



Publications of Hans Leuenberger

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Year: 2019

- H. Leuenberger. "What is Life? A new Human Model of Life, Disease and Death – a Challenge for Artificial Intelligence and Bioelectric Medicine Specialists". 2019. [\[Digital version\]](#)

Year: 2018

- H. Leuenberger, S. K. El-Arini and G. Betz. "chapter PHARMACEUTICAL POWDER TECHNOLOGY – ICH Q8 AND BUILDING THE PYRAMID OF KNOWLEDGE". 2018. [\[Digital version\]](#)
- K. Saeting, G. Kimura, A. Mitrevej, N. Sinchaipanid and H. Leuenberger. "A systematic pharmaceutical technology drug-excipient screening program for pre-formulation studies". 2018. [\[Digital version\]](#)

Year: 2017

- D. Maneerojpakdee, A. Mitrevej, N. Sinchaipanid, J. Nowak and H. Leuenberger. "An Attempt to Adopt the Workflow of the Automotive and Aircraft Industry for the Design of Drug Delivery Vehicles". 2017. [\[Digital version\]](#)

Year: 2016

- H. Leuenberger and M. Leuenberger. "Impact of the Digital Revolution on the Future of Formulation Science". 2016. [\[Digital version\]](#)

Year: 2010

- S. Sehic, G. Betz, S. Hadzidedic, S. K. El-Arini and H. Leuenberger. "Investigation of intrinsic dissolution behavior of different carbamazepine samples". 2010.
- E. Hadzovic, G. Betz, S. Hadzidedic, S. K. El-Arini and H. Leuenberger. "Roller compaction of different pseudopolymorphic forms of Theophylline: Effect on compressibility and tablet properties". 2010.

Year: 2009

- V. Balzano. "Soft tabletting of MCC 102 and UICEL-A/102 pellets into multiple unit pellet systems". 2009. [\[Digital version\]](#)
- E. Krausbauer. "Contributions to a science based expert system for solid dosage form design". 2009. [\[Digital version\]](#)
- M. Rumman. "Understanding the functionality of MCC Rapid as an excipient for DC - Moving towards QbD". 2009. [\[Digital version\]](#)
- L. Maurer and H. Leuenberger. "Terahertz pulsed imaging and near infrared imaging to monitor the coating process of pharmaceutical tablets". 2009.
- H. Leuenberger, M. Puchkov, E. Krausbauer and G. Betz. "Manufacturing pharmaceutical granules: Is the granulation end-point a myth?". 2009.

Year: 2008

- U. J. Bausch. "Impact of filling processes on protein solutions". 2008. [\[Digital version\]](#)
- T. A. Meyer. "Novel determination of powder mixing qualities and study of dry coated particles". 2008. [\[Digital version\]](#)
- E. Hadzovic. "Roller compaction of theophylline". 2008. [\[Digital version\]](#)
- F. S. M\"uller. "Modified celluloses as multifunctional excipients in rapidly dissolving immediate release tablets". 2008. [\[Digital version\]](#)
- L. Maurer. "Near infrared spectroscopy/imaging and terahertz pulsed spectroscopy/imaging for the analysis of solid dosage forms". 2008. [\[Digital version\]](#)
- K. Oppel. "Taste masking of an active pharmaceutical ingredient for veterinary application". 2008. [\[Digital version\]](#)
- M. Pasic. "Study to design stable lansoprazole pellets". 2008. [\[Digital version\]](#)
- S. Sehic. "Investigation of variability of primary materials on the intrinsic dissolution behavior of carbamazepine". 2008. [\[Digital version\]](#)
- A. M. Guntermann. "Untersuchung der Tablettiersimulation mit dem PressterTM in Abhängigkeit von der Formulierung, Chargengrösse und der Tablettenpresse". 2008. [\[Digital version\]](#)
- Y. Y. Pittini et al. "Cole-Cole plot analysis of dielectric behavior of monoalkyl ethers of polyethylene glycol (CnEm)". 2008.

