

Review of: Pyrotechnic Chemistry

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Bernard E. Douda

Naval Surface Warfare Center, Crane, IN, USA

Pyrotechnic Chemistry is the fourth in the Pyrotechnic Reference Series produced by the publisher of the *Journal of Pyrotechnics*. It is composed of nineteen stand-alone presentations each authored by pyrotechnic experts in their specialty area.

There are chapters dealing with pyrotechnic materials, thermodynamics, ignition and propagation, burning rate control, black powder, primes and priming, delays and thermal sources, illuminants, solid rocket motor design, spark generation, whistle devices, and the chemistry of colored flames, propellants, glitter, and strobes. Safety aspects are addressed in chapters discussing composition sensitiveness, hazardous chemical compositions, and risk assessment.

One advantage of a compilation of this sort is that it makes it convenient for the reader to find information across a wide range of pyrotechnic topics. The extensive Table of Contents makes this possible. The book contains a large number of figures and tables to support

the text material. There are many examples of application of the information to pyrotechnic practical situations. For the most part, this book addresses the topics thoroughly but perhaps in some cases not to the degree that one would find in a textbook.

The compilation format provided the opportunity for each of the authors to address their topic to a degree sufficient to relate all aspects of their topic to practical pyrotechnics. They accomplished this by providing the underlying theory, the relevant equations, illustrative figures, and tables of supporting data. The result of this is that some chapters are much larger than others.

Another important characteristic of this book is that it addresses many pyrotechnic safety issues in chapters dedicated to this purpose. Not only were the authors able to point out safety concerns with material incompatibilities throughout their individual topics but also they prepared three chapters dedicated to sensitivity of pyrotechnic compositions, hazardous chemical combinations, and risk assessment.

Each chapter includes a set of its own references. These will be valuable to those wishing to explore a subject further. The book is easy to read. The topics are presented in an informative and educational manner. This book not only addresses topics related to fireworks but also addresses topics relevant to military pyrotechnics. It complements other pyrotechnic reference books and will serve as a valuable addition to one's library.