

**Dr. J. U. Keller****Verzeichnis wissenschaftlicher Arbeiten****Publikationen (1966 -2017)**

- 133 Keller J.U.  
Göbel M.U.  
Seeger T.** *Oscillometric – gravimetric measurements of pure gas adsorption equilibria without the non- adsorption of helium hypothesis*, Springer N.Y. etc., Adsorption (2017) 23:753 - 766
- 132 Keller J.U.  
Göbel M.U.  
Seeger T.** *Oscillometric – Gravimetric Measurements of Pure Gas Adsorption Equilibria Without the Non-Adsorption of Helium Hypothesis*, Poster, A3 DECHEMA – Tagung, Köln, 2017
- 131 Keller J.U.  
Göbel M.U.  
Seeger T.** *Oscillometric – Gravimetric Measurements of Pure Gas Adsorption Equilibria Without the Non-Adsorption of Helium Hypothesis*, Poster, Porotec Workshop, Bad Soden, 2016
- 130 Keller J.U.  
Göbel M.U.  
Seeger T.** *Oscillometric – Volumetric Measurements of Pure Gas Adsorption Equilibria Without the Non - Adsorption of Helium Hypothesis*, Poster, A3 DECHEMA – Tagung, Duisburg, 2016
- 129 Keller J.U.  
Göbel M.U.** *Oscillometric – Volumetric Measurements of Pure Gas Adsorption Equilibria Without the Non-Adsorption of Helium Hypothesis*, Poster, Porotec Workshop, Bad Soden, 2014
- 128 Keller J.U.  
Göbel M.U.  
Seeger T.** *Oscillometric – Volumetric Measurements of Pure Gas Adsorption Equilibria Without the Non-Adsorption of Helium Hypothesis*, Poster, A3 DECHEMA – Tagung, Oldenburg, 2015
- 127 Keller J.U.  
Göbel M.U.** *Oscillometric – Volumetric Measurements of Pure Gas Adsorption Equilibria Devoid of the Non- Adsorption of Helium Hypothesis*, Adsorption, Science & Technology Vol. 33, No.9, 2015, p.793 – 818.
- 126 Keller J.U.  
Iossifova N.  
Seelbach M.  
Staudt R., et al.** *Measurement Methods for Single – and Multi - Component Gas Adsorption Equilibria*, Poster, Inst. Fluid. & Thermodynamics, University of Siegen, 57068 Siegen, 1988- 2008.

**Dr. J. U. Keller**

- 125 Keller J.U.  
Schieferstein E.  
et al.** *Koadsorptionsgleichgewichte von Kraftstoff dämpfen an feuchten Aktivkohlefiltern*, Chemie Ingenieur Technik 2014, 86, No.1-2, p. 58 - 66
- 124 Keller J. U.** *Thermodynamic Analysis of Photosynthesis Article in: The Role of Thermodynamics in Biochemical Engineering*. Chap. 20, U. von Stokar, Editor, EPFL Press, Lausanne, 2012
- 123 Keller J.U.  
Schieferstein E.** *Untersuchung zur Ertüchtigung von PKW-Kraftstoffdampf-Rückhaltesystemen für die Verwendung alternativer Kraftstoffe*. AIF FV No. 16211 N 1,2, 1.9.2009 – 29.2.2012 Schlussbericht 12-06-2012
- 122 Lange M.  
Schieferstein E.  
Keller J.U. et al.** *Adsorption of Biofuel Components on Activated Carbon*. CHISA Prag, 2011, Poster Paper, AIF-FV No. 16211,2010 - 2012
- 121 Keller J.U.** *Perspektiven der Biothermodynamik – IV. Hydratisierung von Proteinen*, Chemie – Ingenieur – Technik (CIT), 81(2009), Nr.3, p. 255 - 266.
- 120 Keller J.U.** *An Outlook to Biothermodynamics: II. Adsorption of Proteins*. J. Non-Equilib. Thermodyn., 34(2009), p. 1-34.
- 119 Keller J.U.** *An Outlook on Biothermodynamics: Needs, Problems, and New Developments. I. Stability and Hydration of Proteins*. J. Non-Equilib. Thermodyn., 33(2008),p. 321-385.
- 118 Keller J.U.** *Perspektiven der Biothermodynamik – III. Thermische Stabilität von Proteinen*, Chemie – Ingenieur – Technik (CIT), 80(2008), Nr.12, p.1759 – 1766.
- 117 Keller J.U.** *Perspektiven der Biothermodynamik – Teil II. Adsorption von Proteinen*, Chemie Ingenieur Technik (CIT) 80(2008), Nr.6, p.755 – 769.

