

## Contents

Preface	vii
<b>Introduction: Precambrian–Palaeozoic history and framework</b>	
KUSKY, T. M., WINDLEY, B. F. & ZHAI, M.-G. Tectonic evolution of the North China Block: from orogen to craton to orogen	1
<b>Magmatism and geochemistry</b>	
ZHANG, H.-F. Temporal and spatial distribution of Mesozoic mafic magmatism in the North China Craton and implications for secular lithospheric evolution	35
HUANG, F., LI, S.-G. & YANG, W. Contributions of the lower crust to Mesozoic mantle-derived mafic rocks from the North China Craton: implications for lithospheric thinning	55
FAN, W.-M., GUO, F., WANG, Y.-J. & ZHANG, H.-F. Late Mesozoic mafic magmatism from the North China Block: constraints on chemical and isotopic heterogeneity of the subcontinental lithospheric mantle	77
GUO, F., FAN, W.-M., LI, X.-Y. & LI, C.-W. Geochemistry of Mesozoic mafic volcanic rocks from the Yanshan belt in the northern margin of the North China Block: relations with post-collisional lithospheric extension	101
CHEN, B., ZHAI, M.-G. & TIAN, W. Origin of the Mesozoic magmatism in the North China Craton: constraints from petrological and geochemical data	131
<b>Structures and tectonics</b>	
LIN, W., FAURE, M., MONIÉ, P. & WANG, Q.-C. Polyphase Mesozoic tectonics in the eastern part of the North China Block: insights from the eastern Liaoning Peninsula massif (NE China)	153
LI, S. Z., KUSKY, T. M., ZHAO, G., WU, F., LIU, J.-Z., SUN, M. & WANG, L. Mesozoic tectonics in the Eastern Block of the North China Craton: implications for subduction of the Pacific plate beneath the Eurasian plate	171
SHAO, J., HE, G. & ZHANG, L. Deep crustal structures of the Yanshan intracontinental orogeny: a comparison with pericontinental and intercontinental orogenies	189
COPE, T. D. & GRAHAM, S. A. Upper crustal response to Mesozoic tectonism in western Liaoning, North China, and implications for lithospheric delamination	201
MIAO, L., ZHANG, F., FAN, W.-M. & LIU, D. Phanerozoic evolution of the Inner Mongolia–Daxinganling orogenic belt in North China: constraints from geochronology of ophiolites and associated formations	223
<b>Basin evolution</b>	
LI, Z., LI, Y., ZHENG, J.-P. & HAN, D. Late Mesozoic tectonic transition of the eastern North China Craton: evidence from basin-fill records	239
HU, S., FU, M., YANG, S., YUAN, Y. & WANG, J. Palaeogeothermal response and record of Late Mesozoic lithospheric thinning in the eastern North China Craton	267
<b>Geophysical constraints</b>	
HAO, T.-Y., XU, Y., SUH, M., XU, Y., LIU, J.-H., ZHANG, L.-L. & DAI, M.-G. East Marginal Fault of the Yellow Sea: a part of the conjunction zone between Sino-Korea and Yangtze Blocks?	281
CHANG, X., LIU, Y., ZHAI, M.-G. & WANG, Y. Crustal P-wave velocity distributions and metallotectonics around the North China Craton	293

**Mineralization**

FAN, H.-R., HU, F.-F., YANG, J.-H. & ZHAI, M.-G. Fluid evolution and large-scale gold metallogeny during Mesozoic tectonic transition in the Jiaodong Peninsula, eastern China 303

**Models**

DENG, J.-F., ZHOU, M.-F., FLOWER, M. F. J., SU, S.-G., ZHAI, M.-G., LIU, C., ZHAO, G.-C., ZHAO, X.-G., ZHOU, S. & WU, Z.-W. A mechanism for transforming buoyant North Chinese cratonic lithosphere to a denser equivalent for delamination 317

**Concluding Review**

KUSKY, T. M., WINDLEY, B. F. & ZHAI, M.-G. Lithospheric thinning in eastern Asia; constraints, evolution, and tests of models 331

Index 345