

# Table of Contents

## Preface

<b>Phase Transformations Research - A Success Story in Progress</b>	
H.I. Aaronson	1
<b>Interface Stability and Evolution of Microstructures</b>	
R. Trivedi	45
<b>Liquid to Solid Transition</b>	
T.V. Ramakrishnan	57
<b>Eutectic Solidification</b>	
J.A. Sekhar and A.M. Sriramamurty	69
<b>Symmetry and Phase Transitions</b>	
G. Venkataraman	81
<b>Ferroelastic Phase Transitions</b>	
V.K. Wadhawan	91
<b>On Clustering and Ordering Instabilities in FCC Solid Solutions</b>	
U.D. Kulkarni, S. Banerjee and R.V. Krishnan	111
<b>Electron Microscopy and Electron Diffraction Studies of Phase Transformations and Phase Stability</b>	
S. Amelinckx, G. Van Tendeloo and J. Van Landuyt	123
<b>The Mechanism of HCP-FCC Martensitic Transformation: A Diffraction Approach</b>	
S. Lele and D. Pandey	143
<b>Polytypic Transitions</b>	
P. Krishna and M.T. Sebastian	157
<b>Amorphous to Crystalline Phase Transformations</b>	
S. Ranganathan and C. Suryanarayana	173
<b>Phase Transformation Studies of Metallic Glasses by Resistivity and Mössbauer Spectroscopy</b>	
A.K. Bhatnagar, B.B. Prasad and R. Jagannathan	187
<b>Viscosity of Glass Forming Melts and its Temperature Dependence</b>	
K.S. Dubey and P. Ramachandrarao	193
<b>Precipitate Nucleation</b>	
G.W. Lorimer	199
<b>The Massive Transformation: A Critical Review</b>	
E.S.K. Menon and H.I. Aaronson	211
<b>The Role of Interfaces in Diffusional Growth</b>	
K. Chattopadhyay	231
<b>Active Eutectoid Decomposition in Zirconium Base Alloys</b>	
P. Mukhopadhyay	247
<b>TEM Studies on the Precipitate Morphology in Quenched and Aged Al-2wt % Ge Alloy</b>	
G.N. Subbanna and N. Kishore	261
<b>Morphology of Discontinuous Coarsening in Fe-Zn Alloys</b>	
G.T. Parthiban and S.P. Gupta	267
<b>Heterogeneous Precipitation of the <math>\gamma''</math> Phase in Inconel 625</b>	
M. Sundararaman and P. Mukhopadhyay	273
<b>On the Stability of Precipitating Phases in Nickel Base Superalloys</b>	
A.K. Jena	281
<b>The Kinetics of some Pressure-Induced Transformations</b>	
A.K. Singh	291
<b>Structural Transition of Amorphous Alloys at High Pressures</b>	
H. Iwasaki	307
<b>Phase Stability in the Diffusion Zone</b>	
G.B. Kale, S.K. Khera and R.V. Patil	319
<b>Application of HVEM in Phase Transformation Research</b>	
K.H. Westmacott and U. Dahmen	325

<b>Radiation-Induced Order-Disorder Transformations</b> K. Urban, S. Banerjee and J. Mayer	335
<b>Radiation Induced Instability and its Influence on the Decomposition of a Concentrated Alloy</b> C. Abromeit and K. Krishan	353
<b>Irradiation Induced Decomposition in CuNiFe Alloys</b> R. Poerschke, H.W. Gölling, W. Wagner and H. Wollenberger	359
<b>Applications of Magnetic Resonance and Mossbauer Effect in Phase Transitions</b> R. Vijayaraghavan and L.C. Gupta	365
<b>Positron Annihilation Study of Precipitation in Al-22 at. % Zn Alloy</b> A. Bharathi, C.S. Sundar and M. Vijayalakshmi	379
<b>Stress Induced Martensitic Transformations</b> R.V. Krishnan	387
<b>Martensitic Transformation and Precipitation Reactions in a Cu-9.9 wt% Al Alloy</b> E. Mohandas, D. Sundararaman, P. Kuppusami and V. Seetharaman	399
<b>Analysis of Binary Phase Diagrams</b> S.S. Balakrishna and A.K. Mallik	405
<b>New Experimental Techniques for Studies on Liquid-Solid Phase Equilibria</b> S.P. Garg, Y.J. Bhatt and R. Venkataramani	419
<b>Precipitation and Ordering Reactions in Interstitial Alloys</b> V. Seetharaman and D. Sundararaman	433
<b>Calculation of Liquidus Lines in Compound Forming Systems</b> P. Ramachandrarao and S. Lele	449
<b>Subject Index</b>	455