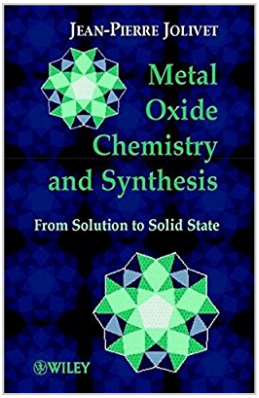

Metal Oxide Chemistry and Synthesis: From Solution to Solid State

By Jean-Pierre Jolivet

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet

The precipitation of metal oxides from aqueous solutions creates nanoparticles with interesting solid state properties, thus building a bridge between solution chemistry and solid state chemistry. This book is the first monograph to deal with the formation of metal oxides from aqueous solutions with emphasis on the formation and physical chemistry of nanoparticles.

Metal Oxide Chemistry and Synthesis: From Solution to Solid State
* Provides a comprehensive introduction to the synthesis of finely divided materials
* Presents the chemistry, physics and applications of these materials
* Builds a bridge between classical solution chemistry and new developments in solid state chemistry
* Introduces an important new area in inorganic chemistry
Part I examines the mechanism of condensation of aqueous cations leading to polynuclear species or lattices, and rationalizes the behaviour of cations in precipitation phenomena by identifying pathways from soluble species to solids. The cation complex is also analysed in relation to the synthesis of some technologically interesting polymetallic oxides, e.g. ferroelectric, ferrimagnetic and supraconductor materials.

Part II is devoted to the surface chemistry of oxide particles. The basic concepts relating to the reactivity of the oxide-solution interface are introduced and applied to various adsorption phenomena, such as aggregation, stability of particle size against ripening, etc. These properties are exploited for the synthesis of nanomaterials for a broad range of applictions such as ceramic powders, catalysts and nanocomposites. This will also be of interest to those wishing to understand geochemical and some biological processes.

As well as being invaluable to researchers and postgraduate students of inorganic chemistry, this book will also be appreciated by solid-state chemists, materials scientists and colloid chemists with an interest in metal oxides.

Metal Oxide Chemistry and Synthesis: From Solution to Solid State

By Jean-Pierre Jolivet

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet

The precipitation of metal oxides from aqueous solutions creates nanoparticles with interesting solid state properties, thus building a bridge between solution chemistry and solid state chemistry. This book is the first monograph to deal with the formation of metal oxides from aqueous solutions with emphasis on the formation and physical chemistry of nanoparticles.

Metal Oxide Chemistry and Synthesis: From Solution to Solid State
* Provides a comprehensive introduction to the synthesis of finely divided materials
* Presents the chemistry, physics and applications of these materials
* Builds a bridge between classical solution chemistry and new developments in solid state chemistry
* Introduces an important new area in inorganic chemistry
Part I examines the mechanism of condensation of aqueous cations leading to polynuclear species or lattices, and rationalizes the behaviour of cations in precipitation phenomena by identifying pathways from soluble species to solids. The cation complex is also analysed in relation to the synthesis of some technologically interesting polymetallic oxides, e.g. ferroelectric, ferrimagnetic and supraconductor materials.

Part II is devoted to the surface chemistry of oxide particles. The basic concepts relating to the reactivity of the oxide-solution interface are introduced and applied to various adsorption phenomena, such as aggregation, stability of particle size against ripening, etc. These properties are exploited for the synthesis of nanomaterials for a broad range of applictions such as ceramic powders, catalysts and nanocomposites. This will also be of interest to those wishing to understand geochemical and some biological processes.

As well as being invaluable to researchers and postgraduate students of inorganic chemistry, this book will also be appreciated by solid-state chemists, materials scientists and colloid chemists with an interest in metal oxides.

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet Bibliography

- Sales Rank: #4793105 in Books
- Published on: 2000-09-27
- Original language: English
- Number of items: 1
- Dimensions: 9.29" h x .99" w x 6.20" l, 1.47 pounds
- Binding: Hardcover
- 338 pages

Editorial Review

Review
"To remedy a...gap in university curricula in teaching the physics and chemistry behind the synthesis of such solutions, Jolivet introduces the mechanism of oxide formation..." (SciTech Book News, Vol. 25, No. 4, December 2001)

From the Back Cover
The precipitation of metal oxides from aqueous solutions creates nanoparticles with interesting solid state properties, thus building a bridge between solution chemistry and solid state chemistry. This book is the first monograph to deal with the formation of metal oxides from aqueous solutions with emphasis on the formation and physical chemistry of nanoparticles.

