

Monday AM, August 5, 2002			
	Plenary Session: Fifty Years of Progress in Crystal Growth		
8:50	MBE - From Small Beginnings to Nanostructures to ? Tim Joyce* (a), Bruce Joyce (b); (a) University of Liverpool, Liverpool, UK, (b)Physics, Imperial College, London, UK		
9:30	Development and Current Status of Organometallic Vapor Phase Epitaxy Gerald Stringfellow* (a); (a)College of Engineering, University of Utah		
10:10	Break		
10:30	A History of Defect Formation, Segregation, Faceting and Twinning in Melt-Grown Semiconductors Peter Rudolph* (a), D.T.J. Hurle (b); (a)Czochralski Semiconductor Compounds, Institute of Crystal Growth in Berlin; (b), Bristol University, GB		
12:00	Lunch		
Monday PM, August 5, 2002			
	Session 1A: Epitaxy I - Antimonide and Nitride	Session 1B: Nonlinear Optics I	Session 1C: Fundamentals and Modeling - Phase Field Modeling I
2:00	<i>(Invited Presentation)</i> GaAsSb/GaAs long wavelength VCSELs grown by MBE Yong-Hang Zhang* (a); (a)Department of Electrical Engineering, Arizona State University	<i>(Invited Presentation)</i> Borate Crystals for Optical Frequency Conversion Douglas Keszler* (a), Ning Ye (a), Michael Hruschka (a), Jennifer Stone-Sundberg (b); (a)Chemistry, Oregon State University; (b), Saint Gobain Crystal Products	<i>(Invited Presentation)</i> Modelling Solidification Microstructures using the Phase-Field Method with Adaptive Mesh Refinement Nikolas Provatas* (a); (a)Materials Science and Engineering, McMaster University
2:15			
2:30	Effect of growth interruption on the interfacial quality of GaSb/GaInAsSb/AlGaAsSb heterostructures grown by organometallic vapor phase epitaxy Christine Wang* (a), Daniel Calawa (a); (a)Electro-Optical Materials and Devices, MIT Lincoln Laboratory	CRYSTALLIZABILITY OF NEW FUNCTIONAL BORATE-BASED SYSTEMS N Leonyuk* (a); (a)Crystallography & Crystal Chemistry, Moscow State University	<i>(Invited Presentation)</i> Quantitative three-dimensional phase-field simulations of dendritic growth Mathis Plapp* (a), Alain Karma (b); (a)Laboratoire PMC, CNRS/Ecole Polytechnique; (b)Physics Department, Northeastern University
2:45	Growth of InGaAsSb/Al(Ga)AsSb thermophotovoltaic monolithic interconnected module by metal-organic chemical vapor deposition Jeffrey Cederberg* (a), Michael Hafich (a), Robert Biefeld (a), Marc Palmisiano (b); (a), Sandia National Laboratories; (b), Bechtel-Bettis, Inc.	Growth and electrical characterization of Lithium Tri Borate (LiB3O5) single crystals Ramasamy Perumalsamy* (c), Kannan Chinna venkadasamy (a), GanesaMoorthy Sarveswaran (b), Subramanian chithambarathanu (a); (a)Crystal Growth Centre, Anna University; (b)Laser Materials Division, Centre for Advanced Technology, Indore, India; (c)Crystal Growth Centre, Anna University, Chennai-25, India	
3:00	Carbon in GaAsSb and GaSb grown by MOVPE Simon Watkins* (a), Rodney Wiersma (a), Chengxin Wang (a), Oliver Pitts (a); (a)Department of Physics, Simon Fraser University	Characterization and Crystal Growth of Barium Aluminum (Gallium) Borate Hideo KIMURA* (a), Akimitsu MIYAZAKI (a); (a)MEL, NIMS	<i>(Invited Presentation)</i> Microstructural Evolution in Inhomogeneous Elastic Media john lowengrub* (a); (a)Math, U. Minnesota
3:15	Measurements of Thermoelectric Properties of GaSb L. Zheng* (a), J. Iseler (b), D. Bliss (b), C. Yapp (b); (a)Mechanical Engineering, Stony Brook University; (b)Sensor Division, Air Force Research Laboratory at Hanscom, MA	BREAK	

3:30	BREAK	<i>(Invited Presentation)</i> Overview of mid-IR NLO Materials Applications Konstantin Vodopyanov* (a); (a), BlueLeaf-Picarro	
3:45	<i>(Invited Presentation)</i> Heteroepitaxy of AlGaIn/GaN Structures For Microwave Power Electronics J. Shealy* (a); (a)School of Electrical and Computer Engineering, Cornell University		<i>(Invited Presentation)</i> The Evolution of Thin Films During Heteroepitaxy: Morphological Instability and Quantum Dot Formation Peter Voorhees* (a), Joshua Eggleston (a), Kastuyo Thornton (a); (a)Materials Science and Engineering, Northwestern University
4:00		Recent advances in nonlinear optical crystals for the mid-infrared Peter Schunemann* (a), Scott Setzler (a), Thomas Pollak (a); (a), BAE Systems/IEWS	
4:15	Cantilever Epitaxy with Facet Controlled Growth for Low Dislocation Density GaN Christine Mitchell* (a), Daniel Koleske (a), Andrew Allerman (a), Arthur Fischer (b), David Follstaedt (c), Paula Provencio (c), Nancy Missert (d), Carol Ashby (e); (a)Chemical Processing Sciences, Sandia National Laboratories; (b)Semiconductor Material & Device Sciences, Sandia National Laboratories; (c)Radiation-Solid Interactions, Sandia National Laboratories; (d)Nanostructure & Semiconductor Physics, Sandia National Laboratories; (e)Microsensors S&T, Sandia National Laboratories	ZnGeP₂ Laser Damage Threshold Enhancement Peter Schunemann* (a), Scott Setzler (a), Thomas Pollak (a), Len Pomeranz (a); (a), BAE Systems/IEWS	<i>(Invited Presentation)</i> Asaro-Tiller-Grinfeld instability and related topics Martin Grant (a); (a)Physics, McGill Univ.
4:30	Growth Kinetic and Defect Formation in Epitaxy Growth of Group III Nitride Thin and Thick Films Bei Wu* (a), Ronghui Ma (a), Hui Zhang (a); (a)Mechanical Engineering, Stony Brook University	GROWTH OF MeGeCl₃ SINGLE CRYSTALS Chang-Shui Fang*, Qingtian Gu (a), Zhihui Qin (a), Qiwei Pan (a), Xiangwen Wu (a); (a)State Key Laboratory of Crystal Materials, Shandong University	
4:45	Aluminum Nitride Substrate Growth by Halide Vapor Transport Epitaxy David Bliss* (a), Vladimir Tassev (a), John Bailey (a), David Weyburne (a); (a)SNHC, Air Force Research Laboratory	Acousto-Optic Tunable Filter Based on Mercurous Chloride Crystal H. Zhang (a), N.B. Singh (a), D. Kahler (a), A. Berghmans (a), J. Clifton (a), M. Gottlieb (a), D. Suhre (a), A. Aberle (b), P. Fileger (b); (a), Northrop Grumman Corporation, MS-3B10, ATL; (b), Space Technology Directorate, P. O. Box 1500	<i>(Invited Presentation)</i> MODELING ELECTRODEPOSITION USING THE PHASE FIELD METHOD William Boettinger* (a), Jonathan Guyer (a), James Warren (a), Geoffrey McFadden (b); (a)Metallurgy Division, NIST; (b)Mathematical and Computational Sciences Division, NIST
5:00	PROSPECTS FOR IMPROVED LOW-MISMATCH EPITAXIAL SUBSTRATES FOR SEMICONDUCTOR DEVICES Eric Dowty (a), Paul Shlichta (b); (a), Shape Software; (b), Crystal Research		
Tuesday AM, August 6, 2002			
	Plenary Session: Fifty Years of Progress in Crystal Growth		
8:00	Morphology: From Sharp Interface to Phase Field Models Robert Sekerka* (a); (a)Department of Physics, Carnegie Mellon University		
8:40	Dendritic Crystal Growth Martin Glicksman* (a); (a)Materials Science & Engr., Rensselaer Polytechnic Institute		
9:20	Fundamentals and Applications, Fifty Years Retrospect of Japanese Crystal Growth Community Ichiro Sunagawa* (a); (a), Yamanashi Institute of Gemology and Jewellery Arts		

