

# Conference Schedule

## Sunday, August 13

4:00-6:00pm Registration  
6:00-8:00pm Reception

## Monday, August 14

7:00-8:00 Continental Breakfast  
7:00-5:00pm Conference Registration  
7:00-5:30pm Industrial Exhibit

8:00-9:30 Plenary Session  
*Welcoming Remarks*  
*Plenary Speaker*  
*AACG Award Speaker*

9:30-10:00 Break

10:00-12:20 Parallel Sessions:  
1A: *Novel Materials*  
10:00-11:40 1B: *Detector Materials - I*  
1C: *MBE-Interface Formation Issues*

12:20-2:00 Lunch

2:00-5:00 Parallel Sessions:  
2A: *NASA Microgravity Workshop*  
2B: *Detector Materials - II, III*  
2C: *Evolution of Thin Films - I, II*

5:30-7:00 Reception  
*Industrial Exhibit*

## Tuesday, August 15

7:00-8:00 Continental Breakfast  
7:00-5:00pm Conference Registration  
7:00-5:00pm Industrial Exhibit

8:00-11:40 Parallel Sessions:  
3A: *SiC Bulk Crystal and Epitaxial Growth - I, II*  
8:00-12:00 3B: *Oxides: Substrates and Films - I, II*  
3C: *Crystal Growth Fundamentals - I, II*

12:00-2:00 Lunch

2:00-5:00 Parallel Sessions:  
4A: *In-Situ Diagnostics - I, II*  
2:00-3:40 4B: *Oxides: Substrates and Films - III*  
3:40-5:20 4B: *Microgravity Growth*  
2:00-3:40 4C: *Crystal Growth Fundamentals - III*

5:30-7:00 *Poster Session and Late News*  
Reception-Poster Area

## Wednesday, August 16

7:00-8:00 Continental Breakfast  
7:00-12:00 Conference Registration  
7:00-12:00 Industrial Exhibit (Exhibit Ends)

8:00-12:20 Parallel Sessions:  
5A: *Industrial Crystallization - I, II*  
8:00-12:00 5B: *Organometallic Vapor Phase Epitaxy /  
PV&TPV - I, II*  
8:00-11:40 5C: *Phase Field Modeling - I, II*

Wednesday afternoon is free.

## Thursday, August 17

7:00-8:00 Continental Breakfast  
7:00-5:00pm Conference Registration

8:00-11:20 Parallel Sessions:  
6A: *Silicon Photovoltaics - I, II*  
11:20-12:00 6A: *Bulk Growth of Semiconductors - I*  
8:00-12:00 6B: *Organometallic Vapor Phase Epitaxy - III, IV*  
6C: *NLO, Photorefractive, and Laser  
Crystals - I, II*

12:00-2:00 Lunch

2:00-5:20 Parallel Sessions:  
7A: *Bulk Growth of Semiconductors - II, III*  
2:00-5:20 7B: *Modeling - I, II*  
2:00-5:40 7C: *NLO, Photorefractive, and Laser  
Crystals - III, IV*

7:00-9:30 Conference Banquet  
AACG Awards Presentations

## Friday, August 18

7:00-8:00 Continental Breakfast  
7:00-12:00 Conference Registration

8:00-10:20 Parallel Sessions:  
8A: *Bulk Growth of Semiconductors - IV*  
10:20-12:00 8A: *Epitaxial Growth*  
8:00-10:00 8B: *Modeling - III*  
10:20-12:00 8B: *NLO, Photorefractive, and Laser Crystals - V*  
8:00-12:00 8C: *Wide Bandgap Materials: Nitrides - I, II*

12:00 Conference Ends

**Monday AM, August 14, 2000**

***Plenary Session***

**Grand Ballroom**

8:00	<b>Welcoming Remarks</b> – Tom Kuech : <i>AACG President (University of Wisconsin)</i>
8:10	<b>Plenary Speaker:</b> <i>Robert A. Brown</i> <b>Engineering Analysis of Microdefect Formation During Silicon Crystal Growth</b> Robert A. Brown*, Zhihong Wang, and Tatsuo Mori <i>Massachusetts Institute of Technology</i>
8:50	<b>AACG Award Speaker:</b> <i>C. David Brandle</i> <b>Czochralski Growth of MgScAlO<sub>4</sub></b> A. J. Ven Graitis, C. D. Brandle*, G. W. Berkstresser, H.M. O’Bryan and A. J. Valentino, <i>Lucent Technologies/Bell Labs</i>
9:30	<b>Break</b>

**Monday AM, August 14, 2000**

	<i>Session 1A: Novel Materials</i>	<i>Session 1B: Detector Materials - I</i>	<i>Session 1C: MBE: Interface Formation Issues</i>
10:00	<b>Invited</b> <b>High Temperature Solution Growth of Intermetallic Single Crystals and Single Grain Quasicrystals</b> Paul C. Canfield* and Ian R. Fisher, <i>Ames Laboratory</i>	<b>Invited</b> <b>The Growth and Characterization of Lanthanide-Phosphate-Based Scintillators for Radiation Detection Applications</b> L. A. Boatner, <i>Oak Ridge National Laboratory</i>	<b>Invited</b> <b>Interface Formation in Arsenide/Antimonide Heterostructures</b> Brian R. Bennett*, Allan S. Bracker, and Brett Z. Noshov, <i>Naval Research Laboratory</i>
10:40	<b>Invited</b> <b>Materials for Organic Electronics</b> Christian Kloc*, Jan Hendrik Schon, Theo Siegrist, and Bertram Batlogg, <i>Bell Laboratories, Lucent Technologies</i>	<b>Double-Crucible Czochralski Growth of High-Temperature Oxide Single Crystals</b> K. J. McClellan*, B. L. Bennett, D. W. Cooke, J. M. Roper, and M. T. Whittaker, <i>Los Alamos National Laboratory</i>	<b>As-Soak Control of Interfaces in Type-II InAs/GaSb Multilayers</b> R. Kaspi*, C. Moeller, A. Ongstad, <i>Air Force Research Laboratory/DELS</i> ; G. Dente, <i>GCD Associates</i> ; M.L. Tilton, <i>Boeing Defense and Space Group</i> ; and P. Gopaladasu, <i>University of New Mexico</i>
11:00		<b>Light Output of Lutetium Based Oxyorthosilicate Scintillators as a Function of Cerium Content</b> M. T. Whittaker*, B. L. Bennett, D. W. Cooke, K. J. McClellan, J. M. Roper, <i>Los Alamos National Laboratory</i> ; and D. H. Matthiesen, <i>Case Western Reserve University</i>	<b>Invited</b> <b>STM Studies of a Model Si/SiO Interface</b> K. S. Schneider, Z. Zhang, M. M. Banaszak Holl, B. G. Orr*, and U. C. Pernisz, <i>University of Michigan</i>
11:20	<b>Invited</b> <b>Controlling Kinetics and Mechanisms in Solid State Reactions Using Modulated Elemental Reactants: New Compounds with Designed Composition and Structure</b> David C. Johnson, <i>University of Oregon</i>	<b>ZnO Schottky Ultraviolet Photodetectors</b> Z. Huo*, H. Sheng, Y. Liu, S. Liang, and Y. Lu, <i>Rutgers University</i>	
11:40			
12:00	<b>PMNT Relaxor Ferroelectric Crystals Grown by High Pressure Bridgman Method</b> I. Nicoara, D. Nicoara, C. Marin, A. G. Ostrogorsky, <i>University of Alabama in Huntsville</i> ; and A. Burger*, <i>Fisk University</i>		
12:20	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>

\*Presenting Author

**Monday PM, August 14, 2000**

	<b>Session 2A: NASA Microgravity Workshop</b>	<b>Session 2B: Detector Materials - II : CdZnTe</b>	<b>Session 2C: Evolution of Thin Films - I</b>
2:00	<p><b>New Directions for NASA's Microgravity Electronic Materials Program</b></p> <p><b>Introduction and Goals:</b> Mike Wargo, <i>NASA</i></p> <p><b>Invited Discussion Leaders:</b> Tim Anderson (<i>University of Florida</i>) Pat Morris (<i>Dupont Central R &amp; D</i>) Ken Jackson (<i>University of Arizona</i>) Gina Kritchevsky (<i>Nanophase Technologies Corp.</i>)</p>	<p><b>Invited CdZnTe Detectors: Comparison of Crystals Grown from the Melt Versus the Vapor Phase</b></p> <p>Michael Fiederle*, T. Feltgen, A. Fauler, J. Meinhardt, and K.W. Benz, <i>Albert-Ludwigs-Universität, Germany</i></p>	<p><b>Invited Quantitative Real Time Studies of Epitaxial Growth Using Glancing-Angle Ions</b></p> <p>Scott Barnett*, Paul DeLuca, and Kurt Ruthe, <i>Northwestern University</i></p>
2:40		<p><b>Engineering of Defects to Control Compensation and Carrier Trapping in Cadmium Zinc Telluride Crystals</b></p> <p>R. B. James*(a), W. Yao(a), G. Wright(a,b), E.Y. Lee(a), R.H. Olsen(a), L. Li(c), F. Lu(c), V. Komar(d), D. Nalivaiko(d), A. Burger(b), M. Greaves (e), T. E. Schlesinger(e), and J. Burtulia (f), (<i>a</i>) Sandia National Laboratories, (<i>b</i>) Fisk University, (<i>c</i>) Yinnel Tech, Inc., (<i>d</i>) Institute for Single Crystals, Kharkov, (<i>e</i>) Carnegie Mellon University, (<i>f</i>) Thermo Electron</p>	<p><b>Invited In Situ Studies of Stress and Morphology During Strained Layer Hetero-Epitaxy</b></p> <p>Eric Chason*, L. B. Freund and R. Beresford, <i>Brown University</i>; J. A. Floro and M. B. Sinclair, <i>Sandia National Laboratory</i></p>
3:00		<p><b>Comparison of Cadmium Zinc Telluride Crystals Grown by Horizontal and Vertical Bridgman and from the Vapor Phase</b></p> <p>M. Schieber*(a,b), R. B. James(a), H. Hermon(b,d), M. Goorsky(c), T. Lam(c), E. Meerson(d), H. W. Yao(a,e), J. Erickson(a,e), E. Cross(a), A. Burger(f), J.O. Ndap(f), G. Wright(a,f), and M. Fiederle(g), (<i>a</i>) Sandia National Laboratories, (<i>b</i>) The Hebrew University of Jerusalem, (<i>c</i>) UCLA, (<i>d</i>) Real Time Radiography Readout, (<i>e</i>) University of Nebraska, (<i>f</i>) Fisk University, (<i>g</i>) University of Freiburg</p>	
3:20	<b>Break</b>	<b>Break</b>	<b>Break</b>

