

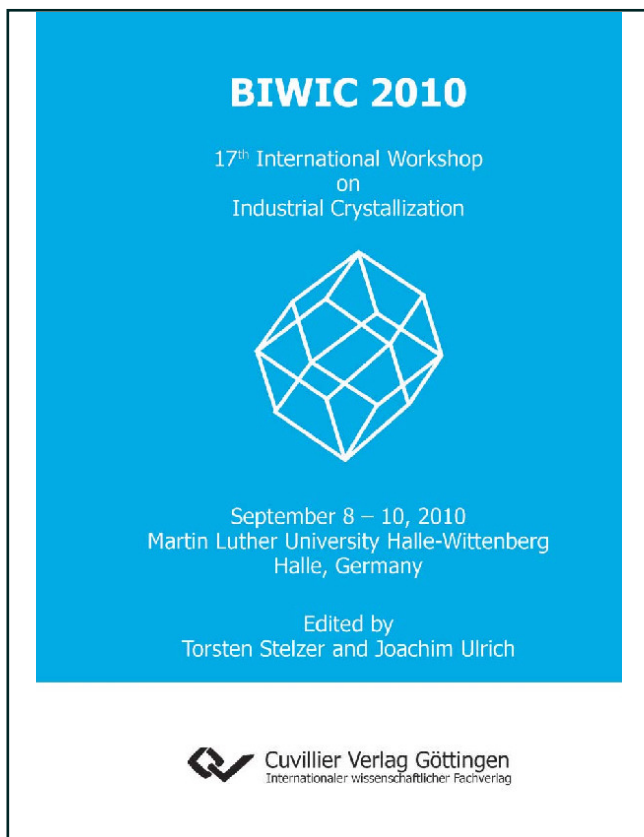


Torsten Stelzer (Autor)

Joachim Ulrich (Autor)

**BIWIC 2010**

*17th International Workshop on Industrial Crystallization*



<https://cuvillier.de/de/shop/publications/673>

Copyright:

Cuvillier Verlag, Inhaberin Annette Jentzsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen, Germany  
Telefon: +49 (0)551 54724-0, E-Mail: [info@cuvillier.de](mailto:info@cuvillier.de), Website: <https://cuvillier.de>

# Contents

## Oral Presentations

O.1	<i>A decade of blind tests in crystal structure prediction</i> <u>F. J. J. Leusen</u>	1
O.2	<i>Morphology prediction of benzoic acid crystals - thermostats</i> <u>C. Schmidt</u> , J. Ulrich	7
O.3	<i>Nucleation kinetics of selenium (+4) precipitation from acidic copper sulphate solution</i> M. Mangere, J. Nathoo, <u>A. E. Lewis</u>	13
O.4	<i>Investigation on cane sugar crystal growth by image analysis</i> G. R. Kindelán, <u>M. Parisi</u> , A. Chianese	21
O.5	<i>Analysis of defects inside crystals by thermal analysis</i> <u>K.-H. Kim</u> , H.-S Kim, K.-J. Kim	29
O.6	<i>Oiling out during cooling crystallization from pure solvents and solvent mixtures</i> <u>K. Kiesow</u> , F. Ruether, G. Sadowski	34
O.7	<i>Application of different acidic resolving agents for diastereomeric salt separation of serine</i> <u>V. S. Sistla</u> , J. von Langermann, H. Lorenz, A. Seidel-Morgenstern	42
O.8	<i>Enhancing performances of preferential crystallization – A case study with: 1,2-di-amoniumcyclohexane citrate monohydrate</i> <u>A. Lafontaine</u> , A. Galland, V. Dupray, P. Cardinael, G. Coquerel	49
O.9	<i>Abrasive grinding as a route to chiral purity</i> <u>H. Meekes</u> , W. L. Noorduyn, B. Kaptein, R. M. Kellogg, G. Deroover, W. J. P. van Enckevort, E. Vlieg	56
O.10	<i>Control of calcium carbonate crystal polymorphism and morphology by high molecular weight alginate and well defined alginate oligomers</i> <u>M. Ø. Olderøy</u> , M. Xie, B. L. Strand, K. I. Draget, P. Sikorski, J.-P. Andreassen	63
O.11	<i>Crystallization of transition metal oxides in inverse miniemulsion</i> <u>R. Muñoz-Espí</u> , F. Graf, L. Preiss, K. Landfester	71
O.12	<i>In-line analyzing of industrial crystallization processes by innovative ultrasonic probe technique</i> <u>D. Pertig</u> , R. Buchfink, S. Petersen, T. Stelzer, J. Ulrich Martin Luther University Halle-Wittenberg, Halle, Germany	78