10:00	BREAK		
	Session 2A: Epitaxy II	Session 2B: Nonlinear Optics II	Session 2C: Fundamentals and Modeling - Phase Field Modeling II
10:20	<i>(Invited Presentation)</i> SURFACE PROCESSES DURING METALORGANIC VAPOR-PHASE EPITAXY Robert Hicks* (a); (a)Chemical Engineering, UCLA	<i>(Invited Presentation)</i> Microstructured Ferroelectrics and Semiconductors for Nonlinear Optical Applications Martin Fejer* (a); (a)Applied Physics, Stanford University	<i>(Invited Presentation)</i> Phase Field Modeling of Polycrystals: Recent Developments James Warren* (a), Irina Loginova (b), W. Carter (c); (a)CTCMS, NIST; (b), KTH; (c), MIT
10:35			
10:50	<i>(Invited Presentation)</i> Growth of In(AsSb) quantum dots on GaAs and GaSb: Surfactant effects on nucleation Robert Biefeld* (a), J. Cederberg (c), S. Kurtz (c); (a)Chemical Processing Science, Sandia National Laboratories; (b), Sandia National Laboratories; (c), Sandia National Laboratories	<i>(Invited Presentation)</i> Periodically Poled BaMgF4 for Ultraviolet Frequency Generation T. Y. Fan* (a), Scott Buchter (a), Vladimir Liberman (a), John Zayhowski (a), Mordechai Rothschild (a), Elliott Mason (b), Hans Jenssen (c), Arlete Cassanho (c), John Burnett (d); (a), MIT Lincoln Laboratory; (b), MIT; (c), AC Materials; (d), NIST	<i>(Invited Presentation)</i> Phase-field simulations of faceted growth Takuya Uehara* (a), Robert Sekerka (a); (a)Dept. Physics, Carnegie Mellon University
11:05			
11:20	in situ Optical and structural study of Sb-terminated GaAs and InP (001) under MOVPE conditions Oliver Pitts* (a), Chengxin Wang (a), Simon Watkins (a); (a)Department of Physics, Simon Fraser University	<i>(Invited Presentation)</i> Advances in All-Epitaxial Growth Techniques for Zincblende Semiconductor Materials Guy Williams* (a), Kenton Green (a), Gary Kanner (b), Jim Cicchiello (a), Doug Essex (b), Michael Marable (a), N.B. Singh (c); (a)EO/IR Advanced Systems, Northrop Grumman Corporation; (b)EO/IR Advances Systems, Northrop Grumman Corporation; (c)Advanced Materials and Semiconductor Device Technology Center, Northrop Grumman Corporation	<i>(Invited Presentation)</i> Simulation of epitaxial growth with strain using the level set method Russel Caflisch* (a); (a)Mathematics, UCLA
11:35	Detection of Trace Water in Phosphine with Cavity Ring-down Spectroscopy Susan Lehman* (a), Kris Bertness (a), Joseph Hodges (b); (a)Optoelectronics, National Institute of Standards and Technology; (b)Process Measurements Division, National Institute of Standards and Technology		
11:50	Crystal Growth of Ge, Si, and GaAs in Fibers for Optoelectronics Applications Michael Mauk* (b), Bryan Feyock (a), Jeremy Balliet (c), Todd Ruffins (a); (a), AstroPower; (b), AstroPower, Inc; (c), AstroPower, Inc.		Onset of Sidebranching in Directional Solidification Alain Karma* (a), Blas Echebarria (a); (a)Physics, Northeastern University
12:05			Computing Free Boundaries for Models of Melt Crystal Growth: Sharp and Diffuse Interface Methods Arun Pandey* (a), Andrew Yeckel (b), Marc Hainke (c), Georg Mueller (d), Jeffrey Derby (a); (a)Chemical Engineering and Materials Science, University of Minnesota; (b)University of Minnesota, Chemical Engineering and Materials Science; (c)Materials Science, University of Erlangen; (d)University of Erlangen, Materials Science
12:25			A Phase Field Model with Electric Current Lucien Brush* (a); (a)Materials Science and Engineering, University of Washington