**Monday PM, August 14, 2000**

	<i>Session 2A: NASA Microgravity Workshop</i>	<i>Session 2B: Detector Materials - III</i>	<i>Session 2C: Evolution of Thin Films - II</i>
3:40	<b>New Directions for NASA's Microgravity Electronic Materials Program</b> <i>Discussions</i>	<b>Semiconductor Crystal Optimization of Gamma Detection</b> Uri Lachish, <i>Guma Science, Israel</i>	<b>Invited Low Energy Electron Microscopy Studies of Thin Film Growth</b> R. M. Tromp, <i>IBM T. J. Watson Research Center</i>
4:00		<b>Thick Films of X-Ray Polycrystalline Mercuric Iodide Detectors</b> M. Schieber*(a,b), H. Hermon (c), A. Zuck (a), A. Vilensky (c), L. Melekhov (a), R. Shatunovsky (c), E. Meerson (c), Y. Saado (a,c), E. Pinhasy (c) and R.A. Street (d), <i>(a) Hebrew University of Jerusalem, (b) Sandia National Laboratories, (c) Real Time Radiography Readout, (d) Xerox Palo Alto Research Center</i>	
4:20		<b>Performance of TAS Crystals for AOTF Imaging</b> N. B. Singh, D. Suhre, Neelam Gupta (a), M. Gottlieb, S. R. Murrill (a), and J. D. Adam, <i>Northrop Grumman Corporation, (a) U. S. Army Research Laboratory</i>	<b>Invited In Situ Optical Characterization of III-V Semiconductor Growth</b> K. A. Bertness, <i>National Institute of Standards and Technology</i>
4:40		<b>Study on New Modified TGS Crystals</b> Fang Chang Shui*, Sun Xun, Shi Wei, Gu Qing Tian, Pan Qi Wei, and Wu Xiang Wen, <i>Shandong University, P. R. China</i>	

5:30 **Reception – Industrial Exhibit**

<b>Tuesday AM, August 15, 2000</b>			
	<b>Session 3A: SiC Bulk Crystal and Epitaxial Growth - I</b>	<b>Session 3B: Oxides: Substrates and Films - I</b>	<b>Session 3C: Crystal Growth Fundamentals - I</b>
8:00	<b>Invited Growth of Large Area Crystals for SiC-Based Devices</b> Cengiz M. Balkas*, Greg T. Dunne, Andrei A. Maltsev, Matthew D. Roth, Larry B. Rowland, Andrew G. Timmerman, Shaoping Wang, and Nikolay K. Yushin, <i>Sterling Semiconductor</i>	<i>Talk moved to 12:00, session 3B</i>	<b>Invited Monte Carlo Simulations of Thin Film Deposition</b> G. H. Gilmer*, F. H. Baumann, J. Dalla Torre, and P. O'Sullivan, <i>Bell Laboratories, Lucent Technologies</i>
8:20		<b>Surface Engineering Along the Close-Packed Direction of Perovskite Oxides</b> Trong-Duc Doan, Arati Bagal, and Paul A. Salvador*, <i>Carnegie Mellon University</i>	
8:40	<b>Invited SiC Crystal Growth Developments by HTCVD and Epitaxy Highlight in Hot-Wall CVD</b> A. Ellison*, C. Hemmingsson, B. Magnusson, A. Henry, N. Son, P. Bergman and E. Janzén, <i>Linköping University, Sweden</i>	<b>Invited Wet-Etching Methods for Perovskite Substrates</b> Dave H. A. Blank, <i>University of Twente, Netherlands</i>	<b>Effect of Pulling Rates on the Quality of YIG Single Crystal Fibers</b> Chao-Chang Hu*, Jyh-Chen Chen, and Chen-Hung Huang, <i>National Central University, Taiwan</i>
9:00			<b>Directional Growth of a Nb-Al-Ni Ternary Eutectic Alloy</b> C. T. Rios, S. Milenkovic and R. Caram*, <i>State University of Campinas, Brazil</i>
9:20	<b>Modeling of Transport Processes and Kinetics of Silicon Carbide Bulk Growth</b> Q.-S. Chen*, H. Zhang, R.-M. Ma, V. Prasad, <i>State University of New York at Stony Brook</i> ; C.M. Balkas and N.K. Yushin, <i>Sterling Semiconductor</i>	<b>Invited Radiation Heated Floating Zone Crystal Growth of High Quality SrTiO<sub>3</sub> and Related Materials</b> A. M. Balbashov*, P.I. Nabokin, D.A. Suptel, <i>Moscow Power Engineering Institute, Russia</i>	<b>Segregation During Glass Crystallization</b> M. V. Minke* and Kenneth A. Jackson, <i>University of Arizona</i>
9:40	<b>Virtual Reactor as a New Tool for Modeling and Optimization of SiC Bulk Crystal Growth</b> M. V. Bogdanov, A. O. Galyukov, S. Yu. Karpov, A. V. Kulik, S. K. Kochuguev, D. Kh. Ofengeim, A. V. Tsiryulnikov; <i>Soft-Impact Ltd.</i> ; M. S. Ramm, A. I. Zhmakin, <i>A.F. Ioffe Institute, Russia</i> ; Yu. N. Makarov*, <i>University of Erlangen-Nuernberg, Germany</i>		<b>Correlation Between Structural Parameters of Colquiriite Structures</b> Dorota A. Pawlak(a)*, Krzysztof Wozniak(b), Kiyoshi Shimamura(a) and Tsuguo Fukuda(a), (a) <i>Tohoku University, Japan</i> (b) <i>University of Warsaw, Poland</i>
10:00	<b>Break</b>	<b>Break</b>	<b>Break</b>

<b>Tuesday AM, August 15, 2000</b>			
	<b>Session 3A: SiC Bulk Crystal and Epitaxial Growth - II</b>	<b>Session 3B: Oxides: Substrates and Films - II</b>	<b>Session 3C: Crystal Growth Fundamentals - II</b>
10:20	<b>Impact of Source Material on Silicon Carbide Vapor Transport Growth Process</b> P. J. Wellmann*, D. Hofmann, L. Kadinski, M. Selder, T. L. Straubinger and A. Winnacker, <i>University of Erlangen, Germany</i>	<b>Invited Intensive In Situ Monitoring Approach To Oxide-MBE Film Growth</b> V. Matijasevic* and I. Bozovic, <i>Oxxel GmbH, Germany</i>	<b>Invited Current-Induced Step Dynamics and Pattern Formation on Crystal Surfaces</b> John D. Weeks, <i>University of Maryland</i>
10:40	<b>Rearrangement of Dislocations and Formation of Micropipes in Silicon Carbide Crystals Due to the Movement of Hexagonal Voids</b> T. A. Kuhr, M. Skowronski, <i>Carnegie Mellon University</i> ; W. M. Vetter and M. Dudley, <i>State University of New York, Stony Brook</i>		
11:00	<b>Growth Related Secondary Phase Inclusions in a Diffusion Controlled 6H-Sublimation System</b> H.-J. Rost *, J. Dolle, J. Doerschel, D. Siche, D. Schulz, and J. Wollweber <i>Institute of Crystal Growth, Germany</i>	<b>MBE Growth of Highly Correlated Model Oxide Systems Using a High-Flux Atomic Oxygen Source</b> N. J. C. Ingle*, R. H. Hammond, and M. R. Beasley, <i>Stanford University</i>	<b>Numerical Simulation of Transport Phenomena During Czochralski Growth of Large Diameter Oxide Crystals</b> , Hermann M. Wilke, <i>Institute of Crystal Growth, Germany</i>
11:20	<b>Experimental Assessment of Metal Solvents for Low-Temperature (&lt; 1000 C) Liquid-Phase Epitaxy of Silicon Carbide</b> Michael G. Mauk*, Bryan W. Feyock; <i>AstroPower, Inc.</i> ; Archana Sharma, Robert G. Hunsperger, <i>University of Delaware</i>	<b>Invited Thermodynamic Stability and Kinetics of YBCO Film Growth at High Rates in Atomic and Molecular Oxygen</b> R. H. Hammond*, Weizhi Wang, Luke S.-J. Peng, Wm. Jo, A. F. Marshall, M. R. Beasley, <i>Stanford University</i> ; and E. Peterson, <i>Los Alamos National Laboratory</i>	<b>A Fundamental Study of Rotational Effects on Solidification in a Simulated Czochralski System</b> M. Ferland, D. Mishra and V. Prasad, <i>State University of New York at Stony Brook</i>
11:40			<b>Modeling and Simulation Experiments on Hydrothermal Crystal Growth</b> A. Pal, D. Mishra, M. Ferland, N. Nemick, A. Saha, V. Prasad*, and H. Zhang, <i>State University of New York at Stony Brook</i>
12:00	<b>Lunch</b>	<b>Preparation of (001)-Oriented PZT Thin Film on Silicon Wafer by Pulsed Laser Deposition</b> Jing Zhao*, Li Lu, Carl V. Thompson, and Wen Dong Song, <i>National University of Singapore</i>	<b>Lunch</b>
12:20		<b>Lunch</b>	