O.13	<i>Application of direct nucleation control approach on laboratory and pilot plant scale using FBRM</i> A. N. Saleemi, <u>Z. K. Nagy</u> , C. D. Rielly	88
O.14	<i>The optimization and scale-up of an anti-solvent crystallization: from lab to pilot plant</i> M. Barrett, <u>J. Schöll</u> , B. Glennon	96
O.15	<i>Influence of mixing device and process parameters on magnetite nanoparticle precipitation</i> <u>W. Li</u> , H. Muhr, E. Plasari	100
O.16	<i>Electrospray crystallization for less sensitive energetic nanoparticles</i> <u>N. Radacsi</u> , L. Wassink, A. I. Stankiewicz, Y. L. M. Creighton, A. E. D. M. van der Heijden, J. H. ter Horst	109
O.17	<i>Purification of active pharmaceutical ingredients by continuous counter current crystallization</i> <u>U. Müller</u> , R. Eilers, D. Grawe	118
O.18	<i>Industrial crystallization to produce potassium-chloride as food additive</i> <u>R. Claußnitzer</u> , A. Dietrich, H. Küster	125
O.19	<i>Market conditions driving technology selection: case study in melt crystallization of phosphoric acid</i> <u>R. Ruemekorf</u> , G. Hofmann, R. Scholz	129
O.20	<i>Why freeze concentration of hazardous waste water?</i> <u>S. S. Dette</u> , H. Jansen	136

### Poster Presentations

P.1	<i>Study on crystalline incrustations in a sugar crystallizer</i> <u>E. Abohamra</u> , J. Ulrich	143
P.2	<i>Preliminary studies for co-crystal formation</i> G. Farkas, O. Berkesi, P. Szabó-Révész, <u>Z. Aigner</u>	150
P.3	<i>Effect of sodium sulfate on the crystal growth rate of boric acid from aqueous solutions</i> <u>W. Alavia</u> , T. A. Graber	159
P.4	<i>The influence of crystallization conditions on the growth of polycrystalline particles of L-glutamic acid, an aromatic amine derivative and calcium carbonate</i> <u>R. Beck</u> , J.-P. Andreassen	166

