

Preface	xv
ICMC Awards	xvii
2005 ICMC Committees	xxi
2005 ICMC Technical Editors	xxiii
Acknowledgments	xxv

PART A

CRYOGENIC FUNCTIONAL MATERIALS

A Low Hysteresis NiTiFe Shape Memory Alloy Based Thermal Conduction Switch	3
J. L. Lemanski, V. B. Krishnan, R. M. Manjeri, W. U. Notardonato, and R. Vaidyanathan	
Effect of Thermal Cycling on Martensitic Transformation Characteristics of $(\text{Ni}_{47}\text{Ti}_{44})_{100-x}\text{Nb}_x$ Shape Memory Alloys	11
X. M. He, D. S. Yan, L. J. Rong, and Y. Y. Li	
New 5 K Magnetic Rare Earth Regenerator Intermetallic Compounds.....	19
K. A. Gschneidner, Jr., A. O. Tsokol, L. Hale, and V. K. Pecharsky	
Transducers for Sub-Micron Displacement Measurements at Cryogenic Temperatures	27
A. Nyilas	
Linear Thermal Expansion Measurements of Single Crystal Silicon for Validation of Interferometer Based Cryogenic Dilatometer	35
P. B. Karlmann, K. J. Klein, P. G. Halverson, R. D. Peters, M. B. Levine, D. Van Buren, and M. J. Dudik	
Thermoelectric Properties of $\text{Bi}_{0.85}\text{Sb}_{0.15}$ Alloys Prepared by High Press Method.....	43
H. J. Liu and L. F. Li	
Spin Correlated Scattering and Metal-Semiconductor Transition in CMR Manganites	51
J. C. Zhang, Y. Xu, Z. Chen, G. Cao, Y. Xue, and S. Cao	

PHYSICAL AND MECHANICAL PROPERTIES AT CRYOGENIC TEMPERATURES

Measurement of the Emissivity of Clean and Contaminated Silver Plated Copper Surfaces at Cryogenic Temperatures.....	61
R. C. Duckworth, J. A. Demko, M. J. Gouge, and J. A. Urbahn	
Mechanical Properties of Low Density Alloys at Cryogenic Temperatures	69
X. D. Jiao, L. F. Li, H. J. Liu, and K. Yang	
Cryogenic Treatment of Metal Parts	77
R. Chillar and S. C. Agarwal	
Effect of Martensitic Transformation on Serration of 304L Steel at Cryogenic Temperatures	83
K. Shibata, T. Ogata, and T. Yuri	