

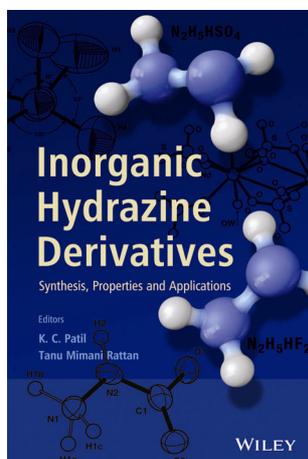
BOOK REVIEWS

This volume will certainly help the reader to gain knowledge and will have a tremendous impact on the science of plant pathology.

1. Janeway Jr, C. A., *Cold Spring Harbor Symp. Quant. Biol.*, 1989, **54**, 1–13.
2. Dangel, J. L. and Jones, J. D. G., *Nature*, 2001, **411**, 826–833; doi: 10.1038/35081161.

R. SRIDHAR

Plot 54, Padmavathy Street,
Santosh Nagar Extn,
Madanandapuram, Porur,
Chennai 600 125, India
e-mail: rangsridhar@yahoo.com



Inorganic Hydrazine Derivatives: Synthesis, Properties and Applications.

K. C. Patil and Tanu Mimani Rattan (eds). John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO198SQ, UK. 2014. 284 pages. Price: US\$ 155.

The chemistry of hydrazine and its derivatives has attracted a lot of attention since the 1950's. The importance of these compounds stems from a variety of factors, which include high energy density, reactivity and their ready availabi-

lity. So it is not surprising that hydrazine and their derivatives find use as fuels, reducing agents, additives and specialty chemicals. Entrants to this research field have to acquire a quick birds-eye view of the chemistry. Because applications of these compounds range from space research to laboratory-scale organic synthesis, it is difficult to get all the information readily in one place. In spite of its relevance, not many books are available on this specialized topic. The most authoritative source of information, apart from the primary literature, became available in 1984 when Eckart Walter Schmidt brought out an excellent treatise. This massive tome on *Hydrazine and its Derivatives: Preparation, Properties, Applications* came out in a second edition in 2001 by the same author with almost double the number of pages (2200). Fourteen years have passed without any authoritative book in this area, although the chemistry surrounding hydrazine has grown by leaps and bounds. So this book is a welcome addition. It is not surprising that the book is dedicated to Schmidt, who has been an inspiration to the editors.

This is probably the only book on this important molecule, which gives the researcher an accelerated start to the chemistry of hydrazine in about 250 pages. The book is a compendium of six chapters edited and authored by scientists with extensive experience in the area of hydrazine chemistry. In a nutshell, it is an excellent introduction to this unique molecule and their inorganic derivatives.

The book is organized in a logical and convenient way, according to the type of compounds formed by hydrazine. If you are not sure about the type of compound, then reading the first chapter is a must which gives you a clear idea of what each chapter is talking about. But if, for example, you know that you are interested in metal hydrazine complexes, you can go directly to the relevant chapter.

This makes it a handy reference tool. Apart from summarizing a large body of data on hydrazine compounds, the book quickly brings the reader up-to-date with the current state of affairs. A special feature of this book is that the authors deal with methods to generate inorganic nanomaterials using hydrazine derivatives.

The strength of the book lies in the fact that it deals not only with synthesis and properties of the inorganic derivatives of hydrazine, but also with several characterization techniques. Since these molecules are often used as propellants and explosives, it is appropriate that the book includes the thermal characterization of key molecules. For those dealing with these molecules in the industry, ready access to these details would be important, especially if they are working in quality control and trouble-shooting. As the authors have characterized several of these molecules using spectroscopy and single crystal X-ray crystallography, they also provide molecular structures of these species. This provides an insight into the chemistry of these molecules.

In conclusion, this book is meant for those who want a quick summary of hydrazine and the new developments in its use. It will be invaluable for those who plan to start research work in this area. For those who are in the industry and chemical plants where hydrazine derivatives are used, the book is a must because in a brief form, a large number of compounds are described. Interestingly, this book is now available on iTunes, Kindle and in the traditional hardback paper format. Also, the price for all of them is the same.

A. G. SAMUELSON

*Department of Inorganic and Physical
Chemistry,
Indian Institute of Science,
Bengaluru 560 012, India
e-mail: ashoka@ipc.iisc.ernet.in*