Davydova, Ekaterina; Wouters, Sam; Deridder, Sander.; Desmet, Gert; Eeltink, Sebastiaan; Schoenmakers, Peter, 2016, Design and evaluation of microfluidic devices for two-dimensional spatial separations, Journal of Chromatography A, 1434, 127-135

Blumberg, Leonid; Desmet, Gert, 2016, Optimal Mixing Rate in Linear Solvent Strength Gradient Liquid Chromatography, Analytical Chemistry, 88, 2281-2288

Callewaert, Manly; Desmet, Gert; Ottevaere, Heidi; De Malsche, Wim, 2016, Detailed kinetic performance analysis of micromachined radially elongated pillar array columns for liquid chromatography, Journal of Chromatography A, 1433, 75-84


Verschooten, T.; Callewaert, M.; Ci Tucker, L.; Vervaeke, M.; Van Erps, J.; De Malsche, W.; Mignani, A.G.; Thienpont, H.; Ottevaere, H., 2016, Optofluidic multi-measurement system for the online monitoring of lubricant oil, Measurement Science and Technology, 27, 15004

Van Assche, Tom; Baron, Gino; Denayer, Joeri F. M., 2016, Molecular separations with breathing metal-organic frameworks: modelling packed bed adsorbers, Dalton Transactions, 45, 4416-4430

Van Schoors, Jolien; Maes, Katrien; Van Wanseele, Yannick; Broeckhoven, Ken; Van Eeckhaut, Ann, 2016, Miniaturized ultra-high performance liquid chromatography coupled to electrochemical detection: Investigation of system performance for neurochemical analysis, Journal of Chromatography A, 1427, 69-78

De Vos, Jelle; Broeckhoven, Ken; Eeltink, Sebastiaan, 2016, Advances in Ultra-high-Pressure Liquid Chromatography Technology and System Design, Analytical Chemistry, 88, 262-278

Bozbiyik, Belgin; Lannoeye, Jeroen; De Vos, Dirk E.; Baron, Gino V.; Denaye, Joeri F. M., 2016, Shape selective properties of the Al-fumarate metal-organic framework in the adsorption and separation of n-alkanes, iso-alkanes, cyclo-alkanes and aromatic hydrocarbons, Physical Chemistry Chemical Physics, 18, 3294-3301

Hereijgers, Jonas; Vandermeersch, Tobias; Van Oeteren, Nicolas; Verelst, Harry; Song, Huiying; Cabooter, Deirdre; Breugelmans, Tom; De Malsche, Wim, 2016, Separation of Co(II)/Ni(II) with Cyanex 272 using a flat membrane microcontactor: Extraction kinetics study, Journal of Membrane Science, 499, 370-378

De Vos, Jelle; Kaal, Erwin R.; Swart, Remco; Baca, Martyna; Vander Heyden, Yvan; Eeltink, Sebastiaan, 2016, Aqueous size-exclusion chromatographic separations of intact proteins under native conditions: Effect of pressure on selectivity and efficiency, Journal of Separation Science, 39, 689-695
Van Assche, Tom R. C.; Campagnol, Nicolo; Muselle, Thibault; Terryn, Herman; Fransaer, Jan; Denayer, Joeri F. M., 2016, On controlling the anodic electrochemical film deposition of HKUST-1 metal-organic frameworks, Microporous and Mesoporous Materials, 224, 302-310

Hereijgers, Jonas; Ottevaere, Heidi; Breugelmans, Tom; De Malsche, Wim, 2016, Membrane deflection in a flat membrane microcontactor: Experimental study of spacer features, Journal of Membrane Science, 504, 153-161

Vanderheyden, Yoachim; Vanderlinden, Kim; Broeckhoven, Ken; Desmet, Gert, 2016, Problems involving the determination of the column-only band broadening in columns producing narrow and tailed peaks, Journal of Chromatography A, 1440, 74-84

Cousin Saint Remi, Julien; Lauerer, Alexander; Chmelik, Christian; Vandendael, Isabelle; Terryn, Herman; Baron, Gino; Denayer, Joeri F. M.; Korger, Joerg, 2016, The role of crystal diversity in understanding mass transfer in nanoporous materials, Nature Materials, 15, 401-406

Campagnol, Nicolo; Van Assche, Tom R. C.; Li, Minyuan; Stappers, Linda; Dinca, Mircea; Denayer, Joeri F. M.; Binnemans, Koen; De Vos, Dirk E.; Fransaer, Jan, 2016, On the electrochemical deposition of metal-organic frameworks, Journal of Materials Chemistry A, 4, 3914-3925

2015


Hereijgers, Jonas; Desmet, Gert; Breugelmans, Tom; De Malsche, Wim, 2015, Strategies to integrate porous layers in microfluidic devices, Microelectronic Engineering, 0, 1-13

Hereijgers, J. Breugelmans, T., De Malsche W., 2015, Breakthrough in a flat channel membrane microcontactor, Chemical Engineering Research and Design, 94, 98-104


Duerinck, T.; Denayer, J. F. M., 2015, Metal-organic frameworks as stationary phases for chiral chromatographic and membrane separations, Chemical Engineering Science, 124, 179-187


Hereijgers, J., Van Oeteren, N., Denayer, J.F.M., Breugelmans, T., De Malsche, W., 2015, Multistage counter-current solvent extraction in a flat membrane microcontactor, Chemical Engineering Journal, 273, 138-146


