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**Summary publication record:**

Publication	Number
Peer-Rev.-Journal papers listed in the Science Citation Index / <b>published</b>	60
Books & Book Chapters	5
Invited Talks	12
Conference Contributions	115

**Peer-Rev.-Journal papers listed in the Science Citation Index [60]:**

*Publications in collaboration with non-German research institutions/partners are highlighted yellow.*

1. N. Grimaldi, P.E. Rojas, S. Stehle, A. Cordoba, R. Schweins, S. Sala, S. Luelsdorf, D. Piña, J. Veciana, J. Faraudo, A. Triolo, **A.S. Braeuer**, N. Ventosa  
Pressure-responsive, surfactant-free CO<sub>2</sub>-based nanostructured fluids  
**ACS Nano** 11, 10774–10784 (2017)
2. Ch. Holzammer, J. Schicks, S. Will, **A.S. Braeuer**  
Influence of Sodium Chloride on the Formation and Dissociation Behavior of CO<sub>2</sub> Gas Hydrates  
The Journal of Physical Chemistry B 121, 8330-8337 (2017)
3. F. Michelino, M.T. Gebrekidan, A. Zambon, M. Vetralla, **A. Braeuer**, S. Spilimbergo  
*In situ* Raman-analysis of supercritical carbon dioxide drying applied to acellular esophageal matrix  
**The Journal of Supercritical Fluids** 128, 194-199 (2017)
4. **A.S. Braeuer**, J.J. Schuster, M.T. Gebrekidan, L. Bahr, F. Michelino, A. Zambon, S. Spilimbergo  
*In situ* Raman-analysis of CO<sub>2</sub>-assisted drying of fruit-slices  
**Foods** 37, 6, 11 pages (2017)
5. V. Strobel, J.J. Schuster, **A.S. Braeuer**, L. Vogt, H. Junge, M. Haumann  
Shining light onto the low-temperature methanol aqueous-phase reforming using homogeneous Ru-pincer complexes – operando Raman-GC studies  
**Reaction Chemistry & Engineering** 2, 390-396 (2017)
6. D. Bassing, **A.S. Braeuer**  
The lag between micro- and macro-mixing in compressed fluid flows

**Chemical Engineering Science** 163, 105-113 (2017)

7. M.G. Pastore Carbone, P. Musto, M. Pannico, **A. Braeuer**, G. Scherillo, G. Mensitieri, E. Di Maio  
Raman Line Imaging of Poly( $\epsilon$ -caprolactone)/Carbon Dioxide Solutions at High Pressures: A Combined Experimental and Computational Study for Interpreting Intermolecular Interactions and Free-Volume Effects  
**The Journal of Physical Chemistry B** 120, 9115-9131 (2016)
8. Ch. Holzammer, A. Finckenstein, S. Will, **A. Braeuer**  
How Sodium Chloride Salt Inhibits the Formation of CO<sub>2</sub> Gas Hydrates  
**The Journal of Physical Chemistry B** 120, 2452–2459 (2016)
9. G. Ferrentino, J.J. Schuster, **A. Braeuer**, S. Spilimbergo  
*In situ* Raman quantification of the dissolution kinetics of carbon dioxide in liquid solutions during a dense phase and ultrasound treatment for the inactivation of *Saccharomyces cerevisiae*  
**The Journal of Supercritical Fluids** 111, 104-111 (2016)
10. J. Quiño, M. Rühl, T. Klima, F. Ruiz, S. Will, **A. Braeuer**  
Supercritical drying of aerogel: *In situ* analysis of concentration profiles inside the gel and derivation of the effective binary diffusion coefficient using Raman spectroscopy  
**The Journal of Supercritical Fluids** 108, 1-12 (2016)
11. J.J. Schuster, Ph. Siegler, A. Guenther, K.-E. Wirth, **A. Braeuer**  
Simultaneous analysis of the dispersed liquid and the bulk gas phase of water sprays using Raman spectroscopy  
**Applied Spectroscopy** 70, 1055-1062 (2016)
12. M.T. Gebrekidan, C. Knipfer, F. Stelzle, J. Popp, S. Will, **A. Braeuer**  
A Shifted-Excitation Raman Difference Spectroscopy (SERDS) evaluation strategy for the efficient isolation of Raman spectra from extreme fluorescence interference  
**Journal of Raman Spectroscopy** 47, 198–209 (2016)
13. A. Günther, **A. Braeuer**, Ph. Siegler, B. Königer, K.-E. Wirth  
Temperature characteristics in a flash atomization process  
**Atomization and Sprays** 26, 1337-1359 (2016)
14. S.K. Luther, S. Stehle, K. Weihs, S. Will, **A. Braeuer**  
Determination of vapor-liquid equilibrium data in microfluidic segmented flows at elevated pressures using Raman spectroscopy  
**Analytical Chemistry** 87, 8165–8172 (2015)
15. J. Quiño, T. Hellwig, M. Griesing, W. Pauer, H.-U. Moritz, S. Will, **A. Braeuer**  
One-dimensional Raman spectroscopy and shadowgraphy for the analysis of the evaporation behavior of acetone/water drops  
**International Journal of Heat and Mass Transfer** 89, 406-413 (2015)

## Publications Andreas Braeuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

16. **A. Braeuer**, R. F. Hankel, M. K. Mehnert, J.J. Schuster, S. Will  
A Raman technique applicable for the analysis of the working principle of promoters and inhibitors of gas hydrate formation  
**Journal of Raman Spectroscopy** 46, 1145-1149 (2015)
17. I. De Marco, M. Rossmann, V. Prosapio, E. Reverchon, **A. Braeuer**  
Control of particle size, at micrometric and nanometric range, using supercritical antisolvent precipitation from solvent mixtures: application to PVP  
**Chemical Engineering Journal** 273, 344-352 (2015)
18. M.G. Pastore Carbone, E. Di Maio, P. Musto, **A. Braeuer**, G. Mensitieri  
On the unexpected non-monotonic profile of specific volume observed in PCL/CO<sub>2</sub> solutions  
**Polymer** 56, 252-255 (2015)
19. K. Reinhold-Lopez, **A. Braeuer**, B. Romann, N. Popovska-Leipertz, A. Leipertz  
Simultaneous *in situ* Raman monitoring of the solid and gas phases during the formation and growth of carbon nanotubes inside a cold wall CCVD reactor  
**CARBON** 78, 164-180 (2014)
20. C. Knipfer, J. Motz, W. Adler, K. Brunner, M.T. Gebrekidan, R. Hankel, A. Agaimy, S. Will, **A. Braeuer**, F.W. Neukam, F. Stelzle  
Raman difference spectroscopy: a non-invasive method for identification of oral squamous cell carcinoma  
**Biomedical Optics Express** 5, 3252-3265 (2014)
21. R. F. Hankel, P. E. Rojas, M. Cano-Sarabia, S. Sala, J. Veciana, **A. Braeuer**, N. Ventosa  
Surfactant-free CO<sub>2</sub>-based microemulsion-like system  
**Chemical Communications** 50, 8215-8218 (2014)
22. S. K. Luther, S. Will, **A. Braeuer**,  
Phase-specific Raman spectroscopy in fast segmented microfluidic flows  
**Lab on a Chip** 14, 2910-2913 (2014)
23. R. F. Hankel, A. Günther, K.-E. Wirth, A. Leipertz, **A. Braeuer**  
Liquid phase temperature determination in dense water sprays using linear Raman scattering  
**Optics Express** 22, 7962-7971 (2014)
24. M. Rossmann, **A. Braeuer**, E. Schluecker  
Supercritical antisolvent micronization of PVP and Ibuprofen Sodium towards tailored solid dispersions  
**The Journal of Supercritical Fluids** 89, 16-27 (2014)
25. J. J. Schuster, S. Will, A. Leipertz, **A. Braeuer**  
Deconvolution of Raman spectra for the quantification of ternary high pressure phase equilibria composed of carbon dioxide, water and organic solvent  
**Journal of Raman Spectroscopy** 45, 246-252 (2014)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