12:40	Lunch		
Tuesday PM, August 6, 2002			
	Session 3A: Opportunities for New Materials I - Piezoelectrics	Session 3B: Nonlinear Optics III	Session 3C: Atomistic Modeling of Crystal Growth
2:00	<i>(Invited Presentation)</i> Relaxor Ferroelectric Single Crystals: Recent Development and New Challenges Zuo-Guang Ye* (a); (a)Department of Chemistry, Simon Fraser University	<i>(Invited Presentation)</i> Refractive Index and Thermo-optic Coefficient Measurements on Nonlinear Optical Materials David Zelmon* (a), Erika Swierad (b); (a)Sensors Branch, Air Force Research Laboratory; (b)Dept. of Physics, University of Dayton	<i>(Invited Presentation)</i> Simulations of the Crystal-Melt Interface Brian Laird* (a) ; (a)Chemistry, University of Kansas
2:15			
2:30	Vertical Bridgman growth and characterization of (1-x)Pb(Mg1/3Nb2/3)O3-xPbTiO3 crystals near the morphotropic phase boundary Kevin Zawilski* (a), M. Claudia Custodio (b), Hiroyuki Odagawa (b), Robert DeMattei (b), Robert Feigelson (a); (a)Materials Science and Engineering, Stanford University; (b)Laboratory for Advanced Materials, Stanford University	FLUX GROWTH AND MORPHOLOGY STUDY OF STOICHIOMETRIC LITHIUM NIOBATE CRYSTALS Xuewu Xu* (a), Sanjeev Solanki (a), Tow-Chong Chong (a); (a)Optical Crystals, Data Storage Institute	<i>(Invited Presentation)</i> NOTE START TIME: 2:25 PM Methods for Computing the Kinetic Coefficient from Molecular Dynamics Simulations Jeffrey Hoyt* (a), Mark Asta (b), Deyan Sun (b), Alain Karma (c) ; (a)Materials and Process Modeling, Sandia National Laboratories; (b)Materials Science and Engineering, Northwestern University; (c)Physics Dept., Northeastern University
2:45	Crystal growth for the high temperature piezoelectric devices based on CGG-type structure IL HYOUNG JUNG* (a), Akira Yoshikawa (b), Tsuguo Fukuda (b), Keun Ho Auh (a); (a), Ceramic Processing Research Center; (b), Institute for Materials Research	Effect of Niobium substitution in Stoichiometric Lithium Tantalate(SLT) single crystals Ravi Ganesan* (a), Jayavel Ramasamy (a), Shunji Takekawa (a), Masaru Nakamura (a), Kenji Kitamura (a); (a)Opto Single Crystals Group, Advanced Materials Laboratory, National Institute for Materials Science(AML/NIMS), Tsukuba, Japan	<i>(Invited Presentation)</i> NOTE START TIME: 2:50 PM <i>(Invited Presentation)</i> Kinetic Monte Carlo Simulations of Alloy Crystallization Kenneth Jackson* (a), Kirk Beatty (a) ; (a)Materials Science and Engineering, University of Arizona
3:00	On the growth and characterization of Bi12(Ge0.5Si0.5)O20 and NaBi(WO4)2 crystals Vaithianathan V* (a), Santhanaraghavan P (a), Ramasamy P (a); (a)Crystal Growth Centre, Anna University	GROWTH AND CHARACTERISATION OF ZINC THIOUREA CHLORIDE(ZTC) SURESHKUMAR PALANIVEL* (b), SURESHKUMAR PALANIVEL* (a); (a)Materials research center, Department of physics, VELAMMAL ENGINEERING COLLEGE,; (b)MATERIALS RESEARCH CENTER,DEPARTMENT OF PHYSICS, VELAMMAL ENGINEERING COLLEGE	
3:15	Effect of high Temperature Anneal on the Photorefractive Response of undoped Czochralski and Bridgman-Stockbarger grown Bismuthe Silicate (Bi12SiO20) Michaela Wiegel (a); (a)Material Science and Engineering, Massachusetts Institute of Technology	Growth of novel NLO material "4-hydroxy benzaldehyde-N-methyl-4-stilbazolium tosylate(HBST) Ramasamy P.* (a), Arulchakkaravarthi A.* (a), Lakshmanaperumal C.K.* (a), Santhanaraghavan P (b); (a)Crystal Growth Centre, Anna University; (b) Tsinchu, Taiwan, National Tsing Hua University	<i>(Invited Presentation)</i> Crystal growth and interface relaxation rates from equilibrium and non-equilibrium molecular dynamics simulations Wim Briels* (a), Wim Briels (a), Harald Tepper (a) ; (a)Applied Physics, University of Twente

3:30	<p>Modification of Photochromic Effect in undoped, photorefractive Bismuth Silicate (Bi₁₂SiO₂₀) Michaela Wiegel* (a), Piotr Becla (b); (a)Material Science and Engineering, Massachusetts Institute of Technology; (b)Material Science and Engineering, MIT</p>	<p>Study on the growth of bulk KDP and DKDP crystals Chang shui Fang* (a), Crystal Growth of China</p>	
3:45	<p>Effect of vibrational control of convection on the vertical Bridgman growth of oxides Kevin Zawilski* (a), Robert Feigelson (a), M. Claudia Custodio (b), Robert DeMattei (b); (a)Materials Science and Engineering, Stanford University; (b)Laboratory for Advanced Materials, Stanford University</p>	<p>KDP CRYSTALS FOR THE CONTROL DEVICES OF HIGH POWER OPTICAL BEAMS Vitaliy Salo* (a), Marina Kolybayeva (b), Igor Pritula (b), Aleksey Voronov (a); (a)Department of Optical and Constructional Crystals, ST Concern "Institute for Single Crystals" ; (b)Department of Optical and Constructional Crystals,, ST Concern "Institute for Single Crystals"</p>	<p><i>(Invited Presentation)</i> NOTE START TIME: 3:40 PM MD simulations of crystallization kinetics in covalent and metallic systems Clancy (a), Pualette (a) ; (a), Cornell Univ</p>
4:00	<p>Preparation of large single crystals of MNb₂O₆ (M = Ni, Co, Fe, Mn) by the floating-zone method PRABHAKARAN* Dharmalingam* (a), Fred Wondre (a), Andrew Boothroyd (a); (a)Clarendon Laboratory , University of Oxford</p>	<p>GROWTH AND CHARACTERISATION OF ORGANIC, 4-N, N-DIMETHYLAMINO-4'-N'-METHYL-STILBAZOLIUM TOSYLATE (DAST) CRYSTALS Ravi Ganesan* (c), Mohankumar Rangasamy (a), Rajanbabu Dhanakotti (b), Jayavel Ramasamy (d); (a)Department of Physics, C M Kothari Polytechnic College; (b)Department of Physics, Presidency College; (c)Single Crystal Group, Advanced Materials Laboratory, Tsukuba,Japan, National Institute of Materials Science; (d)Anna University, Chennai, India, Crystal Growth Centre</p>	<p>NOTE START TIME: 4:05 PM Kinetic Monte Carlo Simulations of the Surface Roughening Transition of Binary Systems Daniel Bentz* (a), William Betush (b), Kenneth Jackson (c) ; (a)Materials Science and Engineering, University of Arizona; (b)Materials Science and Engineering, University of Arizona; (c)Materials Science and Engineering, University of Arizona</p>
4:00 – 5:00	<p>Poster Session I Location: Lopez A/B</p>		

