# Contents

Acknowledgements vi

Introduction 1

HODGES, K. V. The thermodynamics of Himalayan orogenesis 7


WHITNEY, D. L. & DILEK, Y. Characterization and interpretation of $P$–$T$ paths with multiple thermal peaks 53


HARLEY, S. L. On the occurrence and characterization of ultrahigh-temperature crustal metamorphism 81

SANDIFORD, M. & HAND, M. Australian Proterozoic high-temperature, low-pressure metamorphism in the conductive limit 109

GIBSON, R. L. & STEVENS, G. Regional metamorphism due to anorogenic intracratonic magmatism 121

BROWN, M. Ridge–trench interactions and high-$T$ low-$P$ metamorphism, with particular reference to the Cretaceous evolution of the Japanese Islands 137

HARRIS, N. & AYRES, M. The implications of Sr-isotope disequilibrium for rates of prograde metamorphism and melt extraction in anatectic terrains 171

WHITTINGTON, A., HARRIS, N. & BAKER, J. Low-pressure crustal anatexis: the significance of spinel and cordierite from metapelitic assemblages at Nanga Parbat, northern Pakistan 183

RUBIE, D. C. Disequilibrium during metamorphism: the role of nucleation kinetics 194

VERNON, R. H. Chemical and volume changes during deformation and prograde metamorphism of sediments 215

BARKER, A. J. & ZHANG, X. The role of microcracking and grain-boundary dilation during retrograde reactions 247

WORLEY, B. & POWELL, R. Making movies: phase diagrams changing in pressure, temperature, composition and time 269

Index 281