1. Record Nr. UNINA9910140323003321 Autore Conklin Alfred R (Alfred Russel), , Jr., <1941-> Titolo Introduction to soil chemistry: analysis and instrumentation / / Alfred R. Conklin, Jr Pubbl/distr/stampa Hoboken, New Jersey:,: John Wiley & Sons,, [2014] ©2014 **ISBN** 1-118-77338-1 1-118-77329-2 1-118-77331-4 Edizione [Second edition.] Descrizione fisica 1 online resource (549 p.) Collana Chemical analysis; volume 178 Disciplina 631.4/1 Soggetti Soil chemistry Soils - Analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Cover; Series page; Title page; Copyright page; Preface; Instrumental Method Acronyms; Common Hyphenated Instrumental Method Abbreviations; Abbreviated Periodic Table of the Elements; CHAPTER 1: Summary of the History of Soil Chemistry; 1.1 The 19th Century; 1.2 The End of the 19th and the Beginning of the 20th Century; 1.3 The 20th Century: 1.4 The End of the 20th and the Beginning of the 21st Century: 1.5 Conclusion: CHAPTER 2: Soil Basics Part I: Large Features: 2.1 Horizonation; 2.2 Peds; 2.3 Soil Color; 2.4 Soil Naming; 2.5 The Landscape 2.6 Relationship of Large Features to Soil Chemistry, Soil Analysis, and Instrumentation 2.7 Conclusions; CHAPTER 3: Soil Basics Part II: Microscopic to Atomic Orbital Description of Soil Chemical Characteristics; Soil Components Independent; 3.1 Soil Solids; Soil Components Interacting; 3.2 Bonding Considerations; Soil Components in Combination; 3.3 Surface Features; 3.4 Energy Considerations; 3.5 Reaction Paths: 3.6 Steric Factors: 3.7 Rate Factors: 3.8 All Factored Together: 3.9 Micelles: 3.10 Coated Surfaces: 3.11 Conclusions CHAPTER 4: Soil Basics Part III: The Biological and Organic Components

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Sommario/riassunto

Provides the tools needed to explore the incredible complexities of the earth's soils. Now in its Second Edition, this highly acclaimed text fully equips readers with the skills and knowledge needed to analyze soil and correctly interpret the results. Due to the highly complex nature of soil, the author carefully explains why unusual results are routinely obtained during soil analyses, including the occurrence of methane in soil under oxidative conditions. The text also assists readers in developing their own analytical techniques in order to analyze particular samples or test