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Murli H Manghnani

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Foreword

Under the auspices of the International Association for the Advancement of High Pressure Science and Technology (AIRAPT), the seventeenth International Conference on High Pressure Science and Technology (AIRAPT-17) was held at the Hilton Hawaiian Village and Hotel, Honolulu, Hawaii, 25-30 July 1999.

Remarkable advances have been made in the various fields of high pressure in the last two decades, as can be seen in the published proceedings of each AIRAPT conference. Not only have the experimental pressure and temperature ranges rapidly escalated, but so has the degree of sophistication of instrumentation and analytical tools, and sensitivity of various probes.

Perhaps the first conference on high pressure, entitled "First International Conference on the Physics of Solids at High Pressure", was held in 1964 at Tucson, Arizona. AIRAPT was organized at this conference and Professor Boris Vodar was elected as the first president of AIRAPT. He chaired the first AIRAPT conference at Le Creusot, France in 1966. Since then the AIRAPT conference has been held about every two years at various places around the world.

Two-hundred-and-ninety-six (296) delegates from 21 countries attended the Hawaii conference. Twenty-three (23) symposia were organized for oral and poster presentation. The symposia and their co-organizers/co-chairmen are listed below:

- 1. Physics and Chemistry of Water and Ice**
(H. E. Stanley, O. Mishima, S. Scandolo, H. D. Lüdemann, D. D. Klug, H. Hirai)
- 2. High P-T Research Using Synchrotron Radiation**
(R. J. Hemley, A. Polian, S. K. Saxena, M. Hanfland, T. Yamanaka, Y. Wang)
- 3. Research at Megabar Pressures Using Diamond Anvil Cell**
(H. K. Mao, R. Boehler, Y. K. Vohra, M. I. Eremets)
- 4. High Pressure Bioscience and Biotechnology**
(J. Jonas, G. Hummer, R. Winter, C. Balny, L. Li)
- 5. Physical Properties in Strongly Correlated Electron Systems**
(R. Pucci, M. Ishizuka, H. Wilhelm, S. Le Floch)
- 6. Spectroscopy**
(H. G. Drickamer, S. K. Sharma)
- 7. Synthesis and Properties of Diamond and Related Superhard Materials**
(H. Itoh, V. V. Brazhkin, V. L. Solozhenko, O. Fukunaga, A. Onodera, A. Zerr, P. K. Lam)
- 8. High Pressure Phenomena Produced by Intense Laser Radiation**
(R. Cauble, M. Koenig, K. Kondo, J. R. Asay, A. Ng, G. W. Collins, A. M. Rubenchik, K. Widmann)
- 9. Simple Molecular Solids**
(Y. Akahama, C. S. Yoo, K. Nagao, M. Otani, D. R. Allan, A. Anderson, E. Katoh)
- 10. Electronic Transitions Under High Pressures**
(N. W. Ashcroft, K. Takemura, R. Cohen, B. Johansson)
- 11. Baro- (Piezo-) Physiology**
(D. H. Bartlett, P. H. Yancey, F. Abe, H. Iwahashi, C. Kato)
- 12. Structural Studies Under High Pressure**
(J. D. Jorgensen, M. Kruger, C. Jin, J. M. Sasaki)
- 13. Geophysical and Planetary Aspects of Pressure Effects**
(D. C. Rubie, M. Vaughan, J. H. Nguyen, D. Weidner, Y. Kudoh, B. Li)
- 14. Shock Waves**
(W. J. Nellis, L. C. Chhabildas, T. J. Ahrens, Y. Syono, Y. Noguchi, N. C. Holmes)
- 15. Computational Physics in High Pressure Science**
(S. Scandolo, V. E. Van Doren, W. M. Howard)
- 16. Phase Transitions**
(E. F. Skelton, L. C. Ming, S. M. Filipek)
- 17. Synthesis and Properties of Superconducting and Novel Materials Under Pressure**
(R. Winter, M. Yousuf, G. Oomi, N. V. Jaya)

18. Amorphization

(M. Kruger)

19. Mössbauer Spectroscopy and Magnetism

(M. P. Pasternak, S. Nasu, R. D. Taylor, G. R. Hearne)

20. Optical, Elastic, Mechanical, Electrical (transport), and the Thermodynamic Properties of Crystalline and Amorphous Materials

(S. M. Stishov, G. Zou, G. A. Samara, M. Yousuf, G. Oomi)

21. Chemical Reactions and Kinetics

(G. Jenner, E. Dinjus, Y. Takeshita, J. F. Kenney)

22. High Pressure Techniques

(Z. Li, G. Shen)

23. Spectroscopy

(Y. Fujita, Y. Y. Zou)

Three-hundred-and-sixty (360) papers were presented in the oral and poster sessions. The manuscripts submitted for the proceedings volume were reviewed, and two-hundred-and-sixty-four (264) were accepted for publication in these proceedings.

The chairmen and the organizing committee express deep appreciation to all the participants and co-organizers/co-chairmen of the symposia for their participation and contributions. Sincere thanks are due to the management of the Hilton Hawaiian Village and Hotel, especially Epooi Perkins and Lisa Chang, for providing excellent conference facilities and catering service.

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