

PREFACE

The 16th International Conference on Defects in Semiconductors, like previous conferences in this series, was a productive and exciting meeting of research workers who are advancing the fundamental science of defects in semiconductors. However, for the first time, ICDS was held as an independent conference and no longer as a satellite of the International Conference on the Physics of Semiconductors. The organizers of ICDS-16 were concerned that this conference might not be as successful as past defect conferences without the draw of the big semiconductor physics meeting. These concerns were proved to be unjustified. There were more than 400 abstracts submitted, 335 attendees registered, 259 papers presented, and 24 countries represented.

The participation of many delegates from the Eastern Block at a conference in the United States was especially satisfying. The number of Soviet delegates in attendance demonstrated how well international relations have progressed in recent years.

The energy and enthusiasm of the participants seemed boundless. Attendance was excellent at sessions that began as early as 8:30 AM. Scientific discussion dominated meal times. Poster sessions were still well attended when they had to be forcibly closed at 11 PM. Productive scientific discussion then continued at the Tally-Ho Tavern until the early morning hours. We are aware of some delegates who had been up until 3 AM and still found the 9 AM sessions too exciting to miss.

These proceedings document our understanding of the many topics of current interest in the field of defects in semiconductors. Important advances are discussed in roughly 20 invited papers. Over 200 contributed papers describe the breadth of the activity in the field. Among the work presented are resolutions of long standing puzzles, numerous new ideas on old and new problems, and presentations of work at the periphery of the field that may warrant our future attention. Many of the experiments and ideas presented are new and/or controversial and will lead to continued activity and expansion of the field.

We wish success to the future organizers of conferences in the ICDS series and hope that they will enjoy organizing the meeting and editing its proceedings as much as we have.

Michael Stavola

Gary G. DeLeo

Gordon Davies

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The outstanding success of the 16th International Conference on Defects in Semiconductors was due to the efforts of many people. The excellent scientific program was due to the thoughtful consideration of the International Advisory Committee and the Program Committee as well as to the authors and speakers who have presented their work. The following session chairs were responsible for ensuring that the meeting ran smoothly and for helping to referee these proceedings:

W.B. Fowler	G.D. Watkins	R.C. Newman	J.-M. Spaeth
B. Clerjaud	M.L.W. Thewalt	L.C. Kimerling	C.A.J. Ammerlaan
H.P. Gislason	K. Sumino	J.R. Leite	B. Monemar
S.J. Pearton	P.M. Mooney	J.M. Langer	T.A. Kennedy
M.H. Nazaré	C. Van de Walle	H. Kukimoto	G. Baraff
J. Weber	D. Mathiot	A.M. Stoneham	J. Farmer
E. Weber	S.G. Bishop	M. Mizuta	N.M. Johnson
E. Lightowers	J. Chadi		

Many members of the Lehigh University staff helped provide the excellent local services which we often take for granted. Jessica Dunlap, Bobbie Stahr, and Jefferson Huang saw to the housing needs of the participants. Michael Rosenberg directed the catering services which we all enjoyed. Gail Vollman organized the bus transportation which made it possible for us to utilize the spacious Lehigh campus. Craig Wood and Dotty Stoudt helped manage the conference finances and Linda Cope was our interface to the sponsoring agencies.

We are grateful for the efforts of our graduate students who acted as airport guides, excursion coach captains, projectionists, local drivers, etc. and who were responsible for much of the personal attention the participants received during the week of the conference. We do not know what we would have done without the help of the Physics Department secretaries, Louise McCormick, Barbara Szymanski, and especially Lois Groff who worked hard for several months before and during the meeting week to help type, process, and organize the various conference materials.

The financial contributions of the many industrial and government sponsors of ICDS-16 listed on the next page supported the expenses of the meeting and enabled the organizers to provide the highest quality speakers.

We express our sincere thanks to all those who have contributed to the success of ICDS-16.