

Year	Author	Title	Journal
2010	Y. Zorenko, T. Zorenko, T. Voznyak, A. Mandowski, Q. Xia, M. Batentschuk and J. Friedrich	Luminescence of F+ and F centers in Al ₂ O ₃ -Y ₂ O ₃ oxide compounds	IOP Conf. Series: Materials Science and Engineering 15 (2010) 012060, doi:10.1088/1757-899X/15/1/012060
2010	M. Azizi, E. Meissner, J. Friedrich	Ultrasound measurement of the position of the growing interface during directional solidification of silicon	Proceedings of 25th European Photovoltaic Solar Energy Conference, 6-10 September 2010, Valencia, Spain, pp. 1520-1523
2010	G. Müller, J. Friedrich	Optimization and Modeling of Photovoltaic Silicon Crystallization Processes	14th International Summer School on Crystal Growth. AIP Conference Proceedings, Volume 1270 (2010) 255-281
2010	I. Y. Knoke, P. Berwian, E. Meissner, J. Friedrich, H. P. Strunk, G. Müller	Selective etching of dislocations in GaN grown by Low-Pressure Solution Growth	Journal of Crystal Growth 312 (2010) 3040-3045
2010	J. Friedrich, B. Kallinger, P. Berwian, E. Meissner	Interactions of dislocations during epitaxial growth of SiC and GaN	in Crystal Growth Technology: From Fundamentals and Simulation to Large-scale Production (Edited by P. Rudolph and Peter Capper) WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim (2010), pp. 137-150
2010	B. Kallinger, B. Thomas, S. Polster, P. Berwian, J. Friedrich	Dislocation conversion and propagation during homoepitaxial growth of 4H-SiC	Materials Science Forum Vols. 645-648 (1010), pp. 299-302
2010	E. Meissner, S. Hussy, J. Friedrich	Low Pressure Solution Growth of Gallium Nitride	in Technology of Gallium Nitride Crystal Growth (Eds. D. Ehretraut, E. Meissner, M. Bockowski), Springer Verlag (2010), pp. 245-277
2010	D. Ehretraut, E. Meissner	A brief review on the Na-flux method toward growth of large-size GaN crystal	in Technology of Gallium Nitride Crystal Growth (Eds. D. Ehretraut, E. Meissner, M. Bockowski), Springer Verlag (2010), pp. 235-245
2010	C. Reimann, M. Trempa, J. Friedrich, G. Müller	About the formation and avoidance of C and N related precipitates during directional solidification of multi crystalline silicon from contaminated feedstock	Journal of Crystal Growth 312 (2010), pp. 1510-1516
2010	M. Trempa, C. Reimann, J. Friedrich, G. Müller	The influence of growth rate on the formation and avoidance of C and N-related precipitates during directional solidification of multi crystalline silicon	Journal of CrystalGrowth 312 (2010), pp. 1517-1524
2010	C. Reimann, M. Trempa, T. Jung, J. Friedrich, G. Müller	Modeling of incorporation of O, N, C and formation of related precipitates during directional solidification of silicon under consideration of variable processing parameters	Journal of Crystal Growth 312 (2010), pp. 878-885
2009	M. Kozłowska, R. Oechsner, M. Pfeffer, A. J. Bauer, E. Meissner, L. Pfitzner, H. Rysse, W. Maass, J. Langer, B. Ocker, S. Schmidbauer, J.-P. Gonchond	Properties of TaN Thin Films Produced Using PVD Linear Dynamic Deposition Technique	e-J. Surf. Sci. Nanotech. Vol. 7 (2009), pp. 277-283
2009	C. Reimann, M. Trempa, J. Friedrich, S. Würzner, H.-J. Möller	Influencing the SiC and Si ₃ N ₄ -precipitate formation during directional solidification of multi-crystalline silicon by using different growth velocities	Proceedings of 3rd International Workshop on Crystalline Silicon Solar Cells SINTEF/NTNU, Trondheim NORWAY 3-5 June 2009
2009	M. Zschorsch, K. Dadzis, U. Wunderwald, T. Jung, J. Friedrich	Bridgman type solidification of multi-crystalline silicon influenced by a traveling magnetic field	Proceedings of 3rd International Workshop on Crystalline Silicon Solar Cells SINTEF/NTNU, Trondheim NORWAY 3-5 June 2009
2009	K. Dadzis, M. Zschorsch, U. Wunderwald, T. Jung, J. Friedrich	Use of travelling magnetic fields to influence melt convection during Bridgeman type solidification of multi-crystalline silicon for photovoltaic applications	6th international Conference on Electromagnetic Processing of Materials, 2009, Dresden, Germany, pp. 887-890