Ottevaere, Heidi; Van Overmeire, Sara; Albero, Jorge; Nieradko, Lukasz; Desmet, Gert; Gorecki, Christophe; Thienpoint, Hugo, 2015, Plastic light coupler for absorbance detection in silicon microfluidic channels, Microfluidics And Nanofluidics, 18, 559-568

Vonk, R., Wouters, S., Barcaru, A., Vivo Truyols, G., Eeltink, S., de Koning, L., Schoenmakers, P., 2015, Post-polymerization photografting on methacrylate-based monoliths for separation of intact proteins and protein digests with comprehensive two-dimensional liquid chromatography hyphenated with high-resolution mass-spectrometry, Analytical and Bioanalytical Chemistry, 407, 3817-3829

Jespers, Sander; Roeleveld, Kevin; Lynen, Frederic; Broeckhoven, Ken; Desmet, Gert, 2015, Kinetic plots for gas chromatography: Theory and experimental verification, Journal of Chromatography A, 1386, 81-88

De Vos, Jelle; Eeltink, Sebastiaan; Desmet, Gert, 2015, Peak refocusing using subsequent retentive trapping and strong eluent remobilization in liquid chromatography: A theoretical optimization study, Journal of Chromatography A, 1381, 74-86

Tyteca, Eva; Park, Soo Hyun; Shellie, Robert A.; Haddad, Paul R.; Desmet, Gert, 2015, Computer-assisted multi-segment gradient optimization in ion chromatography, Journal of Chromatography A, 1381, 101-109

Tyteca, Eva; Desfontaine, Vincent; Desmet, Gert; Guillarme, Davy, 2015, Possibilities of retention modeling and computer assisted method development in supercritical fluid chromatography, Journal of Chromatography A, 1381, 219-228

Tyteca, Eva; Desmet, Gert, 2015, On the inherent data fitting problems encountered in modeling retention behavior of analytes with dual retention mechanism, Journal of Chromatography A, 1403, 81-95

De Pauw, Ruben; Choikhet, Konstantin; Desmet, Gert; Broeckhoven, Ken, 2015, Understanding and diminishing the extra-column band broadening effects in supercritical fluid chromatography, Journal of Chromatography A, 1403, 132-137

Vonk, Rudy; Aalbers, Tom; Eeltink, Sebastiaan; Schoenmakers, Peter J., 2015, Temperature control in large-internal-diameter scaffolded monolithic columns operated at ultra-high pressures, Journal of Chromatography A, 1401, 60-68

Couck, Sarah; Liu, Ying-Ya; Leus, Karen; Baron, Gino V.; Van der Voort, Pascal; Denayer, Joeri P. M., 2015, Gas phase adsorption of alkanes, alkenes and aromatics on the sulfone-DUT-5 Metal Organic Framework, Microporous and Mesoporous Materials, 206, 217-225
Wouters, Bert; De Vos, Jelle; Desmet, Gert; Terryn, Herman; Schoenmakers, Peter J.; Eeltink, Sebastiaan, 2015, Design of a microfluidic device for comprehensive spatial two-dimensional liquid chromatography, Journal of Separation Science, 38, 1123-1129

Couck, Sarah; Van Assche, Tom; Liu, Ying-Ya; Baron, Gino V.; Van der Voort, Pascal; Denayer, Joeri F. M., 2015, Adsorption and Separation of Small Hydrocarbons on the Flexible, Vanadium-Containing MOF, COMOC-2, Langmuir, 31, 5063-5070

Song, Huiying; Adams, Erwin; Desmet, Gert; Cabooter, Deirdre, 2015, Evaluation and comparison of the kinetic performance of ultra-high performance liquid chromatography and high-performance liquid chromatography columns in hydrophilic interaction and reversed-phase liquid chromatography conditions (vol 1369, pg 83, 2014), Journal of Chromatography A, 1394, 159-159

Vonk, Rudy J.; Gargano, Andrea F. G.; Davydova, Ekaterina; Dekker, Henk L.; Eeltink, Sebastiaan; de Koning, Leo J.; Schoenmakers, Peter J., 2015, Comprehensive Two-Dimensional Liquid Chromatography with Stationary-Phase-Assisted Modulation Coupled to High-Resolution Mass Spectrometry Applied to Proteome Analysis of Saccharomyces cerevisiae, Analytical Chemistry, 87, 5387-5394

Nacken, Manfred; Baron, Gino V.; Heidenreich, Steffen; Rapagna, Sergio; D’Orazio, Annalisa; Gallucci, Katia; Denayer, Joeri F. M.; Foscolo, Pier Ugo, 2015, New DeTar catalytic filter with integrated catalytic ceramic foam: Catalytic activity under model and real bio syngas conditions, Fuel Processing Technology, 134, 98-106

Desmet, Gert; Callewaert, Manly; Ottevaere, Heidi; De Malsche, Wim, 2015, Merging Open-Tubular and Packed Bed Liquid Chromatography, Analytical Chemistry, 87, 7382-7388

Vankova, Nikola; De Vos, Jelle; Tyteca, Eva; Desmet, Gert; Edge, Tony; Ceslova, Lenka; Cesla, Petr; Eeltink, Sebastiaan, 2015, Effect of gradient steepness on the kinetic performance limits and peak compression for reversed-phase gradient separations of small molecules, Journal of Chromatography A, 1409, 152-158