<b>Tuesday PM, August 15, 2000</b>			
	<b>Session 4A: In-Situ Diagnostics - I</b>	<b>Session 4B: Oxides: Substrates and Films - III</b>	<b>Session 4C: Crystal Growth Fundamentals - III</b>
2:00	<b>Invited Sensor-Based Epitaxial Growth: From In Situ Real-Time Monitoring and Control to Intelligent Systems</b> Henry P. Lee, <i>University of California, Irvine</i>	<b>Chemomechanical Polishing of Single Crystal ZnO for Epitaxy</b> David B. Eason*, Gene Cantwell, <i>Eagle-Picher Technologies, L.L.C.</i> ; Jim Thomas, <i>Pittsburg State University</i> ; and Don Lucca, <i>Oklahoma State University</i>	<b>Invited On the Role and Use of Thermal Noise in Crystal Growth</b> Alain Karma, <i>Northeastern University</i>
2:20		<b>Substrate Preparations in Epitaxial ZnO Film Growth</b> Shen Zhu*, C-H Su, S. L. Lehoczky, <i>NASA/Marshall Space Flight Center</i> ; M. T. Harris, M. J. Callahan, <i>Sensors Directorate, Hanscom AFB</i> ; and M. A. George, <i>University of Alabama</i>	
2:40	<b>Real-Time Optical Characterization of Surface-Reaction Kinetics During Heteroepitaxial Ga<sub>x</sub>In<sub>1-x</sub>P Growth by p-Polarized Reflectance</b> N. Dietz, S. Beeler, H. Tran, and V. Woods, <i>North Carolina State University</i>	<b>Invited ZnO Thin Films for Piezoelectric Applications</b> Glen R. Kowach*, <i>Bell Laboratories, Lucent Technologies</i>	<b>Oscillatory Growth of Directionally Solidified Ammonium Chloride Dendrites</b> Katherine A. Gudgel* and Kenneth A. Jackson, <i>University of Arizona</i>
3:00	<b>Monolayer-Period Oscillations in the Reactivity of Sb<sub>2</sub> During Molecular Beam Epitaxial Growth of (001) AlSb</b> R. Kaspi* and J. P. Loehr, <i>Air Force Research Laboratory, Kirtland AFB and Wright-Patterson AFB</i>		<b>Kinetics of Multi-Stage Growth of Stoichiometric Crystals</b> A. S. Abyzov, L. N. Davydov* and L. N. Tanatarov, <i>NSC "KIPT", Kharkov, Ukraine</i>
3:20	<b>In Situ Optical Metrology for Real-Time Control of Molecular Beam Epitaxy Growth of Pseudomorphic InGaAs Thin Films on GaAs</b> Donald A. Gajewski*, Jonathan E. Guyer, <i>NIST</i> ; Jeff Hale, <i>J. A. Woollam Co., Inc.</i> ; Paul Amirtharaj, <i>U. S. Army Research Laboratory</i> ; Deane Chandler-Horowitz and Joseph G. Pellegrino, <i>NIST</i>	<b>ZnO Crystal Growth and Wafer Fabrication Crystal Growth</b> Jeff Nause*, <i>Cermet, Inc.</i> ; Dave Look, <i>Wright State University</i> ; and Hadis Morkoç, <i>Virginia Commonwealth University</i>	<b>Transport Phenomena in Sublimation Crystal Growth</b> A. S. Segal, <i>Institute for Fine Mechanics and Optics</i> ; S. Yu. Karpov, <i>Soft-Impact Ltd.</i> ; M. S. Ramm, A. I. Zhmakin, <i>A. F. Ioffe Physical Technical Institute, Russia</i> ; Yu. N. Makarov, <i>University of Erlangen-Nurnberg, Germany</i>
3:40	<b>Break</b>	Session 4B: <i>Microgravity Growth</i> (next page)	<b>TSAG – Science at the Edge</b> D.A. Pawlak <sup>a*</sup> , G. Lerondel <sup>a</sup> , I. Dmytruk <sup>c</sup> , Y. Kagamitani <sup>a</sup> , S. Durbin <sup>a</sup> , T. Fukuda <sup>a</sup> , <sup>a</sup> <i>Institute for Materials Research, Tohoku University, Sendai, Japan</i> ; <sup>b</sup> <i>Center for Interdisciplinary Research, Sendai, Japan</i>

**Tuesday PM, August 15, 2000**

	<b>Session 4A: In-Situ Diagnostics - II</b>	<b>Session 4B: Microgravity Growth</b>	<b>Session 4C: Crystal Growth Fundamentals - III</b>
3:40	<b>Break</b>	<b>Thermal Conductivity Measurement in Lead Bromide</b> N. B. Singh*(a), S. R. Coriell(b), W. M. B. Duval(c), S. S. Mani(a), J. D. Adam(a), and M. E. Glicksman(d); (a) Northrop Grumman STC, (b) NIST, (c) NASA John Glenn Research Center, (d) R. P. I.	<b>TSAG – Science at the Edge</b> D.A. Pawlak <sup>a*</sup> , G. Lerondel <sup>a</sup> , I. Dmytruk <sup>c</sup> , Y. Kagamitani <sup>a</sup> , S. Durbin <sup>a</sup> , T. Fukuda <sup>a</sup> , <sup>a</sup> <i>Institute for Materials Research, Tohoku University, Sendai, Japan</i> ; <sup>b</sup> <i>Center for Interdisciplinary Research, Sendai, Japan</i>
4:00	<b>Invited Substrate Temperature Sensing and Feedback Control in Molecular Beam Epitaxy</b> J. A. Roth, <i>Hughes Research Laboratories</i>	<b>Effect of Void Location on Segregation Patterns in Microgravity Solidification</b> M. Kassemi, <i>NASA John Glenn Research Center</i>	<b>Break</b> <i>End of session</i>
4:20		<b>Gravity-Related Transport Process in Off-axis Sputtering Deposition</b> Shen Zhu*, Ching-Hua Su, and S. Lehozeky, <i>NASA/Marshall Space Flight Center</i>	
4:40	<b>Diffuse Reflectance Spectroscopy and Reflection High Energy Electron Diffraction to Measure GaAs (001) Surface Reconstructions During Molecular Beam Epitaxy as Functions of Substrate Temperature and V:III Ratio</b> J. E. Guyer*, D. A. Gajewski, and J. G. Pellegrino, <i>NIST</i>	<b>The Source of Voids in Al-In Alloys Processed During the LMS Mission</b> J. B. Andrews*, L. J. Hayes, and D. Downs, <i>University of Alabama at Birmingham</i>	
5:00		<b>Numerical Study on Melt Growth of Compound Semiconductors Under Microgravity and on the Earth</b> Satoshi Adachi*, <i>Ishikawajima-Harima Heavy Industries Co., Ltd.</i> ; Minoru Kaneko, <i>Ishikawajima Jet Service Co., Ltd.</i> ; Kyoichi Kinoshita, <i>NTT Basic Research Laboratories</i> ; Kato Hirokazu, Shinichi Yoda, <i>National Space Development Agency of Japan</i> ; Keisuke Kawachi, and Kazuo Uematsu, <i>Ishikawajima-Harima Heavy Industries Co., Ltd., Japan</i>	

5:30	<b>Poster Session and Late News</b>
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**Bulk Growth of Semiconductors**

<p><b>Zone Melting As Universal Technology for II-VI Compound Crystal Growth</b>, Nikolai N. Kolesnikov* and Nadejda S. Berzigiartova, <i>Russian Academy of Science</i></p>	<p><b>The Preparation Conditions of Chromium Doped ZnSe and Their Effect on the Infrared Luminescence Properties</b>, A. Burger*, K. Chattopadhyay, J.-O. Ndap, X. Ma, S. H. Morgan, <i>Fisk University</i>; C. I. Rablau, <i>West Virginia University</i>; G. J. Wagner, T. J. Carrig, <i>Coherent Technologies, Inc.</i>; S. Feth and C.-H. Su, <i>NASA/Marshall Space Flight Center</i></p>
<p><b>Growth of High Quality ZnSe Single Crystals</b>, Gu Qing Tian, Wei Jing Qian, Pan Qi Wei, Shi Wei, Wang Ji Yang, Fang Chang Shui*, <i>Shandong University, P. R. China</i>; and G. Landwehr, <i>Physikalisches Institut der Universitat Wurzburg, Germany</i></p>	<p><b>Growth and Characterisation of Ga<sub>(x)</sub>In<sub>(1-x)</sub>Sb Thin Films</b>, N.P. Singh*, P.B. Barman, and B. Krishan, <i>Sant Longowal Institute of Engineering &amp; Technology, India</i></p>
<p><b>Preparation and Thermophysical Properties of AgGaTe<sub>2</sub> Crystals</b>, A. Burger*, S. Morgan, J. -O. Ndap, K. Chattopadhyay, X. Ma, K. Faris, Y. Cui, <i>Fisk University</i>; and J. T. Goldstein, <i>Air Force Research Lab</i></p>	

**Crystal Growth Fundamentals**

<p><b>The Peculiarities of Crystal Growth in the Y<sub>1-x</sub>Zr<sub>x</sub>Ni<sub>2</sub>B<sub>2</sub>C Borocarbide System</b>, P. V. Molchan*, A. S. Shestak, Zh. M. Tomilo, V. M. Finskaya, and N. A. Prytkova, <i>Institute of Solid State and Semiconductor Physics, NAS, Belarus</i></p>	<p><b>Experimental Setup for Studies of Step Pattern Evolution During Growth of Crystals from Solution</b>, N. A. Booth*(a,b), P. G. Vekilov(a) and A. A. Chernov(b), (a)<i>University of Alabama in Huntsville</i>, (b) <i>NASA/Marshall Space Flight Center</i></p>
<p><b>Analysis of the Wetting Behavior and Interaction of Bismuth Silicate Melt (Bi<sub>12</sub>SiO<sub>20</sub>) with the Confinement Materials Platinum and Platinum-5% Gold</b>, Michaela E.K. Wiegel* and August F. Witt, <i>Massachusetts Institute of Technology</i></p>	