Year: 2007

- M. S. Faatz. "Ländervergleich Irland-Schweiz betreffend der bildungspolitischen Rahmenbedingungen für die globale pharmazeutische Industrie". 2007. [\[Digital version\]](#)
- D. Daneshvari. "Investigation of binary polar solvent mixtures, solubilized ferroelectric salts and paraffin-based derivatives using dielectric spectroscopy". 2007. [\[Digital version\]](#)

Year: 2006

- L. R. Farfan. "Ganzheitliche systemische Qualitätsbetrachtung in der Produktion fester Arzneiformen : ein praxisorientiertes Vorgehensmodell anhand einer Synthese der Methoden Prozesssimulation und multivariate Datenanalyse". 2006. [\[Digital version\]](#)
- H. Valþórsson. "PAT implementation in pharmaceutical manufacturing and its economical impact". 2006. [\[Digital version\]](#)
- L. R. Farfan. "Ganzheitliche systemische Qualitätsbetrachtung in der Produktion fester Arzneiformen : ein praxisorientiertes Vorgehensmodell anhand einer Synthese der Methoden Prozesssimulation und multivariate Datenanalyse". 2006. [\[Digital version\]](#)
- M. Walter. "Integration und Evaluation neuer Medien angewandt in der Lehre der pharmazeutischen Technologie an der Universität Basel : Erfahrungen bei der Entwicklung und Umsetzung". 2006. [\[Digital version\]](#)
- H. Nalenz. "Dependence of skin drug permeation on microstructure and time dependent alterations following application of more-phasic dermatological formulations studied by the continuous phase drug concentration concept". 2006. [\[Digital version\]](#)
- C. A. Sautter. "Sustained release injectables formed "in-situ" for veterinary use". 2006. [\[Digital version\]](#)
- M. Plitzko. "Gefriertrocknung in der Wirbelschicht : Möglichkeiten und Grenzen f\"ur die Anwendung in der Pharmazie". 2006. [\[Digital version\]](#)
- M. Lanz. "Pharmaceutical powder technology : towards a science based understanding of the behavior of powder systems". 2006. [\[Digital version\]](#)

Year: 2005

- M. P. Altenbach. "Cutaneous metabolism, tissue binding, lipophilicity and electroosmosis : relevance for iontophoretic enhancement". 2005. [\[Digital version\]](#)
- B. Egger-Heigold. "The effect of excipients on pharmacokinetic parameters of parenteral drugs". 2005. [\[Digital version\]](#)
- J. C. von Orelli. "Search for technological reasons to develop a capsule or a tablet formulation". 2005. [\[Digital version\]](#)
- S. Reitbauer. "Einfluss pharmazeutischer Hilfsstoffe auf die Plasmamembran von Caco-2 Zellmonolayern ermittelt durch Fluoreszenzdepolarisation". 2005. [\[Digital version\]](#)
- A. U. Schiffmann. "Modellierung und Formulierung von WIP (Washing In Place) - und CIP (Cleaning In Place) - Konzepten f\"ur Wirbelschichtanlagen". 2005. [\[Digital version\]](#)
- G. Betz, A. Aepli, N. Menshutina and H. Leuenberger. "In vivo comparison of various liposome formulations for cosmetic application". 2005.

- H. LEUENBERGER and M. LANZ. "Pharmaceutical powder technology -- from art to science: the challenge of the FDA's Process Analytical Technology initiative". 2005.
- G. Hernandez-Perni, A. Stengele and H. Leuenberger. "Towards a better understanding of the parameter Ei/E in the characterization of polar liquids". 2005.
- G. Hernandez-Perni, A. Stengele and H. Leuenberger. "Detection of percolation phenomena in binary polar liquids by broadband dielectric spectroscopy". 2005.
- G. Hernandez-Perni and H. Leuenberger. "The characterization of aprotic polar liquids and percolation phenomena in DMSO/water mixtures". 2005.

Year: 2004

- T. T. Kuny. "Compression behavior of the enzyme β -galactosidase". 2004. [\[Digital version\]](#)
- M. E. Perni. "A contribution to the understanding of percolation phenomena in binary liquids". 2004. [\[Digital version\]](#)
- C. Gräflein. "Parenterale Ernährung mit stabilitätsgeprägten, modularen Standardnährlösungen in der Neonatologie". 2004. [\[Digital version\]](#)
- Y. Fukumori, H. Leuenberger and M. Horio. "Preface". 2004.
- J. von Orelli and H. Leuenberger. "Search for technological reasons to develop a capsule or a tablet formulation with respect to wettability and dissolution". 2004.
- G. Betz, P. J. Bürgin and H. Leuenberger. "Power consumption measurement and temperature recording during granulation". 2004
- J. Werani, M. Grünberg, C. Ober and H. Leuenberger. "Semicontinuous granulation--the process of choice for the production of pharmaceutical granules?". 2004.