2009	U. Wunderwald, K. Dadzis, M. Zschorsch, T. Jung, J. Friedrich	Influence of travelling magnetic fields on melt convection during Bridgeman type solidification of multi-crystalline silicon	Proceedings of 24th European Photovoltaic Solar Energy Conference, 21-25 September 2009, Hamburg, Germany, pp. 1023-1028
2009	J. Dagner, J. Friedrich, G. Müller	Influence of forced convection on the directional solidification of AlSi alloys: comparison of experiments and simulation	Progress in Computational Fluid Dynamics, Vol. 9, Nos. 6/7, 2009

2009	B. Thomas, C. Hecht, B. Kallinger	Large-Area Homoepitaxial Growth of Low-Doped Thick Epilayers for Power Devices with VBR > 4 kV	Materials Science Forum Vols. 600-603 (2009), pp. 77-81
2009	B. Kallinger, B. Thomas and J. Friedrich	Influence of Substrate Preparation and Epitaxial Growth Parameters on the Dislocation Densities in 4H-SiC Epitaxial Layers	Materials Science Forum Vols. 600-603 (2009), pp. 143-146
2009	B. Zippelius, M. Krieger, H. B. Weber, G. Pensl, B. Kallinger, J. Friedrich, B. Thomas	Influence of Growth Rate and C/Si-ratio on the Formation of Point and Extended Defects in 4H-SiC Homoepitaxial Layers Investigated by DLTS	Materials Science Forum Vols. 615-617 (2009), pp. 393-396
2008	C. Reimann, T. Jung, M. Trempa, J. Friedrich	Modeling of convective heat and mass transfer processes in crystal growth of silicon for photovoltaic application	Proc. of 23rd European Photovoltaic Solar Energy Conference, Valencia (2008), pp. 1233-1239
2008	J. Dagner, J. Friedrich, G. Müller	Influence of forced convection to the directional solidification of AlSi alloys - comparison of experiments and simulation	Proc. of 6th International Conference on CFD in Oil & Gas, Metallurgical and Process Industries, Trondheim (2008), CFD08-024
2008	S. Hussy, P. Berwian, E. Meissner, J. Friedrich, G. Müller	On the influence of solution density on the formation of macroscopic defects in the liquid phase epitaxy of GaN	Journal of Crystal Growth 311 (2008), pp. 62-65
2008	J. Friedrich, B. Kallinger, I. Knoke, P. Berwian, E. Meissner	Crystal growth of compound semiconductors with low dislocation densities	IEEE Proc. 20th International Conference on Indium Phosphide and Related Materials, Paris (2008), WeB3.1-Inv
2008	T. Wunderer, J. Hertkorn, F. Lipski, P. Brückner, M. Feneberg, M. Schirra, K. Thonke, I. Knoke, E. Meissner, A. Chuvilin, U. Kaiser, F. Scholz	Optimization of semipolar GaInN/GaN blue/green light emitting diode structures on {1-101} GaN side facets	Gallium Nitride Materials and Devices III, edited by Hadis Morkoç, Cole W. Litton, Jen-Inn Chyi, Yasushi Nanishi, Euijoon Yoon, Proc. of SPIE Vol. 6894, (2008), V1-V9
2008	G. Sun, E. Meissner, P. Berwian, G. Müller	Application of a thermogravimetric technique for the determination of low nitrogen solubilities in metals: Using iron as an example	Thermochimica Acta 474 (2008), pp. 36-40
2008	B. Kallinger, B. Thomas, J. Friedrich	Influence of Substrate Preparation and Epitaxial Growth Parameters on the Dislocation Densities in 4H-SiC Epitaxial Layers	Materials Science Forum Vols. 600-603 (2008), pp. 143-146
2008	I.Y. Knoke, E. Meissner, J. Friedrich, H.P. Strunk, G. Müller	Reduction of the dislocation density in GaN during low-pressure solution growth	Journal of Crystal Growth 310 (2008), pp. 3351-3357
2008	B. Kallinger, E. Meissner, P. Berwian, S. Hussy, J. Friedrich, G. Mueller	Vapor phase growth of GaN using GaN powder sources and thermogravimetric investigations of the evaporating behaviour of the source material	Cryst. Res. Technol. 43, No. 1 (2008), pp. 14-21
2008	S. Hussy, E. Meissner, P. Berwian, J. Friedrich, G. Müller	Low pressure solution growth (LPSG) of GaN templates with diameters up to 3 inch	Journal of Crystal Growth 310 (2008), pp. 738-747
2008	N. Bános, J. Friedrich, G. Müller	Simulation of dislocation density: Global modeling of bulk crystal growth by a quasi-steady approach of the Alexander-Haasen concept	Journal of Crystal Growth 310 (2008), pp. 501-507