26. S.K. Luther, J.J. Schuster, A. Leipertz, **A. Braeuer**  
Microfluidic investigation into mass transfer in compressible multi-phase systems composed of oil, water and carbon dioxide at elevated pressure  
**The Journal of Supercritical Fluids** 84, 121-131 (2013)
27. S. K. Luther, J. J. Schuster, A. Leipertz, **A. Braeuer**  
Non-invasive quantification of phase equilibria of ternary mixtures composed of carbon dioxide, organic solvent and water  
**The Journal of Supercritical Fluids** 84, 146-154 (2013)
28. R. Adami, J. J. Schuster, S. Liparoti, E. Reverchon, A. Leipertz, **A. Braeuer**  
A Raman spectroscopic method for determining vapour liquid equilibria  
**Fluid Phase Equilibria** 360, 265-273 (2013)
29. I. Rodriguez-Meizoso, J. Quino, **A. Braeuer**  
*In-situ* quantification of minor compounds in pressurized carbon dioxide using Raman Spectroscopy  
**The Journal of Supercritical Fluids** 82, 263-267 (2013)
30. M. Rossmann, **A. Braeuer**, A. Leipertz, E. Schluecker  
Manipulating the Size, the Morphology and the Polymorphism of Acetaminophen using Supercritical Antisolvent (SAS) Precipitation  
**The Journal of Supercritical Fluids** 82, 230-237 (2013)
31. **A. Braeuer**, O.S. Knauer, J. Quino, A. Leipertz  
Quantification of the mass transport in a two phase binary system at elevated pressures applying Raman spectroscopy: pendant liquid solvent drop in a supercritical carbon dioxide environment  
**International Journal of Heat and Mass Transfer** 62, 729-740 (2013)
32. S. Varona, J. Fernandez, M. Rossmann, **A. Braeuer**  
Solubility of Paracetamol and Polyvinylpyrrolidone in mixtures of carbon dioxide, ethanol and acetone at elevated pressures  
**Journal of Chemical & Engineering Data** 58, 1054-1061 (2013)
33. S. Varona, **A. Braeuer**, A. Leipertz, Á. Martín, M. J. Cocero  
Lycopene Solubility in Mixtures of Carbon Dioxide and Ethyl Acetate  
**The Journal of Supercritical Fluids** 75, 6-10 (2013)
34. O.S. Knauer, M.G. Pastore Carbone, **A. Braeuer**, E. Di Maio, A. Leipertz  
Investigation of CO<sub>2</sub> sorption in molten polymers at high pressures using Raman line imaging  
**Polymer** 54, 812-818 (2013)
35. I. De Marco, O. Knauer, F. Cice, **A. Braeuer**, E. Reverchon  
Interactions of phase equilibria, jet fluid dynamics and mass transfer during supercritical antisolvent micronization: the influence of solvents  
**Chemical Engineering Journal** 203, 71-80 (2012)

## Publications Andreas Braeuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

36. R.F. Hankel, **A. Braeuer**, A. Leipertz  
Increase of the stimulated Raman scattering threshold at droplets by spectral broadening of nanosecond laser pulses  
**Journal of Raman Spectroscopy** 43, 1935-1940 (2012)
37. S.K. Luther, **A. Braeuer**  
High-Pressure Microfluidics for the Investigation into Multi-Phase Systems using the Supercritical Fluid Extraction of Emulsions (SFEE)  
**The Journal of Supercritical Fluids** 65, 78-86 (2012)
38. M. Rossmann, **A. Braeuer**, S. Dowy, T.G. Gallinger, A. Leipertz, E. Schluucker  
Solute solubility as criterion for the appearance of amorphous particle precipitation or crystallization in the supercritical antisolvent (SAS) process  
**The Journal of Supercritical Fluids** 66, 350-358 (2012)
39. K. Reinhold-López, **A. Braeuer**, A. Schmitt, N. Popovska-Leipertz, A. Leipertz  
Flow field characterization in a vertically oriented cold wall CCVD reactor by particle image velocimetry  
**Chemical Engineering Journal** 184, 315-325 (2012)
40. **A. Braeuer**, S. Dowy, E. Torino, M. Rossmann, S.K. Luther, E. Schluucker, A. Leipertz, E. Reverchon  
Analysis of the supercritical antisolvent mechanisms governing particles precipitation and morphology by in situ laser scattering techniques  
**Chemical Engineering Journal** 173, 258-266 (2011)
41. S. Dowy, E. Torino, S.K. Luther, M. Rossmann, **A. Braeuer**  
Imaging the Supersaturation in High-Pressure Systems for Particle Generation  
**Chemical Engineering Journal** 168, 896-902 (2011)
42. **A. Braeuer**, R. Adami, S. Dowy, M. Rossmann, A. Leipertz  
Observation of Liquid Solution Volume Expansion during Particle Precipitation in the Supercritical CO<sub>2</sub> Antisolvent Process  
**The Journal of Supercritical Fluids** 56, 121-124 (2011)
43. O.S. Knauer, M.C. Lang, **A. Braeuer**, A. Leipertz  
Simultaneous Determination of the Composition and Temperature Gradients in the Vicinity of Boiling Bubbles in Liquid Binary Mixtures using One-Dimensional Raman Measurements  
**Journal of Raman Spectroscopy** 42, 195-200 (2011)
44. **A. Braeuer**, S.R. Engel, S. Dowy, S. Luther, J. Goldlücke, A. Leipertz  
Raman Mixture Composition and Flow Velocity Imaging with High Repetition Rates  
**Optics Express** 18, 24579-24587 (2010)
45. S. Dowy, K. Reinhold Lopez, **A. Braeuer**, A. Leipertz  
In-situ Optical Monitoring of the effect of the solution concentration on Supercritical Particle Precipitation  
**The Journal of Supercritical Fluids** 55, 282-291 (2010)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

