CONTENTS

PAGE

PREFACE [v]

G. K. WESTBROOK
Geophysical evidence for the role of fluids in accretionary wedge tectonics [1]

M. KASTNER, H. ELDERFIELD AND J. B. MARTIN
Fluids in convergent margins: what do we know about their composition, origin, role in diagenesis and importance for oceanic chemical fluxes? [17]

R. J. KNIPE, S. M. AGAR AND D. J. PRIOR
The microstructural evolution of fluid flow paths in semi-lithified sediments from subduction complexes [35]

J. C. MOORE, K. M. BROWN, F. HORATH, G. COCHRANE, M. MACKAY AND G. MOORE
Plumbing accretionary prisms: effects of permeability variations [49]

A. TAIRA AND K. T. PICKERING
Sediment deformation and fluid activity in the Nankai, Izu-Bonin and Japan forearc slopes and trenches [63]

X. LE PICHON, P. HENRY AND THE KAIKO-NANKAI SCIENTIFIC CREW
Water budgets in accretionary wedges: a comparison [89]

B. CARSON, M. L. HOLMES, K. UMSTATTS, J. C. STRASSER AND H. P. JOHNSON
Fluid expulsion from the Cascadia accretionary prism: evidence from porosity distribution, direct measurements, and GLORIA imagery [105]

S. M. PEACOCK
Numerical simulation of subduction zone pressure–temperature–time paths: constraints on fluid production and arc magmatism [115]

J. H. DAVIES AND M. J. BICKLE
A physical model for the volume and composition of melt produced by hydrous fluxing above subduction zones [129]

PAGE

J. C. Ayers and E. B. Watson
Solubility of apatite, monazite, zircon, and rutile in supercritical aqueous fluids with implications for subduction zone geochemistry [139]

A. D. Saunders, M. J. Norry and J. Tarney
Fluid influence on the trace element compositions of subduction zone magmas [151]

C. J. Hawkesworth, J. M. Hergt, R. M. Ellam and F. McDermott
Element fluxes associated with subduction related magmatism [167]

W. F. McDonough
Partial melting of subducted oceanic crust and isolation of its residual ecologitic lithology [181]