Year: 2003

- L. Sukowski. "NIR based process analytical technology: in-line residual moisture determination for a complete batch inspection of lyophilized end-products". 2003. [\[Digital version\]](#)
- G. Betz, P. J. Bürgin and H. Leuenberger. "Power consumption profile analysis and tensile strength measurements during moist agglomeration". 2003.
- T. Kuny and H. Leuenberger. "Compression behaviour of the enzyme [beta]-galactosidase and its mixture with microcrystalline cellulose". 2003.
- H. Leuenberger. "Scale-up in the 4th dimension in the field of granulation and drying or how to avoid classical scale-up". 2003.

Year: 2002

- H. Leuenberger. *Martin Physikalische Pharmazie*, 2002. [\[Digital version\]](#)

- A. Stengele, S. Rey and H. Leuenberger. "A novel approach to the characterization of polar liquids. Part 2: binary mixtures". 2002.

Year: 2001

- A. Stengele, S. Rey and H. Leuenberger. "A novel approach to the characterization of polar liquids: Part 1: pure liquids". 2001.
- H. Leuenberger. "New trends in the production of pharmaceutical granules: the classical batch concept and the problem of scale-up". 2001.
- H. Leuenberger. "New trends in the production of pharmaceutical granules: batch versus continuous processing". 2001.

Year: 2000

- M. Kuentz and H. Leuenberger. "A new theoretical approach to tablet strength of a binary mixture consisting of a well and a poorly compactable substance". 2000.
- M. Kuentz and H. Leuenberger. "A new model for the hardness of a compacted particle system, applied to tablets of pharmaceutical polymers". 2000.

Year: 1999

- M. Kuentz, H. Leuenberger and M. Kolb. "Fracture in disordered media and tensile strength of microcrystalline cellulose tablets at low relative densities". 1999.
- H. Leuenberger. "The application of percolation theory in powder technology". 1999.
- C. Siegmund and H. Leuenberger. "Percolation theory, conductivity and dissolution of hydrophilic suppository bases (PEG systems)". 1999.

Year: 1998

- G. Imanidis, S. Helbing-Strausak, R. Imboden and H. Leuenberger. "Vehicle-dependent in situ modification of membrane-controlled drug release". 1998.
- J. Bourquin, H. Schmidli, P. van Hoogevest and H. Leuenberger. "Comparison of artificial neural networks (ANN) with classical modelling techniques using different experimental designs and data from a galenical study on a solid dosage form". 1998.
- J. Bourquin, H. Schmidli, P. van Hoogevest and H. Leuenberger. "Advantages of Artificial Neural Networks (ANNs) as alternative modelling technique for data sets showing non-linear relationships using data from a galenical study on a solid dosage form". 1998.
- S. K. El-Arini and H. Leuenberger. "Dissolution properties of praziquantel-PVP systems". 1998.
- J. Bourquin, H. Schmidli, P. van Hoogevest and H. Leuenberger. "Pitfalls of artificial neural networks (ANN) modelling technique for data sets containing outlier measurements using a study on mixture properties of a direct compressed dosage form". 1998.

Year: 1997

- B. Buchter, C. Hinz and J. Leuenberger. "Tracer transport in a stony hillslope soil under forest". 1997.
- H. Leuenberger and L. Ineichen. "Percolation theory and physics of compression". 1997.

Year: 1996

- I. Caraballo, M. Millán, A. M. Rabasco and H. Leuenberger. "Zero-order release periods in inert matrices. Influence of the distance to the percolation threshold". 1996.
- I. Caraballo, M. Fernández-Arévalo, M. Millán, A. M. Rabasco and H. Leuenberger. "Study of percolation thresholds in ternary tablets". 1996.

Year: 1995

- L. Savastano, H. Leuenberger and H. P. Merkle. "Membrane modulated dissolution of oral drug delivery systems". 1995.
- S. K. Ei-Arini and H. Leuenberger. "Modelling of drug release from polymer matrices: Effect of drug loading". 1995.
- H. Leuenberger, J. D. Bonny and M. Kolb. "Percolation effects in matrix-type controlled drug release systems". 1995.

