1. Record Nr. UNINA9910298387203321

Titolo Evolution of Archean Crust and Early Life / / edited by Yildirim Dilek,

Harald Furnes

Pubbl/distr/stampa Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2014

ISBN 94-007-7615-2

Edizione [1st ed. 2014.]

Descrizione fisica 1 online resource (421 p.)

Collana Modern Approaches in Solid Earth Sciences, , 1876-1682 ; ; 7

Disciplina 55

550 551 551.8

Soggetti Geology

Structural geology Geochemistry Geobiology Economic geology

Structural Geology
Biogeosciences
Economic Geology

Lingua di pubblicazione Inglese

Nota di contenuto

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Description based upon print version of record.

Nota di bibliografia Includes bibliographical references and index.

Trota di Biologiana inolado Sibilogiaprilo di Toloro de Carta index.

Preface -- Precambrian Greenstone Belts Host Different Ophiolite Types -- The Plume to Plate Transition: Hadean and Archean Crustal Evolution in the Northern Wyoming Province, U.S.A -- Archaean elements of the basement outliers west of the Scandinavian Caledonides in Northern Norway: architecture, evolution and possible correlation with Fennoscandia -- A review of the geodynamic significance of hornblende-bearing ultramafic rocks in the Mesoarchean Fiskenæsset Complex, SW Greenland -- The Precambrian Geology of the North China Craton: A review and update of the key issues -- How to Make a Continent: Thirty-five Years of TTG Research Kent -- Recycling of lead at Neoarchean continental margins -- Crustal evolution and

deformation in a non-plate-tectonic Archaean Earth: Comparisons with

Venus -- Accreted turbidite fans and remnant ocean basins in Phanerozoic orogens: A template for a significant Precambrian crustal growth and recycling process -- Biogenicity of Earth's Earliest Fossils -- In situ morphologic, elemental and isotopic analysis of Archean life -- Archaean soils, lakes and springs: looking for signs of life -- Rare earth elements in stromatolites – Evidence that modern terrestrial stromatolites fractionate rare earth elements during incorporation from ambient waters. .

Sommario/riassunto

This book presents an integrated approach to the study of the evolution of the Archean lithosphere, biosphere and atmosphere, and as such it is a unique contribution to our understanding of the early Earth and life. The structural and geochemical make-up of both the oceanic and continental crust of the Archean Earth is documented in some case studies of various cratons, and the implications of the Phanerozoic plate and plume tectonic processes for the Archean geology are discussed in several chapters in the book. All chapters are process-oriented and data-rich, and reflect the most recent knowledge and information on the Archean Earth. The interdisciplinary approach of examining the evolution of the Archean crust, oceans, and life that we adopt in this book sets it apart from previous publications on Precambrian geology. The book will be attractive to researchers in academia and in industry, and to senior undergraduate students, graduate students and faculty in earth and natural sciences.