Metal Oxide Chemistry and Synthesis: From Solution to Solid State
* Provides a comprehensive introduction to the synthesis of finely divided materials
* Presents the chemistry, physics and applications of these materials
* Builds a bridge between classical solution chemistry and new developments in solid state chemistry
* Introduces an important new area in inorganic chemistry
Part I examines the mechanism of condensation of aqueous cations leading to polynuclear species or lattices, and rationalizes the behaviour of cations in precipitation phenomena by identifying pathways from soluble species to solids. The cation complex is also analysed in relation to the synthesis of some technologically interesting polymetallic oxides, e.g. ferroelectric, ferrimagnetic and supraconductor materials.

Part II is devoted to the surface chemistry of oxide particles. The basic concepts relating to the reactivity of the oxide-solution interface are introduced and applied to various adsorption phenomena, such as aggregation, stability of particle size against ripening, etc. These properties are exploited for the synthesis of nanomaterials for a broad range of applictions such as ceramic powders, catalysts and nanocomposites. This will also be of interest to those wishing to understand geochemical and some biological processes.

As well as being invaluable to researchers and postgraduate students of inorganic chemistry, this book will also be appreciated by solid-state chemists, materials scientists and colloid chemists with an interest in metal oxides.

About the Author
Jean-Pierre Jolivet, Université Pierre et Marie Curie, Paris
Marc Henry, Université Louis Pasteur, Strasbourg
Jacques Livage, Université Pierre et Marie Curie, Paris

Users Review

From reader reviews:

Kathleen Young:

Have you spare time for any day? What do you do when you have a lot more or little spare time? Yep, you can choose the suitable activity to get spend your time. Any person spent their particular spare time to take a

stroll, shopping, or went to the particular Mall. How about open or read a book allowed Metal Oxide Chemistry and Synthesis: From Solution to Solid State? Maybe it is to become best activity for you. You recognize beside you can spend your time together with your favorite's book, you can wiser than before. Do you agree with their opinion or you have some other opinion?

Clarence McKeever:

The book Metal Oxide Chemistry and Synthesis: From Solution to Solid State make one feel enjoy for your spare time. You can use to make your capable considerably more increase. Book can being your best friend when you getting pressure or having big problem along with your subject. If you can make reading through a book Metal Oxide Chemistry and Synthesis: From Solution to Solid State to get your habit, you can get much more advantages, like add your own capable, increase your knowledge about many or all subjects. It is possible to know everything if you like open and read a reserve Metal Oxide Chemistry and Synthesis: From Solution to Solid State. Kinds of book are a lot of. It means that, science reserve or encyclopedia or some others. So , how do you think about this book?

Marie Forrest:

A lot of people always spent their particular free time to vacation or perhaps go to the outside with them friends and family or their friend. Do you know? Many a lot of people spent that they free time just watching TV, or even playing video games all day long. In order to try to find a new activity this is look different you can read a new book. It is really fun for yourself. If you enjoy the book that you just read you can spent all day long to reading a book. The book Metal Oxide Chemistry and Synthesis: From Solution to Solid State it doesn't matter what good to read. There are a lot of people who recommended this book. We were holding enjoying reading this book. In case you did not have enough space to develop this book you can buy the e-book. You can m0ore simply to read this book out of your smart phone. The price is not to cover but this book features high quality.

Melissa Fernandez:

You can find this Metal Oxide Chemistry and Synthesis: From Solution to Solid State by visit the bookstore or Mall. Just simply viewing or reviewing it may to be your solve problem if you get difficulties for your knowledge. Kinds of this e-book are various. Not only through written or printed but additionally can you enjoy this book by simply e-book. In the modern era similar to now, you just looking of your mobile phone and searching what your problem. Right now, choose your own ways to get more information about your book. It is most important to arrange yourself to make your knowledge are still up-date. Let's try to choose correct ways for you.

#HXZCIM4F12J

Read Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet for online ebook

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet 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 Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet books to read online.

Online Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet ebook PDF download

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet Doc

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet Mobipocket

Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet EPub

HXZCIM4F12J: Metal Oxide Chemistry and Synthesis: From Solution to Solid State By Jean-Pierre Jolivet