



High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series)

By David John Young

[Download now](#)

[Read Online](#) 

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young

High Temperature Oxidation and Corrosion of Metals, Second Edition, provides a high level understanding of the fundamental mechanisms of high temperature alloy oxidation. It uses this understanding to develop methods of predicting oxidation rates and the way they change with temperature, gas chemistry, and alloy composition.

The book focuses on the design and selection of alloy compositions which provide optimal resistance to attack by corrosive gases, providing a rigorous treatment of the thermodynamics and kinetics underlying high temperature alloy corrosion.

In addition, it emphasizes quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities, and alloy compositions. Users will find this book to be an indispensable source of information for researchers and students who are dealing with high temperature corrosion.

- Emphasizes quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities, and alloy compositions
- Uses phase diagrams and diffusion paths to analyze and interpret scale structures and internal precipitation distributions
- Presents a detailed examination of corrosion in industrial gases (water vapor effects, carburization and metal dusting, sulphidation)
- Contains numerous micrographs, phase diagrams, and tabulations of relevant thermodynamic and kinetic data
- Combines physical chemistry and materials science methodologies
- Provides two completely new chapters (chapters 11 and 13), and numerous other updates throughout the text



[Download High Temperature Oxidation and Corrosion of Metals ...pdf](#)

 [Read Online High Temperature Oxidation and Corrosion of Meta ...pdf](#)

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series)

By David John Young

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series)

By David John Young

High Temperature Oxidation and Corrosion of Metals, Second Edition, provides a high level understanding of the fundamental mechanisms of high temperature alloy oxidation. It uses this understanding to develop methods of predicting oxidation rates and the way they change with temperature, gas chemistry, and alloy composition.

The book focuses on the design and selection of alloy compositions which provide optimal resistance to attack by corrosive gases, providing a rigorous treatment of the thermodynamics and kinetics underlying high temperature alloy corrosion.

In addition, it emphasizes quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities, and alloy compositions. Users will find this book to be an indispensable source of information for researchers and students who are dealing with high temperature corrosion.

- Emphasizes quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities, and alloy compositions
- Uses phase diagrams and diffusion paths to analyze and interpret scale structures and internal precipitation distributions
- Presents a detailed examination of corrosion in industrial gases (water vapor effects, carburization and metal dusting, sulphidation)
- Contains numerous micrographs, phase diagrams, and tabulations of relevant thermodynamic and kinetic data
- Combines physical chemistry and materials science methodologies
- Provides two completely new chapters (chapters 11 and 13), and numerous other updates throughout the text

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series)

By David John Young Bibliography

- Sales Rank: #2966904 in Books
- Published on: 2016-07-14
- Original language: English
- Number of items: 1
- Dimensions: 9.10" h x 1.70" w x 6.10" l, 3.26 pounds
- Binding: Hardcover
- 758 pages

 [**Download** High Temperature Oxidation and Corrosion of Metals ...pdf](#)

 [**Read Online** High Temperature Oxidation and Corrosion of Meta ...pdf](#)

Download and Read Free Online High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young

Editorial Review

From the Back Cover

High Temperature Oxidation and Corrosion of Metals, 2e is concerned with understanding the fundamental mechanisms of high temperature alloy oxidation. It uses this understanding to develop methods of predicting oxidation rates and the way they change with temperature, gas chemistry and alloy composition. The focus is on designing (or selecting) alloy compositions which provide optimal resistance to attack by corrosive gases. The book provides a rigorous treatment of the thermodynamics and kinetics underlying high temperature alloy corrosion. It emphasizes quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities and alloy compositions. An indispensable source of information for researchers and students who are dealing with high temperature corrosion.

- Emphasises quantitative calculations for predicting reaction rates and the effects of temperature, oxidant activities and alloy compositions.
- Uses phase diagrams and diffusion paths to analyse and interpret scale structures and internal precipitation distributions
- Provides a detailed examination of corrosion in industrial gases (water vapour effects, carburisation and metal dusting, sulphidation)
- Text well supported by numerous micrographs, phase diagrams and tabulations of relevant thermodynamic and kinetic data
- Combines physical chemistry and materials science methodologies
- Contains two completely new chapters (chapters 11 and 13) and numerous updates throughout the text

About the Author

David Young was educated at the University of Melbourne then worked in Canada for 9 years (University of Toronto, McMaster University, National Research Council of Canada) on high temperature metal-gas reactions. Returning to Australia, he worked for BHP Steel Research then joined the University of New South Wales. There he led the School of Materials Science & Engineering for 15 years, and has carried out extensive work on high temperature corrosion in mixed gas atmospheres.

His work has led to over 350 publications, including the books Diffusion in the Condensed State (with J.S. Kirkaldy), Institute of Metals (1988) and High Temperature Oxidation and Corrosion of Metals, 1st ed., Elsevier (2008). It has been recognized by his election to the Australian Academy of Technological Sciences and Engineering, the U. R. Evans Award, Institute of Corrosion Science & Technology, UK, the High Temperature Materials Outstanding Achievement Award, Electrochemical Society, USA and election as Fellow, Electrochemical Society.

Users Review

From reader reviews:

Elaine Rode:

Why don't make it to be your habit? Right now, try to ready your time to do the important act, like looking for your favorite guide and reading a reserve. Beside you can solve your condition; you can add your

knowledge by the e-book entitled High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series). Try to stumble through book High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) as your good friend. It means that it can be your friend when you feel alone and beside regarding course make you smarter than before. Yeah, it is very fortunate for you. The book makes you more confident because you can know almost everything by the book. So, let me make new experience as well as knowledge with this book.

Nellie Nelson:

Now a day people that live in the era just where everything reachable by match the internet and the resources within it can be true or not require people to be aware of each details they get. How individuals to be smart in having any information nowadays? Of course the solution is reading a book. Reading through a book can help persons out of this uncertainty Information mainly this High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) book because book offers you rich facts and knowledge. Of course the data in this book hundred percent guarantees there is no doubt in it as you know.

Robert Hightower:

Many people spending their moment by playing outside together with friends, fun activity with family or just watching TV the whole day. You can have new activity to pass your whole day by examining a book. Ugh, do you consider reading a book can actually hard because you have to use the book everywhere? It's alright you can have the e-book, delivering everywhere you want in your Smartphone. Like High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) which is keeping the e-book version. So, try out this book? Let's find.

Jami Hannah:

You may get this High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) by go to the bookstore or Mall. Simply viewing or reviewing it might to be your solve difficulty if you get difficulties on your knowledge. Kinds of this reserve are various. Not only by written or printed but also can you enjoy this book through e-book. In the modern era like now, you just looking because of your mobile phone and searching what your problem. Right now, choose your current ways to get more information about your publication. It is most important to arrange yourself to make your knowledge are still revise. Let's try to choose correct ways for you.

**Download and Read Online High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series)
By David John Young #MQFGY3CI1LB**

Read High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young for online ebook

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young books to read online.

Online High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young ebook PDF download

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young Doc

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young MobiPocket

High Temperature Oxidation and Corrosion of Metals, Volume 1, Second Edition (Corrosion Series) By David John Young EPub