**Dr. J. U. Keller**

- 116 Keller J.U.** *Perspektiven der Biothermodynamik – I. Thermostatik und Thermodynamik der Irreversiblen Prozesse*, Chemie Ingenieur Technik (CIT) 80 (2008), Nr.6, p.741- 753.
- 115 Keller J.U.  
Iossifova N.  
Zimmermann W.  
Dreisbach F.  
Staudt R.** *Experimental Methods for Single – and Multicomponent Gas Adsorption Equilibria*, Proceedings of the 4<sup>th</sup> Pacific Basin Conference on adsorption Science and Technology, Li Zhou, Editor, p.57 – 71, World Scientific, Singapore, 2008.
- 114 Zimmermann W.  
Keller J.U.** *Enhancement of Adsorption Capacity by Use of Phase Change Material (PCM) as Additive in an Activated Carbon (AC) Fixed Bed Adsorber Combined and Hybrid Adsorbents*, Fundamentals and Applications, J.M.Loureiro,M.T. Kartel,Eds.,p.219-224,NATO STS Series, Springer, Berlin etc.,2006, ISBN 978-1-4020-5171-5
- 113 Wang, X.  
Zimmermann, W.  
Ng, K. C.  
Gao, L.  
Keller, J. U.** *Experimental Investigation of the Adsorption of NH<sub>3</sub> on Silica Gel – based Adsorbents*, Proceedings ASME Heat Transfer Conference, July 17-22, 2005, San Francisco, USA. (HT2005-72232)
- 112 Keller, J. U.  
Iossifova, N.  
Zimmermann, W.** *Volumetric-Densimetric Measurements of the Adsorption Equilibria of Binary Gas Mixtures*, Adsorption Science and Technology Vol. 23 (9), 2005, p. 685-702.
- 111 Wang, X.  
Zimmermann, W.  
Ng, K. C.  
Chakraborty, A.  
Keller, J. U.** *Investigation of the Isotherm of Silica Gel + Water Systems*, J. of Thermal Analysis and Calorimetry, Vol. 76 (2004) 659-669.
- 110 Zimmermann, W.  
Keller, J. U.** *Simultaneous Measurements of Isotherms and Heats of Adsorption in a Sensor Gas Calorimeter*, Paper 329 d presented at AIChE Annual Meeting 2003, San Francisco, 16-21 Nov. 2003, to be published.

**Dr. J. U. Keller**

- 109 Keller, J. U.  
Iossifova, N.  
Schein, E.** *Densimetric-Volumetric and Densimetric-Gravimetric Measurements of Binary Coadsorption Equilibria*, Paper 329 a presented at AIChE Annual Meeting 2003, San Francisco, 16-21 Nov. 2003, to be published.
- 108 Keller, J. U.** *Investigation of growth processes of bacterial Populations by caloric measurements*, Thermodynamics in Biochemical Engineering, DECHEMA Course Book, 12-17 October 2008, Biedenkopf, Germany
- 107 Zimmermann, W.  
Keller, J. U.** *A New Calorimeter for Simultaneous Measurement of Isotherms and Heats of Adsorption*, *Thermochimica Acta*, 7/273 (2003), p. 31-41.
- 106 Keller, J. U.  
Göbel, M. U.  
Staudt, R.** *Das Wirbelrohr: Bemerkungen zu den Grundlagen und neuen energietechnischen Anwendungen*, Artikel in: *Moderne Wege der Energieversorgung*, Deutsche Physikalische Gesellschaft – Arbeitskreis Energie, Vorträge Leipzig Tagung (2002), p. 125-161, W. Blum, Hsg., DPG, Bad Honnef, 2003.
- 105 Keller, J. U.  
Robens, E.** *A Note on Sorption Measuring Instruments*, Proceedings of the 29<sup>th</sup> Int. Conf. on Vacuum Microbalance Technology, *J. of Thermal Analysis and Calorimetry*, 71 (2003), 37-45.
- 104 Keller, J. U.  
Zimmermann, W.  
Schein, E.** *Determination of Absolute Gas Adsorption Isotherms by Combined Calorimetric and Dielectric Measurements*, *Adsorption*, 9 (2003), 177-188.
- 103 Staudt, R.  
Ohm, M.  
Löhr, M.  
Keller, J. U.** *Impedanzspektroskopische Untersuchungen von Adsorptionsgleichgewichten zur Optimierung von technischen Adsorbentien*, *Chemie Ingenieur Technik (CIT)*, 10/2002, p. 1410-1413.
- 102 Klopp, R. L. M.  
Schmutzler, R. W.  
Geiger, A.  
Sprakel, J. G.  
Keller, J. U.** *Die Thermopumpe: Ohne mechanischen Antrieb – Nur mit Wärme gegen Druck*, *Pumpen und Kompressoren 2002 mit Druckluft und Vakuumtechnik VDMA*, p. 8-16, 2002.