46. K. Reinhold-Lopez, **A. Braeuer**, N. Popovska, A. Leipertz  
In situ monitoring of the acetylene decomposition and gas temperature at reaction conditions for the deposition of carbon nanotubes using linear Raman scattering  
**Optics Express** 18, 18223-18228 (2010)
47. **A. Braeuer**, S. Dowy, A. Leipertz  
Simultaneous Raman and elastic light scattering imaging for particle formation investigations  
**Optics Letters** 35, 2553-2555 (2010)
48. E. Reverchon, E. Torino, S. Dowy, **A. Braeuer**, A. Leipertz  
Interactions of jet fluid dynamics, phase equilibria and mass transfer during supercritical antisolvent micronization  
**Chemical Engineering Journal** 156, 446-458 (2010)
49. **A. Braeuer**, S. Dowy, A. Leipertz, R. Schatz, M. Rossmann, E. Schluecker  
Supercritical Antisolvent Particle Precipitation: In Situ Optical Investigations  
**Chemical Engineering & Technology** 33, 35-38 (2010)
50. S. Engel, P. Koch, **A. Braeuer**, A. Leipertz  
Simultaneous laser-induced fluorescence and Raman imaging inside a hydrogen engine  
**Applied Optics** 48, 6643-6650 (2009)
51. **A. Braeuer**, S. Engel, R. Hankel, A. Leipertz  
Gas mixing analysis by the simultaneous application of two-dimensional Raman measurements and particle image velocimetry  
**Optics Letters** 34, 3122-3124 (2009)
52. **A. Braeuer**, S. Dowy, A. Leipertz, R. Schatz, M. Rossmann, E. Schluecker  
Optische in-situ-Untersuchungen der Partikelbildung im überkritischen Antisolvent-Prozess  
**Chemie Ingenieur Technik** 81, 1453-1457 (2009)
53. S. Dowy, **A. Braeuer**, K. Reinhold-Lopez, A. Leipertz  
Laser analyses of mixture formation and the influence of solute on particle precipitation in the SAS process  
**The Journal of Supercritical Fluids** 50, 265-275 (2009)
54. S. Dowy, **A. Braeuer**, R. Schatz, E. Schluecker, A. Leipertz  
CO<sub>2</sub> partial density distribution during high-pressure mixing with ethanol in the supercritical antisolvent process  
**The Journal of Supercritical Fluids** 48, 195-202 (2009)
55. **A. Braeuer**, A. Leipertz  
Two-dimensional Raman mole-fraction and temperature measurements for hydrogen-nitrogen mixture analysis  
**Applied Optics** 48, B57-B64 (2009)

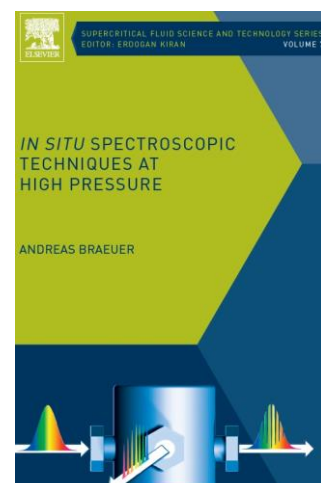
## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

56. **A. Braeuer**, S. Dowy, A. Leipertz, R. Schatz, E. Schluecker  
Injection of ethanol into supercritical CO<sub>2</sub>: Determination of mole fraction and phase state using linear Raman scattering  
**Optics Express** 15, 8377-8382 (2007)
57. **A. Braeuer**, F. Beyrau, and A. Leipertz  
Laser-induced fluorescence of ketones at elevated temperatures for pressures up to 20 bars by using a 248 nm excitation laser wavelength: experiments and model improvements  
**Applied Optics** 45, 4982-4989 (2006)
58. **A. Braeuer**, F. Beyrau, M. C. Weikl, T. Seeger, J. Kiefer, A. Leipertz, A. Holzwarth, A. Soika  
Investigation of the combustion process in an auxiliary heating system using dualpump CARS  
**Journal of Raman Spectroscopy** 37 (6), 633-640 (2006)
59. F. Beyrau, **A. Bräuer**, T. Seeger, and A. Leipertz  
Gas-phase temperature measurement in the vaporizing spray of a gasoline direct injection injector by use of pure rotational coherent anti-Stokes Raman scattering  
**Optics Letters** 29, 247-249 (2004)
60. T. Seeger, F. Beyrau, **A. Bräuer**, A. Leipertz,  
High-pressure pure rotational CARS: comparison of temperature measurements with O<sub>2</sub>, N<sub>2</sub> and synthetic air  
**Journal of Raman Spectroscopy** 34 (12), 932-939 (2003)

## Books & Book Chapters [5]

1. Daniel Bassing, Matthias Rossmann, Iolanda De Marco, Valentina Prosapio, Ernesto Reverchon, Eberhard Schlücker, **Andreas Braeuer**  
"Analysis of Mechanisms for PVP-Active-Agent Formulation as in Supercritical Antisolvent Spray Process" in "Process Spray: Functional Particles Produced in Spray Processes" edited by Udo Fritsching  
Springer-Verlag Berlin-Heidelberg (2016)
2. **Andreas Braeuer**  
*In situ* Spectroscopic Techniques at High Pressure  
Elsevier (2015) edited by Erdogan Kiran



3. Alfred Leipertz, **Andreas Braeuer**, Johannes Kiefer, Andreas Dreizler, Christof Heeger  
"Laser Induced Fluorescence" in "Handbook of combustion" edited by Maximilian Lachner, Franz Winter and Avinash K. Agarwal  
Wiley-VCH Weinheim (2010)
4. **Andreas Bräuer**, Anna Malarski, Alfred Leipertz  
"Development of Imaging Laser Diagnostics for the Validation of LE-Simulations of Flows with Heat and Mass Transfer" in "Imaging Measurement Methods for Flow Analysis" edited by Wolfgang Nitsche and Christoph Dobriloff, published within "Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 106, Springer-Verlag Berlin-Heidelberg (2009)
5. **Andreas Bräuer**  
Experimentelle Gemischbildungsanalyse im überkritischen Antisolvent-Verfahren  
Berichte zur Energie und Verfahrenstechnik BEV, Schriftenreihe Heft 7.3, Erlangen (2007)

### ***Invited Talks (selected) [12]***

1. Raman diagnostics for high-pressure applications  
Gordon Research Conference on Laser Diagnostics in Combustion 2017 at Mount Snow in West Dover, Vermont, USA (06.-11. August 2017)
2. *In situ* Ramanspektroskopie für die Thermodynamik: Von der Phasengleichgewichtsbestimmung zur Sprayuntersuchung (**Plenary lecture**)  
Thermodynamik Kolloquium 2014 in Stuttgart (22.-24. September 2014)
3. Von der Phasengleichgewichtsbestimmung komplexer Systeme zur Untersuchung von Keimbildungsvorgängen und Phasenübergängen  
Seminar at the Karlsruhe Institute of Technology (16. April 2014)
4. *In situ* Raman spectroscopy for high pressure process technology  
Presentation within the Seminar of the Lehrstuhl für Feststoffverfahrenstechnik (Professor Marcus Petermann) of the Ruhr Universität Bochum (Germany) (23. January 2014)
5. On the capability of optical measurement techniques in the field of supercritical fluid process technology  
SFB-TRR 75 workshop on "Experimental investigation of evaporating droplets and sprays in high pressure and high temperature environments", Seeheim (28.-29. November 2013)
6. On the capability of optical techniques in the field of supercritical fluids and their applications (**Plenary and opening lecture**)



## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

- 10<sup>th</sup> Conference on supercritical fluids and their applications, Naples (30<sup>th</sup> April – 4<sup>th</sup> May 2013)
7. Raman techniques as *in situ* measurement tools in process technology for particle generation  
Symposium “Nano-structure in disperse systems: production, characterization and functionality”, Karlsruhe Institute of Technology (13. November 2012)
  8. Optical Diagnostics for high Pressure Process Technology  
Presentation within the Seminar of the  
Supercritical Fluids Group, University of Salerno / Italy (13. September 2012)
  9. Konzentrationsfeldbestimmung mittels *in situ* Raman-Messtechniken unter hohem Druck  
Presentation within the Seminar of the  
Center of Smart Interfaces (CSI), Technical University Darmstadt (08. May 2012)
  10. Ein-Blick in die Hochdruckverfahrenstechnik  
Annual meeting of the ProcessNet subsection „High Pressure Process Technology“  
(02. March 2012)
  11. Advanced optical techniques for life sciences  
Presentation within the Seminar of the Department  
Center for Advanced Biomaterials for Healthcare - Italian Institute of Technology -  
IIT@CRIB, Napoli (03. October 2011)
  12. Taking a look at the supercritical fluid technology for the production of particles  
Presentation within the Seminar of the Department “Aerodynamik und  
Strömungsmechanik” of the  
Technical University Munich (11. January 2011)

### **Conference contributions (international) [85]:**

1. T.C. Klima, A.S. Braeuer  
Fuel distribution and phase transition in high pressure sprays  
Gordon Research Conference on Laser Diagnostics in Combustion 2017 at Mount  
Snow in West Dover, Vermont, USA (06.-11. August 2017)
2. D. Basing, A.S. Braeuer  
Simultaneous visualization of the mixture composition on the macro- and the  
microscale in high-pressure jets via Raman spectroscopy  
Gordon Research Conference on Laser Diagnostics in Combustion 2017 at Mount  
Snow in West Dover, Vermont, USA (06.-11. August 2017)
3. Ch. Holzammer, S. Will, **A.S. Braeuer**  
Experimental study of the amount of gas hydrate in macroscopic single and two  
phase water CO<sub>2</sub> mixtures  
9th International conference on gas hydrates, Denver (USA), June (2017)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

4. Ch. Holzammer, S. Will, **A.S. Braeuer**  
Investigation of the influence of thermodynamic hydrate inhibitors on the development of hydrogen bonds in hydrate forming systems by Raman spectroscopy  
9th International conference on gas hydrates, Denver (USA), June (2017)
5. **S. Stehle, A.S. Braeuer, N. Grimaldi, N. Ventosa, A. Triolo**  
On the development of hydrogen bonds in single-phase but nanostructured ternary mixtures of water/org.solvent/CO<sub>2</sub>  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
6. D. Bassing, **A.S. Braeuer**  
Optical investigations on macro- and micro-scale mixing in the high-pressure supercritical antisolvent (SAS) process  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
7. **J.J. Schuster, M.R. Di Caprio, A.S. Braeuer, E. Di Maio**  
Non-invasive determination of transport properties and solubilities for (compressed CO<sub>2</sub>)/polyol-mixtures  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
8. Ch. Holzammer, J. Schicks, S. Will, **A.S. Braeuer**  
Investigation of the influence of thermodynamic hydrate inhibitors on the properties of the formed hydrate phase by Raman spectroscopy  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
9. T.C. Klima, K. Gurrath, **A.S. Braeuer**  
Insights into the evolution of hydrogen bonding from ambient to supercritical conditions  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
10. T.C. Klima, K. Gurrath, **A.S. Braeuer**  
Determining VLE of fuel/air mixtures at high temperature and high pressure  
16th European meeting on supercritical fluids, Lisboa (Portugal), April (2017)
11. J. Quino, **A. S. Braeuer**  
In situ visualization of mass transport inside Si-gels during drying or impregnation using Raman-line-imaging  
International Seminar on Aerogels, Sophia Antipolis (France), September (2016)
12. I. Selmer, A.S. Behnecke, **A. Braeuer**, J. Quiño, Ch. Kleemann, U. Kulozik, I. Smirnova  
Protein-based aerogel particles as carrier material in food applications: Drying model for a packed bed validated by in situ drying kinetic study  
International Seminar on Aerogels, Sophia Antipolis (France), September (2016)
13. T. Klima, S. Rieß, S. Foster, M. Wensing, **A. Braeuer**  
Raman-analysis of transcritical spray/jet mixing of ethanol with nitrogen at temperatures up to 973 K and pressures up to 8 MPa  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

14. G. Ferrentino, J.J. Schuster, **A. Braeuer**, S. Spilimbergo  
*In situ* Raman quantification of dissolution kinetics of carbon dioxide in liquid solutions during a high pressure and ultrasound treatment for the inactivation of *saccharomyces cerevisiae*  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)
15. J.J. Schuster, M.T. Gebrekidan, M. Tippelt, S. Spilimbergo, **A. Braeuer**  
Insights into high pressure treatments of natural compounds using Raman spectroscopy  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)
16. J. Quino, **A. Braeuer**  
In situ analysis of mass transport in pressurized fluid systems using 1-D Raman spectroscopy  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)
17. N. Grimaldi, P.E. Rojas, J.J. Schuster, S. Sala, A. Cordoba, J. Veciana, J. Faraudo, **A. Braeuer**, N. Ventosa  
CO<sub>2</sub>-based-surfactant-free microemulsions-like system as futurist universal green medium for chemical processes  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)
18. Ch. Holzammer, M. Brack, S. Will, **A. Braeuer**  
Determination of Gas Hydrate concentration in water-CO<sub>2</sub>-mixtures by Raman spectroscopy  
15th European meeting on supercritical fluids, Essen (Germany), May (2016)
19. N. Grimaldi, P.E. Rojas, J.J. Schuster, S. Sala, A. Cordoba, J. Veciana, J. Faraudo, A. Triolo, **A. Braeuer**, N. Ventosa  
CO<sub>2</sub>-based surfactant-free microemulsions-like system as futurist universal green medium for chemical processes  
Nano Spain Conference 2016, Logrono (Spain), March (2016) (accepted as oral presentation)
20. M.T. Gebrekidan, Ch. Knipfer, **A. Braeuer**  
A Shifted-Excitation Raman Difference Spectroscopy (SERDS) evaluation strategy for the efficient isolation of Raman spectra from extreme fluorescence interference  
SPIE/OSJ Biophotonics Japan, Tokyo (Japan), October (2015) (accepted as oral presentation with proceeding)
21. **A. Braeuer**, J. Quino, F. Ruiz  
Drying of aerogels: In situ visualization of mass transport inside the gel during the supercritical drying via 1-D Raman spectroscopy  
11<sup>th</sup> International symposium on supercritical fluids, Seoul (South Korea), October (2015) (accepted as oral presentation with proceeding abstract)
22. Ch. Holzammer, A. Finckenstein, S. Will, **A. Braeuer**  
Experimental study of the influence of inhibitors on hydrogen bonds before the onset of gas hydrate formation