P.5	<i>Obtaining of synthetic corundum star-monocrystals</i> <u>B. Bogdanov</u> , I. Markovska, Y. Hristov, D. Georgiev, J. Denev	175
P.6	<i>The influence of trivalent metal ions on the metastable zone width of ammonium sulfate</i> <u>R. Buchfink</u> , J. Ulrich	180
P.7	<i>Solubility calculation and prediction of pharmaceuticals using a thermodynamic model</i> <u>J. Cassens</u> , F. Ruether, K. Leonhard, G. Sadowski	188
P.8	<i>Emulsion fractionation of coconut oil – the new fractionation technology</i> <u>K. Chaleepa</u> , J. Ulrich	196
P.9	<i>Blind tests in crystal structure prediction revisited</i> <u>H. C. S. Chan</u> , J. Kendrick, F. J. J. Leusen	204
P.10	<i>Seeding effect of calcium carbonate in seawater crystallization</i> <u>J. Chen</u> , J. Yuan, W. Omar, J. Ulrich	208
P.11	<i>Purification of phenantrene by zone melting</i> <u>N. Couvrat</u> , P. Keil, J. L. Solà, A. König, Y. Cartigny, G. Coquerel	216
P.12	<i>Method for production of needle-like crystals from waste phosphogypsum using recrystallization in cid conditions</i> <u>Y. Denev</u> , G. Denev, B. Bogdanov, A. Popov	223
P.13	<i>Advances toward optimization of a novel freeze out protein crystallization technology</i> <u>V. Díaz Borbón</u> , J. Ulrich	232
P.14	<i>Image-based measurement of crystal shape distributions</i> <u>H. Eisenschmidt</u> , C. Borchert, K. Sundmacher	241
P.15	<i>Modeling of induction time for the calcium salts of surfactants in pure and mixed surfactant systems</i> <u>A. E. Flood</u> , A. Maneedaeng, B. P. Grady, K. J. Haller	250
P.16	<i>Phase relations of mixed crystals with solutions: determination, effects on crystal formation</i> <u>A. E. Glikin</u> , L. Yu. Kryuchkova, V. D. Franke	258
P.17	<i>Chiral discrimination in the solid state and its relationship with the performances of preferential crystallization</i> <u>S. Gonella</u> , V. Dureisseix, J. Mahieux, A. Galland, V. Dupray, G. Coquerel	265
P.18	<i>Effect of a chiral additive on preferential crystallization</i> <u>L. Gou</u> , H. Lorenz, A. Seidel-Morgenstern	273

P.19	<i>New technology to manufacture crystalline micro-particles of APIs for use in pharmaceutical formulations</i> <u>D. Grawe</u>	281
P.20	<i>Emulsion solidification: influence of the droplet size of the water-in-oil emulsion on the generated particle size</i> <u>J. Iqbal</u> , S. Petersen, J. Ulrich	287
P.21	<i>Physical and chemical characterization of precipitated magnesium silicate from rice hull ash silica</i> P. Sayan, S. Titiz-Sargut, S. Ozgul-Yucel, <u>B. Kiran</u>	295
P.22	<i>Multi-component paraffin compositions: determining composition, structure and behaviour at heating</i> <u>E. N. Kotelnikova</u> , N. V. Platonova, S. K. Filatov	303
P.23	<i>Separation of solid impurity by melt crystallization of aluminium nitrate nonahydrate</i> <u>M. Kumashiro</u> , Y. Izumi, T. Hoshino, Y. Fujita, I. Hirasawa	310
P.24	<i>The gCR model for micromixing in reaction crystallization</i> <u>B. G. Lakatos</u> , Zs. Ulbert	317
P.25	<i>Effect of supersaturation on co-crystal formation</i> <u>K.-C. Lee</u> , K.-J. Kim	326
P.26	<i>Ternary phase diagrams of 3-chloromandelic acid in different solvents and possibilities of enantiomeric resolution</i> <u>T. Le Minh</u> , H. Lorenz, A. Seidel-Morgenstern	330
P.27	<i>Phase diagram determination of the binary system AA/PA</i> <u>M. Le Page</u> , H. Muhr, E. Plasari, M. Fauconet	336
P.28	<i>Seed control of supersaturation in solution at evaporation of sodium aluminate liquors</i> <u>O. D. Linnikov</u> , I. V. Rodina, V. M. Kovzel, V. M. Ronkin	344
P.29	<i>Mechanosynthesis of co-crystals: influence of the solvent on the formation kinetic and the crystallinity</i> <u>J. Linol</u> , G. Coquerel	352
P.30	<i>Reductive crystallization of Au nanoparticles in the presence of polyethylenimine</i> <u>T. Mikami</u> , J. Watanabe, S. Kawaguchi, Y. Takayasu, I. Hirasawa	358
P.31	<i>Reductive crystallization of Au nanoparticles on PEI-dosed silica</i> <u>T. Mikami</u> , C. Konno, Y. Takayasu, I. Hirasawa	363
P.32	<i>Evaporative crystallization of highly concentrated sodium chloride slurry in continuous operation</i> <u>R. Misumi</u> , S. Kato, S. Ibe, K. Nishi, M. Kaminoyama	369