**Detector Materials**

<p><b>Growth and Characterization of CZT Crystals Obtained by High-Pressure Bridgman Method in Single- and Multi-Zone Furnaces</b>, V. Komar*, D. Nalivaiko, A. Gerasimenko, and P. Mateychenko, <i>STC "Institute for Single Crystals", Ukraine</i></p>	<p><b>Characterization of Thallium Bromide Crystals for Radiation Detector Applications</b>, K. Hitomi*, O. Muroi, M. Matsumoto, T. Shoji, and Y. Hiratate, <i>Tohoku Institute of Technology, Japan</i></p>
<p><b>Crystal Growth of Trans-Stilbene by Modified Bridgman Technique: A Potential Scintillator Material</b>, A. Arulchakkaravarthi*, P. Santharaghavan, and P. Ramasamy, <i>Anna University, India</i></p>	<p><b>Optical, Mechanical and Scintillating Time Resolution Studies of Trans- Stilbene Crystal</b>, A. Arulchakkaravarthi*, P. Santharaghavan, and P. Ramasamy, <i>Anna University, India</i></p>
<p><b>Semi-insulating CdZnTe for Radiation Detector Applications: Crystal Growth Challenges</b>, Csaba Szeles*, <i>eV PRODUCTS, A Division of II-VI Inc.</i></p>	<p><b>Characterization Studies on CZ Grown BGO (Bi<sub>4</sub>Ge<sub>3</sub>O<sub>12</sub>) Single Crystal</b>, V. Vaithianathan, A. Claude, P. Santharaghavan, L. Righi (a), G. Bocelli (a) and P. Ramasamy*, <i>Anna University, India</i>; (a) <i>CSSD, CNR, Italy</i></p>
<p><b>Growth and Characterisation of L-Serine Doped TGS and TGSP Single Crystals</b>, R. Mohan Kumar*, R. Muralidharan, R. Jayavel and P. Ramasamy, <i>Anna University, India</i></p>	

**Epitaxial Growth**

<p><b>GaAs-on-Silicon Conformal Vapor Phase Epitaxy Using Reversible Transport and Selective Etching Reactions with Water Vapor</b>, Michael G. Mauk* and Bryan W. Feyock, <i>AstroPower, Inc.</i></p>	<p><b>Epitaxially Grown Fe/Ag Thin Films and Their Application in Microwave Notch Filter Devices</b>, Wei Wu*(a), C. S. Tsai(a,b), C. C. Lee(a), H. Hopster(a), and H. J. Yoo(a), (a) <i>University of California, Irvine</i>, (b) <i>Academia Sinica, Taiwan</i></p>
<p><b>CANCELLED: Electrical and Luminescent Properties of CdSe Epitaxial Layers</b>, Alexandru Focsha*, Petru Gashin, Valentina Nicorich, and Tamara Potlog, <i>State University of Moldova</i></p>	<p><b>Effect of H<sub>2</sub> Addition on the Characteristics of TiN Deposited by APCVD</b>, Hong-Hsin Huang* and Min-Hsiung Hon, <i>National Cheng Kung University, Taiwan</i></p>

## Modeling

<p><b>Parallel Computational and Experimental Studies of the Effect of Solvent on the Morphology of Copper (II) Sulfate Pentahydrate</b>, A. L. Braybrook*, B. R. Heywood and R. A. Jackson, <i>Keele University, UK</i></p>	<p><b>Parallel Computational and Experimental Studies of the Morphological Modification of Calcium Carbonate</b>, A. L. Braybrook*, B. R. Heywood, R. A. Jackson and K. Pitt, <i>Keele University, UK</i></p>
<p><b>Wave Method At Crystal Growth Technology</b>, A. A. Abgarian, <i>Shubnikov Institute of Crystallography, Russia</i></p>	<p><b>Theory for Growth of Small Oxide Particles</b>, R. J. Braun*, <i>University of Delaware</i>, and P. A. Morris, <i>DuPont Central R&amp;D</i></p>

## MBE – Interface Formation Issues

<p><b>A Model for Predicting the AlAs<sub>x</sub>Sb<sub>1-x</sub> Alloy Composition During Molecular Beam Epitaxy Obtained by Response Surface Methodology</b>, P. Gopaladasu*(a), J. Cecchi(a), K.J. Malloy(a), and R. Kaspi(b), <i>(a) Univ. of New Mexico, (b) Air Force Research Laboratory, AFRL/DELS, Kirtland AFB</i></p>	<p><b>Multiple Quantum Wells and Laser Structures Containing InAs Quantum Dots Grown by Molecular Beam Epitaxy</b>, Chin-An Chang*, Cheng-Zu Wu, Pai-Yong Wang, Yi-Tsuo Wu, Ferng-Jye Lay, Chiu-Yueh Liang, Fei-Chang Hwang, Hsin-Chien Kuo, Li-Wei Sung (a), and Hao-Hsiung Lin (a), <i>Industrial Technology Research Institute, (a) National Taiwan University, Taiwan, Republic of China</i></p>
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## NLO, Photorefractive, and Laser Crystals

<p><b>Phase Formation and Crystallization of RETa<sub>7</sub>O<sub>19</sub> in Borate and Molybdate Based Systems</b>, N. I. Leonyuk*, L. I. Leonyuk, <i>Moscow State University, Russia</i>; and E. Cavalli, <i>Universita di Parma - Viale delle Scienze, Italy</i></p>	<p><b>Crystal Growth and Phase Transitions in (Nd,Gd)Al<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> Solid Solutions</b>, N. I. Leonyuk*, L. I. Leonyuk, E. V. Koporulina, <i>Moscow State University, Russia</i>; G. Bocelli, and L. Righi, <i>Viale delle Scienze, Italy</i></p>
<p><b>Effect of Metal Ion Impurities on the Habit of Ammonium Dihydrogen Phosphate (NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>) Single Crystals</b>, K. Srinivasan*(a), G. Uma(a), and P. Ramasamy(b), <i>(a) Alagappa University, (b) Anna University, India</i></p>	<p><b>Effect of Trivalent Cationic Impurities on the Habit of Potassium Hydrogen Phthalate (KC<sub>8</sub>H<sub>5</sub>O<sub>4</sub>) Single Crystals</b>, K. Srinivasan*(a), A. Elakkina Kumaran(a), T.P. Srinivasan(a), and P. Ramasamy(b); <i>(a) Alagappa University, (b) Anna University, India</i></p>
<p><b>Solubility Coefficient and Metastability Limit for the Growth of NMBA Single Crystals from Different Organic Solvents</b>, K. Srinivasan*(a), R. Birava Ganesh(b), R. Gandhimathi(a), K. Sankaranarayanan(a), S. Thangavelu(c) and P. Ramasamy(d); <i>(a) Alagappa University, (b) Madura College, (c) Central Electro-Chemical Research Institute, (d) Anna University, India</i></p>	<p><b>X-Ray Structural Studies on the Novel Nonlinear Optical Crystal 4-Nitro-4'-Methyl Benzylidene Aniline (NMBA)</b>, K. Srinivasan*(a), K. Sankaranarayanan(a), S. Thangavelu(b), K. Santhanaraghavan(d), G. Bocelli(c) and P. Ramasamy(d); <i>(a) Alagappa University, (b) Central Electro-Chemical Research Institute, India, (c) Viate Delle Scienze, Italy, (d) Anna University, India</i></p>
<p><b>Growth of 4-Nitro-4'-Methyl Benzylidene Aniline (NMBA) Single Crystals from Toluene and Their Characterization</b>, K. Srinivasan*(a), R. Birava Ganesh(b), R. Gandhimathi(a), K. Sankaranarayanan(a), S. Thangavelu(c) and P. Ramasamy (d); <i>(a) Alagappa University, (b) Madura College, (c) Central Electro-Chemical Research Institute, (d) Anna University, India</i></p>	<p><b>Blue SHG Characteristics and Homogeneity of the TSSG Grown Potassium Lithium Niobate (KLN) Crystal With High Li<sub>2</sub>O Content</b>, Tow-Chong Chong*, Xuewu Xu, Guangyu Zhang, <i>Data Storage Institute, Singapore</i>; Hirohiko Kumagai, and Masahiro Hirano, <i>Asahi Glass Co. Ltd., Japan</i></p>
<p><b>Increasing Optical Homogeneity of KDP Crystals</b> V. I. Salo*, I. M. Pritula, M. I. Kolybayeva, and A. V. Semenov, <i>ST Concern "Institute for Single Crystals", Ukraine</i></p>	<p><b>Cracking Mechanism of the Potassium Lithium Niobate Crystal Related To Its Internal Structure</b>, Guangyu Zhang*, Tow-Chong Chong, Xuewu Xu, <i>Data Storage Institute, Singapore</i>; Hirohiko Kumagai and Masahiro Hirano, <i>Asahi Glass Co. Ltd., Japan</i></p>
<p><b>Crystal Growth and Properties of the New Infrared Nonlinear Optical Crystal CsGeCl<sub>3</sub></b>, Changshui Fang*, Qingtian Gu, Wei Shi, Qiwei Pan, and Xiangwen Wu, <i>Shandong University, P. R. China</i></p>	<p><b>Bridgman Growth of Ca<sub>4</sub>ReO(BO<sub>3</sub>)<sub>3</sub>(Re: Y and Gd) Crystals</b>, Shiji Fan*, Jun Luo, Zhenwu Zhong, Guoxing Qian, Renying Sun, and Yafang Lin, <i>Shanghai Institute of Ceramics, P. R. China</i></p>