## Publications Andreas Braeuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

- 11<sup>th</sup> International symposium on supercritical fluids, Seoul (South Korea), October (2015) (accepted as oral presentation with proceeding abstract)
23. S. Stehle, S.K. Luther, **A. Braeuer**  
Determination of high pressure VLE in micro capillaries using Raman spectroscopy  
11<sup>th</sup> International symposium on supercritical fluids, Seoul (South Korea), October (2015) (accepted as oral presentation with proceeding abstract)
24. R.F. Hankel, P.E. Rojas, M. Cano-Sarabia, S. Sala, J. Veciana, **A. Braeuer**, N. Ventosa  
Surfactant-free CO<sub>2</sub>-based microemulsion  
29<sup>th</sup> conference of the European colloid and interface society (ECIS 2015), Bordeaux (France), September (2015)
25. J.J. Schuster, Ph. Siegler, S. Will, **A. Braeuer**  
Thermodynamic characterization of water and alcohol sprays using Raman spectroscopy  
28<sup>th</sup> European symposium on applied thermodynamics (ESAT 2015), Athens (Greece), June (2015)
26. S. Stehle, J.J. Schuster, S. K. Luther, K. Weihs, S. Will, **A. Braeuer**  
Remote analysis of high pressure phase equilibria in micro capillary flows  
28<sup>th</sup> European symposium on applied thermodynamics (ESAT 2015), Athens (Greece), June (2015)
27. K. Reinhold-López, **A. Braeuer**, B. Romann, N. Popovska-Leipertz, A. Leipertz  
*In situ* Raman monitoring of the formation and growth of carbon nanotubes via chemical vapor deposition  
New Paradigm of Particle Science and Technology Proceedings of The 7th World Congress on Particle Technology, Beijing (China), May (2014)  
Procedia Engineering 102, 190-200 (2015)
28. I. Rodriguez-Meizoso, J. Quino, **A. Braeuer**, Ch. Turner  
In-situ Raman spectroscopy in supercritical carbon dioxide systems  
XXIV. International Conference on Raman Spectroscopie (ICORS 2014), Jena (Germany), August (2014)
29. Y. Khodaei, M. Tesfay, Ch. Knipfer, W. Adler, K. Brunner, F. Stelzle, S. Will<sup>1</sup>, **A. Braeuer**  
Improved design of Raman-based sensor for the identification of oral cancer  
SPIE Optical Engineering + Applications, San Diego (California United States), August (2014)
30. J. Quino, **A. Braeuer**  
Utilization of one-dimensional Raman spectroscopy for the investigation into transport phenomena between supercritical carbon dioxide sessile bubble and liquid solvent environment  
14th European meeting on supercritical fluids, Marseille (France), May (2014)
31. J.J. Schuster, **A. Braeuer**  
Remote quantification of the composition of multi-component high pressure systems

- using Raman spectroscopy  
14th European meeting on supercritical fluids, Marseille (France), May (2014)
32. S.K. Luther, **A. Braeuer**  
Using a Raman sensor for the investigation into the mass transfer in compressed multi-phase flows in micro channels  
14th European meeting on supercritical fluids, Marseille (France), May (2014)
33. R.F. Hankel, P.E. Rojas, M. Cano, S. Sala, J. Veciana, **A. Braeuer**, N. Ventosa  
Surfactant-free CO<sub>2</sub>-based microemulsion  
14th European meeting on supercritical fluids, Marseille (France), May (2014)
34. M.G. Pastore Carbone, D. Tammaro, A. De Maio, E. Di Maio, R. Hankel, **A. Braeuer**, G. Mensitieri  
Anomalous Swelling of Molten PCL/scCO<sub>2</sub> solutions  
7<sup>th</sup> international conference "Times of Polymers and Composites", Ischia (Italy), June (2014) (accepted as oral presentation)
35. C. Knipfer, **A. Braeuer**, R. Hankel, K. Brunner, A. Agaimy, W. Adler, M. Schmidt, E. Nkenke, F. Stelzle  
Optische Biopsie zur Früherkennung von Tumoren der Mundhöhle – Erste ex vivo Ergebnisse  
64. Kongress der Deutschen Gesellschaft für Mund-, Kiefer- und Gesichtschirurgie, Mainz (Germany), June (2014) (accepted as oral presentation)
36. M.G. Pastore Carbone, P. Musto, E. Di Maio, O. Knauer, **A. Braeuer**, G. Mensitieri  
Probing mass transport and molecular interaction in Poly( $\epsilon$ -caprolactone)-carbon dioxide solutions by using Raman line imaging  
Frontiers in polymer science, Sitges (Spain), May (2013) (accepted as poster and awarded as best poster)
37. R. Adami, **A. Braeuer**, S. Liparoti, E. Reverchon  
Non-intrusive analysis of high pressure vapour liquid equilibria using Raman spectroscopy  
10<sup>th</sup> Conference on supercritical fluids and their applications, Naples (Italy), April/May (2013) (accepted as oral presentation with proceedings)
38. S. K. Luther, **A. Braeuer**  
Using microfluidics to optically investigate mass transfer rates in multiphase- and supercritical mixtures  
10<sup>th</sup> Conference on supercritical fluids and their applications, Naples (Italy), April/May (2013) (accepted as oral presentation with proceedings)
39. J. Quino, **A. Braeuer**  
Derivation of mass transport quantities between a pendant liquid drop and its supercritical carbon dioxide environment at steady-state conditions  
10<sup>th</sup> Conference on supercritical fluids and their applications, Naples (Italy), April/May (2013) (accepted as oral presentation with proceedings)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

40. M. Rossmann, **A. Braeuer**, A. Leipertz, E. Schluecker  
Generation of Tailor Made Solid Dispersions using the Supercritical Antisolvent (SAS) Process  
10<sup>th</sup> Conference on supercritical fluids and their applications, Naples (Italy), April/May (2013) (accepted as oral presentation with proceedings)
41. Rodriguez-Meizoso, J. Quino, **A. Braeuer**, P. Olin, L. Wågberg, C. Turner  
In-situ Raman overtone spectroscopy (ROS) for a greener future  
10th Conference on supercritical fluids and their applications, Naples (Italy), April/May (2013) (accepted as oral presentation with proceedings)
42. K. Reinhold-Lopez, A. Braeuer, B. Romann, N. Popovska-Leipertz, A. Leipertz  
In situ Raman monitoring of the formation and growth of carbon nanotubes via chemical vapor deposition  
Carbon 2013, Rio de Janeiro (Brazil), August (2013)
43. K. Reinhold-Lopez, **A. Braeuer**, N. Popovska-Leipertz, A. Leipertz  
In situ optical investigations into the nucleation and growth mechanism of carbon nanotubes  
Nanotech, Santa Clara (USA), June (2012) (accepted as oral presentation with proceedings)
44. S. K. Luther, **A. Braeuer**  
High-Pressure Microfluidics to explore Multi-Phase Systems: A Study towards the Supercritical Fluid Extraction of Emulsions (SFEE)  
10<sup>th</sup> International symposium on supercritical fluids, San Francisco (USA), May (2012) (accepted as oral presentation with proceeding)
45. M. Rossmann, **A. Braeuer**, A. Leipertz, E. Schluecker  
Supersaturation as criterion for the appearance of amorphous particle precipitation or crystallization in the supercritical antisolvent (SAS) process  
10<sup>th</sup> International symposium on supercritical fluids, San Francisco (USA), May (2012) (accepted as oral presentation with proceeding)
46. O.S. Knauer, R.F. Hankel, **A. Braeuer**  
Quantitative composition measurements in high pressure systems by means of Raman spectroscopy  
10<sup>th</sup> International symposium on supercritical fluids, San Francisco (USA), May (2012) (accepted as poster with proceeding)
47. S.Varona, M. Rossmann, R.F. Hankel, **A. Braeuer**, E. Schluecker, M.J. Cocero, A. Leipertz  
Possibilities of laser diagnostics to study the supercritical extraction of emulsions process  
10<sup>th</sup> International symposium on supercritical fluids, San Francisco (USA), May (2012) (accepted as poster with proceeding)
48. **A. Braeuer**  
Optical diagnostics to study supercritical CO<sub>2</sub> processes (accepted)