P.33	<i>Recombinant L-Asparaginase II – purification by crystallization</i> <u>C. Müller</u> , A. Migge, M. Pietzsch, J. Ulrich	375
P.34	<i>Fractionation of organic compounds by combining crystallization and membrane separation</i> <u>H. Niemi</u> , S. Sha, J. Lahti, M. Kallioinen, H. Hatakke, M. Mänttari, M. Louhi-Kultanen	386
P.35	<i>Inline measurement of supersaturation during crystallization in suspensions</i> <u>S. Nitschke</u> , M. Bode, I. Benecke	394
P.36	<i>Crystallization of ice in water including petrochemical monomer</i> <u>Y.-H. Park</u> , K.-J. Kim	400
P.37	<i>Equilibrium melting point depression in blends and diblock copolymers of PEO and PMA</i> <u>D. Pfefferkorn</u> , S. O. Kyeremateng, K. Busse, H.-W. Kammer, J. Kressler	404
P.38	<i>The influence of additives and seeding on glycine crystal characteristics</i> <u>J. Prlić Kardum</u> , M. Hrkovac	411
P.39	<i>Investigation of water adsorption of crystalline fertilizer</i> <u>M. Rößler</u> , T. Stelzer, J. Ulrich	419
P.40	<i>Separation and monitoring of the crystallization of mixture of amino-benzoic acid isomers using ATR UV/Vis and FBRM</i> <u>A. N. Saleemi</u> , Z. K. Nagy, C. Rielly	426
P.41	<i>Process optimization of brine purification and evaporation for combined crystallization of NaCl and Na<sub>2</sub>SO<sub>4</sub> by means of mechanical vapour recompression</i> <u>J.-H. Schmidt</u> , W. Meierhofer, H. Schwaiger	434
P.42	<i>Online real time monitoring of particle shape and size</i> <u>S. Schorsch</u> , T. Vetter, M. Mazzotti	443
P.43	<i>The generation of crystalline hollow needles</i> <u>A. Schuster</u> , J. Ulrich	449
P.44	<i>Insitu crystal size measurement of roughness and size</i> <u>F. Schwartz</u> , J. Soschinski, A. Haase	455
P.45	<i>Research on the simulation of the Morphology of Glucuro lactone Based on BFDH Law and Attachment Energy Modes</i> L. Zhu, <u>Z. Sha</u> , X. Zhao, J. Gong, Z. Wang	460
P.46	<i>Interpretation of FBRM and 3D ORM SMF data via simulated nucleation and crystal growth</i> S. Peda, <u>M. Smieszek</u> , C. Stollberg, P. Ay	468

P.47	<i>Mixed crystals in chiral organic systems: phase diagram and crystal structure features of an ethanolamine salt of 3-chloromandelic acid</i> <u>N. Taratin</u> , H. Lorenz, E. Kotelnikova, A. Glikin, L. Yu. Kryuchkova, A. Galland, V. Dupray, G. Coquerel, A. Seidel-Morgenstern	476
P.48	<i>Controlling co-crystal polymorphs</i> D. D. P. W. Stam, E. Aret, A. Coetzee, <u>J. H. ter Horst</u>	483
P.49	<i>Chiral tailor-made solvents and their impact on solution thermodynamics and crystallisation kinetics of mandelic acid</i> S. K. Tulashie, <u>J. von Langermann</u> , H. Lorenz, A. Seidel-Morgenstern	490
P.50	<i>Decreasing the diameter of crystalline tubes</i> <u>A. Wachsmuth</u> , T. Stelzer, J. Ulrich	495
P.51	<i>Properties of solid bodies formed by freeze casting</i> <u>A. Witte</u> , J. Ulrich	500
<b>Author index</b>		509
<b>Sponsor pages</b>		511