6th International Symposium on Catalysis in Multiphase Reactors and 5th International Symposium on Multifunctional Reactors), Pune (India), 2007.
- [103] T. Jacobs, A. Gomide, M. Kaspereit, K.-P. Zeyer, A. Kienle, P. Hauptmann. In-line Analysis of Chemical Reactions in Micro Reactors Using Thermal Mass Flow Sensors (oral). EUROCON 2007, Warsaw (Poland), in: IEEE Catalog 571 - 574, 2007.
- [104] M. Kaspereit, T. Sainio, Seidel-Morgenstern, A. Kienle. Application of Equilibrium Theory for Analysis of Non-Isothermal Chromatographic Separations and Chromatographic Reactors (oral). AIChE Annual Meeting, San Francisco (USA), 2006.
- [105] M. Kaspereit, A. Seidel-Morgenstern, A. Kienle. Design of Continuous Chromatography Under Reduced Purity Requirements (oral). SPICA 2006 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Innsbruck (Austria), 2006.
- [106] M. Kaspereit, H. Schramm, M. Lübbert, B. Holz, A. Kienle, A. Seidel-Morgenstern. Application of the Modicon-SMB Concept for Variable Purity Requirements (poster). PREP - 19th Intl. Symp., Exhibit and Workshops on Preparative/Process Chromatography, Baltimore (USA), 2006.
- [107] T. Sainio, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Thermal Effects in Reactive Chromatography (oral). ISCRE 19 - International Symposium on Chemical Reaction Engineering, Potsdam, 2006.
- [108] A. Kulkarni, K.-P. Zeyer, T. Jacobs, M. Kaspereit, A. Kienle. Feasibility Studies and the Dynamics of Catalytic Liquid Phase Esterification Reactions in a Micro Plant (oral). IMRET 9 - International Conference on Microreaction Technology, Potsdam, 2006.
- [109] K. Gedicke, M. Kaspereit, A. Seidel-Morgenstern. Applying Mass Balances to Evaluate the Potential of Hybrid Separation Processes (oral). Process Integration and Modeling of Chromatography Processes, Rzeszów (Poland), 2004.

- [110] M. Kaspereit, A. W. Mahoney, K. Gedicke, A. Seidel-Morgenstern. Dynamic Analysis of Hybrid Separation Processes: Flowsheet-integration of Continuous Chromatography and Enantioselective Crystallisation (oral). SPICA 2004 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Aachen, 2004.
- [111] K. Gedicke, M. Kaspereit, A. Seidel-Morgenstern. Applying Mass Balances to Evaluate the Potential of Hybrid Separation Processes (poster, 3rd poster award). SPICA 2004 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Aachen, 2004.
- [112] M. Kaspereit A. Seidel-Morgenstern. Enantiomerentrennung durch Integration von SMB-Chromatographie und enantioselektiver Kristallisation (poster). Dechema / GVC-Jahrestagungen 2004, Karlsruhe, abstract: Chemie-Ingenieur-Technik 76 (2004) 1423-1424, 2004.
- [113] M. Kaspereit A. Seidel-Morgenstern. Integration of SMB Chromatography and Crystallisation for Enantioseparations (poster). PREP - 17th Intl. Symp., Exhibit and Workshops on Preparative/Process Chromatography, Baltimore (USA), 2004.
- [114] Y. Shan, M. Kaspereit, A. Seidel-Morgenstern. Separation of Multicomponent Mixtures Using a Combination of Batch Chromatography and Continuous Countercurrent Chromatography (poster). PREP - 17th Intl. Symp., Exhibit and Workshops on Preparative/Process Chromatography, Baltimore (USA), 2004.
- [115] M. Kaspereit, H. Schramm, A. Kienle, A. Seidel-Morgenstern. Improvement of SMB Process by Cyclic Modulation of the Feed Concentration (poster). ECCE - 4th European Congress in Chemical Engineering, Granada (Spain), 2003.
- [116] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Impact of Periodically Modified Feed Concentrations on Simulated Moving Bed Processes (oral). PREP - 16th Intl. Symp., Exhibit & Workshops on Preparative/Process Chromatography, San Francisco (USA), 2003.
- [117] K. Gedicke, M. Kaspereit, A. Seidel-Morgenstern. Parametric Study of Coupling Chromatography and Crystallization for Efficient Enantioseparations (poster). PREP - 16th Intl. Symp., Exhibit & Workshops on Preparative / Process Chromatography, San Francisco (USA), 2003.
- [118] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. Verbesserung der Trennleistung von Simulated Moving Bed-Prozessen durch zyklische Modulation der Feedkonzentration (poster). DECHEMA/GVC-Jahrestagungen, Mannheim (Germany), abstract: Chemie-Ingenieur-Technik 75 (2003) 1170-1171, 2003.

- [119] H. Schramm, M. Kaspereit, A. Kienle, A. Seidel-Morgenstern. SMB chromatography with periodically modified feed concentrations (oral). ACHEMA 2003, Frankfurt/M. (Germany), abstract: Proc. ACHEMA p.73, 2003.
- [120] M. Kaspereit A. Seidel-Morgenstern. Design of Regeneration Zones in SMB processes / Auslegung der Regenerationszonen des SMB-Verfahrens (oral). GVC-Jahrestagung, Wiesbaden, abstract: Chemie-Ingenieur-Technik, 74 (2002) 591-592, 2002.
- [121] M. Kaspereit A. Seidel-Morgenstern. Impact of Isotherm Parameters for Reduced Purity Requirements in Preparative Chiral Separations by SMB and Elution Chromatography (poster). SPICA 2002 - Intl. Symp. on Preparative and Industrial Chromatography and Allied Techniques, Heidelberg (Germany), 2002.
- [122] M. Kaspereit, H. Lorenz, A. Seidel-Morgenstern. Coupling of Chromatography and Crystallisation for Efficient Enantioseparation (poster). 14th Intl. Symp. on Chirality (ISCD-14), Hamburg, 2002.
- [123] M. Kaspereit, H. Lorenz, A. Seidel-Morgenstern. Coupling of Simulated Moving Bed Technology and Crystallization to Separate Enantiomers (oral). Fundamentals of Adsorption 7, Nagasaki (Japan) May 2001. In: K. Kaneko et al. (Eds.): Fundamentals of Adsorption 7, IK International Ltd., Chiba City, Japan (2002) 101-108.
- [124] H. Lorenz, A. Perlberg, M. Kaspereit, K. Gedicke, D. Sapoundjiev, A. Seidel-Morgenstern. Coupling Chromatographic Separation and Crystallisation of Enantiomers (poster). in: Proceedings of the 15th Intl. Symp. on Preparative/Process Chromatography – PREP 2002, Washington, USA, 2002.
- [125] H. Lorenz, M. Kaspereit, A. Perlberg, A. Seidel-Morgenstern. Theoretical and Experimental Study of Thermodynamic and Kinetic Aspects of Enantioselective Crystallization (oral). 3rd European Congress of Chemical Engineering ECCE-3, June 26-28, Nuremberg (Germany), abstract: Chemie-Ingenieur-Technik 73 (2001) 712, in: Proc. ECCE-3, 2001.
- [126] M. Kaspereit, H. Lorenz, A. Seidel-Morgenstern. Coupling of Chromatography and Crystallization for Enantioseparation (oral). 3rd European Congress of Chemical Engineering ECCE-3, June 26-28, Nuremberg (Germany), abstract: Chemie-Ingenieur-Technik 73 (2001) 720-721; in: Proc. ECCE-3 p. 1-7, 2001.