**Dr. J. U. Keller**

- 101 Keller, J. U.  
Robens, E.  
Cedric du Fresne  
von Hohenesche** *Thermogravimetric and Sorption Measurement Techniques / Instruments, Proceedings of 6th Int. Symposium on the Characterization of Porous Solids (COPS VI), Alicante, Spain, May 8-11, 2002, Studies in Surface Science and Catalysis 144, p. 387-394, F. Rodriguez-Reinoso et al., Eds., Elsevier, New York etc., 2003.*
- 100 Dreisbach, F.  
Seif, R.  
Lösch, H. W.  
Keller, J. U.** *Gravimetric Measurement of Adsorption Equilibria of Gas Mixture CO / H<sub>2</sub> with a Magnetic Suspension Balance, Proceedings of "Fundamentals of Adsorption (FoA7)" Conference, Nagasaki, May 2001, K. Kaneko, Ed., p. 255-262, IK International, Chiba-City, 2002.*
- 99 E. Robens  
J. U. Keller** *Gassorptionmessung und Thermogravimetrie, LABO, Magazin für Labortechnik + Life Sciences, März 2002, p. 56-67.*
- 98 Keller, J. U.,  
Schmidt, O.  
Michels, W.  
Fischer, M.  
Seelbach, M.  
Staudt, R.** *Influence of Water on Adsorption Kinetics and Equilibria of Ar, N<sub>2</sub>, and CO on Zeolite and Molecular Sieve, Proceedings of "Fundamentals of Adsorption (FoA 7)" Conference, Nagasaki, May 2001, K. Kaneko, Ed., p. 594-600, 2002.*
- 97 Stahl, A.  
Keller, J. U.** *The Entropic Waste Problem in Energy Engineering, Economy and Ecology, J. of Non-Equilib. Thermodyn., 24 (1999), 260-279*
- 96 Brass, M.  
Pritzel, T.  
E. Schulte  
Keller, J. U.** *Measurements of Vapor-Liquid-Equilibria in the Systems NH<sub>3</sub>-H<sub>2</sub>O-NaOH and NH<sub>3</sub>-H<sub>2</sub>O-KOH at 303 K and 318 K, and Pressures 0.1 MPa < p < 1.3 MPa, Int. J. of Thermophysics, 21 (2000), 883-898.*
- 95 Rave, H.  
Staudt, R.  
Keller, J. U.** *Measurement of the Sorption and Swelling Behaviour of Polymer/CO<sub>2</sub> Systems by a Combined Oscillometric - Gravimetric Method, Adsorption Science & Technology, Proceedings of PBAC2 Conference, Brisbane, May 14-18, 2000, p. 341-345, World Scientific, Singapore, 2000.*

**Dr. J. U. Keller**

- 94 Keller, J. U.  
Rave, H.  
Seelbach, M.  
Staudt, R.** *A Note on Old and New Measurement Methods for Gas Adsorption Equilibria*, Adsorption Science & Proceedings PBAC2 Conference, Brisbane, May 14-18, 2000, p. 329 – 335, World Scientific, Singapore, 2000.
- 93 Keller, J. U.  
Popernack, J. D.  
Staudt, R.** *A Generalization of Langmuir's Adsorption Isotherm to Admolecules with Interaction*, Adsorption Science & Technology, Proceedings PBAC2 Conference, Brisbane, May 14-18, 2000, World Scientific, p. 336 – 340, Singapore, 2000.
- 92 Keller, J. U.  
Rave, H.  
Staudt, R.** *Measurements of gas absorption in a swelling polymeric material by a combined gravimetric-dynamic method*, Macromol. Chem. Phys. 200, 2269-2275 (1999).
- 91 Staudt, R.  
Dreisbach, F.  
Keller, J. U.** *Characterization of Activated Carbon (Norit R1 Extra) by Adsorption Equilibria, Impedance Spectroscopy and ESCA-Measurements*, CARBON '97, Extended Abstracts and Program, p. 178 - 179, The American Carbon Society, PENN STATE, University Park Campus, 1998.
- 90 Staudt, R.  
Dreisbach, F.  
Löhr, M.  
Keller, J. U.** *Measurements of Multicomponent Adsorption Equilibria of N<sub>2</sub>, CH<sub>4</sub>, CO<sub>2</sub> and H<sub>2</sub>S and some of their Mixtures on Activated Carbon Norit R 1 Extra*, CARBON '97, Extended Abstracts and Program, p. 68 - 69, The American Carbon Society, PENN STATE, University Park Campus, 1998.
- 89 Dreisbach, F.  
Staudt, R.  
Keller, J. U.** *High Pressure Adsorption Data of Methane, Nitrogen, Carbon Dioxide and their Binary and Ternary Mixtures on Activated Carbon*, Adsorption, 5 (1999), 215-227.
- 88 Staudt, R.  
Rave, H.  
Keller, J. U.** *Impedance Spectroscopic Measurements of Pure Adsorption Equilibria on Zeolithes*, Adsorption, 5 (1999), 159-167.