Year: 1994

- S. Lehnert, H. Tarabishi and H. Leuenberger. "Investigation of thermal phase inversion in emulsions". 1994.
- A. Bausch and H. Leuenberger. "Wet spherical agglomeration of proteins as a new method to prepare parenteral fast soluble dosage forms". 1994.
- I. Caraballo, M. Fernandez-Arevalo, M. A. Holgado, A. M. Rabasco and H. Leuenberger. "Study of the release mechanism of carteolol inert matrix tablets on the basis of percolation theory". 1994.
- R. Luginbühl and H. Leuenberger. "Use of percolation theory to interpret water uptake, disintegration time and intrinsic dissolution rate of tablets consisting of binary mixtures". 1994.

Year: 1993

- J. D. Bonny and H. Leuenberger. "Matrix type controlled release systems II. Percolation effects in non-swellable matrices". 1993.
- R. Leu and H. Leuenberger. "The application of percolation theory to the compaction of pharmaceutical powders". 1993.

Year: 1991

- M. Mumenthaler and H. Leuenberger. "Atmospheric spray-freeze drying: a suitable alternative in freeze-drying technology". 1991.

Year: 1990

- L. E. Holman and H. Leuenberger. "The effect of varying the composition of binary powder mixtures and compacts on their properties: A percolation phenomenon". 1990.

Year: 1989

- H. Leuenberger, L. Holman, M. Usteri and S. Winzap. "Percolation Theory, Fractal Geometry and Dosage Form Design". 1989. [\[Digital version\]](#)
- H. Leuenberger, J. D. Bonny, C. F. Lerk and H. Vromans. "Relation between crushing strength and internal specific surface area of lactose compacts". 1989.
- L. E. Holman and H. Leuenberger. "Effect of compression speed on the relationship between normalised solid fraction and mechanical properties of compacts". 1989.
- M. Usteri and H. Leuenberger. "Agglomeration of binary mixtures in a high-speed mixer". 1989.

Year: 1988

- L. E. Holman and H. Leuenberger. "The relationship between solid fraction and mechanical properties of compacts -- the percolation theory model approach". 1988.

Year: 1987

- H. Leuenberger, B. D. Rohera and C. Haas. "Percolation theory -- a novel approach to solid dosage form design". 1987.

Year: 1985

- H. Leuenberger. "Compression of binary powder mixtures and solubility parameters of solids". 1985.
- W. Jetzer and H. Leuenberger. "Ueber das Komprimierverhalten von NaCl, KCl und Hexamethylentetramin". 1985.

Year: 1984

- H. Leuenberger and W. Jetzer. "The compactibility of powder systems - a novel approach". 1984. [\[Digital version\]](#)

Year: 1983

- L. Hans. "Scale-up of Granulation Processes with Reference in Process Monitoring". 1983. [\[Digital version\]](#)

Year: 1982

- H. Leuenberger. "Granulation, new techniques.". 1982. [\[Digital version\]](#)
- H. Leuenberger. "The compressibility and compactibility of powder systems". 1982.

Year: 1980

- P. F. Ni, N. F. Ho, J. L. Fox, H. Leuenberger and W. I. Higuchi. "Theoretical model studies of intestinal drug absorption V. Non-steady-state fluid flow and absorption". 1980.

Year: 1978

- H. Leuenberger and P. Guitard. "Delivery systems for patient compliance (PHARMACEUTICAL MEDICINE - THE FUTURE)". 1978. [\[Digital version\]](#)

Year: 1975

- H. Leuenberger and W. Becher. "A Factorial Design for Compatibility Studies in Preformulation Work". 1975. [\[Digital version\]](#)

Year: 1973

- H. Leuenberger. "Interpretation of the change in half-life of ^{89}Zr in $\text{BaTi}(\text{Zr})\text{O}_3$ at the upper phase transition ($T_c = 120^\circ\text{C}$)". 1973.

Year: 1968

- P. Huber, S. Gagneux and H. Leuenberger. "Influence of the internal electric field in BaTiO_3 on the lifetime of ^{89}Zr ". 1968.