2008	J. Friedrich	Yield Improvement and Defect Control in Bridgman-Type Crystal Growth with the Aid of Thermal Modeling	in Crystal Growth Technology: From Fundamentals and Simulation to Large-scale Production (Edited by Hans J. Scheel and Peter Capper) WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim (2008)
2007	B. Kallinger, E. Meissner, D. Seng, G. Sun, S. Hussy, J. Friedrich, G. Mueller	Study on the sublimation growth of GaN using different powder sources and investigation on the sublimation behaviour of GaN powder by means of thermogravimetry	phys. stat. sol. (c) 4, No. 7, (2007), pp. 2264-2267
2007	J. Dagner, J. Friedrich, G. Mueller	Simulation of the microstructure of Al-Si alloys by multi-scale modeling of directional solidification	Proceedings of the 5th Dennical International Conference on Solidification Processing, Sheffield (2007)

2007	C. Reimann, J. Friedrich, G. Müller, S. Würzner, H. J. Möller	Analysis of the Formation of SiC and Si ₃ N ₄ Precipitates During Directional Solidification of Multicrystalline Silicon for Solar Cells	Proceedings of the 22nd European Photovoltaic Solar Energy Conference, Milan, 3-7 September 2007, pp. 1073-1077
2007	G. Müller	The Czochralski Method - where we are 90 years after Jan Czochralski's invention	Cryst. Res. Technol. 42, No. 12 (2007), pp. 1150-1161
2007	J. Friedrich	Control of melt convection in VGF and CZ crystal growth configurations by using magnetic fields: Theory and examples	in Crystal Growth Under Applied Fields (Editors: Sadik Dost and Yasunori Okano) 2007, pp. 31-59
2007	G. Müller	Fundamentals of Melt Growth	AIP Conf. Proc., June 14 2007, Volume 916, pp. 3-33 PERSPECTIVES ON INORGANIC, ORGANIC, AND BIOLOGICAL CRYSTAL GROWTH: FROM FUNDAMENTALS TO APPLICATIONS: Based on the lectures presented at the 13th International Summer School on Crystal Growth
2007	D. Vizman, J. Friedrich, G. Mueller	3D time-dependent numerical study of the influence of the melt flow on the interface shape in a silicon ingot casting process	Journal of Crystal Growth Volume 303, Issue 1, 1 May 2007, pp. 231-235
2007	D. Vizman, M. Watanabe, J. Friedrich, G. Müller	Influence of different types of magnetic fields on the interface shape in a 200 mm Si-EMCZ configuration	Journal of Crystal Growth Volume 303, Issue 1, 1 May 2007, pp. 221-225
2007	G. Sun, E. Meissner, P. Berwian, G. Müller, J. Friedrich	Study on the kinetics of the formation reaction of GaN from Ga-solutions under ammonia atmosphere	Journal of Crystal Growth Volume 305, Issue 2, 15 July 2007, pp. 326-334
2007	J. Fainberg, D. Vizman, J. Friedrich, G. Mueller	A new hybrid method for the global modeling of convection in CZ crystal growth configurations	Journal of Crystal Growth Volume 303, Issue 1, 1 May 2007, pp. 124-134
2007	G. Müller, J. Friedrich	Proceedings of the Fifth International Workshop On Modeling In Crystal Growth	Journal of Crystal Growth 303 (2007), pp. 1-4
2006	J. Dagner, M. Hainke, T. Jung, M. Kellner, H. Hadler, J. Friedrich, G. Mueller	GLOBAL MODELING OF HEAT TRANSFER DURING SOLIDIFICATION EXPERIMENTS	Gandin, C.A.: Modeling of casting, welding and advanced solidification processes XI : May 28 - June 2, 2006, Opio, France. Warrendale, Pa.: TMS, 2006, pp. 1027-1034
2006	M. Purwins, A. Weber, P. Berwian, G. Mueller, F. Hergert, S. Jost, R. Hock	Kinetics of the reactive crystallization of CuInSe ₂ and CuGaSe ₂ chalcopyrite films for solar cell applications	Journal of Crystal Growth 287 (2006), pp. 408-413
2006	G. Zimmermann, L. Sturz, J. Dagner	Directional solidification of AlSiMg0.3-Alloys in a rotating magnetic field	in Proc. 5th International Symposium on Electromagnetic Processing of Materials (EPM 5) (2006), pp. 375-380
2006	L. Ratke, S. Steinbach, G. Müller, M. Hainke, A. Roósz, Y. Fautrelle, M. D. Dupouy, G. Zimmermann, A. Weiß, H. Diepers, J. Lacaze, R. Valdes, G. U. Grün, H.-P. Nicolai, H. Gerke-Cantow	MICAST – Microstructure Formation in Casting of Technical Alloys under Diffusive and Magnetically Controlled Convective Conditions	in Proc. Solidification and Gravity IV, September 6-9 2004, Miskolc-Lillafüred, Hungary, A. Roosz, M. Rettenmayr, Z. Gracsi, Eds; Material Science Forum Vol. 508 (2006), pp. 131-144