De Vos, Jelle; De Pra, Mauro; Desmet, Gert; Swart, Remco; Edge, Tony; Steiner, Frank; Eeltink, Sebastiaan, 2015, High-speed isocratic and gradient liquid-chromatography separations at 1500 bar, Journal of Chromatography A, 1409, 138-145

Desmet, Gert; Cabooter, Deirdre; Broeckhoven, Ken, 2015, Graphical Data Representation Methods To Assess the Quality of LC Columns, Analytical Chemistry, 87, 8593-8602

Danilov, Valery; De Schepper, Peter; Denayer, Joeri, 2015, A TSR model for direct propane fuel cell with equilibrium adsorption and desorption processes, Renewable Energy, 83, 1084-1096

Vandermeersch, Tobias; Goovaerts, Robert; Luyten, Jan; Denayer, Joeri; De Malsche, Wim, 2015, Tracking the liquid-liquid extraction performance in mesoflow reactors, Chemical Engineering Journal, 279, 9-17

Tanaka, Shunsuke; Fujimoto, Hiroki; Denayer, Joeri; Miyamoto, Manabu; Oumi, Yasunori; Miyake, Yoshikazu, 2015, Surface modification of soft-templated ordered mesoporous carbon for electrochemical supercapacitors, Microporous and Mesoporous Materials, 217, 141-149
De Schepper, Peter; Li, Ben; Calemma, Vincenzo; Denayer, Joeri F. M, 2015, Breakthrough Model for Adsorption of Paraffinic Mixtures in Mixed Phase Conditions, Industrial & Engineering Chemistry Research, 54, 8754-8761

Van de Voorde, Ben; Borges, Daiane Damasceno; Vermoortele, Frederik; Wouters, Robin; Bozbiyik, Belgin; Denayer, Joeri; Taulelle, Francis; Martineau, Charlotte; Serre, Christian; Maurin, Guillaume; De Vos, Dirk, 2015, Isolation of Renewable Phenolics by Adsorption on Ultrastable Hydrophobic MIL-140 Metal-Organic Frameworks, ChemSusChem, 8, 3159-3166

Andres, Axel; Broeckhoven, Ken; Desmet, Gert, 2015, Methods for the experimental characterization and analysis of the efficiency and speed of chromatographic columns: A step-by-step tutorial, Analytica Chimica Acta, 894, 20-34


Anjum, M. Waqas; de Clippel, F.; Didden, J.; Khan, Asim Laeeq; Coudc, Sarah; Baron, Gino V.; Denayer, Joeri F. M.; Sels, B. F.; Vankelecom, I. F. J., 2015, Polyimide mixed matrix membranes for CO2 separations using carbon-silica nanocomposite fillers, Journal Of Membrane Science, 495, 121-129

Hereijgers, Jonas; Breugelmans, Tom; De Malsche, Wim, 2015, Chromatography as an inspiration for microreactors, Journal of Chemical Technology and Biotechnology, 90, 2122-2131

De Pauw, Ruben; Pursch, Matthias; Desmet, Gert, 2015, Using the column wall itself as resistive heater for fast temperature gradients in liquid chromatography, Journal of Chromatography A, 1420, 129-134

Wouters, Bert; Davydoeva, Ekaterina; Wouters, Sam; Vivo-Truyols, Gabriel; Schoenmakers, Peter J.; Eeltink, Sebastiaan, 2015, Towards ultra-high peak capacities and peak-production rates using spatial three-dimensional liquid chromatography, Lab on a Chip, 15, 4415-4422

Collins, Carol; Guillarme, Davy; Desmet, Gert; Dolan, John; Dong, Michael; Ferguson, Paul; Glajch, Joseph; Gritti, Fabrice; McNally, Mary Ellen; Pursch, Matthias; Rozing, Gerard; Sandra, Pat; Snyder, Lloyd R.; Stoll, Dwight, 2015, The Current Status and Future of LC Column Technology: What the Experts Are Saying, LC GC North America, 33, 40-45

De Coster, Diane; Ottevaere, Heidi; Vervaeke, Michael; Van Erps, Jurgen; Callewaert, Manly; Wuytens, Pieter; Simpson, Stephen H.; Hanna, Simon; De Malsche, Wim; Thienpont, Hugo, 2015, Mass-manufacturable polymer microfluidic device for dual fiber optical trapping, Optics Express, 23, 30991-31009

Van Aelst, Joost; Verboekend, Danny; Philippaerts, An; Nuttens, Nicolas; Kurttepeli, Mert; Gobechiya, Elena; Haouas, Mohamed; Sree, Sreeprasanth P.; Denayer, Joeri F. M.; Martens, Johan A.; Kirschhock, Christine E. A.; Taulelle, Francis; Bals, Sara; Baron, 2015, Catalyst Design by NH4OH Treatment of USY Zeolite, Advanced Functional Materials, 25, 7130-7144
Song, Huiying; Desmet, Gert; Cabooter, Deirdre, 2015, Evaluation of the Kinetic Performance Differences between Hydrophilic-Interaction Liquid Chromatography and Reversed-Phase Liquid Chromatography under Conditions of Identical Packing Structure, Analytical Chemistry, 87, 12331-12339