Wednesday AM, August 7, 2002

Plenary Session: Fifty Years of Progress in Crystal Growth

8:00	Surface Processes of Faceted Growth Alexander Chernov* (a); (a), USRA		
8:40	Recent Progress in the Melt Growth of III-V Compound Semiconductors John Mullin* (a); (a)Consultant Editor, EMC-Hoo Two		
9:20	BREAK		
	Session 4A: Epitaxy III	Session 4B: Microgravity I	Session 4C: Industrial Crystallization I
9:40	<p><i>(Invited Presentation)</i> Molecular Beam Epitaxy of Quantum Cascade Lasers A. Cho* (a); (a), Bell Laboratories, Lucent Technologies</p>	<p>Melting in Microgravity: "Point Effect" of Diffusion Afina Lupulescu* (a), Martin Glicksman (a), Matthew Koss (b); (a)Dept. of Materials Sciences and Engineering, Rensselaer Polytechnic Institute, Troy, NY, 12180; (b)Dept. of Physics, College of the Holy Cross, Worcester, MA 01610-2395</p>	<p><i>(Invited Presentation)</i> Development of VGF Crystal Growth Technology for the Compound Semiconductor Industry Morris Young* (a); (a), American Xtal Technology</p>
9:55		<p>Detached Bridgman growth of germanium and germanium-silicon alloy crystals Frank Szofran* (a), Martin Volz (a), Markus Schweizer (b), Sharon Cobb (a), Shariar Motakef (c), Arne Cröll (d), Peter Dold (e); (a)SD46, NASA Marshall Space Flight Center; (b)SD46, USRA/NASA MSFC; (c), Cape Simulations, Inc.; (d)Institut für NE-Metallurgie und Reinststoffe, University of Freiberg; (e)Kristallographisches Institut, University of Freiberg</p>	
10:10	<p><i>(Invited Presentation)</i> Surface Morphology and Non-linear Growth in GaAs Epitaxy T. Tiedje* (a); (a)Department of Physics and Astronomy, University of British Columbia</p>	<p>Microgravity Experiment to Understand Effect of Convection on PVT Growth N.B. Singh* (a), A. S. W. Thomas (b), W.M.B. Duval (c), M. E. Glicksman (a), J.D. Adam (a), H. Zhang (a), J. Clifton (a), T.A. Waite (a), A. Berghmans (a), J. Golombek (a), C. Watson (d), G. Nelson (d), C. Cacioppo (d), R. Naumann (d), N. Meyers (d), T. Rolin (d), J. Griffith (d); (a), AMSDTC-ES, Northrop Grumman Corporation, 1212 Winterson Rd. Linthicum, MD 21090; (b), Astronaut Office, Johnson Space Center, Houston, Tx, 77058; (c), NASA Glenn Research Center, Cleveland, OH 44135; (d), Center for Automation and Robotics, University of Alabama in Huntsville, Huntsville, AL 35899</p>	<p>GROWTH AND CHARACTERIZATION OF 200 mm SI GAAS CRYSTALS GROWN BY THE VGF METHOD M. Jurisch* (a), F. Börner (a), Th. Büniger (a), St. Eichler (a), T. Flade (a), R. Hammer (a), U. Kretzer (a), J. Stenzenberger (a), B. Weinert (a); (a), Freiburger Compound Materials GmbH</p>

10:25		Bridgman Growth of Germanium Crystals in a Rotating Magnetic Field M. Volz* (a), M. Schweizer (b), S. Cobb (a), J. Walker (c), F. Szofran (d); (a)SD46, NASA Marshall Space Flight Center; (b)SD46, USRA, NASA Marshall Space Flight Center; (c)Dept. of Mechanical and Industrial Engineering, University of Illinois; (d)SD46, NASA Marshall Space Flight Center	<i>(Invited Presentation)</i> MOCVD technology in research, development and mass production Michael Heuken* (a); (a)R & D, AIXTRON AG
10:40	<i>(Invited Presentation)</i> Spontaneous superlattices in III-V alloys Andrew Norman* (a), Sebastien Francoeur (a), Mark Hanna (a), Angelo Mascarenhas (a), Mowafak Al-Jassim (a); (a), National Renewable Energy Laboratory	The Diffusion Coefficient of Antimony in Molten Germanium as Determined in a Microgravity Environment David Matthiesen* (a), Lara Keefer (a); (a)Materials Science and Engineering, Case Western Reserve University	
10:55		Characterization of Surface Features in Detached Grown GeSi Crystals Sharon Cobb* (a), Martin Volz (a), Markus Schweizer (b), Natalie Kaiser (c), Paul Carpeneter (d), Frank Szofran (a); (a)SD46, NASA/MSFC; (b)R&D Center, Schott Glas; (c)Kristallographisches Institut, University of Freiburg; (d), Universities Space Research Association	InGaN-based light emitting devices in mass production MOCVD systems Michael Heuken* (a), Bernd Schineller (a), Harry Protzmann (a), Markus Luenenbuerger (a), Oliver Schoen (a); (a), AIXTRON AG
11:10	Step Structure and Island Formation in Alloy Layers Alexandru Riposan* (a), Grant Martin (a), Catalina Dorin (a), Brad Orr (b), Joanna Mirecki Millunchick (a); (a)Materials Science and Engineering, The University of Michigan; (b)Applied Physics, The University of Michigan	CONVECTIONLESS GROWTH OF PROTEIN CRYSTALS AT 1 G Paul Shlichta (a); (a), Crystal Research	<i>(Invited Presentation)</i> Platinum-Group Metals: Mine to Crystal Growth Application A. Shchetkovskiy* (a), E. Boland (b), R. Molnar (c), C. Fiorica (b); (a)R&D, Engelhard-CLAL LP; (b)Sales & Marketing, Engelhard-CLAL LP; (c)MSG, Engelhard Corporation
11:25	EFFECT OF BUFFER LAYER THICKNESS ON MORPHOLOGY AND OPTICAL PROPERTY OF GaAs/Si BY MBE Nammalvar Gopalakrishnan* (a), Krishnan Baskar (a), Hitoshi Kawanami (c), Isao Sakata (c); (a)Energy Electronics Institute, National Institute of Advanced Industrial Science and Technology (AIST), Central-2, Umezono 1-1-1, Tsukuba, Ibaraki 305-8568, JAPAN.; (b)Energy Electronics Institute, National Institute of Advanced Industrial Science and Technology (AIST), Central-2, Umezono 1-1-1, Tsukuba, Ibaraki 305-8568, JAPAN; (c)Energy Electronics Institute, National Institute of Advanced Industrial Science and Technology (AIST), Central-2, Umezono 1-1-1, Tsukuba, Ibaraki 305-8568, JAPAN	Melt Flow and Species Transport in Gradient-Freeze growth of Ge:Zn under μg Olf Paetzold* (a), Bernd Fischer (b), Arne Cröll (a); (a)Institute of non-ferrous metallurgy and ultra pure materials, University of Freiberg; (b), Fraunhofer Institute for Integrated Circuits B	
11:40	Large-Grain (> 1-mm), Recrystallized Germanium Films on Alumina, Fused Silica and Oxide-Coated Silicon Substrates for III-V Solar Cell Applications Michael Mauk* (b), Jeremy Balliet (a), Bryan Feyock (c); (a), AstroPower, Inc and University of Delaware; (b), AstroPower, Inc.; (c), AstroPower		<i>(Invited Presentation)</i> Evolution of PBN in the Processing of Compound Semiconductors Larry Mann* (a); (a), Advanced Ceramics Corp
11:55			
12:20	Lunch		

