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FOREWORD

The First Symposium on Thermal Expansion of Solids was organized in 1968 to provide a new forum on this emerging subject. The need was evidence by the enormous increase in activities in materials applications in space- and nuclear-oriented fields. Until then, the subject of thermal expansion had been a stepchild in several diversified conferences devoted to related subjects.

The response was excellent, and the first symposium got off to a good start with a balanced, high-quality 2-day program. Even though the future of the conference was predictable, since similar conferences were able to repeat for years without any formal structure, the sponsors of the first symposium ensured success by setting forth a basic plan that has been followed up to this day. A Governing Board was formed, at first on an invitational, and later on an elective, basis. It was also decided that, if possible, future conferences would be cosponsored by an industrial or government organization and a university. The board also became a clearing house, maintaining the balance of the material presented, selecting the most suitable among the potential sponsor offers; and ensuring a smooth transition from one conference to the next. The board now automatically includes in its membership the new General Chairman of each conference, thus ensuring a dynamic, growing leadership.

The following is a list of past conferences (see p. 168) with their respective sponsors and chairmen, who were instrumental in perpetuating this program.

The fourth and fifth symposia were held concurrently with the Thermal Conductivity Conference, since many of the workers in one field were also heavily involved with the other. And for a while, the meetings were also coordinated with the European Thermophysical Conference to take place in alternating years. The fourth through the eighth symposia were permanently cosponsored by the Thermophysical Research Center of CINDAS at Purdue University. As government support of research has dropped in later years, it became apparent that federation rather than partition is the answer to future success. In 1978 the Thermophysical Congress, an umbrella organization to promote economic and operational

Conference	Year	Host organization and site	Chairmen
1	1968	National Bureau of Standards Westinghouse Astronuclear Laboratory Gaithersburg, Md.	R. K. Kirby P. S. Gaal
2	1970	University of Illinois (MRL) Sandia Laboratories Santa Fe, N.M.	R. O. Simmons D. C. Wallace
3	1971	Corning Glass Works University of Toronto Corning, N.Y.	H. E. Hagy G. M. Graham
4	1973	Purdue University U.S. Air Force Materials Laborary Lake of the Ozarks, Mo.	R. E. Taylor B. L. Denman
5	1975	Oak Ridge National Laboratory University of Connecticut Storrs, Conn.	T. G. Godfrey P. G. Klemens
6	1977	Atomic Energy of Canada, Ltd. Pinawa, Manitoba, Canada	I. D. Peggs
7	1979	IIT Research Institute Tepiac/CINDAS Chicago, Ill.	D. C. Larsen
8	1981	National Bureau of Standards Washington, D.C.	T. A. Hahn
9	1986	Anter Laboratories, Inc. Pittsburgh, Pa.	P. S. Gaal

matters among several related conferences, was formed; as a result, the eighth symposium in 1981 was held under the auspices of the congress.

Just as the initial organization itself, the proceedings were also informal to permit the most up-to-date interchange of ideas. Formal proceedings were published starting with the second symposium, initially as an American Institute of Physics proceedings volume. Later, the proceedings were published as independent volumes by Plenum Press. Beginning with the ninth symposium, the proceedings will be published as special issues of the *International Journal of Thermophysics.*

The recession during the first half of this decade made the sponsorship of the conference a commodity difficult to come by. The signs clearly pointed toward the new economic reality that independent conferences without a defined structure and a firm tie to a permanent organization would have a difficult time surviving by themselves. Academia is hurting in the research funding area, and so is industry. It is not the sophisticated experimentalist who has been courted for decades to talk about state-of-the-art solutions to fascinating problems but, rather, the often overlooked and perhaps not so colorful engineer in basic industries with bread-and-butter-type problems who had to be sought out to speak up. This is not a value judgment on basic vs applied research, or on research vs production, but simply a recognition of certain economic driving forces. Problems that arise, not out of academic curiosity, but out of necessity in day-to-day operations of an industrial enterprise should be discussed on an equal footing with subjects involving pure science. This conference was predicated on the premise of striking this balance and broadening the involvement of people who are faced with tasks which may, on the surface, seem simple but can have a large economic impact. We had hoped to provide a forum where these two worlds would be able to meet, become aware of common interests, and develop an appreciation for each other's position in the technological arena. To this end, the program contained an equipment exhibit where, among others, eight domestic and foreign dilatometer and TMA manufacturers showed their products, perhaps the largest number for any technical exhibit of any size. Two panel sessions on subjects of general interest and a workshop on laboratory technique were also included in the conference to enhance further its value to its participants. Twenty-one technical papers were presented in the program.

I would like to take this opportunity to recognize the contributions made to this symposium by my long-time friend and colleague, Dr. R. Keith Kirby, who was instrumental in bringing together the first symposium and who served as the Chairman of the Governing Board from 1978 to 1986. His decades of work at the National Bureau of Standards, along with Dr. Tom Hahn, the present Chairman of the Governing Board, have benefited all who are involved with tasks in the field of thermal expansion. A am sure I speak for all of us who have had the privilege of being associated with him in wishing him a pleasant retirement after a long and fruitful career.

The sponsorship of a conference is a grueling task, whether it is done by a small company or a large organization. In the long run, however, the rewards far outweigh the efforts expended, and the benefits to the scientific community as a whole are great. It is not for the timid or weary. The interchange of ideas and the dialogue—both formal and informal—contribute immeasurably to the advancement of this field; intimate involvement and promotion of these conferences should be made a goal of those who perceive themselves as leaders in this segment of the scientific community.

Peter S. Gaal
General Chairman
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