Tanaka, Shunsuke; Fujita, Kosuke; Miyake, Yoshikazu; Miyamoto, Manabu; Hasegawa, Yasuhisa; Makino, Takashi; Van der Perre, Stijn; Cousin Saint Remi, Julien; Van Assche, Tom; Baron, Gino V.; Denayer, Joeri F. M., 2015, Adsorption and Diffusion Phenomena in Crystal Size Engineered ZIF-8 MOF, Journal of Physical Chemistry C, 119, 28430-28439

2014


Duerinck, Tim; Denayer, Joeri F. M., 2014, Unusual chain length dependent adsorption of linear and branched alkanes on UiO-66, Adsorption-Journal Of The International Adsorption Society, 20, 251-259

Newsome, David; Gunawan, Sofranita; Baron, Gino; Denayer, Joeri; Coppens, Marc-Olivier, 2014, Adsorption of CO2 and N-2 in Na-ZSM-5: effects of Na+ and Al content studied by Grand Canonical Monte Carlo simulations and experiments, Adsorption-Journal Of The International Adsorption Society, 20, 157-171

Van de Voorde, Ben; Bueken, Bart; Denayer, Joeri; De Vos, Dirk, 2014, Adsorptive separation on metal-organic frameworks in the liquid phase, Chemical Society Reviews, 43, 5766-5788

Tanaka, Shunsuke; Shimada, Tomoko; Fujita, Kosuke; Miyake, Yoshikazu; Kida, Koji; Yogo, Katsunori; Denayer, Joeri F. M.; Sugita, Miki; Takewaki, Takahiko, 2014, Seeding-free aqueous synthesis of zeolitic imidazolate framework-8 membranes: How to trigger preferential heterogeneous nucleation and membrane growth in aqueous rapid reaction solution, Journal Of Membrane Science, 472, 29-38


Van Assche, Tom R. C.; Duerinck, Tim; Van der Perre, Stijn; Baron, Gino V.; Denayer, Joeri F. M., 2014, Prediction of Molecular Separation of Polar-Apolar Mixtures on Heterogeneous Metal-Organic Frameworks: HKUST-1, Langmuir, 30, 7878-7883

Van der Perre, Stijn; Duerinck, Tim; Valvekens, Pieterjan; De Vos, Dirk E.; Baron, Gino V.; Denayer, Joeri F. M., 2014, Chromatographic separation through confinement in nanocages, Microporous And Mesoporous Materials, 189, 216-221


Eeltink, S., Kaal, E., 2014, How can we improve ion-exchange separations in LC?, Bioanalysis, 6, 2021-2023


De Bruyne, Selm; De Masche, Wim; Deridder, Sander; Gardeniers, Han; Desmet, Gert, 2014, In Situ Measurement of the Transversal Dispersion in Ordered and Disordered Two-Dimensional Pillar Beds for Liquid Chromatography, Analytical Chemistry, 86, 2947-2954

Goovaerts, Robert; Vandermeersch, Tobias; Op de Beeck, Jeff; Eghbali, Hamed; Desmet, Gert, 2014, The axial rearrangement mixer: Working principles and in-depth investigation, Electrophoresis, 35, 298-305

Tytica, Eva; Periat, Aurelie; Rudaz, Serge; Desmet, Gert; Guillarme, Davy, 2014, Retention modeling and method development in hydrophilic interaction chromatography, Journal of Chromatography A, 1337, 116-127

Cabooter, Deirdre; Choikhet, Konstantin; Lestremauc, Francois; Dittmann, Monika; Desmet, Gert, 2014, Towards a generic variable column length method development strategy for samples with a large variety in polarity, Journal of Chromatography A, 1372, 174-186

De Pauw, Ruben; Shoykhet (Choikhet), Konstantin; Desmet, Gert; Broeckhoven, Ken, 2014, Exploring the speed-resolution limits of supercritical fluid chromatography at ultra-high pressures, Journal of Chromatography A, 1374, 247-253

Deridder, Sander; Vanmessen, Alison; Nakanishi, Kazuki; Desmet, Gert; Cabooter, Deirdre, 2014, Experimental and numerical validation of the effective medium theory for the B-term band broadening in 1st and 2nd generation monolithic silica columns, Journal of Chromatography A, 1351, 46-55
Tyteca, Eva; Guillarme, Davy; Desmet, Gert, 2014, Use of individual retention modeling for gradient optimization in hydrophilic interaction chromatography: Separation of nucleobases and nucleosides, Journal of Chromatography A, 1368, 125-131


De Beeck, Jeff Op; Callewaert, Manly; Ottevaere, Heidi; Gardeniers, Han; Desmet, Gert; De Malsche, Wim, 2014, Suppression of the sidewall effect in pillar array columns with radially elongated pillars, Journal of Chromatography A, 1367, 118-122

Vanderheyden, Yoachim; Broeckhoven, Ken; Desmet, Gert, 2014, Comparison and optimization of different peak integration methods to determine the variance of unretained and extra-column peaks, Journal of Chromatography A, 1364, 140-150

De Pauw, Ruben; Choikhet, Konstantin; Desmet, Gert; Broeckhoven, Ken, 2014, Temperature effects in supercritical fluid chromatography: A trade-off between viscous heating and decompression cooling, Journal of Chromatography A, 1365, 212-218


Tyteca, Eva; Periat, Aurelie; Rudaz, Serge; Desmet, Gert; Guillarme, Davy, 2014, Retention modeling and method development in hydrophilic interaction chromatography (vol 1337, pg 116, 2014), Journal of Chromatography A, 1366, 136-136