**Dr. J. U. Keller**

- 87 Staudt, R.  
Kramer, F.  
Dreisbach, F.  
Keller, J. U.** *Impedance Spectroscopic Measurements of Break-through Curves (in Adsorption Columns)*, 6<sup>th</sup> Int. Conf. on Fundamentals of Adsorption, Giens, France, May 1998, F. Meunier, Ed., p. 153-158, Elsevier, Paris etc., 1998.
- 86 Keller, J. U.  
Dreisbach, F.  
Rave, H.  
Staudt, R.  
Tomalla, M.** *Measurement of Gas Mixture Adsorption Equilibria of Natural Gas Compounds on Microporous Sorbents*, *Adsorption*, 5 (1999), 199-214.
- 85 Ahlborn, B.  
Rebhan, E.  
Keller, J. U.** *The Heat Pump in a Vortex Tube*, *J. Non-Equilib. Thermodyn.*, 23 (1998), 159-165.
- 84 Staudt, R.  
Dreisbach, F.  
Keller, J. U.** *Analyse und Auswertung von experimentellen Adsorptionsgleichgewichtsdaten*, *CIT, Chemieingenieurtechnik*, 69 (1997) Nr. 9, p. 1325 - 26.
- 83 Brass, M.  
Maxeiner, E.  
Treude, M.  
Keller, J. U.** *Vapour - liquid equilibria in the system ammonia-water-potassium hydroxide at 333 and 373 K, 0.1 - 1.5 MPa*, *High Temperatures - High Pressures*, 29 (1997), p. 505 - 508.
- 82 Keller, J. U.  
Staudt, R.  
Dreisbach, F.** *Generalized Isotherms for Mono- and Multicomponent Adsorption*, *Fundamentals of Adsorption*, M. D. Le Van, Ed., p. 865-872, Kluwer Academic Publishers, Boston, MA, 1996.
- 81** *Measurement of Gas-Adsorption Equilibria by Rotational Oscillations*, *Proceedings 27 th VMT Conference on Vacuum-Microbalance-Technology*, Lublin, July 1997, Poland, *J. of Thermal Analysis and Calorimetry*, 55 (1999), 601-608.
- 80 Keller, J. U.** *Das Injektor-Wirbelrohr. Bemerkungen zu nicht adiabaten Expansionsvorgängen von Gasen und Dämpfen*, *Geropp-Festschrift*, p. 103 - 116, Shaker-Verlag, Aachen, 1997.
- 79 Keller, J. U.  
Göbel, M. U.** *Die Thermodrossel: Eine Anlage zur Entspannung komprimierter Flüssigkeiten unter Wärmeabgabe*, *Ki Luft- und Kältetechnik* 33 (1997) Heft 2, p. 57 - 60.

**Dr. J. U. Keller**

- 78 **Dreisbach, F.**  
**Staudt, R.**  
**Keller, J. U.** *Experimental Investigation of the Kinetics of Adsorption of pure Gases and Binary Gas Mixtures on Activated Carbon*, Proceedings Conference Fundamentals of Adsorption FOA6, May, 1998, Giens, France, p. 1219-1224, F. Meunier, Ed., Elsevier, Paris etc., 1998.
- 77 **Keller, J. U.**  
**Dreisbach, F.**  
**Staudt, R.** *Correlation and Calculation of Multicomponent Adsorption Equilibria Data using a Generalized Adsorption Isotherm*, Adsorption, 4, 57 - 62 (1998).
- 76 **Keller, J. U.**  
**Massen, C. H.**  
**Robens, R.**  
**Staudt, R.** *Disturbances of Adsorption Experiments by Helium Adsorption*, Proceedings Conference of Porous Solids (COPS IV), Bath, UK, Sept. 1996, Mc Ennany, Edt., Elsevier, 1997.
- 75 **Staudt, R.**  
**Bohn, St.**  
**Dreisbach, F.**  
**Keller, J. U.** *Gravimetric and Volumetric Measurements of Helium Adsorption Equilibria on Different Porous Solids*, Proceedings COPS IV Conference, Bath, UK, Sept. 1996, p. 261-266, Mc Ennany, et al., Eds., The Royal Society of Chemistry, Special Publ. No. 213, London, 1997.
- 74 **Keller, J. U.**  
**Ahlborn, B.**  
**Camire, J.** *Low Pressure Vortex Tubes*, J. Phys. D, Appl. Phys. 29 (1996), 1469-72
- 73 **Keller, J. U.**  
**Abdel-Ghani, T.**  
**Dreisbach, F.**  
**Tomalla, M.** *Measurement of Adsorption Equilibria of Pure and Mixed Corrosive Gases: The Magnetic Suspension Balance*, Proceedings 5 th Int. Conference Fundamentals of Adsorption, Asilomar, May 1995, Kluwer Academic Publishers, p. 259-268, Boston, Mass., 1996.
- 72 **Keller, J. U.**  
**Dreisbach, F.**  
**Staudt, R.** *A Class of Generalized Adsorption Isotherms for Mono- and Multicomponent Adsorbates of Fractal Dimension*, Proceedings 5 th Int. Conference Fundamentals of Adsorption Asilomar, May 1995, Kluwer Academic Publishers, p. 867-872, Boston, Mass., 1996.