2006	J. Dagner, A. Weiss, M. Hainke, G. Zimmermann, G. Müller	Global Modeling of Directional Solidification of Aluminum Alloys using the Software Package CrysVUn	in Proc. Solidification and Gravity IV, September 6-9 2004, Miskolc-Lillafüred, Hungary, A. Roosz, M. Rettenmayr, Z. Gracsi, Eds; Material Science Forum Vol. 508 (2006), pp. 437-442
2006	M. Hainke, S. Steinbach, J. Dagner, L. Ratke, G. Müller	Solidification of AlSi Alloys in the ARTEMIS and ARTEX Facilities Including Rotating Magnetic Fields – A Combined Experimental and Numerical Analysis	in Proc. Solidification and Gravity IV, September 6-9 2004, Miskolc-Lillafüred, Hungary, A. Roosz, M. Rettenmayr, Z. Gracsi, Eds; Material Science Forum Vol. 508 (2006), pp. 199-204
2006	M. Hainke, J. Dagner, M. Wu, A. Ludwig	Control of Interdendritic Convection by the Application of Time-Dependent Magnetic Fields during Directional Solidification of Aluminum Alloys	in Proc. Modeling of Casting, Welding, and Advanced Solidification Processes – XI, (Eds. C-A, Gandin, M. Bellet) (2006), pp. 317-324
2006	M. Hainke, J. Dagner, J. Friedrich, G. Müller	Simulation of ESA's MSL Furnace Inserts and Sample-cartridge Assemblies using the Thermal Model Tool CrysVUn	in Proc. Solidification and Gravity IV, September 6-9 2004, Miskolc-Lillafüred, Hungary, A. Roosz, M. Rettenmayr, Z. Gracsi, Eds; Material Science Forum Vol. 508 (2006), pp. 151-156

2006	M. Hainke, J. Dagner, M. Wu, A. Ludwig	Control of Interdendritic Convection by the Application of Time-Dependent Magnetic Fields during Directional Solidification of Aluminum Alloys	in Proc. Modeling of Casting, Welding, and Advanced Solidification Processes – XI, (Eds. C-A, Gandin, M.. Bellet) (2006), pp. 317-324
2006	B. Birkmann, S. Hussy, G. Sun, P. Berwian, E. Meissner, J. Friedrich, G. Müller	Considerations on faceting and on the atomic structure of the phase boundary in low-pressure solution growth of GaN	Journal of Crystal Growth 297 (2006), pp. 133-137
2006	M. Watanabe, D. Vizman, J. Friedrich, G. Mueller	Large modification of crystal-melt interface shape during Si crystal growth by using electromagnetic Czochralski method (EMCZ)	Journal of Crystal Growth 292/2 (2006), pp. 252-256
2006	G. Sun, E. Meissner, S. Hussy, B. Birkmann, J. Friedrich, G. Müller	Morphologies of GaN single crystals grown from Ga solutions under flowing ammonia	Journal of Crystal Growth 292/2 (2006), pp. 201-205
2006	S. Steinbach, J. Dagner, M. Hainke, J. Friedrich, L. Ratke	A Combined Numerical and Experimental Study of the Effects of Controlled Fluid Flow on Alloy Solidification	Materials Science Forum Vols. 519-521 (2006), pp. 1753-1758
2006	S. Hussy, E. Meissner, B. Birkmann, I. Brauer, J. Off, F. Scholz, H. P. Strunk, G. Mueller	Morphology and microstructure of a-plane GaN layers grown by MOVPE and by low pressure solution growth (LPSG)	phys. stat. sol. (a) 203, No. 7, 1676-1680 (2006) / DOI 10.1002/pssa.200565261
2006	G. Mueller, J. Friedrich	Yield Improvement and advanced defect control – driving forces for modeling of bulk crystal growth	Journal of Rare Earths 24 (2006), pp. 200-207
2006	J. Friedrich, G. Müller	Herausforderungen bei der Modellierung von Kristallzüchtungsprozessen	Freiberger Forschungshefte B337 Werkstofftechnologie (2006), pp. 28-49
2006	J. Titus, R. W. Birkmirea, C. Hack, G. Müller, P. McKeown	Sulfur incorporation into copper indium diselenide single crystals through annealing in hydrogen sulfide	JOURNAL OF APPLIED PHYSICS 99, 043502 2006
2006	B. Birkmann, C. Salcianu, E. Meissner, S. Hussy, J. Friedrich, G. Müller	Characterisation of the electrical properties of solution-grown GaN crystals by reflectivity and Hall measurements	phys. stat. sol. (c), 3 No.3 (2006), pp. 575-578
2005	E. Meissner, B. Birkmann, S. Hussy, G. Sun, J. Friedrich, G. Mueller	Characterisation of GaN crystals and epilayers grown from a solution at room pressure	phys. stat. sol. (c), 2, No. 7 (2005), pp. 2040-2043