Tyteca, Eva; Vanderlinden, Kim; Favier, Maxime; Clicq, David; Cabooter, Deirdre; Desmet, Gert, 2014, Enhanced selectivity and search speed for method development using one-segment-per-component optimization strategies (vol 1358, pg 145, 2014), Journal of Chromatography A, 1366, 138-139

Vaast, Axel; Tyteca, Eva; Desmet, Gert; Schoenmakers, Peter J.; Eeltink, Sebastiaan, 2014, Gradient-elution parameters in capillary liquid chromatography for high-speed separations of peptides and intact proteins (vol 1355, pg 149, 2014), Journal of Chromatography A, 1366, 137-137

De Pauw, Ruben; Choikhet, Konstantin; Desmet, Gert; Broeckhoven, Ken, 2014, Occurrence of turbulent flow conditions in supercritical fluid chromatography, Journal of Chromatography A, 1361, 277-285


Tyteca, Eva; Vanderlinden, Kim; Favier, Maxime; Clicq, David; Cabooter, Deirdre; Desmet, Gert, 2014, Enhanced selectivity and search speed for method development using one-segment-per-component optimization strategies, Journal of Chromatography A, 1358, 145-154

Kahsay, Getu; Broeckhoven, Ken; Adams, Erwin; Desmet, Gert; Cabooter, Deirdre, 2014, Kinetic performance comparison of fully and superficially porous particles with a particle size of 5 μm: Intrinsic evaluation and application to the impurity analysis of griseofulvin, Talanta, 122, 122-129

Broeckhoven, K.; Desmet, G., 2014, The future of UHPLC: Towards higher pressure and/or smaller particles?, Trac-Trends In Analytical Chemistry, 63, 65-75

2013

Vanderheyden, Y., Cabooter, D., Desmet, G., Broeckhoven, K., 2013, Isocratic and gradient impedance plot analysis and comparison of some recently introduced large size core-shell and fully porous particles, Journal of Chromatography A, 1312, 80-86

De Pauw, R., Desmet, G., Broeckhoven, K., 2013, Theoretical evaluation of the advantages and limitations of constant pressure versus constant flow rate gradient elution separation in supercritical fluid chromatography, Journal of Chromatography A, 1312, 134-142


Smits, W., Desmet, G., 2013, Computational fluid dynamics study of the optimal design and operating conditions of the segmentation ring used in parallel segmented flow columns, Journal of Chromatography A, 1294, 50-57


Fekete, S., Veuthey, J.L., Eeltink, S., Guillarme, D., 2013, Comparative study of recent wide-pore materials of different stationary phase morphology, applied for the reversed-phase analysis of recombinant monoclonal antibodies, Analytical and Bioanalytical Chemistry, 10, 3137-3151

Verstraeten, M., Broeckhoven, K., Lynen, F., Choikhet, K., Landt, K., Dittmann, M., Witt, K., Sandra, P., Desmet, G., 2013, Quantification aspects of constant pressure (ultra) high pressure liquid chromatography using mass-sensitive detectors with a nebulizing interface, Journal of Chromatography A, 1274, 118-128
Desmet, G., Eeltink, S., 2013, Fundamentals for LC Miniaturization, Analytical Chemistry, 85, 543-556


Campagnol, N., Van Assche, T., Boudewijns, T., Denayer, J.F.M., Binnemans, K., De Vos, D., Fransaer, J., 2013, High pressure, high temperature electrochemical synthesis of metal-organic frameworks: films of MIL-100 (Fe) and HKUST-1 in different morphologies, Journal of Materials Chemistry A, 19, 5827-5830


columns using electrochemical anodization for liquid chromatography, Lab-on-a-Chip, submitted, submitted


2012


Verstraeten, M., Broeckhoven, K., Lynen, F., Choikhet, K., Dittmann, M., Witt, K., Sandra, P., Desmet, G., 2012, Comparison of the quantitative performance of constant pressure versus constant flow rate
gradient elution separations using concentration-sensitive detectors, Journal of Chromatography A, 1232, 65-76

Nacken, M., Ma, L., Heidenreich, S., Verpoort, F., Baron, G.V., 2012, Development of a Catalytic Ceramic Foam for Efficient Tar Reforming of a Catalytic Filter for Hot Gas Cleaning of Biomass-Derived Syngas, Applied Catalysis B: Environmental, 125, 111-119


Verstraeten, M., Broeckhoven, K., Lynen, F., Choikhet, K., Dittmann, M., Witt, K., Sandra, P., Desmet, G., 2012, Maximizing Robustness and Throughput by Pressure Controlled Operation, LC×GC North America, 30, 1046-1051


Kalili, K.M., Cabooter, D., Desmet, G., de Villiers, A., 2012, Kinetic optimisation of the reversed phase liquid chromatographic separation of proanthocyanidins on sub-2 mu m and superficially porous phases, Journal of Chromatography A, 1236, 63-76


Vaast, A., Broeckhoven, K., Dolman, S., Desmet, G., Eeltink, S., 2012, Comparison of the gradient kinetic performance of silica monolithic capillary columns with columns packed with 3 mu m porous and 2.7 mu m fused-core silica particles, Journal of Chromatography A, 1228, 270-275


Gases on an Amino-Functionalized Metal-Organic Framework: An Adsorption and In Situ XRD Study, Chemsuschem, 4, 740-750


Cousin Saint Remi, J., Baron, G., Denayer, J., 2012, Adsorptive separations for the recovery and purification of biobutanol, Adsorption, 18, 367-373