**Dr. J. U. Keller**

- 71 **Keller, J. U.**  
**Saller, G.**  
**Staudt, R.** *Generalized Langmuir - Freundlich Adsorption Isotherms for Single- and Multicomponent Gas Adsorption Equilibria*, Proceedings 26 th Int. Conf. on Vacuum Microbalance Technology, Marakech, April 1995.
- 70 **Keller, J. U.** *Principles of Measurement of Gas Adsorption Equilibria, Proceedings of Minisymposium „Thermodynamics of Surface Systems*, ETN, Berlin, May 1995, TU-Dokumentation, 1996, Wissenstransfer Heft 2, p. 11-26.
- 69 **Keller, J. U.**  
**Peters, R.**  
**Helwig, R.** *A Solvation Model for Vapor-Liquid-Equilibria in the System H<sub>2</sub>O-NaOH from 10 to 85 Wt %*, Int. J. of Thermophysics, 17 (1996), 99-109.
- 68 **Keller, J. U.** *A Note on the Measurement of Gas-Adsorption Equilibria by Rotational Oscillations*, AIChE Annual Meeting 1994, San Francisco, Chemical Engineering Communications, MS # 268-95, 1995.
- 67 **Keller, J. U.**  
**Konrith, C.**  
**Peters, R.** *Vapor-Liquid-Equilibria in the System NH<sub>3</sub> + H<sub>2</sub>O + LiBr, Part. II: Data Correlation*, J. of Chemical and Engineering Data, K. N. Marsh, Ed., 40 (1995), 775-783.
- 66 **Keller, J. U.**  
**Greb, O.**  
**Konrith, C.**  
**Peters, R.**  
**Zimmermann, A.** *Vapor-Liquid-Equilibria in the System NH<sub>3</sub> + H<sub>2</sub>O + LiBr, Part. I: Measurements in the Range T = 303 to 423 K and p = 0.1 to 1.5 MPa*, J. of Chemical and Engineering Data, K. N. Marsh, Ed., 40 (1995), 769-774.
- 65 **Keller, J. U.** *Theory of Measurement of Gas-Adsorption Equilibria by Rotational Oscillations*, ADSO-3-94, Adsorption, 1 (1995), 283-290.
- 64 **Keller, J. U.**  
**Staudt, R.**  
**Saller, G.**  
**Dreisbach, F.**  
**Tomalla, M.** *What can be learned about the volume of a porous solid by gas adsorption equilibria measurements?* Microbalance Techniques, Proceedings of the 25 th Conf. on Microbalance Techniques, Sept. 2 - 4, 1993, Siegen, Germany, p. 205-210, Multi-Science Publishers, Brenntwood, UK, 1994.

**Dr. J. U. Keller**

- 63 Keller, J. U.  
Tomalla, M.  
Staudt, R.** *Determination of Binary Gasadsorption Equilibria by Volume-Gravimetric Measurements, Microbalance Techniques, Proceedings of the 25 th Conf. on Vacuum Microbalance Techniques, Sept. 2 - 4, 1993, Siegen, Germany, p. 193-204, Multi-Science Publishers, Brentwood, UK, 1994.*
- 62 Keller, J. U.  
Ahlborn, B.  
Staudt, R.  
Treitz, G.  
Rebhahn, E.** *Limits of Temperature Separation in a Vortex Tube, J. Phys. Appl. Phys. 27 (1994), 480-488.*
- 61 Keller, J. U.  
Saller, G.  
Staudt, R.  
Tomalla, M.** *Electro-Gravimetric Measurements of Binary Coadsorption Equilibria, Proceedings of the IUPAC-Symposium on Characterization of Porous Solids, COPS III, Marseille, May 1993, Studies in Surface Science and Catalysis, Vol. 87, p. 345-351, Elsevier, New York, 1994.*
- 60 Keller, J. U.** *Können die Leistungszahlen von Kompressions-Kältemaschinen und Wärmepumpen durch exotherme Entspannung des Arbeitsfluides im Kühlwirbelrohr erhöht werden?, Ki, Klima, Kälte, Heizung, 21 (7/8), (1993) p. 300 - 304.*
- 59 Keller, J. U.  
Peters, R.** *Ein Assoziationsmodell zur Berechnung von Phasengleichgewichtszuständen im Stoffsystem Ammoniak-Wasser, DKV-Berichte 20 (1993), Bd. II/I, p. 183 - 196.*
- 58 Keller, J. U.  
Peters, R.** *A Note on Vapor-Liquid-Equilibria in the System  $\text{NH}_3\text{-H}_2\text{O}$ ,  $\text{NaOH}$  in the Range  $T = 303 - 363 \text{ K}$ ,  $p = 0,1 - 1,5 \text{ MPa}$ , Ref. No. 11, Proceedings of CHISA '93, Prague, 1993.*
- 57 Keller, J.U.  
Busse, R.  
Peters, R.** *Solid - Liquid Equilibria in the Systems  $\text{NH}_3\text{-H}_2\text{O-LiBr}$  and  $\text{H}_2\text{O-LiBr}$  at  $p = 1 \text{ atm}$  in the Range from 35 to  $80^\circ\text{C}$ , Int. J. of Thermophysics, 14 (1993) 763 - 775.*
- 56 Keller, J. U.  
Peters, R.** *Solvation Model for VLE in the System  $\text{H}_2\text{O} - \text{LiBr}$  from 5 up to 76 wt.%, Fluid Phase Equilibria, 94 (1994), 129 - 147.*

