Structure and Evolution of the European Lithosphere and Upper Mantle

Introduction: The evolution of a continent, from kinematics to dynamics p. 1
Travel-time tomography of the European-Mediterranean mantle down to 1400 km p. 3
From collision to collapse: phases of lithospheric evolution as monitored by seismic records p. 75
Deep structure of the Alps - what do we really know? p. 87
Physical properties of crustal and upper mantle rocks with regards to lithosphere dynamics and high pressure mineralogy p. 113
Lithospheric and upper-mantle structures, results of electromagnetic soundings in Europe p. 137
Lithospheric thermal regimes in Europe p. 179
The nature of the lower continental crust of Europe: petrological and geochemical evidence from xenoliths p. 195
Growth of the European lithospheric mantle - dependence of upper-mantle peridotite facies and chemical heterogeneity on tectonics and age p. 219
Mantle flow and the evolution of the lithosphere p. 241
P-wave mantle velocity structure beneath northern Eurasia from long range recordings along the profile Quartz p. 269

Relationship Between Mantle Processes and Geological Processes at or Near the Earth's Surface

Preface p. 1
True Polar Wander and long-wavelength dynamic topography p. 3
Glacial rebound and sea-level change: an example of relationship between mantle and surface processes p. 15
Mantle and crustal contributions to continental flood volcanism p. 39
From tectonic reconstruction to upper mantle model: an application to the Alpine-Mediterranean region p. 53
Convective removal of thermal boundary layer of thickened continental lithosphere: a brief summary of causes and consequences with special reference to the Cenozoic tectonics of the Tibetan plateau and surrounding regions p. 67
Initiation of asymmetric extension in continental lithosphere p. 75
Geochemical and tectonic relationships in the east Indonesian arc-continent collision region: implications for the subduction of the Australian passive margin p. 97
Geochemical and petrological evidence of the subduction of delaminated Adriatic continental lithosphere in the genesis of the Neogene-Quaternary magmatism of central Italy p. 117
Thermal-rheologic evolution of the upper mantle and the development of the San Andreas fault system p. 149

Fluid-Rock Interaction in the Deeper Continental Lithosphere

Introduction p. 1
Fluid-absent melting and the roles of fluids in the lithosphere: A slanted summary? p. 19
Experimental strategies for the investigation of low temperature properties in granitic and pegmatitic melts p. 31
The role of melt in the uplift and exhumation of orogenic belts p. 49
Large-scale hydration of the lithosphere above subducting slabs
Metasomatism during subduction: products and possible paths in the Catalina Schist, California p. 61
Fluid-melt - rock interaction in mafic eclogites and coesite-bearing metasediments: Constraints on volatile recycling during subduction p. 93
Nitrogen and carbon dioxide in deep crustal fluids: evidence from the Caledonides of Norway p. 113
Fluid control of charnockitization p. 175
The role of ultramafic rocks in regulating the concentrations of volatile and non-volatile components during deep crustal metamorphism p. 187
Basin Analysis and Dynamics of Sedimentary Basin Evolution
Introduction p. 1
Magmatism and the geodynamics of basin formation p. 5
Development of the North Viking Graben: inferences from laboratory modelling p. 31
From rifting to drifting: tectonic evolution of the South-Alpine upper crust from the Triassic to the Early Cretaceous p. 53
Sedimentary basins and crustal thickening p. 77
Variability of the sequence stratigraphic model: effects of local basin factors p. 91
Accommodation and supply - a dual control on stratigraphic sequences p. 111
Fluid flow in sedimentary basins p. 137
Continental rift development in Precambrian and Phanerozoic Europe: EUROPROBE andp. 159 the Dnieper-Donets rift and Polish Trough basins
The Neogene evolution of the outer Carpathian flysch units (Poland, Ukraine and Romania): kinematics of a foreland/fold-and-thrust belt system p. 177
Ocean Carbon Cycle and Climate Change
Introduction p. 1
The biological pump in the greenhouse p. 13
The abiotically driven biological pump in the ocean and short-term fluctuations in atmospheric CO[2] contents p. 17
A model system approach to biological climate forcing. The example of Emiliania huxleyi p. 27
Organic matter mineralization in marine systems p. 47
Are atmospheric CO[2] content and Pleistocene climate connected by wind speed over a polar Mediterranean Sea? p. 59
Limitations to the quantitative application of Cd as a paleoceanographic tracer, based on results of a multi-box model (MENU) and statistical considerations p. 69
Marine Sediments, Burial, Pore Water Chemistry, Microbiology and Diagenesis
Introduction

Microbial mats: a joint venture
Pathways of organic carbon oxidation in three continental margin sediments
Enzymatic iron and uranium reduction by sulfate-reducing bacteria
A quantitative study of microbial decomposition of biopolymers in recent sediments from the Peru Margin
Geochemistry of recent oxic and anoxic marine sediments: implications for the geological record
A simple three-dimensional model of diffusion-with-precipitation applied to localised pyrite formation in framboids, fossils and detrital iron minerals

Coupling of cycles and global significance of sediment diagenesis
Factors controlling [superscript 13]C contents of sedimentary organic compounds: principles and evidence
Microbial processes: controls on the shape and composition of carbonate concretions

Lipid biomarkers in biogeochemistry: future roles?

200 ka of Global Change
Introduction
Paleotemperature of the last interglacial period based on [superscript 18]O of Strombus bubonius from the western Mediterranean Sea
Quaternary history of calcium carbonate fluctuations in the western equatorial Indian Ocean (Somali Basin)
Pacific carbonate dissolution revisited
Ocean-atmosphere carbon exchange: impact of the 'biological pump' in the Atlantic equatorial upwelling belt over the last 330,000 years
Comparison of two UK37-sea surface temperature records for the last climatic cycle at ODP Site 658 from the sub-tropical Northeast Atlantic
The continental tree-ring record - absolute chronology, [superscript 14]C calibration and climatic change at 11 ka
The climate in Western Europe during the last glacial/interglacial cycle derived from pollen and insect remains
Pluvial conditions in the Eastern Sahara following the penultimate deglaciation: implications for changes in atmospheric circulation patterns with global warming

Modelling the last ice-age cycle with 2-d climate models

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.