1. Record Nr. UNINA9910736999203321 Autore Moldoveanu S. erban Titolo Pyrolysis of organic molecules with applications to health and environmental issues / / by Serban C. Moldoveanu Amsterdam ; ; Oxford, : Elsevier, 2009 Pubbl/distr/stampa **ISBN** 1-282-30915-3 9786612309151 0-08-093215-0 Descrizione fisica 1 online resource (737 p.) Collana Techniques and instrumentation in analytical chemistry;; v. 28 Disciplina 543 543.17 Soggetti Pyrolysis - Environmental aspects Pyrolysis - Health aspects Molecular structure Organic compounds Environmental toxicology 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. Nota di contenuto Front cover; Pyrolysis of Organic Molecules with Applications to Health and Environmental Issues; Copyright page; Preface; Contents; Part 1. Organic Non-Polymeric Molecules: Fundamental Concepts of Pyrolysis, Risk Assessment, and Toxicology; Chapter 1. Introduction; 1.1. Preliminary Information on Pyrolysis; 1.2. Preliminary information on risk assessment and toxicology; 1.3. References; Chapter 2. The Chemistry of the Pyrolytic Process; 2.1. Basic characteristics of pyrolytic reactions; 2.2. Elimination Reactions; 2.3. Fragmentation and extrusion reactions; 2.4. Rearrangement reactions 2.5. Other reaction types in pyrolysis2.6. Pyrolysis in the presence of additional reactants or with catalysts; 2.7. Pyrolysis of mixtures of compounds: 2.8. References: Chapter 3. Physicochemical Aspects of the Pyrolytic Process; 3.1. Thermodynamic factors in pyrolytic reactions; 3.2. Kinetic factors in pyrolytic reactions; 3.3. References; Chapter 4. Instrumentation Used in Pyrolysis; 4.1. Optimization of the

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Pyrolysis of Organic Molecules with Applications to Health and Environmental Issues, the 28th volume in the Techniques and Instrumentation in Analytical Chemistry series, gives a systematic and comprehensive description of pyrolysis of non-polymeric organic molecules. Pyrolysis is involved in many practical applications as well as in many common human activities, but harmful compounds can be generated in the process. The study of pyrolysis and of the formation of undesirable compounds as a result of pyrolytic processes is of considerable interest to chemists, chemical engi