Broeckhoven, K., Desmet, G., 2012, Efficiency gain limits of the parallel segmented inlet and outlet flow concept in analytical liquid chromatography columns suffering from radial transcolumn packing density gradients, Journal of Chromatography A, 1258, 66-75


Goovaerts, R., Desmet, G., Denayer, J., De Malsche, W., 2012, Combined improved mixing and reduced energy dissipation by combining convective effects and lamination, Chemical Engineering Journal, 211, 260-269


2011


Liekens, A., Denayer, J., Desmet, G., 2011, Use of pressure drop profiles to assess the accuracy of Total Pore Blocking measurements of the external porosity of chromatographic columns, Journal of Chromatography A, 1218, 3940-3943


Broeckhoven, K., Cabooter, D., Desmet G., 2011, Maximizing your lab's throughput with optimized column lengths and particle diameters, LC GC Europe, 24, 396-404


Desmet, G., 2011, John Knox, a Pioneer of Both Gas and Liquid Chromatography, LC GC North America, 29, 996


van de Meent, M.H.M., Eeltink, S., de Jong, G.J., 2011, Potential of poly(styrene-co-divinylbenzene) monolithic columns for the LC-MS analysis of protein digests, Analytical and Bioanalytical Chemistry, 399, 1845-1852

Vanhoutte, D.J.D., Eeltink, S., Kok, W.T., Schoenmakers, P.J., 2011, Construction and initial evaluation of an apparatus for spatial comprehensive two-dimensional liquid-phase separations, Analytica Chimica Acta, 701, 92-97


Remy, T., Baron, G.V., Denayer, J.F.M., 2011, Modeling the Effect of Structural Changes during Dynamic Separation Processes on MOFs, Langmuir, 27, 13064-13071

Vaast, A., Broeckhoven, K., Desmet, G., Eeltink, S., 2011, Comparison of the gradient kinetic performance of silica monolithic capillary columns with columns packed with 3 µm porous and 2.7 µm fused-core silica particles, Journal of Chromatography A, 1228, 270-275


Van Assche T.R.C., Remy T., Desmet G., Baron G.V., Denayer J.F.M., 2011, Adsorptive separation of liquid water/acetonitrile mixtures, Separation and Purification Technology, 82, 76-86

2010


De Clippel F., Harkiolakis A., Ke X., Vosch T., Van Tendeloo G., Baron G.V., Jacobs P.A., Denayer J.F.M., Sels B.F., 2010, Molecular sieve properties of mesoporous silica with intraporous nanocarbon, Chemical Communications, 6, 928-930


Cabooter, D., Decrop, W., Eeltink, S., Swart, R., Ursem, M., Lestremau, F., Desmet, G., 2010, Automatic Column Coupling System To Operate Chromatographic Supports Closer To Their Kinetic Performance Limit and To Enhance Method Development, Analytical Chemistry, 82, 1054-1065


Eeltink, S., Decrop, W. M. C., Steiner, F., Ursem, M., Cabooter, D., Desmet, G., Kok, W. Th., 2010, Use of kinetic plots for the optimization of the separation time in ultra-high-pressure LC, Journal of Separation Science, 33, 2629-2635


Nacken, M., Ma, L., Heidenreich, S., et al., 2010, Catalytic Activity in Naphthalene Reforming of Two Types of Catalytic Filters for Hot Gas Cleaning of Biomass-Derived Syngas, Industrial & Engineering Chemistry Research, 49, 5536-5542

Eeltink, S., Dolman, S., Detobel, F., Swart, R., Ursem, M., Schoenmakers, P.J., 2010, High-efficiency liquid chromatography-mass spectrometry separations with 50 mm, 250 mm, and 1 m long polymer-based monolithic capillary columns for the characterization of complex proteolytic digests, Journal of Chromatography A, 1217, 6610-6615


Finsy V., Calero S., Garcia-Perez E., Merkling P.J., Vedts G., De Vos D.E., Baron G.V., Denayer J.F.M., 2009, Low-coverage adsorption properties of the metal-organic framework MIL-47 studied by pulse chromatography and Monte Carlo simulations, Physical Chemistry Chemical Physics, 18, 3515-3521

Huang S., Finsy V., Persoons J., Telling M.T.F., Baron G.V., Denayer J.F.M., 2009, Rotation dynamics of 2-methyl butane and n-pentane in MCM-22 zeolite: A molecular dynamics simulation study, Physical Chemistry Chemical Physics, 16, 2869-2875


Broeckhoven, K., Desmet, G., 2009, Numerical and analytical solutions for the time-dependent band broadening originating from radial column heterogeneity due to difference in packing density or temperature effects, Journal of Chromatography A, 1216, 3270-3279


Illa, X., De Malsche, W., Bomer, J., Gardeniers, H., Eijkel, J., Morante, J.R., Romano-Rodriguez and Desmet, G., 2009, An array of ordered pillars with retentive properties for pressure-driven liquid chromatography fabricated directly from an unmodified cyclo-olefin copolymer, Lab Chip, 9, 1511 - 1516

Desmet, Gert; Cabooter, Deirdre, 2009, Are Short Columns Always The Best Option?, LC GC EUROPE, 22, 70