**Dr. J. U. Keller**

- 55 Keller, J. U.** *Verbesserung der Leistungszahlen von Kompressionskältemaschinen und Wärmepumpen durch Entspannung des Arbeitsfluids im Wirbelrohr*, Artikel in: *Turbulente Strömungen in Forschung und Praxis*, Geropp-Festschrift, p. 176 - 193, Shaker, Aachen, 1992.
- 54 Keller, J. U.  
Saller, G.  
Staudt, R.  
Tomalla, M.** *A Note on Gravimetric Measurements of Gas Adsorption Equilibria*, Ber. Bunsenges. Phys. Chem., 97 (1993), 89 - 105
- 53 Keller, J. U.  
Staudt, R.  
Tomalla, M.** *Volume-Gravimetric Measurements of Binary Gas Adsorption Equilibria*, Ber. Bunsenges. Phys. Chem., 96 (1992), 28.
- 52 Keller, J. U.** *Electro-gravimetric measurements of Binary Coadsorption Equilibria*, Poster Paper No. 675, 4th World Congress Chemical Engineering, Karlsruhe, June 1991.
- 51 Keller, J. U.** *Energetische Sondersysteme*, Tagungsbericht „Möglichkeiten und Bewertung Alternativer Energiewandlungsprozesse“, Teil B, Daimler Benz, Forschung und Technik, H. Schnieder, Hsg., p. 87 - 119, Berlin, 1991.
- 50 Keller, J. U.** *Energiewandlungsprozesse, Möglichkeiten und Bewertungen*, Tagungsbericht „Möglichkeiten und Bewertung Alternativer Energiewandlungsprozesse“, Teil B, Daimler Benz, Forschung und Technik, H. Schnieder, Hsg., p 13 - 48, Berlin 1991.
- 49 Keller, J. U.  
Staudt, R.  
Tomalla, M.** *Volume-Gravimetric Measurements of Binary Gas Adsorption Equilibria*, Ber. Bunsenges. Phys. Chem., 96 (1992), p. 28 - 32.
- 49a Keller, J. U.** *Research into Coadsorption Phenomena of Natural Gases on AC's and MS's*, Adsorption News, 1 (1990), No. 3, p. 4.

**Dr. J. U. Keller**

- 48 **Keller, J. U.**  
**Lorenz, M.**  
**Reh, M.**  
**Zimmermann, A.** *Dichte, Viskosität und Dampf-Flüssigkeit-Gleichgewichte des Stoffsystems Ammoniak-Wasser-Lithiumbromid*, Berichte der Jahrestagung der DKV, Heidelberg, 1990, Bd. 2, p. 277 - 289, DKV, Stuttgart, 1991.
- 47 **Klopfer, M.**  
**Keller, J. U.** *Measurements of Mass Concentration in the System Sulphuric Acid/Water in the Range 35-80% WT, 15-120°C*. Proceedings 3rd Int. Workshop on Research Activities on Advanced Heat Pumps, A. Moser, Ed., TU Graz, Graz, September 1990.
- 46 **Zimmermann, A.**  
**Keller, J. U.** *Vapor-Liquid-Equilibria in the Ternary System Ammonia-Water-Lithium Bromide*, Proceedings 10th Int. Congress of Chemical Engineering, Chemical Equipment, Design and Automatisation, CHISA '90, Prague, CSFR, August 1990.
- 45 **Keller, J. U.** *Equations of State of Adsorbates with Fractal Dimension*, Physika A, 166 (1990), No. 2, p. 180-193.
- 44 **Keller, J. U.**  
**Zimmermann, A.** *Liquid-Vapor-Equilibria in the System Ammonia-Water-Lithium Bromide*, Proceedings of the Int. Conference on „Thermophysical Properties of Pure Substances and Mixtures for Refrigeration“, p. 217-224, Int. Institute of Refrigeration (IIR), Paris, Com. BI, Herzlia on-Sea, Israel, 3/5-7/1990.
- 43 **Keller, J. U.** *Thermodynamics of Physical Adsorption Processes of Gases on Solid Adsorbent*, Acta Physica Hungarica, 66 (1989), 135-143.
- 42 **Keller, J. U.** *Bildung und Evolution von Gesamtheiten einfacher thermodynamischer Systeme*, Schriftenreihe zur gesellschaftlichen Entwicklung, Bd. 2, Dissipative Strukturen in integrierten Systemen, Tagung Mannheim, Oktober 1987, p. 145-162, NOMOS, Baden-Baden, 1989.
- 41 **Zimmermann, A.**  
**Keller, J. U.** *VLE in the System Water-Ammonia-Lithium Bromide*, Proceedings of the 5th Int. Conf. on Fluid Properties & Phase Equilibria for Chemical Process Design, Banff Alberta, Canada, May 1989, Fluid Phase Equilibria, 53 (1989), 229-234.

