Record Nr. UNINA9910479895603321 Autore Wagner Günther A Titolo Age Determination of Young Rocks and Artifacts [[electronic resource]] : Physical and Chemical Clocks in Quaternary Geology and Archaeology // by Günther A. Wagner Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa , 1998 **ISBN** 3-662-03676-2 Edizione [1st ed. 1998.] Descrizione fisica 1 online resource (XVIII, 466 p.) Collana Natural Science in Archaeology, , 1613-9712 Disciplina 551.9 Soggetti Geochemistry Geology Geography Anthropology Geography, general Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "With 177 Figures." Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1 Introduction -- 2 Materials -- 3 Radiogenic Noble Gases -- 4 Uranium Series (Radioactive Equilibrium, Disequilibrium as Clock, Detection Techniques, Thermo-Ionization Mass Spectrometry, Gamma Spectrometry) -- 5 Cosmogenic Nuclides (Atmospheric Production, In Situ Production, Accelerator Mass Spectrometry) -- 6 Particle Tracks (Track Accumulation Age) -- 7 Radiation Dosimetry (Radiation Damage, Natural Dose, Resetting, Fading, Dose Rate, Dose Rate Evaluation) -- 8 Chemical Reactions (Reaction Kinetics, Diffusion) -- 9 Paleomagnetism -- 10 Earth's Orbit, Climate and Age -- References. Sommario/riassunto The Quaternary, which spans approximately the last 2 million years, is characterized by dramatic environmental changes, commonly known as the "ice age". During this period, man with his manifold cultures evolved. Attempts at dating these events as accurately as possible have made great progress. The broad spectrum of physical and chemical dating methods, now available for dating human artifacts and Quaternary rocks, is becoming increasingly difficult to grasp. In this

book the various chronometric techniques are comprehensively and

intelligibly treated. By means of numerous case studies, taken from archaeology and Quaternary geology, the potential and limitation of these techniques are demonstrated. The book is intended mainly for scientists and students of these fields, but the interested layman may also find its rewarding.