### ***NLO, Photorefractive, and Laser Crystals (cont.)***

<b>Growth and Characterization of Barium Calcium Titanate Single Crystals</b> , Varatharajan Rengarajan* (a), S. Madeswaran (b) and R. Jayavel (b); (a) <i>University of Florida</i> ; (b) <i>Anna University, India</i>	<b>Growth of Core-Free High-Quality Bi<sub>12</sub>SiO<sub>20</sub> and Bi<sub>12</sub>GeO<sub>20</sub> Crystals</b> , S. Kumaragurubaran*, S. Moorthy Babu, C. Subramanian and P. Ramasamy, <i>Anna University, India</i>
<b>Growth of RbTiOPO<sub>4</sub> Single Crystals by Self Nucleation Technique and its Characterization</b> , C.V. Kannan*, S. Ganesamoorthy, V. Kannan, C. Subramanian and P. Ramasamy, <i>Anna University, India</i>	<b>Growth and Characterisation of Tris Thiourea Cadmium Sulphate (TTCS): A Semi- Organic Non-linear Optical Crystal</b> , R. Rajasekaran*, P.M. Ushasree, R. Jayavel and P. Ramasamy, <i>Anna University, India</i>
<b>CZ Growth and Characterization of Pure and Chromium Doped Bismuth Tellurium Oxide Crystals</b> , S. Kumaragurubaran*, C. Subramanian and P. Ramasamy, <i>Anna University, India</i>	<b>Increasing Optical Homogeneity of KDP Crystals</b> V. I. Salo*, I. M. Pritula, M. I. Kolybayeva, and A. V. Semenov, <i>ST Concern "Institute for Single Crystals", Ukraine</i>

### ***Novel Materials***

<b>Growth of Single Crystals (Ca,Sr)<sub>10</sub>Cu<sub>17</sub>O<sub>29</sub> by "Melted Band" Method from Bi-Containing Fluxes and Formation of Subsidiary Phases</b> , V. Maltsev*, L. Leonyuk, <i>Moscow State University, Russia</i> ; G.J. Babonas, A. Reza, and L. Dapkus, <i>Semiconductor Physics Institute, Lithuania</i>	<b>Synthesis Technique for Crystal Growth Starting Materials</b> , David Burlage*, <i>Cleveland Crystals, Inc.</i>
<b>Solidification Behavior and Mechanical Properties of Ni-Si Eutectic Alloys</b> , S. Milenkovic* and R. Caram, <i>State University of Campinas, Brazil</i>	<b>New Crystals in the Systems RE<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-M<sub>2</sub>Mo<sub>3</sub>O<sub>10</sub>-MF (RE=La, Nd, Gd, Dy, Ho; M=K, Li)</b> , E. P. Shvanskii*, N. I. Leonyuk; <i>Moscow State University, Russia</i> ; G. Bocelli, and L. Righi, <i>Viale delle Scienze, Italy</i>
<b>Growth Morphology and Impurity Distribution by Zones in Ruby, Alexandrite and Emerald Under Homoepitaxy from Flux</b> , S. N. Barilo*, S. V. Shiryaev, V. V. Fedotova, G. L. Bychkov, L. A. Kurnevich, <i>Institute of Solid State &amp; Semiconductor Physics, Belarus</i> ; N. I. Leonyuk, <i>Moscow State University, Russia</i> ; and T. A. Poluyanovich, <i>Institute of Powder Metallurgy, Belarus</i>	<b>Preparation and Properties of Manganite Single Crystals Doped by Ca and Ba</b> , D. Shulyatev*, S. Karabashev, A. Arsenov, Ya. Mukovskii, <i>Moscow State Steel and Alloys Institute</i> ; and S. Zverkov, <i>Institute of Solid State Physics, Russia</i>

### ***Organometallic Chemical Vapor Deposition***

<b>The Effect of Diffusion on Formation of Self-Assembled CdSe Quantum Dots</b> , Yi Yang*, D. Z. Shen, J. Y. Zhang, X. W. Fan, Z. H. Zhen, X. W. Zhao, and D. X. Zhao, <i>Chinese Academy of Science, P. R. China</i>	
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### ***Photovoltaics***

<b>Crystal Growth and Photoluminescence of Cu-In-Se Crystals</b> K. Yoshino*, M. Nishimoto, M. Yoneta, H. Yokoyama, K. Maeda and T. Ikari, <i>Miyazaki University, Japan</i>	<b>Selectively-Grown InGaP/GaAs on Silicon Heterostructures for Application to Photovoltaic-Photoelectrolysis Cells</b> , Michael G. Mauk* and Anthony Tata, <i>AstroPower, Inc.</i>
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### ***Nitrides***

<b>On the Electrical Characteristics of Pd/n-GaN Schottky Barriers</b> , M. Senthil Kumar*, P. Ramasamy and J. Kumar, <i>Anna University, India</i>	<b>Thermal Expansion of LiGaO<sub>2</sub> and Resulting Epitaxial Misfits with GaN</b> , C.J. Rawn, <i>Oak Ridge National Laboratory</i> ; and J. Chaudhuri, <i>Wichita State University</i>
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## Oxides: Substrates and Films

<p><b>High Quality Hydrothermal Growth and Surface Preparation of Zinc Oxide Crystals for Use As III-Nitride Substrates</b>, M. Suscavage(a), D. Bliss(a), G. Bryant(a), M. Callahan(a), P. Yip(a), S.-Q. Wang(a), D. Schwall(a), L. Bouthillette(a), J. Bailey(b), M. Harris(b), D. C. Look(c), D. C. Reynolds(c), R. L. Jones(d), C. W. Litton(d), Hadis Morkoc(e), and Michael Reshchikov(e); (a) <i>Air Force Research Laboratory, Sensors Directorate</i>, (b) <i>Solid State Scientific Corporation</i>, (c) <i>Wright State University</i>, (d) <i>Air Force Research Laboratory, Materials and Manufacturing Directorate</i>, (e) <i>Virginia Commonwealth University</i></p>	<p><b>Surface Morphology and Physical Properties of Bi<sub>3.25</sub>La<sub>0.75</sub>Ti<sub>3</sub>O<sub>12</sub> Thin Films by Chemical Solution Decomposition</b>, Shuxia Shang*, Yun Hou, Shaowei Wang, Xiaohong Xu, Yin Zhang, Hong Wang, and Min Wang, <i>Shandong University, P. R. China</i></p>
<p><b>Control of Morphology and Orientation of ZnO Thin Films Grown on SiO<sub>2</sub>/Si Substrates</b>, S. Muthukumar*, N. W. Emanetoglu, C. R. Gorla, S. Liang, and Y. Lu, <i>Rutgers University</i></p>	<p><b>Defect Structure of C-Axis Oriented YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> Film Grown by LPE on (001) NdGaO<sub>3</sub> Substrate</b>, S. N. Barilo, V. V. Fedotova, A. I. Ignatenko, L. A. Kurochkin, N. S. Orlova, V. M. Finskaya, G. L. Bychkov, and V. M. Pan, <i>Institute of Solid State &amp; Semiconductor Physics, Belarus</i>; and H. W. Zandbergen, <i>Delft University of Technology, Netherlands</i></p>
<p><b>Structural Approach Towards Alternative Substrates for Epitaxial Growth of AlN-GaN Thin Films</b>, E. A. Volkova and N.I. Leonyuk, <i>Moscow State University, Russia</i></p>	<p><b>Hydrothermal Synthesis of Piezoquartz Y-Bars Doped With Aluminium</b>, I. B. Evseeva*, V. E. Khadzhy, P. P. Chvanski, <i>Russian Research Institute for Synthesis of Minerals</i>; and N. I. Leonyuk, <i>Moscow State University, Russia</i></p>
<p><b>Morphology of Quartz-Like Crystals: Ga- and Al-Orthophosphates</b>, A. I. Motchany*, P. P. Chvanski, <i>Russian Research Institute for Synthesis of Minerals</i>; and N. I. Leonyuk, <i>Moscow State University, Russia</i></p>	<p><b>Dielectric Properties of a New Insulating Gate Material-Bi<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> Films Grown by MOCVD</b>, Hong Wang*, S. X. Shang, and M. Wang, <i>Shandong University, P. R. China</i></p>
<p><b>Hydrothermal Growth of In<sup>3+</sup> Doped CaCO<sub>3</sub> Crystals on Pinacoidal Seeds</b>, I. V. Nefyodova*, <i>Russian Research Inst. for Synthesis of Minerals</i>; and N. I. Leonyuk, <i>Moscow State University, Russia</i></p>	<p><b>Study of Defects and Interfaces in Epitaxial ZnO Films on (11-20) Al<sub>2</sub>O<sub>3</sub> Grown by Electron Cyclotron Resonance - Assisted Molecular Beam Epitaxy</b>, S. -H. Lim, D. Shindo, H. -B. Kang, and K. Nakamura, <i>Tohoku University, Japan</i></p>
<p><b>Structural Characterization of Epitaxial ZnO Films Grown on (0001) Al<sub>2</sub>O<sub>3</sub> by Electron Cyclotron Resonance-Assisted Molecular Beam Epitaxy</b>, S. -H. Lim, D. Shindo, H. -B. Kang, and K. Nakamura, <i>Tohoku University, Japan</i></p>	<p><b>Epitaxial Growth of SrBi<sub>2</sub>Ta<sub>2</sub>O<sub>9</sub> Thin Films by Chemical Solution Deposition Method</b>, J.H. Kim, <i>Chonnam National University</i>; F.F. Lange, <i>University of California at Santa Barbara</i>; and C.I. Cheon*, <i>Hoseo University, Korea</i></p>

## Microgravity

<p><b>Convection Induced by Traveling Magnetic Fields in Semiconductor Melts</b>, K. Mazuruk, <i>NASA, Marshall Space Flight Center</i></p>	
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## Late News

<p><b>Growth Of Rare Earth Manganite And Cobaltite Crystals From Flux Under Electrochemical Conditions</b>, S.N. Barilo*, S.V. Shiryaev, G.L. Bychkov, D.D. Khalyavin, A.G. Soldatov, and L.A. Kurochkin, <i>Institute of Solid State &amp; Semiconductor Physics, Belarus</i></p>	
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**Wednesday AM, August 16, 2000**