2005	P. Schwesig, U. Sahr, J. Friedrich, G. Mueller, A. Koehler, U. Kretzer, S. Eichler, A. Muehe	Growth and characterization of 2" and 4" low EPD InP substrate crystals by the Vertical Gradient Freeze (VGF) method	Proceedings of International Conference on Indium Phosphide and Related Materials (2005), pp. 392-397
2005	G. Mueller, J. Friedrich	Crystal growth – bulk (methods)	in Encyclopedia of Condensed Matter Physics (Eds. G. Bassani, G. Liedl, P. Wyder) Elsevier Science Ltd (2005), pp. 262-274
2005	M. Hainke, S. Steinbach, L. Ratke, G. Müller	The effect of forced fluid flow on microstructure in directionally solidified Al-Si base alloys	Trans. Indian. Inst. Met. Vol. 58 No. 4 August 2005, pp. 639-644
2005	M. Bellmann, H. J. Möller, J. Fainberg, J. Friedrich, A. Seidl, G. Müller	Numerical simulation of the feeding process, flow field and solute segregation in edge-defined film fed growth of photovoltaic silicon	Proceedings of 20th European Photovoltaic Solar Energy Conference, Barcelona, Spain 6-10 June 2005, pp. 254-257
2005	T. Jung, H. Hadler, M. Kellner	ORCAN: An Open Component Framework, and its Application to the Development of Complex Simulation Software	Proceedings of the 9th World Multi-conference on Systemics, Cybernetics and Informatics (2005), pp. 345-350
2005	W. v. Ammon, Y. Gelfgat, L. Gorbunov, A. Mühlbauer, A. Muiznieks, Y. Makarov, J. Virbulis, G. Müller	Application of magnetic fields in industrial growth of silicon crystal	Proceedings of 6th PAMIR International Conference on Fundamental and Applied MHD, Riga, Latvia, 27.6. – 1.7. 2005, pp. 41-53

2005	F. Herget, R. Hock, A. Weber, M. Purwins, J. Plam, V. Probst	In situ investigation of the formation of Cu(In,Ga)Se ₂ from selenised metallic precursors by X-ray diffraction – The impact of Gallium, Sodium and Selenium excess	Journal of Physics and Chemistry of Solids 66 (2005) 1903-1907
2005	G. Müller, P. Schwesig, B. Birkmann, J. Härtwig, S. Eichler	Types and origin of dislocations in large GaAs and InP bulk crystals with very low dislocation densities	phys. stat. sol. (a) 202, No. 15, 2870–2879 (2005) / DOI 10.1002/pssa.200521179
2005	J. Dagner, M. Hainke, J. Friedrich	Simulation of ESA's MSL Furnace Inserts and Sample-Cartridge Assemblies: Model Development and Correlation with Experimental Data	International Conference on Environmental Systems (ICES), Rome – Italy, 11.7.05 – 14.7, 2005, SAE Paper Number 2005-01-2859
2005	L. Ratke, S. Steinbach, G. Müller, M. Hainke, A. Roos, Y. Fautrelle, M.D. Dupou, G. Zimmermann, A. Weiss, J. Lacaze, R. Valdes, G-U. Grün, H-P. Nicolai	THE EFFECT OF MAGNETICALLY CONTROLLED FLUID FLOW ON MICROSTRUCTURE EVOLUTION IN CAST TECHNICAL Al-ALLOYS: THE MICAST PROJECT	Trans. Indian Inst. Met. Vol.58, No. 4, August 2005, pp. 631-638
2005	J. J. Derby, Y. Kwon, A. Pandey, P. Sonda, A. Yeckel, T. Jung, G. Müller	Developing Quantitative, Multi-Scale Models For Microgravity Crystal Growth	Interdisciplinary Transport Phenomena in Microgravity and Space Sciences IV, Tomar, Portugal, August 7 to 12, 2005, 3-2-3-13
2005	J. Friedrich, G. Mueller	Spezielle Kristalle für weißes Licht	Technik in Bayern 2/2005, 32-33
2005	J. Friedrich, G. Mueller	Erlanger Kristall-Labor bei Weltraummission dabei	Technik in Bayern 2/2005, 20
2005	M. Hainke, J. Dagner, J. Friedrich, G. Mueller	Macrosegregation in binary AlSi ₇ alloys resulting from the application of time-dependent magnetic fields	Microgravity Science and Technology XVI-1 (2005), pp. 59-63
2005	L. Ratke, S. Steinbach, G. Mueller, M. Hainke, J. Friedrich, A. Roos, Y. Fautrelle, M. Dupou, G. Zimmermann, A. Weiss, J. Lacaze, R. Valdes, G. Grün, H. Nicolai, H. Gerke-Cantow	MICAST-The effect of magnetically controlled fluid flow on microstructure evolution in cast technical Al- alloys	Microgravity Science and Technology XVI-1 (2005), pp. 99-103
