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Nota di contenuto	<p>CONTENTS; Chapter 1; Introduction to Explosives; Development of Blackpowder; Development of Nitroglycerine; Development of Mercury Fulminate; Development of Nitrocellulose; Development of Dynamite; Development of Ammonium Nitrate; Development of Commercial Explosives; Development of Permitted Explosives; Development of ANFO and Slurry Explosives; Development of Military Explosives; Development of Picric Acid; Development of Tetryl; Development of TNT; Development of Nitroguanidine; Development of PETN; Development of RDX and HMX; Polymer Bonded Explosives; Recent Developments</p> <p>Insensitive Munitions Pollution Prevention; Chapter 2; Classification of Explosive Materials; Explosions; Atomic Explosions; Physical Explosions; Chemical Explosions; Chemical Explosives; Classification of Chemical Explosives; Primary Explosives; Secondary Explosives; Propellants; Chemical Data on Explosive Materials; Primary Explosives; Mercury Fulminate; Lead Azide; Lead Styphnate; Silver Azide; Tetrazene; Secondary Explosives; Nitroglycerine; Nitrocellulose; Picric Acid; Tetryl; TNT; Nitroguanidine; PETN; RDX; HMX; TATB; HNS; NTO; TNAZ; Other Compounds used in Explosive Compositions</p> <p>Chapter 3 Combustion, Deflagration and Detonation; Combustion; Physical and Chemical Aspects of Combustion; Combustion of Explosives and Propellants; Deflagration; Detonation; Burning to Detonation; Shock to Detonation; Propagation of the Detonation Shockwave; Effect of Density on the Velocity of Detonation; Effect of</p>

Diameter of the Explosive Composition on the Velocity of Detonation; Effect of Explosive Material on the Velocity of Detonation; Classification of Explosives; Chapter 4; Ignition, Initiation and Thermal Decomposition; Ignition; Hotspots; Mechanisms for the Formation of Hotspots
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Decomposition Reaction; Heat of Explosion; Volume of Gaseous Products; Energized Explosives; Addition of Aluminium; Force and Pressure of Explosion; Chapter 6; Equilibria and Kinetics of Explosive Reactions; Equilibria; Products of Decomposition; The Water-Gas Equilibrium; Heat of Explosion; Temperature of Explosion; Kinetics of Explosive Reactions; Activation Energy; Rate of Reaction; Kinetics of Thermal Decomposition; Measurement of Kinetic Parameters; Differential Thermal Analysis; Thermogravimetric Analysis; Differential Scanning Calorimetry; Chapter 7; Manufacture of Explosives; Nitration
C-Nitration

Sommario/riassunto

Revised and expanded to reflect new developments in the field, this book outlines the basic principles required to understand the chemical processes of explosives. The Chemistry of Explosives provides an overview of the history of explosives, taking the reader to future developments. The text on the classification of explosive materials contains much data on the physical parameters of primary and secondary explosives. The explosive processes of deflagration and detonation, including the theory of 'hotspots' for the detonation process, are introduced and many examples are provided in the detail
