1. Record Nr. UNINA9910817945303321 **Titolo** Environmental chemistry of animal manure // Zhongqi He, editor New York,: Nova Science Publishers, c2011 Pubbl/distr/stampa **ISBN** 1-61942-238-7 Edizione [1st ed.] Descrizione fisica 1 online resource (471 p.) Animal science, issues and professions Collana Environmental science, engineering and technology Altri autori (Persone) HeZhongqi 631.8/61 Disciplina Soggetti Agricultural chemistry Analytical chemistry Environmental chemistry Farm manure Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. ""ENVIRONMENTAL CHEMISTRY OF ANIMAL MANURE"": Nota di contenuto ""ENVIRONMENTAL CHEMISTRY OF ANIMAL MANURE ""; ""CONTENTS ""; ""PREFACE "": ""ABOUT THE EDITOR "": ""PART I. ORGANIC MATTER CHARACTERIZATION ""; ""APPLICATION OF ANALYTICAL PYROLYSIS-MASS SPECTROMETRY IN CHARACTERIZATION OF ANIMAL MANURES""; ""1.1. INTRODUCTION ""; ""1.2. THE PRINCIPLE OF ANALYTICAL PYROLYSIS ""; ""1.3. APPLICATION OF ANALYTICAL PYROLYSIS IN CHARACTERIZING NATURAL ORGANIC MATTER""; ""1.4. ANIMAL MANURE CHEMISTRY BY ANALYTICAL PYROLYSIS "" ""1.5. CASE STUDY I: COMPOUNDS IDENTIFIED IN SELECTED ANIMAL MANURES FROM CONVENTIONAL AND ORGANIC DAIRY FARMS BY PY-GC/MS """1.6. CASE STUDY II: IMPACT OF TETRAMETHYLAMMONIUM HYDROXIDE PRETREATMENT ON PYROLYSIS-GC/MS CHARACTERIZATION OF CHICKEN LITTER ""; ""1.7. CONCLUSION ""; ""REFERENCES "": ""STRUCTURAL AND BONDING ENVIRONMENTS OF MANURE ORGANIC MATTER DERIVED FROM INFRARED SPECTROSCOPIC STUDIES ""; ""2.1. INTRODUCTION ""; ""2.2. SPECTRAL FEATURES OF ORGANIC MATTER IN ANIMAL MANURE ""; ""2.2.1. General Spectral

Features ""; ""2.2.2. Spectra Type ""

""2.2.3. Unique Characteristics of Animal Manure """"2.3. SPECTRAL

FEATURES OF WATER EXTRACTABLE ORGANIC MATTER (WEOM) IN ANIMAL MANURE "": ""2.4. SPECTRAL FEATURES OF HUMIC FRACTIONS IN ANIMAL MANURE AND COMPOST ""; ""2.5. FTIR ANALYSIS OF ORGANIC MATTER TRANSFORMATION DURING COMPOSTING ""; ""2.6. FTIR ANALYSIS OF ORGANIC MATTER TRANSFORMATION DURING DECOMPOSITION ""; ""2.7. INFRARED PHOTOACOUSTIC STUDY OF ANIMAL MANURE ""; ""2.8. CONCLUSION ""; ""REFERENCES ""; ""CARBON FUNCTIONAL GROUPS OF MANURE ORGANIC MATTER FRACTIONS IDENTIFIED BY SOLID STATE 13C NMR SPECTROSCOPY "" ""3.1. INTRODUCTION """"3.2. SOLID STATE C-13 NMR TECHNIQUES AND STRUCTURAL INFORMATION OF ORGANIC MATTER ""; ""3.3. DISTRIBUTION OF CARBON FUNCTIONAL GROUPS IN ANIMAL MANURE ""; ""3.3.1. General Features ""; ""3.3.2. Comparison of Chemical Structures of Transgenic and Conventional Pig Manures ""; ""3.3.3. Changes of the Distribution of Carbon Functional Groups in Stabilized Manure Products "": ""3.4. 13C NMR CHARACTERIZATION OF WATER SOLUBLE ORGANIC MATTER OF ANIMAL MANURE""; ""3.4.1. General Features ""; ""3.4.2. Comparison of Spectral Features with Plant-derived WEOM ""

""3.5. SOLID AND COLLOIDAL FRACTIONS OF ORGANIC MATTER OF MANURE SLURRY """3.5.1. Solid Fractions ""; ""3.5.2. Colloidal Fractions ""; ""3.6. CHARACTERISTICS OF HUMIC SUBSTANCES DERIVED FROM ANIMAL MANURE ""; ""3.7. CONCLUSION ""; ""REFERENCES ""; ""ULTRAVIOLET-VISIBLE ABSORPTIVE FEATURES OF WATER EXTRACTABLE AND HUMIC FRACTIONS OF ANIMAL MANURE AND RELEVANT COMPOST ""; ""4.1. INTRODUCTION ""; ""4.2. UV/VISIBLE SPECTRA OF MANURE FRACTIONS""; ""4.3. SPECIFIC ULTRAVIOLET ABSORBANCE WAVELENGTHS ASSOCIATED WITH PROPERTIES OF MANURE ORGANIC MATTER ""; ""4.3.1. E2/E3 Ratio ""; ""4.3.2. SUVA "" ""4.3.3. Absorptivity at 280 nm ""