	<i>Session 5A: Industrial Crystallization - I</i>	<i>Session 5B: OMVPE / PV &amp; TPV - I</i>	<i>Session 5C: Phase Field Modeling - I</i>
8:00	<b>Invited</b> <b>Growth of the World's Largest Sapphire Crystals</b> C. P. Khattak* and F. Schmid, <i>Crystal Systems, Inc.</i>	<b>Invited</b> <b>Challenges and Opportunities in Large-Area MOVPE of Multijunction Solar Cells</b> N. H. Karam*, J. H. Ermer, M. Haddad, R. R. King, B. T. Cavicchi, K. S. Boutros, R. Sudharsanan, and D. E. Joslin, <i>Hughes Spectrolab, Inc.</i>	<b>Invited</b> <b>Convective Effects on Dendritic Growth</b> Gustav Amberg, <i>KTH, Sweden</i>
8:20			
8:40	<b>Invited</b> <b>Advances in Crystal Optics for DUV Microlithography</b> M. Mendicino* and J. Fillot, <i>BICRON, div Saint-Gobain Industrial Ceramics</i>	<b>MOVPE-Fabricated GaInP/Ge Junctions for GaInP/GaAs/Ge Three-Junction Solar Cells</b> D. J. Friedman* and J. M. Olson, <i>National Renewable Energy Laboratory</i>	<b>Phase Field Models of Multicomponent Alloy Solidification</b> Robert F. Sekerka* and Zhiqiang Bi, <i>Carnegie Mellon University</i>
9:00		<b>Epitaxial Growth of BGaAs and BGaInAs by OMVPE</b> J. F. Geisz*, D. J. Friedman, S. R. Kurtz, J. M. Olson, R.C. Reedy and A. G. Norman, <i>National Renewable Energy Laboratory</i>	<b>Numerical Computation of Cellular Solidification in a Binary Alloy Using the Phase Field Model</b> Zhiqiang Bi* and Robert F. Sekerka, <i>Carnegie Mellon University</i>
9:20	<b>Invited</b> <b>Industrial Growth of Ce-Doped LSO Crystals for Medical Imaging</b> B. Chai*, Y. Y. Ji, R. Becker and M. Stowell, <i>Crystal Photonics, Inc.</i>	<b>MOCVD Growth of InGaAsN for High Efficiency Solar Cells</b> A. A. Allerman, S. R. Kurtz, E. D. Jones, R. M. Sieg, D. J. Aiken, and N. A. Modine, <i>Sandia National Laboratories</i>	<b>Break</b>
9:40		<b>FTIR Studies of Impurities in GaInAsN</b> Sarah Kurtz*, J. Webb, L. Gedvilas, D. Friedman, J. M. Olson, R. King(a), and N. Karam(a), <i>National Renewable Energy Laboratory, (a) Hughes Spectrolab</i>	
10:00	<b>Break</b>	<b>Break</b>	

<b>Wednesday AM, August 16, 2000</b>			
	<b>Session 5A: Industrial Crystallization - II</b>	<b>Session 5B: OMVPE / PV &amp; TPV -II</b>	<b>Session 5C: Phase Field Modeling - II</b>
10:20	<b>Invited <u>WITHDRAWN</u></b> <b>Manufacture of KTP, KTA and RTA Crystals for Non-Linear Optical Applications</b> G. M. Loiacono, D.N. Loiacono and P. Czechowicz, <i>Crystal Associates Inc.</i>	<b>Invited</b> <b>Photonic Heat Engines: Crystal Growth Considerations for Thermophotovoltaics</b> G. Charache*, <i>Lockheed Martin, Inc.</i>	<b>Invited</b> <b>Phase-Field Model of Grain Dynamics</b> Alexander E. Lobkovsky* and James A. Warren, <i>NIST</i>
10:40			
11:00	<b>Invited</b> <b>Commercialization of the Growth of Cr-Doped LiSrAlF<sub>6</sub> Crystals for Diode Pumped Solid State Laser Applications</b> G. J. Quarles, <i>VLOC Inc.</i>	<b>MOVPE Grown p-GaSb/n-GaAs Diodes for TPV and Solar Cells</b> N. J. Mason*, <i>University of Oxford</i> ; L. Zheng and S. K. Haywood, <i>University of Hull, UK</i>	<b>Phase Boundaries Using Multiple Order Parameters</b> G. B. Tanoglu, R. J. Braun*, <i>University of Delaware</i> ; J. W. Cahn, G. B. McFadden, <i>NIST</i> ; and A. A. Wheeler, <i>University of Southampton, UK</i>
11:20		<b>Evolution of Surface Structure During Epitaxial Growth of Metastable GaInAsSb</b> C. A. Wang*, D. R. Calawa, and C. J. Vineis, <i>MIT Lincoln Laboratory</i>	<b>Phase Field Under Stress</b> Klaus Kassner*, Chaouqi Misbah, Judith Mueller, Jens Kappey, and Peter Kohlert, <i>Otto-von-Guericke-Universitaet Magdeburg, Germany</i>
11:40	<b>Invited</b> <b>Manufacture of Large Aperture KDP for the NIF Program</b> J. Luken, L. Latanich, T. Frenk, G. Kennedy, M. LaFluer, C. Durham, D. Chase, and G. Catella, <i>Cleveland Crystals</i>	<b>The Growth and Characterization of InGaAsSb and AlGaAsSb on GaSb by Metal Organic Chemical Vapor Deposition</b> R. M. Biefeld, S. R. Kurtz, J. G. Cederberg, <i>Sandia National Laboratories</i> ; and R. J. Wehrer, <i>Becthel Bettis Inc.</i>	
12:00		<b>Lunch</b>	<b>Lunch</b>
12:20	<b>Lunch</b>		

**There are no technical sessions on Wednesday afternoon.**

**Thursday AM, August 17, 2000**

	<b>Session 6A: Silicon Photovoltaics - I</b>	<b>Session 6B: OMVPE - III</b>	<b>Session 6C: NLO, Photorefractive and Laser Crystals - I</b>
8:00	<b>Multiple Batch Recharging for Industrial CZ Silicon Growth</b> B. Fickett* and G. Mihalik, <i>Siemens Solar Industries</i>	<b>Invited</b> <b>Where is Epi Going?</b> R.L. Moon, <i>Agilent Laboratories</i>	<b>Invited</b> <b>Rapid Growth of Large KDP and DKDP Crystals</b> N. Zaitseva, <i>Lawrence Livermore National Laboratory</i>
8:20	<b>Characteristics of CZ-Grown Recharge Ingots</b> G. Mihalik* and B. Fickett, <i>Siemens Solar Industries</i>		
8:40	<b>Enhanced Bulk Polysilicon Production Using Silicon Tubes</b> I. Jafri (a), M. Chandra (a)*, H. Zhang (b), V. Prasad (b), C. Reddy (c), C. Amato-Wierda (c), M. Landry (d) and T. Ciszek (d); (a) <i>GT Equipment Technologies, Inc.</i> , (b) <i>State University of New York at Stony Brook</i> , (c) <i>University of New Hampshire</i> , (d) <i>National Renewable Energy Laboratory</i>	<b>Invited</b> <b>Enabling Terabit Systems through OMVPE</b> K. T. Campbell*, C. H. Joyner(a), C. W. Ebert, A. Robertson, J. L. Zilko, and D. P. Wilt, <i>Lucent Technologies, Optoelectronics Center</i> , (a) <i>Lucent Technologies, Bell Laboratories</i>	<b>Optical Absorption and Electron Paramagnetic Resonance of Fe Ions in KDP Crystals</b> N. Y. Garces*, K. T. Stevens, and L. E. Halliburton, <i>West Virginia University</i> ; M. Yan, N. P. Zaitseva, and J. J. DeYoreo, <i>Lawrence Livermore National Laboratory</i>
9:00	<b>Modeling and Experiment for 50 cm Diameter Silicon Tube Growth</b> A. Roy *(a), B. Mackintosh (b), H. Zhang (a), V. Prasad (a), J. P. Kalejs (b), and M. Ouellette(b), (a) <i>State University of New York at Stony Brook</i> , (b) <i>ASE Americas, Inc.</i>		<b>Gray Tracks and Electrochromic Damage in KTP Crystals</b> K. T. Stevens*, L. E. Halliburton <i>West Virginia University</i> ; and M. P. Scripsick, <i>Nova Phase</i>
9:20	<b>Potential and Limitations of High-Rate, Low-Temperature Epitaxy of Silicon-Films</b> R. B. Bergmann* and L. Oberbeck, <i>Universität Stuttgart, Germany</i>		<b>Invited</b> <b>MOCVD of Heterojunction Bipolar Transistors</b> N. Pan, R. E. Welsler, C. R. Lutz, P. DeLuca, Byung Han, J. Elliot, and M. Chaplin, <i>Kopin Corporation</i>
9:40	<b>Directly Deposited Polycrystalline-Silicon Layers for Solar Cells</b> T. H. Wang*, T. F. Ciszek, M. Page, and R. Bauer, <i>National Renewable Energy Laboratory</i>		<b>Improved Material Properties in Near-Stoichiometric LiTaO<sub>3</sub> for Nonlinear Optical Applications</b> Y. Furukawa, K. Kitamura, and S. Takekawa, <i>National Institute for Research in Inorganic Materials, Japan</i>
10:00	<b>Break</b>	<b>Break</b>	<b>Break</b>