- 13th European meeting on supercritical fluids, The Hague (Netherlands), October (2011)
49. S.K. Luther, **A. Braeuer**  
Supercritical particle technology in microfluidic devices (accepted)  
13th European meeting on supercritical fluids, The Hague (Netherlands), October (2011)
50. O.S. Knauer, **A. Braeuer**  
Laser-based quantification of heat and mass transfer across the phase boundaries of droplets during mixing in the supercritical antisolvent process (accepted)  
13th European meeting on supercritical fluids, The Hague (Netherlands), October (2011)
51. M. Rossmann, **A. Braeuer**, S. Dowy, S.K. Luther, A. Leipertz, E. Schluecker  
Tailor made particles by means of supercritical antisolvent precipitation. "From nanoparticles to hollow spheres via microparticles (accepted)  
13th European meeting on supercritical fluids, The Hague (Netherlands), October (2011)
52. K. Reinhold-Lopez, **A. Braeuer**, N. Popovska-Leipertz, A. Leipertz  
In situ monitoring of the gas and solid phase during the catalytic chemical vapour deposition of carbon nanotubes.  
Carbon 2011, Shanghai (China), July (2011)
53. K. Reinhold-Lopez, **A. Braeuer**, N. Popovska-Leipertz, A. Leipertz  
In situ optical analysis of the catalytic chemical vapor deposition of carbon nanotubes.  
2<sup>nd</sup> European Conference on Process Analytics and Control Technology, Glasgow (UK), April (2011).
54. M. Rossmann, **A. Braeuer**, S. Dowy, A. Leipertz, E. Schluecker  
Tailor made particles by means of supercritical antisolvent precipitation  
8th European Congress on Chemical Engineering (ECCE-8), Berlin (Germany), September (2011)
55. S. Dowy, E. Torino, S. Luther, M. Rossmann, **A. Braeuer**, A. Leipertz  
A novel technique for supersaturation and particle precipitation measurements in high-pressure systems  
10<sup>th</sup> AIChE Annual Meeting, Salt Lake City (USA), November (2010)
56. S. R. Engel, R. F. Hankel, **A. Braeuer**, A. Leipertz  
Mixture Analysis of Gases by Planar Raman Imaging  
10<sup>th</sup> AIChE Annual Meeting, Salt Lake City (USA), November (2010)
57. K. Reinhold-Lopez, A. Schmitt, **A. Braeuer**, N. Popovska, A. Leipertz  
In-Situ Monitoring of the Catalytic Chemical Vapor Deposition of Carbon Nanotubes  
10<sup>th</sup> AIChE Annual Meeting, Salt Lake City (USA), November (2010)



## Publications Andreas Braeuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

58. O. S. Knauer, **A. Braeuer**, A. Leipertz  
Composition and Temperature Gradient Measurements at Binary Mixture Boiling Bubbles  
10<sup>th</sup> AIChE Annual Meeting, Salt Lake City (USA), November (2010)
59. **A. Braeuer**, S. Dowy, M. Rossmann, R. Adami, E. Torino, E. Reverchon, A. Leipertz  
On the capability of in-situ laser diagnostics to analyze supercritical fluid applications for particle generation  
9th Conference on Supercritical Fluids and Their Applications, Sorrento (Italy), September (2010)
60. O.S. Knauer, **A. Braeuer**, M.C. Lang, A. Leipertz  
Measurement of Concentration and Temperature Gradients at Binary Mixture Bubbles  
14<sup>th</sup> international Heat Transfer Conference, IHTC 14, Washington (USA), August (2010), Paper IHTC 14-22054
61. K. Reinhold-Lopez, A. Schmitt, **A. Braeuer**, N. Popovska, A. Leipertz  
In-situ monitoring of the catalytic chemical vapor deposition of carbon nanotubes  
Carbon 2010, Clemson University (USA), July (2010)
62. **A. Braeuer**, S. Dowy, A. Leipertz  
Capability of modern in situ diagnostics for the analysis of the sc antisolvent (SAS) technology  
12th European meeting on supercritical fluids, Graz (Austria), May (2010)
63. S. Dowy, **A. Braeuer**, M. Rossmann, E. Schluecker, A. Leipertz  
An optical technique to gain information on mixing, nucleation and phase behaviour  
12th European meeting on supercritical fluids, Graz (Austria), May (2010)
64. M. Rossmann, M. Pemsel, **A. Braeuer**, S. Dowy, A. Leipertz, E. Schluecker  
Influence of injection pressure up to 100 MPa and vessel pressures above the critical point on the particle formation in the supercritical antisolvent process  
12th European meeting on supercritical fluids, Graz (Austria), May (2010)
65. **A. Braeuer**, E. Schluecker, und A. Leipertz  
Fortschrittliche optische Messtechniken zur in-situ Analyse von Sprühverfahren in überkritischen Fluiden  
Workshop Spray, Heidelberg (Germany), Mai (2010)
66. M. Rossmann, M. Pemsel, S. Dowy, **A. Braeuer**, E. Schluecker, A. Leipertz  
Investigation of particle formation in a supercritical antisolvent process above the ternary mixture critical point at injection pressures up to 100 MPa  
World congress on Particle Technology WCPT6, Nuernberg (Germany), April (2010)
67. S. Dowy, **A. Braeuer**, K. Reinhold-Lopez, A. Leipertz  
Effect of solution concentration on the precipitation of paracetamol particles in the supercritical antisolvent process  
World congress on Particle Technology WCPT6, Nuernberg (Germany), April (2010)



## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

68. **A. Braeuer**, S. Dowy, E. Torino, E. Reverchon  
Particle precipitation correlated with jet fluid-dynamics and phase equilibria in the supercritical antisolvent process  
World congress on Particle Technology WCPT6, Nuernberg (Germany), April (2010)
69. R. Adami, **A. Braeuer**, S. Dowy, E. Reverchon, A. Leipertz  
A new concept to measure the mass transfer in SAS technique  
World congress on Particle Technology WCPT6, Nuernberg (Germany), April (2010)
70. K. Reinhold-Lopez, A. Schmitt, K. Danova, **A. Braeuer**, N. Popovska, A. Leipertz  
In-situ monitoring of the catalytic chemical vapor deposition of carbon nanotubes by Raman spectroscopy  
World congress on Particle Technology WCPT6, Nuernberg (Germany), April (2010)
71. S. Dowy, K. Reinhold-Lopez, **A. Braeuer**, A. Leipertz  
Laser optical Analyses of particle formation in the supercritical antisolvent process  
World Congress on Chemical Engineering WCCE, Montreal (Canada), August (2009)
72. **A. Braeuer**, S. Dowy, R. Schatz, E. Schluecker and Alfred Leipertz  
Antisolvent Precipitation: Interaction of Mixing, Phase behaviour, and Particle formation.  
9th International Symposium on SuperCritical Fluids, Bordeaux (France), May (2009)
73. S. Dowy, **A. Braeuer**, R. Schatz, E. Schluecker and A. Leipertz  
Particle nucleation and mixture formation characterized by a combination of Raman and Mie scattering  
9th International Symposium on SuperCritical Fluids, Bordeaux (France), May (2009)
74. A. Leipertz, N. Popovska, **A. Bräuer**, K. Danova, K. Reinhold-Lopez  
Concept for in-situ monitoring of catalytic chemical vapour deposition of carbon nanotubes by Raman spectroscopy  
Carbon'09, Biarritz (France), June (2009) (**Abstract only**)
75. **A. Braeuer**, M. Dorscht, H. Kremer, A. Leipertz  
Two-dimensional Raman Techniques for the Simultaneous H<sub>2</sub> Concentration and Temperature Analysis under H<sub>2</sub>-IC-Engines' relevant conditions  
7th Int. Conference on Modeling and Diagnostics for Advanced Engine Systems COMODIA 2008, Sapporo (Japan), July (2008)
76. S. Dowy, **A. Braeuer**, A. Leipertz  
CO<sub>2</sub> partial density distribution under dynamic mixture generation conditions below and above the critical point of the mixture in the supercritical antisolvent process  
11th European meeting on supercritical fluids, Barcelona (Spain), May (2008)
77. R. Schatz, **A. Braeuer**, A. Leipertz, E. Schlücker  
Correlation of Fluid Atomization and Particle Formation in the SAS Process by Optical Laser Analysis  
European Congress of Chemical Engineering ECCE-6, Copenhagen (Denmark), September (2007)

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

78. R. Schatz, **A. Braeuer**, A. Leipertz, E. Schluecker  
Effects of Spray Properties on the Particle Formation in a Pulsed Supercritical Antisolvent Spray Precipitator  
Partec 2007, Nuernberg (Germany), March (2007)
79. M. Löffler, B.U. Melcher, **A. Braeuer**, F. Beyrau, A. Leipertz  
Behavior of the Acetone Laser-Induced Fluorescence under engine Relevant Conditions for the Simultaneous Visualization of Temperature and Concentration Fields  
SAE Technical Paper Series 2007-01-0642 (2007)
80. **A. Braeuer**, P. Koch, M. Weigl, A. Leipertz, T. Blotevogel, H. Kremer, M. Hartmann  
Optical Measurement Techniques for the Investigation of Mixture Formation and Combustion in Hydrogen Internal Combustion Engines  
1st International Symposium on Hydrogen Internal Combustion Engines, Graz (Austria), September (2006)
81. **A. Braeuer**, R. Schatz, E. Schluecker, A. Leipertz  
Characterization of the spray dynamics in a pulsed antisolvent Spray Precipitator  
ICLASS, Kyoto (Japan), August (2006), Paper ID ICLASS06-274
82. **A. Bräuer**, F. Beyrau, M. Weigl, T. Seeger, A. Leipertz, A. Holzwarth, A. Soika  
Investigation of an auxiliary heating system using dual-pump CARS  
European Conference on Non-linear Optical Spectroscopy ECONOS, Oxford (UK), April (2005)
83. F. Beyrau, **A. Bräuer**, J. Egermann, I. Schmitz, T. Seeger, M. Taschek, M. C. Weigl, A. Leipertz  
Linear and Non-Linear Raman Scattering Techniques for the Investigation of Fuel Sprays  
Proc. 31st National Conference on Fluid Mechanics & Fluid Power, Kolkata (India), (2004)
84. F. Beyrau, **A. Bräuer**, T. Seeger, A. Leipertz  
Determination of the Gas-Phase Temperature in the Vaporizing Spray of a GDI Injector using Pure Rotational CARS  
SAE Technical Paper Series 2004-01-1350 (2004)
85. F. Beyrau, **A. Bräuer**, T. Seeger, A. Leipertz, M. Afzelius, P. E. Bengtsson, P. Joubert, J. Bonamy  
High pressure pure rotational CARS of O<sub>2</sub> and N<sub>2</sub>/O<sub>2</sub>  
European Conference on Nonlinear Optical Spectroscopy ECONOS, Besancon (France), March/April (2003)

### **Conference Contributions (national) [32]:**

1. L. Bahr, **A. Braeuer**  
Online determination of the polymorphic modification of crystalline nanoparticles

- dispersed in the gas-phase by Raman spectroscopy  
Jahrestreffen der ProcessNet Fachgruppe Partikelmesstechnik in Dresden (Germany),  
March 2017
2. S. Stehle, A. Braeuer, N. Grimaldi, N. Ventosa  
Surfactant-free CO<sub>2</sub>-based microemulsion-like systems  
Thermodynamik Kolloquium 2016 in Kaiserslautern (Germany), October 2016
3. Ch. Holzammer, S. Will, A. Braeuer  
Investigation of the inhibition effect of thermodynamic and kinetic hydrate inhibitors  
by Raman spectroscopy  
Thermodynamik Kolloquium 2016 in Kaiserslautern (Germany), October 2016
4. Ch. Knipfer, J. Motz, W. Adler, K. Brunner, M. Gebrekidan, R. Hankel, A. Agaimy, S.  
Will, A. Braeuer, F.W. Neukam, Florian Stelzle  
Raman Differenz-Spektroskopie für die nicht-invasive optische Biopsie des oralen  
Plattenepithelkarzinomes  
66. Kongress & Praxisführungsseminar der Deutschen Gesellschaft für Mund-, Kiefer-  
und Gesichtschirurgie in Hamburg (Germany), June 2016
5. A. Braeuer  
Untersuchung der Gemischbildung und der Entmischung auf der Mikroskala in  
makroskopischen Fluidsystemen mittels der *in situ* Ramanspektroskopie  
Jahrestreffen der Fachgruppen Extraktion und Mischen (ProcessNet), Heidelberg  
(Germany), March 2015
6. J.J. Schuster, Ph. Siegler, A. Braeuer  
Vollständige thermodynamische Beschreibung von Wasser- und Alkoholsprays  
mittels Ramanspektroskopie: Flüssig- & Gasphasentemperatur,  
Verdampfungsfortschritt und Gemischbildungsfortschritt  
Jahrestreffen der Fachgruppen Wärme- und Stoffübertragung und Trocknungstechnik  
(ProcessNet), Leipzig (Germany), March 2015
7. J. Quino, T. Klima, A. Braeuer  
Direkte Bestimmung des Diffusionskoeffizienten durch Abbildung des zweiten  
Fick'schen Gesetzes mittels Raman-Line-Imaging-Spektroskopie  
Jahrestreffen der Fachgruppen Wärme- und Stoffübertragung und Trocknungstechnik  
(ProcessNet), Leipzig (Germany), March 2015
8. D. Bassing, J. Hohage, A. Braeuer, E. Schlücker  
Darstellung einer Korrelation zwischen der Molenbruchverteilung und der  
Übersättigung in der Partikelentstehungszone im SAS-Prozess mittels  
Ramanspektroskopie,  
Jahrestreffen der Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Darmstadt  
(Germany), March 2015
9. J.J. Schuster, S.K. Luther, S. Stehle, A. Braeuer  
Bestimmung von Hochdruck-Phasengleichgewichten mittels Raman-Spektroskopie:  
Vergleich Mikrokapillare und Hochdrucksichtzelle Ramanspektroskopie,