**Dr. J. U. Keller**

- 40 Keller, J. U.  
Hardt, H.-W.  
Hoen, K.** *Thermodynamics of Non-Isothermal Coadsorption Processes*, Proceedings of the 3rd Int. Conf. on „Fundamentals of Adsorption“, Sonthofen, May 7-12, 1989, A. Mersmann, Ed., Engineering Foundation, New York, 1991.
- 39 Keller, J. U.** *Interrelations between Thermodynamic Equations of State of Single- and Multi-Component Adsorbates*, Ber. Bunsenges. Phys. Chem., 92 (1988), 1510-1516.
- 38 Keller, J. U.** *Evolution of Populations of Biothermodynamic Systems Including Birth- and Death-Processes*, article in „Thermodynamics and Pattern Formation in Biology“, I. Lampecht, A.I Zotin, Eds., p. 149-164, W. de Gruyter, Berlin-New York, 1988.
- 37 Keller, J. U.  
Hardt, H. - W.** *Thermodynamics of Non-Isothermal Adsorption Processes*, J. Non-Equilib. Thermodyn., 13 (1988), 161-176.
- 36 Keller, J. U.** *Thermodynamics of Non-Isothermal Coadsorption Processes*, Ber. Bunsenges. Phys. Chem. 91 (1987), 528-536.
- 35 Keller, J. U.** *Evolution Processes of Populations of Simple Biothermodynamic Systems*, J. Non-Equilib. Thermodyn., 9 (1984), 293-308.
- 34 Keller, J. U.** *Thermodynamics of Processes and the Evolution of Simple Biothermodynamic Populations*, Artikel in: Thermodynamics and Regulation of Biological Processes, I. Lamprecht, A. I. Zotin, Eds., p. 305 - 329, W. de Gruyter, Berlin, N. Y., 1984. Dito Übersetzung ins Russische, Moskau, 1984.
- 33 Keller, J. U.** *Consequences from the Second Law of Thermodynamics for the Dynamics of Adsorption Processes*, Proceedings of the Conference „Fundamentals of Adsorption“, Elmau, May 1983, p. 259 - 265, A. Meyers (Ed.), Engineering Foundation, New York, 1984.

**Dr. J. U. Keller**

- 32 Keller, J. U.** *Evolution of Biothermodynamic Systems*, Art. In Bd. 22 der „Springer Series in Synergetics“, E. Frehland (Ed.), p. 140 - 149, Springer, Berlin - Heidelberg - New York, 1984.
- 31 Keller, J. U.** *R&D Work on Heat Transformations by Absorption Processes*, Proceedings of the Workshop on „Absorption Working Pairs“, Berlin (West), April 14 - 16, 1982, p. 121, Ed. W. Raldow, Swedish Council for Building Research, Stockholm, 1982.
- 30 Keller, J. U.** *Wie viel Energie braucht der Mensch? Zur Beziehung zwischen anthropogenem Energieverbrauch, Bevölkerungswachstum und Umweltschaden, Humanismus und Technik*, Zeitschrift der TU Berlin, Bd. 26 (1983), 1 - 27.
- 29 Keller, J. U.** *On the Formulation of the Second Law for Biothermodynamic Systems*, article in „Thermodynamics and Regulation in Biological Processes“, A. I. Zotin, Ed., NAUKA, Moscow, p. 181 - 197, 1984 (in Russisch).
- 28 Keller, J. U.** *Die zukünftige Rolle der Kohle als Substitutions- und Brückenenergie I* (The future role of coal as substituent energy and energy bridge I) Humanismus und Technik, Zeitschrift der TU Berlin, 25 (1982), 60 - 85.
- 27 Keller, J. U.** *Efficiency - Coefficients in Energy Conversions with Cogeneration*, Energy, The International Journal, 7 (1982), 637 - 50.
- 26 Keller, J. U.  
Gräber, J.** *A Group Contribution Model for the Dynamic and the Kinematic Viscosity of Liquid, Boiling Halokanes* (DFG Kn 122/28), Chemical Eng. Science, 1982.
- 25 Keller, J. U.  
Hess, S.** *Properties of global Constitutive Equations of Non - Equilibrium Thermodynamics Based on Linear Local Laws*, J. Non - Equilib. Thermodyn., 6 (1981), 217.

**Dr. J. U. Keller**

- 24 **Keller, J. U.** *Constitutive Equations of Discontinuous Thermodynamic systems and the Principle of Environs Invariance*, article in: Continuum models of discrete systems, Proceedings of CMDS-3 Conference, p. 173, Freudenstadt, 1979, University of Waterloo Press, Waterloo, Canada, 1980.
- 23 **Keller, J. U.** *A General Antisymmetry Property of the Constitutive Equations of Non - Equilibrium Thermodynamics*, Int. J. Eng. Science, 17 (1979), 715.
- 22 **Keller, J. U.** *Causality as a Consequence of Environs-Invariance*, ZAMM 58 (1978),T 378.
- 21 **Keller, J. U.** *The Fundamental Inequality for Thermodynamic Systems with Heat and Mass Transfer*, J. Non-Equilib. Thermodyn., 1 (1976), 67.
- 20 **Kollmann, W.**  
**Keller, J. U.** *Statistical treatment of Homogenous Chemical Reactions*, Bull. Amer. Phys. Soc., 17 (1972) 1115.
- 19 **Keller, J. U.** *The Master-Eqation Formalism for Turbulent Flows with and without Chemical Reactions*, Bull. Amer. Phys. Soc., 17 (1972), 1080.
- 18 **Keller, J. U.** *Eine Mastergleichung für Turbulenzströmungen*, (A master-equation for turbulent flows), Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM) 54 (1974), T 125.
- 17 **Keller, J. U.** *Über eine Integro-Differential-Gleichung in der Turbulenztheorie*, (A new integro-differential-equation of turbulence theory), Internationale Schriftenreihe Numerische Mathematik, 19 (1972) 125.
- 16 **Keller, J. U.** *Zur statistischen Thermodynamik der Vorgänge in fluiden Systemen*, (Statistical thermodynamica of processes in fluid systems), Acta Physica Austriaca, 37 (1972), 132.
- 15 **Keller, J. U.** *Über den Zweiten Hauptsatz der Thermodynamik irreversibler Prozesse*, (On the Second Law in thermodynamics of irreversible Processes), Acta Physica Austriaca, 35 (1972), 321.