**Thursday AM, August 17, 2000**

	<b>Session 6A: Silicon Photovoltaics - II</b>	<b>Session 6B: OMVPE - IV</b>	<b>Session 6C: NLO, Photorefractive and Laser Crystals - II</b>
10:20	<b>Crystalline Silicon Thin Film Solar Cells (CSITFSC) on SSP and on Ceramic Substrates</b> Achim Eyer, Fridolin Haas, Thomas Kieliba, Daniela Oßwald, Stefan Reber, and Walter Zimmermann, <i>Fraunhofer Institute for Solar Energy Systems, Germany</i>	<b>Structure of Compound Semiconductor Surfaces in the MOVPE Environment</b> R. F. Hicks*, Q. Fu, M. Begarney, C. Li, and D. Law, <i>University of California, Los Angeles</i>	<b>Invited Growth and Characterization of Fluoride Single Crystals for Optical Applications</b> K. Shimamura, N. Sarukura(a) and T. Fukuda, <i>Tohoku University, (a) Institute for Molecular Science, Japan</i>
10:40	<b>Electro-Epitaxial Lateral Overgrowth of Silicon from Liquid-Metal Solutions</b> M. G. Mauk* and J. P. Curran, <i>AstroPower, Inc</i>	<b>A Scanning Tunneling Microscopy Study of As/Ge(mnn) and P/Ge(mnn) Surfaces</b> W.E. McMahon* and J.M. Olson, <i>National Renewable Energy Laboratory</i>	
11:00	<b>Sulphur-Terminated Silicon Surfaces for the Epitaxial Growth of Chalcopyrite Semiconductors</b> H. Metzner* and Th. Hahn, <i>Friedrich-Schiller-Universität Jena Institut für Festkörperphysik, Germany</i>	<b>MOVPE Growth of Highly-Strained Piezoelectric InGaAs/GaAs Quantum Wells on [111]A Oriented Substrates</b> J. Kim*, S. Cho, A. Sanz-Hervás, A. Majerfeld, <i>University of Colorado</i> ; and B. W. Kim, <i>Electronics and Telecommunications Research Institute, Korea</i>	<b>Material and Laser Characterization of Intermediate Compositions of Ce:LiSr<sub>x</sub>Ca<sub>1-x</sub>AlF<sub>6</sub></b> Vida K. Castillo* and Gregory J. Quarles, <i>VLOC</i> ; and Robert S. F. Chang, <i>University of South Florida</i>

	<b>Session 6A: Bulk Growth of Semiconductors-I</b>		
11:20	<b>Shaped Crystal Growth of 50 cm Diameter Silicon Thin-Walled Cylinders by Edge-Defined Film-Fed Growth (EFG)</b> D. Garcia, M. Oullette, B. Mackintosh, and J. P. Kalejs*, <i>ASE Americas</i>	<b>In Situ Reflectance Monitoring of GaSb Oxide Desorption</b> C. J. Vineis*, C. A. Wang, and K. F. Jensen, <i>Lincoln Laboratory, MIT</i>	<b>Progress in the Growth of Yb:S-FAP Laser Crystals</b> Kathleen Schaffers*, John Tassano, Phillip Waide, Stephen Payne, <i>Lawrence Livermore National Laboratory</i> ; and Robert Morris, <i>Consultant</i>
11:40	<b>Dependence of Temperature Gradient on Growth Rate in CZ Silicon</b> N. Inoue(a), K. Tanahashi(a) and A. Mori(b); (a) <i>RIAST, Osaka Prefecture University</i> ; (b) <i>Tokushima University, Japan</i>	<b>MOVPE OF GaSb, (AlGa)Sb and (AlGa)(AsSb) in a Multi-Wafer Planetary Reactor</b> C. Agert*, P. Lanyi, and A. W. Bett, <i>Fraunhofer Institute for Solar Energy Systems, Germany</i>	<b>Melt Composition and Growth of Terbium Aluminum Garnet Micro Crystals</b> S. Ganschow*, D. Klimm, B. M. Epelbaum, A. Yoshikawa, and T. Fukuda, <i>Institute of Crystal Growth, Germany</i>
12:00	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>

<b>Thursday PM, August 17, 2000</b>			
	<b>Session 7A: Bulk Growth of Semiconductors - II</b>	<b>Session 7B: Modeling - I</b>	<b>Session 7C: NLO, Photorefractive and Laser Crystals - III</b>
2:00	<b>Invited</b> <b>Effects of Radial Thermal Asymmetry on Crystal Growth and Segregation in Czochralski and Bridgman Geometries</b> A. F. Witt, <i>Massachusetts Institute of Technology</i>	<b>Invited</b> <b>Modeling, Design and Virtual Prototyping of Crystal Growth Processes</b> V. Prasad, <i>State University of New York at Stony Brook</i>	<b>Invited</b> <b>NLO Materials for Deep UV Generation</b> Douglas A. Keszler, <i>Oregon State University</i>
2:40	<b>VCZ Development at the IKZ in Berlin - Summary and Outlook</b> M. Neubert and P. Rudolph, <i>Institut für Kristallzüchtung (IKZ), Germany</i>	<b>Modeling of Czochralski Si Crystal Growth</b> I. Yu. Evstratov, V. V. Kalaev, V. N. Nabokov, <i>Soft-Impact Ltd.</i> ; A. I. Zhmakin, <i>A. F. Ioffe Physical Technical Institute, Russia</i> ; Yu. N. Makarov*, <i>University of Erlangen-Nuernberg, Germany</i> ; A. G. Abramov, N. G. Ivanov, E. A. Rudinsky, E. M. Smirnov, <i>State Technical University, Russia</i> ; S. A. Lowry, <i>CFD Research Corporation</i> ; E. Dornberger, J. Virbulis, E. Tomzig, and W. V. Ammon, <i>Wacker Siltronic, Germany</i>	<b>Hydrothermal Growth of Lanthanide Orthoborate Crystals for Deep UV Laser Applications</b> Joseph W. Kolis*, Henry Giesber, John M. Ballato, and William T. Pennington, <i>Clemson University</i>
3:00	<b>200 mm GaAs Crystal Growth by the Temperature Gradient Controlled LEC Method</b> A. Seidl*, S. Eichler, T. Flade, M. Jurisch, A. Koehler, U. Kretzer, and B. Weinert, <i>Freiberger Compound Materials GmbH, Am Junger Loewe Schacht, Germany</i>	<b>Effect of Crown Shape on Growth Process in a Large Diameter Silicon Growth</b> A. K. Saha*, H. Zhang, and V. Prasad, <i>State University of New York at Stony Brook</i>	<b>Influence of K/Li and Li/Nb Ratios in Melts on the TSSG Growth and SHG Characteristics of Potassium Lithium Niobate Crystals</b> Xuewu Xu*, Tow-Chong Chong, Guangyu Zhang, <i>Data Storage Institute, Singapore</i> ; Hirohiko Kumagai and Masahiro Hirano, <i>Asahi Glass Co.Ltd., Japan</i>
3:20	<b>Break</b>	<b>Break</b>	<b>Break</b>

**Thursday PM, August 17, 2000**

	<b>Session 7A: Bulk Growth of Semiconductors - III</b>	<b>Session 7B: Modeling - II</b>	<b>Session 7C: NLO, Photorefractive and Laser Crystals - IV</b>
3:40	<b>Invited LEC Growth of Ternary III-V Single Crystals</b> W. A. Bonner, <i>Crystallod Inc.</i>	<b>Effects of Microgravity, Magnetic Fields, and Crucible Rotation on Convection in Bridgman Crystal Growth</b> A. Yeckel* and J. J. Derby, <i>Army HPC Research Center and University of Minnesota</i>	<b>Bulk Growth of High Quality Nonlinear Optical Crystals: L-Arginine Tetrafluoroborate (L-AFB)</b> C. Owens*, K. Bhat, W.S. Wang, A. Tan, M. D. Aggarwal, <i>Alabama A&amp;M University</i> ; Benjamin G. Penn and Donald O. Frazier, <i>NASA/Marshall Space Flight Center</i>
4:00		<b>Computing Radiative Heat Transport During the Growth of Sapphire Domes</b> A. Meir, S. Brandon*, <i>Technion</i> ; S. Biderman, D. Gazit and A. Horowitz, <i>NRCN, Israel</i>	<b>Growth of Vanillin Crystals for SHG Applications in Near-IR Wavelength Region</b> O. P. Singh*, Y. P. Singh, Namwar Singh and N. B. Singh (a), <i>K. N. Post Graduate College, India</i> , (a) <i>STC-ESSS, Northrop Grumman Corporation</i>
4:20	<b>Segregation of Dopants Having Equilibrium Segregation Coefficient <math>k &gt; 1</math> in InSb Single Crystals</b> N. Pottier, C. Marin and A. G. Ostrogorsky, <i>University of Alabama, Huntsville</i>	<b>A Volume Radiation Heat Transfer Model for Czochralski Crystal Growth Processes</b> Edmundo M. Nunes, <i>Columbia University</i> ; Mohammad H.N. Naraghi*, <i>Manhattan College</i> ; Hui Zhang and Vishwanath Prasad, <i>State University of New York at Stony Brook</i>	<b>Crystal Growth and Hydration in Morpholinium 4-hydroxybenzoate (M4)</b> Gurmit Singh Bahra*(a), Lucy M. Dutta (b), Penny A. Chaloner(b), W. Healy(a), and P. B. Hitchcock, (a) <i>Defence Evaluation Research Agency</i> , (b) <i>University of Sussex, UK</i>
4:40	<b>LEC Growth of In-Doped GaAs with Bottom Solid Feeding</b> J. He and S. Kou*, <i>University of Wisconsin</i>	<b>Numerical Computation of Sapphire Crystal Growth Using Heat Exchanger Method</b> Chung-Wei Lu* and Jyh-Chen Chen, <i>National Central University, Taiwan</i>	<b>Growth and Characterization of L-Arginine Fluoride (LAF) Single Crystals</b> A. S. Haja Hameed(a), G. Ravi*(a), A. Nixon Azariah(a), R. Ilangovan(a) and P. Ramasamy(b), (a) <i>Alagappa University</i> (b) <i>Anna University, India</i>
5:00	<b>Improved Phosphorus Injection Synthesis for Bulk Indium Phosphide</b> W. M. Higgins*(a), G. W. Iseler(b), D. Bliss(b), G. Bryant(b), V. Tassev(b), I. Jafri(c), R. M. Ware(a), and D. J. Carlson(a), (a) <i>M/A-COM, Inc.</i> , (b) <i>U.S. Air Force Research Laboratory, Sensors Directorate, Hanscom AFB</i> , (c) <i>GT Equipment Technologies, Inc.</i>	<b>Simulation of Epitaxial Growth of GaN in a Rotating Planetary Reactor, A.</b> Worlikar and S. Motakef, <i>Cape Simulations, Inc.</i>	<b>Crystal Growth and Characterization Studies of the NLO Material : 4-Nitro-4'-Methoxy Benzylidene Aniline (NMOBA)</b> A. Nixon Azariah(a), G. Ravi*(a), A. S. Haja Hameed(a), S. Thangavelu(b), P. Ramasamy(c), (a) <i>Alagappa University</i> , (b) <i>Central Electrochemical Research Institute</i> , (c) <i>Anna University, India</i>
5:20			<b>Increasing Optical Homogeneity of KDP Crystals</b> V. I. Salukhin, M. I. Kolybayeva, and A. V. Semenov, <i>STC "Institute for Single Crystals", Ukraine</i>