Detobel F., Fekete, V., De Malsche, W., De Bruyne, S., Gardeniers, H. and Desmet, G., 2009, Estimation of surface desorption times in hydrophobically coated nanochannels and their effect on
shear-driven and pressure-driven chromatography, Analytical and Bioanalytical Chemistry, 394, 399-411


Desmet, G., Knox, J., 2009, Icons of Chromatography: John Knox, LC GC Europe, 22, 284

Cabooter, D., Lestremau, F., de Villiers, A., Broeckhoven, K., Lynen, F., Sandra, P. and Desmet, G., 2009, Investigation of the validity of the kinetic plot method to predict the performance of coupled column systems operated at very high pressures under different thermal conditions, Journal of Chromatography A, 1216, 3895-3903


De Wilde, D., Detobel, F., Billen, J., Deconinck, J. and Desmet, G., 2009, Modelling the relation between the species retention factor and the C-term band broadening in pressure-driven and electrically driven flows through perfectly ordered 2-D chromatographic media, Journal of Separation Science, 32, 4077-4088


François, I., Cabooter D., Sandra K., Lynen F., Desmet G., Sandra P., 2009, Tryptic digest analysis by comprehensive reversed phase x two reversed phase liquid chromatography (RP-LC×2RP-LC) at different pH’s, Journal of Separation Science, 32, 1137-1144

Eghbali, H., Matthijs, S., Verdoold, V., Gardeniers, H., Cornelis, P., Desmet, G., 2009, Use of non-porous pillar array columns for the separation of Pseudomonas pyoverdine siderophores as an example of a real-world biological sample, Journal of Chromatography A, 1216, 8603-8611

Nacken, M., Ma, L., Heidenreich, S., et al., 2009, Performance of a catalytically activated ceramic hot gas filter for catalytic tar removal from biomass gasification gas, Applied Catalysis B: Environmental, 88, 292-298

2008


Desmet, G., 2008, Comparison techniques for HPLC column performance, LC-GC Europe, 21, 310-315


Desmet, G. and Broeckhoven, K., 2008, Equivalence of the different Cm- and Cs-term expressions appearing in literature and a geometrical model uniting them, Analytical Chemistry, 80, 8076-8088


De Malsche, W., Gardeniers, H. and Desmet, G., 2008, Experimental Study of Porous Silicon Shell Pillars under Retentive Conditions, Analytical Chemistry, 80, 5391-5400


Cabooter, D., Billen, J., Terryn, H., Lynen, F., Sandra, P. and Desmet, G., 2008, Kinetic plot and particle size distribution analysis to discuss the performance limits of sub-2 µm and supra-2 µm particle columns, Journal of Chromatography A, 1204, 1-10

Heinisch, S., Rocca, J.L., and Desmet, G., 2008, Kinetic plot equations for evaluating the real performance of the combined use of high temperature and ultra-high pressure in liquid chromatography: Application to commercial instruments and 2.1 and 1 mm I.D. Columns, Journal of Chromatography A, 1203, 124-136

Cabooter, D., Lestremau, F., Lynen, F., Sandra, P. and Desmet, G., 2008, Kinetic plot method as a tool to design coupled column systems producing 100 000 theoretical plates in the shortest possible time, Journal of Chromatography A, 1212, 23-34

Van Overmeire, S., Ottevaere, H., Desmet, G. and Thienpont, H., 2008, Miniaturized detection system for fluorescence and absorbance measurements in chromatographic applications, IEEE journal, Selected Topics on Quantum Electronics, 14, 140-150


Cabooter, D., Lynen, F., Sandra, P. and Desmet, G., 2008, Turbulence as a source of excessive baseline noise during high speed isocratic and gradient separations using absorption detection, Analytical Chemistry, 80, 1679-1688


Ma, L., Baron, G.V., 2008, Mixed zirconium-alumina supports for Ni/MgO based catalytic filters for biomass fuel gas cleaning, Powder Technology, 180, 21-29

Van Overmeire, S., Ottevaere, H., Desmet, G. et al., 2008, Tolerance analysis of a micro-optical detection unit for fluorescence and absorbance measurements in lab-on-a-chip micro-channels for chromatographic applications, Biosensing, 7035, NA

Van Overmeire, S., Ottevaere, H., Desmet, G., Thienpont, H., 2008, Fluorescence and absorbance measurements for chromatographic analysis using a miniaturized micro-optical detection unit - art.


Daems I., Singh R., Baron G., Denayer J., 2007, Length exclusion in the adsorption of chain molecules on chabazite type zeolites, Chemical Communications, 13, 1316-1318


Nacken, M., Engelen, K., Ma, L., Baron, G.V., et al., 2007, Development of a tar reforming catalyst for integration in a ceramic filter element and use in hot gas cleaning, Industrial and Engineering Chemistry Research, 46, 1945-1951


2006


Denayer J.F.M., Daems I., Baron G.V., 2006, Adsorption and reaction in confined spaces, Oil and Gas Science and Technology, 4, 561-569


Billen, J. Gzil, P, and Desmet, G., 2006, Domain size-induced Heterogeneity As An Explanation for the Poor Performance of Small Domain Monolithic Columns and Other LC support Types, Analytical Chemistry, 78, 6191-6202


Desmet, G., Cabooter, D., Gzil, P. Verelst, H., Mangelings, D., Vander Heyden, Y. and Clicq, D., 2006, Future of high pressure liquid chromatography: Do we need porosity or do we need pressure?, Journal of Chromatography A, 1130, 158–166