2005	B. Fischer, J. Friedrich, Th. Jung, M. Hainke, J. Dagner, T. Fühner, P. Schwesig	Modeling of industrial bulk crystal growth – state of the art and challenges	Journal of Crystal Growth, Volume 275, Issues 1-2, 15 February 2005, pp. 240-250
2005	A. Molchanov, J. Friedrich, G. Wehrhan, G. Müller	Study of the oxygen incorporation during growth of large CaF ₂ -crystals	Journal of Crystal Growth 273 (2005), pp. 629-637
2005	B. Birkmann, J. Stenzenberger, M. Jurisch, J. Härtwig, V. Alex, G. Müller	Investigation of residual dislocations in VGF-grown Si-doped GaAs	Journal of Crystal Growth 276 (2005), pp. 335-346
2005	A. Pandey, A. Yeckel, M. Reed, C. Szeles, M. Hainke, G. Müller, J. J. Derby	Analysis of the growth of cadmium zinc telluride in an electrodynamic gradient freeze furnace via a self-consistent, multi-scale numerical model	Journal of Crystal Growth 276 (2005), pp. 133-147
2004	P. J. Wellmann, A. Albrecht, U. Künecke, B. Birkmann, G. Mueller, M. Jurisch	Quantitative determination of the doping level distribution in n-type GaAs using absorption mapping	European Physical Journal Applied Physics 27 (2004), pp. 357-361
2004	D. Vizman, S. Eichler, J. Friedrich, G. Müller	Three-dimensional modeling of melt flow and interface shape in the industrial liquid-encapsulated Czochralski growth of GaAs	Journal of Crystal Growth, Volume 266, Issues 1-3, 15 May 2004, pp. 396-403
2004	T. Fühner, T. Jung	Use of genetic algorithms for the development and optimization of crystal growth processes	Journal of Crystal Growth, Volume 266, Issues 1-3, 15 May 2004, pp. 229-238
2004	E. Meissner, G. Sun, S. Hussy, B. Birkmann, J. Friedrich, G. Müller	Growth of GaN crystals and epilayers from solutions at ambient pressure	Proc. 21st Century COE Joint International Workshop on Bulk Nitrides (2004), pp. 46-49

2004	M. Hainke, J. Friedrich, G. Mueller	A matrix based correction scheme of the liquid fraction during columnar solidification	International Journal of Heat and Mass Transfer 47 (2004), pp. 2883-2887
2004	M. Hainke, J. Friedrich, G. Mueller	Numerical study on directional solidification of AlSi alloys with rotating magnetic fields under microgravity conditions	Journal of Materials Science 39 (2004), pp. 2011-2015
2004	G. Müller, J. Friedrich	Challenges in modeling of bulk crystal growth	Journal of Crystal Growth, Volume 266, Issues 1-3, 15 May 2004, pp. 1-19
2004	P. Schwesig, M. Hainke, J. Friedrich, G. Mueller	Comparative numerical study of the effects of rotating and travelling magnetic fields on the interface shape and thermal stress in the VGF growth of InP crystals	Journal of Crystal Growth, Volume 266, Issues 1-3, 15 May 2004, pp. 224-228
2003	M. Hainke, J. Friedrich, G. Mueller	Numerical Study of the Effects of Rotating Magnetic Fields during the VGF Growth of 3" GaAs Crystals	Mag. Hyd., Vol. 39, No. 4 (2003), pp. 515-522
2003	V. Socoliuc, D. Vizman, B. Fischer, J. Friedrich, G. Mueller	3D numerical simulation of Rayleigh-Bénard convection in an electrically conducting melt acted on by a travelling magnetic field	Magnetohydrodynamics 39, 2 (2003), pp. 187-200
2003	J. Friedrich, J. Dagner, M. Hainke, G. Mueller	Numerical modeling of crystal growth and solidification experiments carried out under microgravity conditions	Cryst. Res. Technol. 38 (2003), pp. 726-733
2003	P. Berwian, A. Weimar, G. Mueller	In situ resistivity measurements of precursor reactions in the Cu-In-Ga system	Thin Solid Films, Volumes 431-432, 1 May 2003, pp. 41-45
2003	A. Brummer, V. Honkimäki, P. Berwian, V. Probst, J. Palm, R. Hock	Formation of CuInSe ₂ by the annealing of stacked elemental layers – analysis by in situ high-energy powder diffraction	Thin Solid Films, Volume 437, Issues 1-2, 1 August 2003, pp. 297-307
2003	M. Hainke, J. Friedrich, D. Vizman, G. Mueller	MHD Effects in semiconductor crystal growth and alloy solidification	Proc. of Int. Scientific Colloquium on Modelling for Electromagnetic Processing (Eds. B. Naacke, E. Baake) (2003), pp. 73-78