7:00 **Reception and Conference Banquet**

**Friday AM, August 18, 2000**

	<b>Session 8A: Bulk Growth of Semiconductors - IV</b>	<b>Session 8B: Modeling - III</b>	<b>Session 8C: Wide Bandgap Materials: Nitrides - I</b>
8:00	<b>Melt Growth and Characterization of Quaternary Alloys</b> C. Marín, A.G. Ostrogorsky*, <i>University of Alabama in Huntsville</i> ; X. Ma, K. Chattopadhyay and A. Burger, <i>Fisk Univ.</i>	<b>Invited Strain Relaxation and Interfacial Stability in III-V Semiconductor Strained-Layer Heteroepitaxy: Modeling and Experiment</b> D. Maroudas*, L. A. Zepeda-Ruiz, R. I. Pelzel, B. Z. Nosh, and W. Henry Weinberg, <i>University of California, Santa Barbara</i>	<b>Invited Pendeo-Epitaxial Growth of GaN and Related Materials on 6H-SiC(0001) and Si(111) Substrates and Their Characterization</b> Robert F. Davis*, T. Gehrke, Kevin J. Linthicum, P. Rajagopal, E. A. Preble, C.A. Zorman(a), and M. Mehregany(a), <i>North Carolina State University</i> , (a) <i>Case Western Reserve University</i>
8:20	<b>The Effect of Post-Growth Cool-Down Rate on Defects in Cadmium Telluride Crystals Grown by "Contactless" PVT</b> W. Palosz* (a), K. Graszka (b), K. Durose (c), D. Halliday (c), N. M. Boyall (c), M. Dudley (d), B. Raghathamachar (d), and L. Cai (d), (a) <i>USRA/NASA-MSFC</i> , (b) <i>IF PAS, Poland</i> ; (c) <i>University of Durham, UK</i> ; (d) <i>SUNY at Stony Brook</i>		
8:40	<b>Comparison of Characterization Techniques Using LEC Grown Doped Germanium</b> L.A. Keefer and D.H. Matthiesen, <i>Case Western Reserve University</i>	<b>Numerical Simulation of Dislocation Density Evolution in High Pressure Czochralski InP Growth</b> S. Pendurti*, H. Zhang, and V. Prasad, <i>State University of New York at Stony Brook</i>	<b>Nanoheteroepitaxial Growth of GaN on Nanostructured Compliant &lt;111&gt; SOI by Organometallic Vapor Phase Epitaxy</b> D. Zubia*, S. H. Zaidi, S. R. J. Brueck and S. Hersee, <i>University of New Mexico</i>
9:00	<b>Solution Growth of Thick InAsSb and InGaSb Layers for Virtual Substrates</b> M. G. Mauk and A. Tata, <i>AstroPower, Inc.</i>	<b>Morphology Instability Due To Double Diffusive Flows During Directional Solidification in An Ampoule: Pit Formation</b> C. W. Lan* and J. Y. Tu*, <i>National Taiwan University</i>	<b>Chemical Vapor Reaction Process for III-Nitride Growth</b> D. F. Bliss*, J. Bailey, M. J. Callahan, M. T. Harris, M. J. Suscavage, V. Tassev, and M. N. Alexander, <i>U. S. Air Force Research Laboratory, Hanscom AFB</i>
9:20	<b>Growth of Metal-Free Phthalocyanine Doped Anthracene Crystal Using a Three Zone Furnace by Vacuum Sublimation Method</b> S. L. Selvaraj*, F. P. Xavier and A. Ramanand, <i>Loyola College, India</i>	<b>Modeling Segregation During the Growth of Non-Dilute Ternary Alloys</b> A. Pandya*, A. Yeckel, and J. J. Derby, <i>Army HPC Research Center, and University of Minnesota</i>	<b>MOVPE of Group-III-Nitrides Grown on 5x3 Inch Sapphire Substrates on Planetary Reactors</b> H. Protzmann, M. Luenenbuerger, M. Bremser(a), M. Heuken and H. Juergensen, <i>AIXTRON AG, Germany</i> , (a) <i>AIXTRON Inc.</i>
9:40	<b>Hydrogen Neutralization Effect in Bulk N-Type LEC InP Materials</b> N. Sun (a)*, X. Wu (b), X. Wu (c), Y. Zhao (a), L. Cao (a), Q. Zhao (d), W. Guo (b), J. Zhang (a), K. Bi (c), and T. Sun(a), (a) <i>Hebei Semiconductor Research Inst.</i> ; (b) <i>Tianjin University</i> ; (c) <i>Chinese Academy of Electronics</i> ; (d) <i>Electronic Material. Research Institute, P.R. China</i>	<b>Interface Control Mechanisms in Horizontal Zone-Melting With Slow Rotation</b> C. W. Lan*, C. H. Chian, and T. Y. Wang, <i>National Taiwan University</i>	<b>Break</b>
10:00	<b>Point Defect Behavior by the Stress Due To Impurity Doping in Growing Silicon</b> K. Tanahashi, M. Kikuchi and N. Inoue, <i>RIAST, Osaka University, Japan</i>	<b>Break</b>	<i>(See next page)</i>

<b>Friday AM, August 18, 2000</b>			
	<b>Session 8A: Epitaxial Growth</b>	<b>Session 8B: NLO, Photorefractive and Laser Crystals - V</b>	<b>Session 8C: Wide Bandgap Materials: Nitrides - II</b>
10:00		<b>Break</b>	<b>Invited</b> <b>Nitride Epitaxy on GaN Bulk Crystals</b> M. Leszczynski*, P. Prystawko, R. Czernecki, T. Suski, P. Perlin, G. Teisseyre, Cz. Skierbiszewski, W. Knap, I. Grzegory, and S. Porowski, <i>High Pressure Research Center UNIPRESS, Poland</i>
10:20	<b>LPE of HgCdTe Multilayer Avalanche Photodiode Structures</b> M. H. Kalisher* and M. Jack, <i>Raytheon InfraRed Center of Excellence</i>	<b>Growth and Spectral Characterization of Ce and Eu Doped SBN Crystals</b> M. Li*, T-C. Chong, X. Xu, <i>Data Storage Institute, Singapore</i> ; H. Kumagai, and M. Hirano, <i>Asahi Glass Co. Ltd., Japan</i>	
10:40	<b>Break</b>	<b>BaSrTiNbO<sub>3</sub>: Crystal Growth and Ferroelectric Properties</b> R. Varatharajan* (a), S. Madeswaran (b), and R. Jayavel (b), <i>(a) University of Florida, Gainesville, (b) Anna University, India</i>	<b>Ammonothermal Growth of GaN and AlN Crystals</b> M. Alexander, D. Bliss, G. Bryant, M. Callahan, V. Tassev, G. Iseler, J. Bailey, M. Harris, A. Purdy(a), and J. Kolis(b), <i>Air Force Research Laboratory, Sensors Directorate, (a) Naval Research Laboratory, (b) Clemson University</i>
11:00	<b>Phase Diagram Calculation for Epitaxial Growth of GaInAs on InP Considering the Surface, Interface and Strain Energies</b> K. Nakajima*, T. Ujihara, S. Miyashita, and G. Sazaki, <i>Tohoku University, Japan</i>	<b>Growth and Characterization of Flux Grown PbZr<sub>x</sub>Ti<sub>1-x</sub>O<sub>3</sub> Single Crystals</b> R. Ilangoan, S. I. Srikrishna Ramya and P. Ramasamy(a), <i>Alagappa University, (a) Anna University, India</i>	<b>Thermodynamic and Nucleation Kinetics of AlGaIn/GaN/InGaIn Heterostructures</b> E. Varadarajan*, R. Dhanasekaran and P. Ramasamy, <i>Anna University, India</i>
11:20	<b>Quasi-Thermodynamic Model of Si-Ge Epitaxial Growth</b> A. S. Segal, <i>Institute for Fine Mechanics and Optics</i> ; S. Yu. Karpov, <i>Soft-Impact Ltd., Russia</i> ; and Y. N. Makarov*, <i>University of Erlangen-Nurnberg, Germany</i>	<b>Growth and Characterisation of Potassium Tantalate Niobate Single Crystals by Step Cooling Technique</b> R. Ilangoan(a), C. Subramanian(b) and P. Ramasamy(b), <i>(a) Alagappa University, (b) Anna University, India</i>	<b>Effect of Diluted Ammonia Flow Rate on Undoped GaN Epitaxial Films Grown by Metal Organic Chemical Vapor Deposition</b> Fuh-Shyang Juang*, <i>National Huwei Institute of Technology</i> , Yan-Kuin Su, Shouu-Jinn Chang, and Dar-Gun Chwu, <i>National Cheng Kung University, Taiwan</i>
11:40	<b>LPE Process for Industrial Production of Power GaAs Rectifiers</b> Victor Voitovich, <i>Tartu, Estonia</i>	<b>Modification of Ferroelectric and Photorefractive Properties of SBN:Ce Crystals by La Ions Doping</b> L. I. Ivleva, N. M. Polozkov, P. A. Lykov, E. V. Zharikov, and T. R. Volk, <i>Russian Academy of Sciences</i>	<b>Growth of High Quality GaN Layers With AlN Buffer on Si(111) Substrates</b> P. Chen, R. Zhang, R. L. Jiang, Z. M. Zhao, D. J. Xi, B. Shen, Z. Z. Chen, Y. G. Zhou, S. Y. Xie, Y. D. Zheng*, and W. F. Lu, <i>Nanjing University, P. R. China</i>
12:00	<b>Conference Ends</b>		