Meulebroeck, W., Ottevaere, H., Scheir, K., Desmet, G., et al., 2006, A novel optical detection system for chromatography, The International Society for Optical Engineering, 6188, NA

2005


Denayer J.F.M., Ocakoglu R.A., De Meyer K., Baron G.V., 2005, Exploiting pore or cavity size and shape in separating linear and branched hydrocarbons by inverse selectivity: Enthalpy, entropy and packing effects, Adsorption, 1, 49-53


Denayer J.F.M., Baron G.V., 2005, The confinement factor: A thermodynamic parameter to characterize microporous adsorbents, Adsorption, 1, 85-90


Billen, J., Gzil, P., Baron, G.V., Desmet, G., 2005, A first principles explanation for the experimentally observed increase in A-term band broadening in small domain silica monoliths and other chromatographic supports, Journal of Chromatography A, 1077, 28-36

Vanderhoeven, J., Pappaert, K., Dutta, B., Van Hummelen, P. and Desmet, G., 2005, Comparison of a pump-around a diffusion-driven, and a shear-driven system for the hybridization of mouse lung and testis total RNA on microarrays, Electrophoresis, 26, 3773-3779


Vervoort, N., Saito, H., Nakanishi, K. and Desmet, G., 2005, Experimental validation of the tetrahedral skeleton model pressure drop correlation for silica monoliths and the influence of column heterogeneity, Analytical Chemistry, 77, 3986-3992

Desmet, G., Clicq, D. and Gzil, P., 2005, Geometry-independent plate height representation methods for the direct comparison of the kinetic performance of LC supports with a different size or morphology, Analytical Chemistry, 77, 4058-4070


Desmet, G., Gzil, P. and Clicq, D., 2005, Kinetic Plots To Directly Compare The Performance Of Differently Shaped and Sized LC Supports, LC-GC Europe, 18, 403-409


Degreef, J., Desmet, G. and Baron, G.V., 2005, Micro-fiber elements as perfusive catalysts or in catalytic mixers. Flow, mixing and mass transfer, Catalysis Today, 105, 331-336


2004


Clicq, D., Vervoort, N., Ranson, W, Baron, G.V., Desmet, G., et al., 2004, Axial dispersion measurements of Bodenstein >100,000 flows through nano-channels etched on flat surfaces, Chemical Engineering Science, 59, 2783-2790


Vankrunkelsven, S., Clicq, D., Pappaert, K., Baron, G.V. and Desmet, G., 2004, High Velocity Transport of Nano-Particles Through 1-D Nano-Channels At Very Large Particle to Channel Diameter Ratios, Analytical Chemistry, 76, 3005-3011

Vervoort, N., Billen, J., Gzil, P., Baron, G.V. and Desmet, G., 2004, Importance and reduction of the additional band broadening stemming from the sidewall effect in microfabricated monolithic columns, Analytical Chemistry, 76, 4501-4507


Clicq, D., Vervoort, N., Baron, G.V. and Desmet, G., 2004, Shear-driven Flow LC: Dispensing with Pumps and Voltage Supplies for Increased Speed and Resolution, LC GC, 17, 278-290


2003


Pappaert, K., Van Hummelen, P., Vanderhoeven, J., Baron, G.V. and Desmet, G., 2003, Diffusion-Reaction Modelling of DNA Hybridization Kinetics on Biochips, Chemical Engineering Science, 58, 4921-4930


2002

Desmet, G. and Baron G.V., 2002, A chromatographic explanation for the side-wall induced axial dispersion effect in pressure-driven and shear-driven flows through channels with a large aspect-ratio rectangular cross-section, Journal of Chromatography A, 946, 51-58


2001


Desmet, G., Clicq, D., Boogaerts, S., Vervoort, N. and Baron, G.V., 2001, Pushing the Miniaturisation of LC with Shear-driven Flows, Chromatographia, 53, S181-S187

2000

Denayer J.F., Baron G.V., Jacobs P.A., Martens J.A., 2000, Competitive physisorption effects in hydroisomerisation of n-alkane mixtures on Pt/Y and Pt/USY zeolite catalysts, Physical Chemistry Chemical Physics, 5, 1007-1014


Desmet, G. and Baron G.V., 2000, On the simultaneous optimization of the analysis time and the concentration detectability in open-tubular LC, Journal of Chromatography A, 867, 23-43

Desmet, G. and Baron G.V., 2000, The possibility of generating high speed shear-driven flows and their potential application in liquid chromatography, Analytical Chemistry, 72, 2160-2165

1999 & before


Denayer J.F.M., Baron G.V., 1997, Adsorption of normal and branched paraffins in faujasite zeolites NaY, HY, Pt/NaY and USY, Adsorption, 4, 251-265


Desmet, G., Verelst, H., and Baron, G.V., 1997, Transient and Stationary Axial Dispersion in Vortex Array Flows- II. Decoupling of Inter- and Intra-Vortex Transport Phenomena, Chemical Engineering Science, 52, 2403-2419

Desmet, G., Verelst, H., Baron, G.V., 1996, Local and global dispersion effects in Couette-Taylor flow .1. Description and modeling of the dispersion effects, Chemical Engineering Science, 8, 1287-1298

Desmet, G., Verelst, H., Baron, G.V., 1996, Local and global dispersion effects in Couette-Taylor flow .2. Quantitative measurements and discussion of the reactor performance, Chemical Engineering Science, 8, 1299-1309