Thursday AM, August 8, 2002				
Plenary Session: Fifty Years of Progress in Crystal Growth				
8:00	Quantitative Microsegregation/Bridgman Growth Michael Wargo (a), Gus Witt; (a)Physical Sciences Division, NASA			
8:40	Macroscale Modeling and Simulation in Semiconductor Crystal Growth Robert Brown* (a); (a)Chemical Engineering, Massachusetts Institute of Technology			
9:20	BREAK			
	Session 5A: Oxides I	Session 5B: Characterization I	Session 5C: Microstructured Pattern Formation in Directional Solidification	Session 5D: Opportunities in New Materials II - IR and UV Materials
9:40	<i>(Invited Presentation)</i> Liquid Phase Epitaxy of Oxide Films Vincent Fratello* (a); (a), Integrated Photonics	<i>(Invited Presentation)</i> SCANNING PROBE STUDIES OF DEFECT CONTROLLED ELECTRONIC TRANSPORT IN III-NITRIDE FILMS Julia Hsu* (a); (a)Bell Laboratories, Lucent Technologies	<i>(Invited Presentation)</i> Stability of lamellar eutectic growth. Recent advances and future prospects Gabriel Faivre* (a), Silvere Akamatsu (b), Sabine Bottin-Rousseau (b); (a), GPS - UMR CNRS 7588; (b), GPS CNRS UMR 7588	Growth and optical properties of KMgF3 crystals Pavel Nefedov* (a), Boris Dorogovin (b), Boris Zadneprovski (b), Nikolay Leonyuk (a); (a)Crystallography & Crystal Chemistry, Moscow State University, Geological Faculty; (b), VNIISIMS
9:55				Growth and optical characterization of aliovalent ion doped LiCaAlF₆ single crystals as a new window material in the VUV region Hiroki Sato* (a), Amina Bensalah (b), Tomohiko Satonaga (c), Hiroshi Machida (a), Martin Nikl (d), Tsuguo Fukuda (c); (a)Development Division, Optical Devices Business Unit, Networking Devices Business Unit, NEC TOKIN Corporation; (b), Institute for Materials Research, Tohoku University; (c), IMRAM, Tohoku University; (d), Institute of Physics AS CR
10:10	Effects of Annealing on the High Ce Substituted YIG Films Prepared by Pulsed Laser Deposition Method Guangyu Zhang* (a), Towchong Chong (b), Xuewu Xu (a), Xiaohua Liu (a), Minghui Hong (a); (a), Data Storage Institute; (b), Data Storage Institute	<i>(Invited Presentation)</i> In situ x-ray scattering studies of growth and surface structure of PbTiO₃ films Carol Thompson* (a), S. Streiffer (b), J. Eastman (b), D. Fong (b), O. Auciello (b), G. Stephenson (b), P. Fuoss (b), M. Aanerud (a), A. Munkholm (c), M. V. Ramana Murty (b); (a)Department of Physics, Northern Illinois University; (b)Materials Science Division, Argonne National Lab; (c)Chemistry Division, Argonne National Lab	<i>(Invited Presentation)</i> Cellular and Dendritic arrays in binary alloy directional solidification Wolfgang Losert* (a), Kyuyong Lee (b); (a)Dept of Physics, IPST, and IREAP, University of Maryland; (b)Dept. of Physics, University of Maryland	Growth and Characterization of Bulk AlN Crystals N.B. Singh* (a), A. Berghmans (a), H. Zhang (a), J. Clifton (a), T.A. Waite (a), J. Golombek (a), J. Zingaro (a), C. Clarke (a), C. Wood (b); (a), Advance Materials & Semiconductor Device Technology Center, ES; (b), Office of Naval Research, 800 N. Quincy Street, Arlington, VA 22217-5660
10:25	High-quality La₃Ga_{5.5}Ta_{0.5}O₁₄ and La₃Ga_{5.5}Nb_{0.5}O₁₄ LPE Films for Oscillators and Resonators Christine Klemenz* (a); (a)AMPAC, University of Central Florida			Growth, some optical and photoelectrical properties of photorefractive crystals of CdxHg1-xTe:V (x = 0.9-0.95) Vasyl Shenderovskiy* (b), Stepan Paranchych (a), Maria Skilska, Yulia Tanasyuk (c), Oksana Romanyuk (c), Volodymyr Makogonenko (c); (a), Chernivtsi National University; (b), Institute of Physics; (c)Physics, Chernivtsi National University

10:40	<p>Homoepitaxial Growth of High-Quality BaSO₄:Mn⁶⁺ Using Low-Temperature Liquid Phase Epitaxy Dirk Ehrentraut, Markus Pollnau</p>	<p>Crystal growth and superconductivity of LiTi₂O₄ and Li_{1+1/3}Ti₂-1/3O₄ C. Chen* (a), M. Spears (a), F. Wondre (a), J. Ryan (a); (a)Physics, Clarendon Laboratory</p>	<p><i>(Invited Presentation)</i> Cellular arrays in binary alloys : from geometry to stability Alain Pocheau* (a), Marc Georgelin (a); (a)Marseille, France, IRPHE</p>	<p>Crystal growth of Yb³⁺-doped oxide single crystals for scintillator application Akira Yoshikawa* (a), Hiraku Ogino, Jong-Ho Lee, Tsuguo Fukuda (a); (a)Institute of Multidisciplinary Research for Advanced Materials, Tohoku University</p>
10:55	<p>HYDROTHERMAL SYNTHESIS OF LEAD ZIRCONATE TITANATE EPITAXIAL THIN FILMS Wojciech Suchanek* (a), Magdalena Oledzka (b), Katherine Mikulka-Bolen (b), Robert Pfeffer (c), Malgorzata Lencka (d), Richard Riman (b), Larry McCandlish (e); (a), Sawyer Research Products, Inc.; (b)Department of Ceramic and Materials Engineering, Rutgers University; (c)Serin Physics Laboratory, Rutgers University; (d), OLI Systems, Inc.; (e), Ceramare Corp.</p>	<p>Optical Properties of Czochralski Grown Rare-earth Garnet Single Crystals in Solid Solution Hideo KIMURA* (a), Akimitsu MIYAZAKI (a); (a)MEL, NIMS</p>		<p>Flux growth of rare earth layered cobaltites: crystal structure comparison between known and new phases Sergei Barilo* (a), Sergei Shiryayev (b), Georgii Bychkov (c), Dmitry Khalyavin (d), Denis Sheptyakov (e), Peter Allenspach (f), Albert Furrer (e); (a)Laboratory for Superconducting Materials Physics, Institute of Solid State & Semiconductor Physics, BAS; (b)Laboratory for Superconducting Materials Physics, Institute of Solid State & Semiconductor Physics, BAS; (c)Laboratory for Superconducting Materials Physics, Institute of Solid State & Semiconductor Physics, BAS; (d)Laboratory of Nonmetallic Ferromagnetics, Institute of Solid State & Semiconductor Physics; (e), Laboratory for Neutron Scattering, ETHZ & PSI Villigen; (f), Laboratory for Neutron Scattering, ETHZ & PSI Villigen</p>
11:10	<p>Liquid-Phase Epitaxy for the New Millenium Michael Mauk* (a), Oleg Sulima (a), James McNeely (a); (a), AstroPower</p>	<p>Processing of crystals with controlled lattice parameters gradient by the LHPG technique Luciara Barbosa* (a), Diogenes Ardila (b), Edson Kakuno (c), Rafael Camparim (c), Cesar Cusatis (c), Jose Andreeta (a); (a)DFCM, São Carlos Institute of Physics, University of Sao Paulo, 13560-590, São Carlos, São Paulo, Brasil ; (b)Department of Physics, University of Santiago de Chile , 7254758, Santiago, Chile ; (c)LORXI, Department of Physics, Federal University of Paraná, 81531-990, Curitiba, Paraná, Brasil</p>	<p><i>(Invited Presentation)</i> Binary alloys with weak surface tension anisotropy Eberhard Bodenschatz (a), Brian UTTER ; (a)Physics, Cornell University</p>	<p>VERTICAL BRIDGMAN GROWTH OF CALCIUM LITHIUM NIOBIUM GALLIUM GARNET CRYSTALS Xuewu Xu* (a), Tow-Chong Chong (a), Guangyu Zhang (a), Minghua Li (a), Lay Hiok Soo (a), Wei Xu (a); (a)Optical Crystals, Data Storage Institute</p>