- Jahrestreffen der Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Darmstadt (Germany), March 2015
10. **A. Braeuer**  
What hydrogen bonds teach us about the formation of gas hydrates, micro-emulsions and vapor liquid equilibria  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Merseburg (Germany), March (2014)
11. **A. Braeuer**  
Non-invasive determination of phase equilibria and transport properties in multi-component systems at elevated pressure  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Berlin (Germany), March (2013)
12. S.K. Luther, J. Schuster, **A. Braeuer**  
Einsatz von Mikrokapillaren zur optischen Untersuchung von Stofftransportvorgängen in Mehrphasenströmungen unter hohem Druck  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Berlin (Germany), March (2013)
13. M. Rossmann, **A. Braeuer**, A. Leipertz, E. Schluecker  
Gezielte Strukturbeeinflussung von Polymer-Wirkstoff-Formulierungen im Supercritical- Antisolvent (SAS) - Sprühverfahren  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Berlin (Germany), March (2013)
14. S. Varona, J. Fernández, M. Rossmann, **A. Braeuer**  
Solubility of Paracetamol and Polyvinylpyrrolidon in mixtures of carbon dioxide, ethanol and acetone at elevated pressures  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Berlin (Germany), March (2013)
15. M. Rossmann, **A. Braeuer**, S. Dowy, A. Leipertz, E. Schluecker  
Tailor Made Particles by means of Supercritical Antisolvent Precipitation  
8<sup>th</sup> European Congress on Chemical Engineering, Berlin, September (2011)
16. **A. Braeuer**  
Optische Messverfahren als In-situ-Analysewerkzeug für Hochdruckprozesse  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Maribor (Slovenia), March (2011)
17. S.K. Luther, **A. Braeuer**  
Überkritische Partikeltechnologie in Mikrofluidik-Systemen  
Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Maribor (Slovenia), March (2011)
18. M. Rossmann, **A. Braeuer**, S. Dowy, S.K. Luther, A. Leipertz, E. Schluecker  
Gezielte Beeinflussung der Partikelmorphologie im Supercritical Antisolvent Prozess

Jahrestreffen Fachgruppe Hochdruckverfahrenstechnik (ProcessNet), Maribor (Slovenia), March (2011)

19. S. Engel, P. Koch, **A. Braeuer**, A. Leipertz  
Ramanography for the H<sub>2</sub>-mixture Formation Analysis under Engines Relevant Conditions  
Motorische Verbrennung, Aktuelle Probleme und moderne Lösungsansätze, in Berichte zur Energie und Verfahrenstechnik (BEV) Vol. 9.1, 103-114, Tagung im Haus der Technik, Munich (Germany), March (2009)
20. R. Schatz, S. Dowy, **A. Braeuer**, A. Leipertz, und E. Schlücker  
Ein Einblick in die Partikelbildung im überkritischen Antisolvent Prozess  
GVC Hochdruckverfahrentechnik, Oberhausen (Germany), March (2009)
21. **A. Braeuer**, S. Dowy, R. Schatz, A. Leipertz  
Ein-Blick in die überkritische Partikeltechnologie  
ProcessNet Jahrestagung, Mannheim (Germany), September (2009), veröffentlicht in Chemie Ingenieur Technik 81, 1046, (2009) **(Abstract only)**
22. S. Engel, R. Hankel, **A. Braeuer**, und A. Leipertz  
Simultane Gemischbildung und Temperaturbestimmung von tiefkaltem Wasserstoff mittels 2-D Ramanographie  
Thermodynamik Kolloquium, Berlin (Germany), October (2009) **(Abstract only)**
23. K. Reinhold-Lopez, K. Danova, **A. Braeuer**, N. Popovska, A. Leipertz  
Konzept zur lokalen In-situ-Analyse der katalytischen Gasphasenabscheidung von Kohlenstoff-Nanoröhren  
Thermodynamik Kolloquium, Berlin (Germany), October (2009) **(Abstract only)**
24. O. Knauer, **A. Braeuer**, A. Leipertz  
Bestimmung von Konzentrationsgradienten an Siedebblasen binärer Flüssigkeitsgemische  
Thermodynamik Kolloquium, Berlin (Germany), October (2009) **(Abstract only)**
25. S. Dowy, **A. Braeuer**, A. Leipertz  
In-situ optische Betrachtung der Partikelbildung im überkritischen Antisolvent-Verfahren  
Thermodynamik Kolloquium, Berlin (Germany), October (2009) **(Abstract only)**
26. S. Engel, **A. Braeuer**, A. Leipertz  
2D-Raman Messtechnik zur simultanen Kraftstoff/Luft-Verhältnis- und Temperaturbestimmung während der Gemischbildung in Wasserstoffmotoren  
Thermodynamik Kolloquium, Erlangen (Germany), September (2008) **(Abstract only)**
27. **A. Braeuer**, S. Dowy, R. Schatz, E. Schluucker und A. Leipertz  
Einfluss der partiellen Dichte von CO<sub>2</sub> auf das Mischungsverhalten im pulsierenden überkritischen Antisolvent-Verfahren **(Abstract only)**  
Thermodynamik Kolloquium, Erlangen (Germany), September (2008) **(Abstract only)**

## Publications Andreas Bräuer since 2003

Peer-Review-Journal Papers; Books & Book Chapters; Conference Contributions, Invited Talks

28. R. Schatz, M. Di Franca, S. Dowy, **A. Braeuer**, A. Leipertz und E. Schlücker  
Korrelation von Lösemittelausbreitung und Partikelbildung im SAS Prozess durch  
laseroptische Analyseverfahren  
GVC Hochdruckverfahrenstechnik, Aachen (Germany), October (2008)
29. S. Dowy, **A. Braeuer**, R. Schatz, E. Schlücker, A. Leipertz  
Gemischbildungsanalyse im überkritischen Antisolvent-Verfahren  
Thermodynamik Kolloquium, Rostock (Germany), October (2007) (**Abstract only**)
30. **A. Braeuer**, P. Koch, A. Leipertz  
Einsatz der Raman-Streuung im Wasserstoffmotor  
Motorische Verbrennung, Aktuelle Probleme und moderne Lösungsansätze, in  
Berichte zur Energie und Verfahrenstechnik (BEV) Vol. 7.1, Tagung im Haus der  
Technik, Munich (Germany), March (2007)
31. F. Beyrau, **A. Bräuer**, M.C. Weigl, M. Löffler, A. Leipertz  
Laseroptische Methoden zur Messung der Luftzahl und AGR-Rate  
Motorische Verbrennung, Aktuelle Probleme und moderne Lösungsansätze, in  
Berichte zur Energie und Verfahrenstechnik (BEV) Vol. 7.1, Tagung im Haus der  
Technik, Munich (Germany), March (2007)
32. R. Schatz, E. Schlücker, **A. Braeuer**, A. Leipertz  
Charakterisierung der Spraydynamik eines gepulsten Sprays zur Partikelerzeugung in  
einem Antisolvent  
VDI-GVC-Fachausschüsse „Hochdruckverfahrenstechnik“ und  
„Mehrphasenströmungen“, Baden Baden (Germany), March (2007)