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Review on Molecular Design and Performance of Energetic Ionic Compounds

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Abstract: Energetic ionic compounds are a unique class of novel energetic materials, including energetic salts and energetic ionic liquids. Energetic ionic compound is one of the effective way to develop new high-energy, low-sensitive and non-toxic materials. To meet the requirement of multifunctional energetic materials for weapons and equipments, the chemical structure of cation and anion of energetic ionic compounds can be introduced by the molecular design. This approach makes energetic salts contain the various excellent functions, such as high-heat, high-density, insensitive, stable, environmentally friendly and so on. This article summarizes the research background, performance and molecular design of the energetic ionic compounds, and looks forward to the research trend of energetic ionic compounds. Energetic ionic compounds will be applied increasingly in the fields of explosive, propellant, etc.

Key words: organic chemistry; energetic ionic compounds; energetic ionic liquids; energetic salts; molecular design; explosive

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《绿色·高能·钝感弹药专辑》征稿

随着人们环保意识的增强,“绿色”理念已在全球范围内受到重视,高能、低感及绿色环保成为武器弹药发展的新趋势。为此,《含能材料》将于2010年第6期(12月)组织出版《绿色·高能·钝感弹药专辑》,内容涉及新型高能、低感及零(低)污染的新型含能材料的合成、配方、性能测试与表征及相关技术的研究与应用,绿色弹药的发展、洁净硝化等。

欢迎科研工作者来稿,来稿时请注明《绿色·高能·钝感弹药专辑》。