11:25	PHASE FORMATION IN RARE EARTH (Re) TANTALATE BASED FLUX SYSTEMS E Volkova* (a), V Maltsev (a), N Leonyuk (a); (a)Crystallography & Crystal Chemistry, Moscow State University	Growth and Characterization of Rh doped BaTiO₃ single crystals Madeswaran Saminathan (a), Giridharan Venkatesan (a), Varatharajan R (b), Jayavel Ramasamy (a); (a)Crystal Growth Centre, Anna University; (b)Research & Development, Cermet, Inc		Effect of the crystal growth atmosphere on the dopant distribution coefficient in CO₂ laser-processed oxide single crystals Diogenes Reyes-Ardila* (b), Jose P. Andreea (a), Luciara B. Barbosa (a); (a)Depto de Fisica e Ciencia dos Materiais, DFCM/IFSC/Universidade de Sao Paulo; (b)Depto de Fisica, Universidad de Santiago de Chile
11:40	SEARCH OF ADVANTAGEOUS SYSTEMS FOR FLUX GROWTH OF SrCu₂(BO₃)₂ CRYSTALS V. Maltsev* (a), N. Leonyuk (a), G Babonas (b); (a)Geological Faculty, Moscow State University; (b), Semiconductor Physics Institute	GROWTH OF PURE AND DISODIUM TETRABORATE DOPED POTASSIUM ACID PHTHALATE (KAP) SINGLE CRYSTALS AND THEIR CHARACTERIZATION Srinivasan K* (a), Radha Jeyalakshmi V (a), Ramasamy P (b); (a)Crystal Research Centre, Alagappa University, Karaikudi-630 003, Tamil Nadu, India; (b)Crystal Growth Centre, Anna University, Chennai-600 025, Tamil Nadu, India	The Nonlinear Dynamical Behavior of Bridgman Crystal Growth: Kim, Witt, and Gatos Revisited Jeffrey Derby* (b), Andrew Yeckel (a), Prodomos Daoutidis (b), Paul Sonda (b); (a)University of Minnesota, Chemical Engineering and Materials Science; (b)Chemical Engineering and Materials Science, University of Minnesota	SYSTEMATIC AND EXHAUSTIVE SEARCHES FOR OPTIMAL-PROPERTY CRYSTALS Eric Dowty (a), Paul Shlichta (b); (a), Shape Software; (b), Crystal Research
11:55			Characteristic Parameters of Xenon Dendrites Herman Singer* (a), J. H. Bilgram (a); (a)Solid State Physics Laboratory, Swiss Federal Institute of Technology ETH, Zurich	
12:10	Lunch			
Thursday PM, August 8, 2002				
	Session 6A: Nano-Crystallization	Session 6B: Characterization II	Session 6C: Industrial Crystallization II	
2:00	<i>(Invited Presentation)</i> The Nano-Engineering of Perovskite Oxides by MBE Darrell Schlom* (a), Jeff Haeni (a), James Lettieri (a), Venugopalan Vaithyanathan (a), Wei Tian (b), Xiaoqing Pan (b), B.T. Liu (c), K. Maki (c), Y. So (c), V. Nagarajan (c), Ramamoorthy Ramesh (c), D.M. Kim (d), S.D. Bu (d), Chang-Beom Eom (d), Jeff Neaton (e), Craig Fennie	GROWTH AND CHARACTERIZATION OF PURE AND UREA DOPED KAP SINGLE CRYSTALS Srinivasan K* (a), Kumar S (a), Ramasamy K (b); (a)Crystal Research Centre, Alagappa University, Karaikudi-630 003, Tamil Nadu, India; (b)Crystal Growth Centre, Anna University, Chennai-600 025, Tamil Nadu, India	<i>(Invited Presentation)</i> Engineering and Production of a CZ Growth System for 300mm Silicon production Robert Stevenson* (a); (a), Kayex	

2:15	(e), Karin Rabe (e), Marilyn Hawley (f); (a)Materials Science and Engineering, Penn State University; (b)Materials Science and Engineering, The University of Michigan; (c)Materials and Nuclear Engineering, University of Maryland; (d)Materials Science and Engineering, University of Wisconsin-Madison; (e)Physics and Astronomy, Rutgers University; (f)Center for Materials Science, Los Alamos National Laboratory	Effect of Nd³⁺ + K⁺ Coupled Substitution on Growth and Dielectric Dispersion of Ferroelectric Lead Germanate Single Crystals Aarti Wazalwar* (a), Ashok Katpatal (a); (a)Applied Physics, VRCE, Nagpur, India	
2:30	<i>(Invited Presentation)</i> Growth and Microstructure of Nanocrystals Synthesized by Ion Implantation Al Meldrum* (a); (a)Physics, University of Alberta	An in situ study of aspirin crystal growth using atomic force microscopy Claire Thompson* (a), Stephanie Allen (a), Martyn Davies (b), Clive Roberts (a), Saul Tendler (a), Mike Wilkinson (c), Philip Williams (a); (a)School of Pharmaceutical Sciences, University of Nottingham; (b)School of Pharmaceutical Sciences, University of Nottingham; (c), GlaxoSmithKline Pharmaceuticals	<i>(Invited Presentation)</i> Scaling Cz Crystal Growth for 300mm Si - Process Challenges John Holder* (a); (a)Crystal Technology, MEMC Electronic Materials Inc
2:45		LIGHT SCATTERING TOMOGRAPHY - A FAST, NON-DESTRUCTIVE TECHNIQUE FOR IMAGING DEFECTS IN CRYSTALS Robert De Mattei* (a), Robert Feigelson (a); (a)Geballe Laboratory for Advanced Materials, Stanford University	
3:00	<i>(Invited Presentation)</i> Silicon/Silica and Tin Oxide Based Nanowires, Nanofiber Arrays, Nanoribbons, and Nanotubes James Gole* (a), Zurong Dai (b), John Stout (a), Zhong Wang (b); (a)Physics, Georgia Inst. of Technology; (b)Material Science, Georgia Inst. of Technology	Characterization of Paratellurite crystals grown in different temperature gradients Kumaragurubaran S* (a), Krishnamurthy D (b), Subramanian C (b), Selvarajan A (c), Ramasamy P (d); (a), Opto-Single crystal Group, National Inst. for Materials Science, Tsukuba 305-0045 Japan; (b), Crystal Growth Centre, Anna University, Chennai - 600 025 India; (c)Dept of Electrical and Electronic Engineering, Indian Inst. of Science, Bangalore, India; (d), Crystal Growth Centre, Anna University, Chennai-600 025 India	A Modified Continuous Czochralski Silicon Crystal Growth System Chenlei Wang* (a), Hui Zhang (a), Tihu Wang (b), Ted Ciszek (b); (a)Mechanical Engineering, Stony Brook University; (b), National Renewable Energy Laboratory
3:15		Congruency and Morphology of Ca₃(LiNbGa)₅O₁₂ Garnet Crystals Grown by the Czochralski Method Guangyu Zhang* (a), Minghua Li (a), Towchong Chong (a), Xuewu Xu (a); (a), Data Storage Institute	Scaling Cz Hot Zone for 300mm Si - Materials Challenges John Holder* (a); (a)Crystal Technology, MEMC Electronic Materials Inc
3:30	Crystal Growth of Trivalent Rare Earth doped YAG/Sapphire Eutectic for High Power Laser Application Yuji Kagamitani* (a), Akira Yoshikawa (b), Georges Boulon (c), Tsuguo Fukuda (d); (a), Fukuda X'tal Laboratory; (b), IMRAM, Tohoku University; (c), Lyon 1 Claude Bernard University; (d), IMRAM Tohoku University	Effect of Aging on the Growth of Intermetallic Compounds at the Interface of Sn-9Zn-xAg Lead-free Solders/Cu Substrate Min-Hsiung Hon* (a), Moo-Chin Wang* (b), Tao-Chih Chang* (a); (a)Materials Science and Engineering, National Cheng Kung University; (b)Mechanical Engineering, National Kaohsiung University of Applied Sciences	CALCULATION OF BULK DEFECTS IN CZ SI GROWTH: IMPACT OF MELT TURBULENT FLUCTUATIONS Yuri Makarov* (b), Vladimir Kalaev (a), Denis Lukanin (a), Vasiliy Zabelin (a), Janis Virbulis (c), Erich Dornberger (c), Wilfried von Ammon (c); (a), Soft-Impact Ltd., St.Petersburg, Russia; (b), STR, Inc, USA; (c), Wacker Siltronic AG, Burghausen, Germany