2003	A. Molchanov, O. Graebner, G. Wehrhan, J. Friedrich, G. Mueller	Optimization of the growth of CaF ₂ crystals by model experiments and numerical simulation	Journal of the Korean Crystal Growth and Technology 13 (2003), pp. 15-18
2003	G. Mueller	Modeling of crystal growth from the melt	in Computational Modelling and Simulations of Materials (eds. P. Vincenzini, A. Lami) (2003 Techna Srl.), pp. 267-278
2003	M. Krause, J. Friedrich, G. Mueller	Systematic study of the influence of the Czochralski hot zone design on the point defect distribution with respect to a perfect crystal	Material Science in Semiconductor Processing 5 (2003), pp. 361-367
2003	O. Czarny, P. Droll, M. Ganaoui, B. Fischer, M. Hainke, M. Metzger, G. Müller et al.	High performance computer codes and their application to optimize crystal growth processes III	in E. H. Hirschel (ed.): Numerical Flow Simulation III, CNRS-DFG Collaborative Research Programme Results 2000-2002, Springer-Verlag, Berlin (2003), pp. 49-76
2003	J. Dagner, M. Hainke, J. Friedrich, G. Mueller	Effects of time-dependent magnetic fields on directional solidification of AlSi ₇ alloys	4th Int. Conf. on Electromagnetic Processing of Materials, EPM2003, 14-17 October 2003, Lyon, France, A2 3.6, 2003
2002	G. Mueller, O. Graebner, D. Vizman	Simulation of crystal pulling and comparison to experimental analysis of the CZ-process	in Semiconductor Silicon 2002 (eds. H.R. Hunt, L. Fabry, S. Kishino) Electrochemical Society (2002), pp. 489-504
2002	D. Vizman, J. Friedrich, G. Mueller	HMCZ and EMCZ in the Industrial Czochralski Growth of 300mm Si Crystals	Proceedings of the 5th International Pamir Conference, Fundamental and Applied MHD, 16-20 September, 2002, Ramatuelle, France, pp. 19-24

2002	D. Vizman, O. Graebner, G. Mueller	3D numerical simulation and experimental investigations of melt flow in a Si Czochralski melt under the influence of a cusp-magnetic field	Journal of Crystal Growth 236(4) (2002), pp. 545-550
2002	U. Sahr, G. Müller	Growth of InP Substrate Crystals by the Vertical Gradient Freeze Technique	Conf. Proc., 12th Semiconducting and Insulating Materials Conference (2002)
2002	Y. Stry, M. Hainke, T. Jung	Comaprison of linear and quadratic shape functions for a hybrid control-volume finite element method	Int. Journal of Numerical Methods for Heat&Fluid Flow, Vol. 12(8) (2002), pp. 1009-1031
2002	U. Sahr, M. Baeumler, I. Grant, W. Jantz, G. Müller	Photoluminescence Topography of Sulfur doped 2" InP grown by the Vertical Gradient Freeze Technique	Conf. Proc., 14th International Conference on Indium Phosphide and Related Materials (2002), pp. 405-408
2002	O. Paetzold, B. Fischer, A. Croell	Melt flow and species transport in μ g-gradient freeze growth of Germanium	Cryst. Res. Technol. 37 (2002), pp. 1058-1065
2002	G. Mueller	Experimental analysis and modeling of melt growth processes	J. Crystal Growth 237-239 (2002), pp. 1628-1637
2002	G. Mueller, J. Friedrich	Züchtung von Einkristallen - eine Herausforderung für Wissenschaft und Technik	Nachrichten des Fraunhofer-Verbunds Mikroelektronik 8 (2002), p. 2
2002	G. Mueller, J. Friedrich	Juwelen für Innovation	Schott Info 100 (2002), pp. 12-14
2002	G. Mueller, B. Birkmann,	Optimization of VGF-growth of GaAs crystals by the aid of numerical modelling	J. Crystal Growth, 237-239 (2002), 1745-1751
2002	A. Molchanov, U. Hilburger, J. Friedrich, M. Finkbeiner, G. Wehrhan, G. Mueller	Experimental verification of the numerical model for a CaF ₂ crystal growth process	Crystal Reseach and Technology 37 (2002), pp. 77-82
2002	M. Hainke, J. Friedrich, G. Mueller	Numerical Study of the Effects of Rotating Magnetic Fields during VGF Growth of 3" GaAs Crystals	Proc. of 5th Int. Pamir Conference (2002), V-1
2002	M. Hainke, T. Jung, J. Friedrich, B. Fischer, M. Metzger, G. Mueller	Equipment and Process Modelling of Industrial Crystal Growth Using the Finite Volume Codes CrysVUn and STHAMAS	Progress in Industrial Mathematics (Eds. Anile, A.M.; Capasso, V.; Greco, A.), Springer Verlag, ISBN 3540425829 (2002), pp. 218-222
