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Nota di contenuto	Metal-Fluorocarbon Based Energetic Materials; Contents; Foreword; Preface; Acknowledgment; 1 Introduction to Pyrolants; References; 2 History; 2.1 Organometallic Beginning; 2.2 Explosive & Obscurant Properties; 2.3 Rise of Fluorocarbons; 2.4 Rockets Fired Against Aircraft; 2.5 Metal/Fluorocarbon Pyrolants; References; Further Reading; 3 Properties of Fluorocarbons; 3.1 Polytetrafluoroethylene (PTFE); 3.2 Polychlorotrifluoroethylene (PCTFE); 3.3 Polyvinylidene Fluoride (PVDF); 3.4 Polycarbon Monofluoride (PMF); 3.5 Vinylidene Fluoride-Hexafluoropropene Copolymer; 3.5.1 LFC-1 3.6 Vinylidene Fluoride-Chlorotrifluoroethylene Copolymer 3.7 Copolymer of TFE and VDF; 3.8 Terpolymers of TFE, HFP and VDF; 3.9 Summary of chemical and physical properties of common fluoropolymers; References; 4 Thermochemical and Physical Properties of Metals and their Fluorides; References; 5 Reactivity and Thermochemistry of Selected Metal/Fluorocarbon Systems; 5.1 Lithium;

5.2 Magnesium; 5.3 Titanium; 5.4 Zirconium; 5.5 Hafnium; 5.6 Niob;
5.7 Tantalum; 5.8 Zinc; 5.9 Cadmium; 5.10 Boron; 5.11 Aluminium;
5.12 Silicon; 5.13 Calcium Silicide; 5.14 Tin; References
6 Ignition and Combustion Mechanism of MTV
6.1 Ignition and Pre-Ignition of Metal/Fluorocarbon Pyrolants; 6.2 Magnesium-Grignard Hypothesis; References; 7 Ignition of MTV; References; 8 Combustion; 8.1 Magnesium/Teflon/Viton; 8.1.1 Pressure Effects on the Burn Rate; 8.1.2 Particle Size Distribution and Surface Area Effects on the Burn Rate; 8.2 Porosity; 8.3 Burn Rate Description; 8.4 Combustion of Metal-Fluorocarbon Pyrolants with Fuels Other than Magnesium; 8.4.1 Magnesium Hydride; 8.4.2 Alkali and Alkaline Earth Metal; 8.4.2.1 Lithium; 8.4.2.2 Magnesium-Aluminium Alloy; 8.4.3 Titan
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Sommario/riassunto

This exciting book details all aspects of a major class of pyrolants and elucidates the progress that has been made in the field, covering both the chemistry and applications of these compounds. Written by a pre-eminent authority on the subject from the NATO Munitions Safety Information Analysis Center (MSIAC), it begins with a historical overview of the development of these materials, followed by a thorough discussion of their ignition, combustion and radioactive properties. The next section explores the multiple facets of their military and civilian applications, as well as indu