3:45			ANALYSIS OF MAGNETIC FIELD EFFECT ON 3D MELT FLOW IN CZ SI GROWTH Yuri Makarov* (c), Anton Korsakov (a), Nikolay Ivanov (a), Evgenii Smirnov (a), Konstantin Khodosevitch (b), Vladimir Kalaev (b), Janis Virbulis (d), Erich Dornberger (d), Wilfried von Ammon (d); (a), State Technical University, St.Petersburg, Russia; (b), Soft-Impact Ltd., St.Petersburg, Russia; (c), STR, Inc, USA; (d), Wacker Siltronic AG, Burghausen, Germany	
4:00 – 5:00	Poster Session I I Location: Lopez A/B			
Friday AM, August 9, 2002				
Plenary Session: <i>Fifty Years of Progress in Crystal Growth</i>				
8:00	Czochralski Growth of Oxides C. Brandle* (a); (a), CrysTex			
8:40	Constitutional Supercooling/Surface Roughening K. Jackson, University of Arizona			
9:20	BREAK			
	Session 7A: Oxides II	Session 7B: Characterization III	Session 7C: Microgravity II	Session 7D: Bulk Growth and Model Simulations
9:40	HYDROTHERMAL CRYSTALLIZATION OF EULYTITE-TYPE Bi₄Si₃O₁₂ and Bi₄Ge₃O₁₂ D Kozhbakhteeva* (a), A Mar'in (b), N Leonyuk (a); (a)Crystallography & Crystal Chemistry, Moscow State University; (b), All-Russian Research Inst. For Synthesis of Minerals	<i>(Invited Presentation)</i> A NOVEL DIGITAL X-RAY TOPOGRAPHY SYSTEM Keith Bowen* (a), Petra Feichtinger (a), Matthew Wormington (a) ; (a), Bede Scientific Incorporated	MODELING THREE-DIMENSIONAL FLOWS AND G-JITTER DURING MICROGRAVITY BRIDGMAN GROWTH Andrew Yeckel* (a), Arun Pandey (a), Jeffrey Derby (a); (a)Chemical Engineering and Materials Science, University of Minnesota	PREDICTION OF THE MELT/CRYSTAL INTERFACE GEOMETRY IN LIQUID ENCAPSULATED CZOCHRALSKI GROWTH OF InP BULK CRYSTALS Yuri Makarov* (a), Elena Shelegedina (b), Vladimir Kalaev (b), Olga Smirnova (b), Eugene Yakovlev (b) ; (a), STR, Inc; (b), Soft-Impact Ltd.
9:55	The Effect of MgAl₂O₄ precipitates on the sapphire che-ming liu,		Convective Contamination in Self-diffusivity Experiments with an Applied Magnetic Field Yu Yu Khine* (a), R. Michael Banish (a), J. Iwan D. Alexander (b); (a)Center for Microgravity and Materials Research, University of Alabama in Huntsville; (b)Mechanical and Aerospace Engineering, Case Western Reserve University	Modeling Multi-Scale Phenomena for Process Simulation of Bulk Crystal Growth Jeffrey Derby* (a), Arun Pandey (a), Andrew Yeckel (a), Yong-Il Kwon (a), Bing Dai (b) ; (a)Chemical Engineering and Materials Science, University of Minnesota; (b)University of Minnesota, Chemical Engineering and Materials Science