**Dr. J. U. Keller**

- 14 Keller, J. U.** *Irrflug-Prozesse mit korrelierten Sprungwahrscheinlichkeiten*, (Random-walk processes with correlated transition probabilities), Zeitschrift für Naturforschung, 26a (1971), 1539.
- 13 Keller, J. U.** *Ein einfaches statistisches Modell für -Transportvorgänge mit beschränkter Ausbreitungsgeschwindigkeit II*, (A simple statistical model for transport processes with finite velocity of propagation II), Zeitschrift für Naturforschung, 25a (1970), 1207.
- 13a Keller, J. U.** *Bemerkungen zu den Arbeiten „Ein einfaches statistisches Modell für Transportvorgänge mit beschränkter Ausbreitungsgeschwindigkeit I, II“, Ergebnisse für das 2-dimensionale Gitter*, (Remarks on the articles A simple statistical model for transport processes with finite velocity of propagation I, II, results concerning the 2-dimensional lattice.) Zeitschrift für Naturforschung, 25a (1970) 1999.
- 12 Keller, J. U.** *Ein einfaches statistisches Modell für Transportvorgänge mit beschränkter Ausbreitungsgeschwindigkeit I* (A simple statistical model for transport processes with finite velocity of propagation I), Zeitschrift für Naturforschung, 25a (1970), 1202.
- 11 Keller, J. U.** *Ein Beitrag zur Thermodynamik fluider Systeme I*, (A contribution to thermodynamics of fluid system I), Physica, 53 (1971), 602-620.
- 10 Keller, J. U.** *On the validity of the Clausius-Duhem-Inequality*, Proceedings of the Int.Conf. on Thermodynamics, Cardiff, 1970, Journal Pure and Applied Chemistry, 22 (1970), 343.
- 9 Keller, J. U.** *Eine Folgerung aus der Fundamentalen Ungleichung der Thermodynamik*, (A consequence of the fundamental inequality of thermodynamics), Physica, 46 (1969), 451-57



**Dr. J. U. Keller**

- 9a Keller, J. U.** *Eine Folgerung aus der fundamentalen Ungleichung der Thermodynamik, (A consequence of the fundamental inequality of thermodynamics), Zeitschrift für Angewandte Mathematik und Mechanik, 50 (1970), T 126.*
- 8 Keller, J. U.** *Bemerkungen zur Clausiusschen Ungleichung, (Remarks on the Clausius-Duhem-inequality), Zeitschrift für Naturforschung, 24a (1969), 1989.*
- 7 Keller, J. U.** *Statistische Bewegungsgesetze relaxierender Systeme, (Statistical laws of motion of relaxation systems), Zeitschrift für Physik, 227 (1969), 427-39.*
- 6 Keller, J. U.** *Ein Beitrag zur phänomenologischen Theorie der Brownschen Bewegung, (A contribution on the phenomenological theory of the Brownian motion), Annalen der Physik, 7.Folge, 24 (1969), 47-58.*
- 5 Keller, J. U.** *Über Linear Passive Transformationen stochastischer Prozesse II. (On linear passive transformations of stochastic processes II), Zeitschrift für Naturforschung, 24a (1969), 716-28.*
- 4 Keller, J. U.** *Über Linear Passive Transformation stochastischer Prozesse I, (On linear passive transformation of stochastic processes I), Zeitschrift für Naturforschung, 23a (1968), 1431-38*
- 3 Keller, J. U.** *Über eine Approximation von Markoff-Ketten hoher Stufe durch Ketten niedrigerer Stufe, (Approximation of Markov-chains of high order by chains of lower order), Zeitschrift für Physik, 210 (1968), 142-163*
- 2 Keller, J. U.** *Zur Approximation der statistischen Bewegungsgesetze physikalischer Größen durch Markoff-Prozesse, (Approximations of the statistical laws of motion of physical quantities by Markov-processes), Zeitschrift für Physik, 204 (1967), 47-70*
- 1 Keller, J. U.** *Zum Ausbreitungsprozess eines Knudsen-Gases in einem abgeschlossenen Volumen, (On the expansion process of a Knudsen-gas in a closed volume.) Acta Physica Austriaca, XXV (1967), 224.*

**Dr. J. U. Keller**