2002	I. R. Grant, U. Sahr, G. Mueller	Growth of InP and GaAs Substrate Crystals by the Vertical Gradient Freeze Method	Conf. Proc., 14th International Conference on Indium Phosphide and Related Materials (2002), pp. 413-415
2002	J. Friedrich	Erlanger Nitritage: Erlangen im Zeichen des blauen Lasers und UMTS	DGKK Mitteilungsblatt 76/Dezember 2002
2002	J. Friedrich, R. Backofen, G. Mueller	Numerical simulation of grain structure and global heat transport during solidification of technical alloys in MSL inserts under diffusive conditions	Adv. Space Res. 29/4 (2002), pp. 549-552
2002	J. Derby, P. Daoutidis, Y. Kwon, A. Pandey, P. Sonda, B. Vartak, A. Yeckel, M. Hainke, G. Mueller	High performance computing, multi scale models for crystal growth systems	High Performance Scientific and Engineering Computing (eds. M. Breuer, F. Durst, C. Zenger in Lecture Notes in Computational Science and Engineering), Springer, Heidelberg (2002), pp. 185-201
2002	B. Birkmann, R. Weingärtner, P. Wellmann, B. Wiedemann, G. Mueller	Analysis of silicon incorporation into VGF-grown GaAs	J. Crystal Growth 237-239 (2002), 345-349

2002	M. Baeumler, E. Diwo, W. Jantz, U. Sahr, G. Müller, I. Grant	Optical evaluation of spatial carrier concentration fluctuations in doped InP substrates	Conf. Proc., 29th International Symposium on Compound Semiconductors (2002)
2001	G. Mueller, P. Rudolph	Crystal growth from the melt	in Encyclopedia of Materials: Science and Technology, Elsevier Science Ltd. (2001), pp. 1866-1873
2001	B. Wiedemann, J.D. Meyer, D. Jockel, H.C. Freyhardt, B. Birkmann, G. Müller	Spark source mass spectrometric assesment of silicon concentrations in silicon doped gallium arsenide single crystals	Fresenius' Journal of Analytical Chemistry 370, (2001), p. 541
2001	D. Vizman, O. Gräbner, G. Müller	Three-dimensional numerical simulation of thermal convection in an industrial Czochralski melt. Comparison to experimental results	Journal of Crystal Growth, Volume 233, Issue 4, December 2001, pp. 687-698
2001	D. Vizman, J. Friedrich, G. Müller	Comparison of the predictions from 3D numerical simulation with temperature distributions measured in Si Czochralski melts under the influence of different magnetic fields	Journal of Crystal Growth, Vol. 230, No. 1-2; Aug. 2001; pp. 73-80
2001	U. Sahr, I. Grant, G. Müller	Growth of S-doped 2" InP-Crystals by the Vertical Gradient Freeze Technique	13th International Conference on Indium Phosphide and Related Materials, Nara, Japan, (2001)
2001	M. Rasp, B. Birkmann, G. Müller	Anomalous interface shapes in the seed well during vertical gradient freeze growth of Si-doped GaAs	J. Cryst. Growth 222, (2001), p. 88
2001	O. Pätzold, B. Fischer, U. Wunderwald, E. Buhrig	Vapor phase doping under microgravity	Proc. Symp. on Int. Sci. Cooperation onboard MIR, Lyon, France, (2001), p. 301
2001	G. Müller, B. Fischer	Optimization of Melt Growth Processes by Experimental Analysis and Computer Modeling	Advances in Crystal Growth Research, eds. K. Sato, Y. Furukawa, K. Nakajima, Elsevier, Amsterdam, (2001), pp. 167-190
2001	A. Muhe, G. Muller	Optical in-situ measurement of the dissolution rate of a silica-Czochralski-crucible with silicon melt and comparison to ex-situ measurements	Microelectronic-Engineering. Vol. 56, No. 1-2; May 2001, pp.147-52
2001	M. Metzger	Optimal Control of Crystal Growth	Journal of Crystal Growth, Volume 230, Issues 1-2, August 2001, pp. 210-216
2001	O. Grabner, G. Muller, J. Virbulis, E. Tomzig, W. v. Ammon	Effects of various magnetic field configurations on temperature distributions in Czochralski silicon melts	Microelectronic-Engineering, Vol. 56, No. 1-2, May 2001, pp.83ff.
2001	S. Enger, O. Grabner, G. Muller, M. Breuer, F. Durst	Comparison of measurements and numerical simulations of melt convection in Czochralski crystal growth of silicon	Journal of Crystal Growth, Vol. 230, No. 1-2, Aug. 2001, pp.135-142
2001	J. Derby, P. Daoutidis, Y. Kwon, A. Pandey, P. Sonda, B. Vartak, A. Yeckel, M. Hainke, G. Mueller	High performance computing, multi scale models for crystal growth systems	AHPCRC, Preprint 2001-017