10:10	Adaptations of a LHPG system for the growth of single crystal minirods in controlled atmosphere Diogenes Reyes-Ardila* (a), Luciana B. Barbosa (b), Jose P. Andreeta (b); (a)Depto de Fisica, Universidad de Santiago de Chile; (b)Depto de Fisica e Ciencia dos Materiais, DFCM/IFSC/Universidade de Sao Paulo	<i>(Invited Presentation)</i> Scanning White Beam X-Ray Microdiffraction for Characterization of Thin Film Materials Bryan Valek* (a), Nobumichi Tamura (b), Ralph Spolenak (c), Alastair MacDowell (b), Richard Celestre (b), Howard Padmore (b), John Bravman (a), Jim Patel (d) ; (a)Materials Science and Engineering, Stanford University; (b)Advanced Light Source, Lawrence Berkeley National Laboratory; (c), Agere Systems; (d)Advanced Light Source, Lawrence Berkeley National Laboratory	Determination of Diffusion Coefficients from Concentration Measurements Daivd Matthiesen* (a), Lara Keefer (b), Dennis Keller (c), Chuck Panzarella (d), Arnon Chait (d); (a)Materials Science and Engineering, Case Western Reserve University; (b)Materials Science and Engineering, Case Western Reserve University; (c), RealWorld Quality Systems; (d), NASA Glenn	Observed Relaxation Phenomena in the Viscosity of Liquid Tellurium Chao Li* (a), Ching-Hua Su (b), Rose Scripa (a), B. Lin (b), Heng Ban (c), S. Zhu (b), Sandor Lehoczky (b) ; (a)Materials Science and Engineering, University of Alabama at Birmingham; (b), NASA/Marshall Space Flight Center; (c)Mechanical Engineering, University of Alabama at Birmingham
10:25	Growth of Mg and Fe ions Double Doped Congruent LiNbO3 Single-Crystal Fibers by a Laser-Heated Pedestal Method Chi-Yung Chen, Jyh-Chen Chen		Effect of Residual Accelerations on the Crystal Growth of II-VI Semiconductors in Low Earth Orbit Sandor Lehoczky* (b), Donald Gillies (a), Ching-Hua Su (b), Frank Szofran (b), Rosalia Scripa (c), Sharon Cobb (b); (a)SD41, NASA Marshall Space Flight Center; (b)SD46, NASA Marshall Space Flight Center; (c)Materials Science and Engineering, University of Alabama at Birmingham	MODELING ANALYSIS OF VCz GROWTH OF GaAs BULK CRYSTALS USING 3D UNSTEADY MELT FLOW SIMULATIONS Yuri Makarov* (a), Olga Smirnova (b), Elena Shelegedina (b), Igor Evstratov (b), Vladimir Kalaev (b), Eugene Yakovlev (b), Christiane Frank-Rotsch (c), Peter Rudolph (c), Michael Neubert (c) ; (a), STR, Inc, Richmond, VA, USA; (b), Soft-Impact Ltd., St.Petersburg, Russia; (c), Istitut für Kristallzüchtung, Berlin, Germany
10:40	CRYSTALLIZATION AND CHARACTERIZATION OF HYDROXYAPATITE ashok mahalingam* (a), narayana kalkura (a), Meenakshi Sundaram N (a); (a)crystal growth centre, anna university	DIFFUSE X-RAY SCATTERING AS A MEASURE OF NANOSCALE IMPERFECTIONS Alex Ulyanenkov* (a) ; (a)R & D, Bruker AXS	DEFECT, KINETICS AND HEAT TRANSFER OF CDTE BRIDGMAN GROWTH WITHOUT WALL CONTACT Hui Zhang* (a), David Larson (b); (a)Mechanical Engineering, Stony Brook University; (b)Materials Science and Engineering, Stony Brook University	OPTIMIZATION OF THE GROWTH PROCESS OF MULTIGRAIN SILICON INGOTS IN HEM FURNACE THROUGH COMPUTER SIMULATION Yuepeng Wan* (a), A.V. Hariharan (a), Mohan Chandra (a), Bernard Jones (b), Jon Talbott (b) ; (a)R&D, GT Equipment Technologies, Inc.; (b)Engineering, GT Equipment Technologies, Inc.
10:55	QUANTITATIVE ANALYSIS OF MAGNETIC YIG, YFeO3 AND Fe3O4 COMPOUNDS IN GROWN YIG RODS Chao-Chang Hu,	INTERLABORATORY COMPARISON OF InGaAsP EX-SITU CHARACTERIZATION Alexana Roshko* (a), Kristine Bertness (a) ; (a)Optoelectronics Division, National Institute of Standards and Technology	RECALESCENCE MODELLING FOR UNDERCOOLED SPHERICAL METALLIC SAMPLE Abdala Saleh* (a), Roberto Clemente (b); (a)Matematica e Estatistica, Universidade Estadual de Ponta Grossa ; (b)Quantum Electronic, UNICAMP	Modeling and Experiment of EFG Silicon Tube Growth Dawei Sun* (a), Hui Zhang (a), Juris Kalejs (b), Brian Mackintosh (b) ; (a)Mechanical Engineering, Stony Brook University; (b)Research and Development, ASE Americas, Inc.
11:10	SYNTHESIS AND GROWTH OF GALLIUM ORTHOPHOSPHATE	X-ray characterization of bulk AlN single crystals grown by the sublimation	Comparison of Characterization Techniques for the	Numerical and Experimental Study of Polysilicon Deposition on

	<p>CRYSTALS IN HYDROTHERMAL CONDITIONS Alexandre Mottchanyi* (a), Peter Chvanski (b); (a), All-Russian Research Institute for Synthesis of Minerals (VNIISIMS); (b), VNIISIMS</p>	<p>technique Balaji Raghothamachar* (a), Michael Dudley (a), Carlos Rojo (b), Kenneth Morgan (b), Leo Schowalter (c) ; (a)Materials Science and Engineering, SUNY at Stony Brook; (b), Crystal IS, Inc.; (c)Physics, Applied Physics, and Astronomy, Rensselaer Polytechnic Institute</p>	<p>Measurement of Dopant Level Concentrations Lara Keefer* (a), David Matthiesen (a); (a)Materials Science and Engineering, Case Western Reserve University</p>	<p>Silicon Tubes D. Cai* (a), L. Zheng (a), Y. Wan (b), A. Hariharan (b), M. Chandra (b) ; (a)Mechanical Engineering, Stony Brook University; (b), GT Equipment Technologies Inc., Nashua, NH</p>
11:25	<p>Analysis of the Growth of Dielectric Single Crystals by the AHP Method Andrew Yeckel* (a), Paul Sonda (a), Jeffrey Derby (a); (a)Chemical Engineering and Materials Science, University of Minnesota</p>	<p>Free nucleation of Aluminum Nitride Single Crystal by Sublimation B. Liu (a), D. Zhuang (a), J. Edgar (a), J. Chaudhuri (b) ; (a)Chemical Engineering, Kansas State University; (b)Mechanical Engineering, Wichita State University</p>	<p>SEMICONDUCTOR CRYSTAL GROWTH IN THE MICROGRAVITY SCIENCE GLOVEBOX (MSG) C. Marin, A. Churilov and A.G. Ostrogorsky, Rensselaer Polytechnic Institute, Troy, NY W. A. Bonner* *Crystallod Inc. Somerville, NJ</p>	
11:40	<p>Floating zone growth of rutile (TiO₂) under high oxygen pressure Satoshi Watauchi* (a), Jong Kwan Park (b), Kwang Bo Shim (b), Keun Ho Auh (c), Isao Tanaka (a); (a)Center for Crystal Science and Technology, Yamanashi University; (b)Hanyang University, Department of Ceramic Engineering; (c)Hanyang Univeristy, Department of Ceramic Engineering</p>	<p>Crystal Growth and Characterization of Cr doped CdZnTe Althea Bluiett* (a), EiEi Nyein (b), R.T. Shah (a), Uwe Hommerich (a), Sudhir Trivedi (c), S. Kutcher (d), R. Rosemeier (d) ; (a)Physics, Hampton University; (b)Department of Physics, Hampton University; (c), Brmrose Corporation; (d), Brimrose Corporation</p>		
11:55		<p>Characterizing Thermal Properties Of Melting Te Semiconductor: Thermal Diffusivity Measurements And Simulation Shen Zhu (a), Ching-Hua Su (b), C Li (c), B Lin (c), H Ben (c), R. Scripa (c), S. Lehoczky (b) ; (a)NASA/Marshall Space Flight Center, USRA; (b)Microgravity Science and Appl Dept, NASA/Marshall Space Flight Center; (c)Materials Engineering, Univ of Alabama-Birmingham</p>		