

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics)

From Brand: Springer

Download now

Read Online →

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer

Topological Modelling of Nanostructures and Extended Systems completes and expands upon the previously published title within this series: *The Mathematics and Topology of Fullerenes* (Vol. 4, 2011) by gathering the latest research and advances in materials science at nanoscale. It introduces a new speculative area and novel concepts like topochemical reactions and colored reactive topological indices and provides a better understanding of the physical-chemical behaviors of extended systems. Moreover, a charming new family of space-filling fullerene crystals is here analyzed for the first time.

Particular attention is given to the fundamental influences exercised by long-range connectivity topological mechanisms on the chemical and physical properties of carbon nanostructures. Systems consisting in graphenic layers with structural and topological defects are investigated in their electronic and magnetic behaviors also in presence of metallic particles.

More specifically, the book focuses on:

- Electronic Properties of low dimensional nanostructures including negatively-curved carbon surfaces;
Pariser-Parr-Pople model hamiltonian approach to graphene studies;
- Topochemistry and Toporeactivity of extended sp^2 -nanocarbons: PAH, fullerenes, nanoribbons, Moebius-like nanoribbons, nanotubes and grapheme;
- Novel class of crystal networks arising from spanning fullerenes;
- Nanostructures and eigenvectors of matrices and an extended treatise of topological invariants;
- Enumeration hetero-fullerenes by Polya theory.

Topological Modelling of Nanostructures and Extended Systems represents a valuable resource to advances graduates and researchers working in mathematics, chemistry, physics and material science.

 [Download Topological Modelling of Nanostructures and Extend ...pdf](#)

 [Read Online Topological Modelling of Nanostructures and Extende ...pdf](#)

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics)

From Brand: Springer

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer

Topological Modelling of Nanostructures and Extended Systems completes and expands upon the previously published title within this series: *The Mathematics and Topology of Fullerenes* (Vol. 4, 2011) by gathering the latest research and advances in materials science at nanoscale. It introduces a new speculative area and novel concepts like topochemical reactions and colored reactive topological indices and provides a better understanding of the physical-chemical behaviors of extended systems. Moreover, a charming new family of space-filling fullerenic crystals is here analyzed for the first time.

Particular attention is given to the fundamental influences exercised by long-range connectivity topological mechanisms on the chemical and physical properties of carbon nanostructures. Systems consisting in graphenic layers with structural and topological defects are investigated in their electronic and magnetic behaviors also in presence of metallic particles.

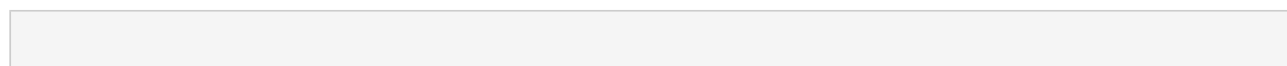
More specifically, the book focuses on:

- Electronic Properties of low dimensional nanostructures including negatively-curved carbon surfaces; Pariser-Parr-Pople model hamiltonian approach to graphene studies;
- Topochemistry and Toporeactivity of extended sp²-nanocarbons: PAH, fullerenes, nanoribbons, Moebius-like nanoribbons, nanotubes and grapheme;
- Novel class of crystal networks arising from spanning fullerenes;
- Nanostructures and eigenvectors of matrices and an extended treatise of topological invariants;
- Enumeration hetero-fullerenes by Polya theory.

Topological Modelling of Nanostructures and Extended Systems represents a valuable resource to advances graduates and researchers working in mathematics, chemistry, physics and material science.

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer Bibliography

- Brand: Brand: Springer
- Published on: 2013-05-19
- Original language: English
- Number of items: 1
- Dimensions: 9.41" h x 1.42" w x 6.44" l, 2.81 pounds
- Binding: Hardcover
- 575 pages



 [Download Topological Modelling of Nanostructures and Extend ...pdf](#)

 [Read Online Topological Modelling of Nanostructures and Exte ...pdf](#)

Download and Read Free Online Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer

Editorial Review

From the Back Cover

Topological Modelling of Nanostructures and Extended Systems completes and expands upon the previously published title within this series: The Mathematics and Topology of Fullerenes (Vol. 4, 2011) by gathering the latest research and advances in materials science at nanoscale. It introduces a new speculative area and novel concepts like topochemical reactions and colored reactive topological indices and provides a better understanding of the physical-chemical behaviors of extended systems. Moreover, a charming new family of space-filling fullerene crystals is here analyzed for the first time. Particular attention is given to the fundamental influences exercised by long-range connectivity topological mechanisms on the chemical and physical properties of carbon nanostructures. Systems consisting in graphenic layers with structural and topological defects are investigated in their electronic and magnetic behaviors also in presence of metallic particles.

More specifically, the book focuses on:

- Electronic Properties of low dimensional nanostructures including negatively-curved carbon surfaces; Pariser-Parr-Pople model hamiltonian approach to graphene studies;
- Topochemistry and Toporeactivity of extended sp^2 -nanocarbons: PAH, fullerenes, nanoribbons, Moebius-like nanoribbons, nanotubes and grapheme;
- Novel class of crystal networks arising from spanning fullerenes;
- Nanostructures and eigenvectors of matrices and an extended treatise of topological invariants;
- Enumeration hetero-fullerenes by Polya theory.

Topological Modelling of Nanostructures and Extended Systems represents a valuable resource to advances graduates and researchers working in mathematics, chemistry, physics and material science.

About the Author

Prof. Dr. Ali Reza Ashrafi, University of Kashan, Department of Mathematics, Kashan, Iran

Prof. Dr. Franco Cataldo, Tor Vergata University, Department of Materials Science, Rome, Italy

Prof. Dr. Ali Iranmanesh, Tarbiat Modares University, Department of Mathematics, Tehran, Iran

Dr. Ottorino Ori, Actinium Chemical Research, Rome, Italy

Users Review

From reader reviews:

Johnny Cervantes:

Hey guys, do you really want to find a new book to read? Maybe the book with the subject Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) suitable to you? The particular book was written by a popular writer in this era. The particular book entitled Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) is a single of

several books this everyone read now. This specific book was inspired lots of people in the world. When you read this book you will enter the new shape that you ever know prior to. The author explained their plan in the simple way, so all of people can easily to comprehend the core of this guide. This book will give you a large amount of information about this world now. To help you to see the represented of the world in this book.

Ryan Wysocki:

Reading a reserve can be one of a lot of action that everyone in the world really likes. Do you like reading book and so. There are a lot of reasons why people enjoy it. First reading a e-book will give you a lot of new information. When you read a reserve you will get new information due to the fact book is one of various ways to share the information or their idea. Second, reading through a book will make you actually more imaginative. When you examining a book especially fictional book the author will bring that you imagine the story how the people do it anything. Third, you are able to share your knowledge to some others. When you read this Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics), it is possible to tells your family, friends and also soon about yours book. Your knowledge can inspire average, make them reading a book.

Andrea Quirk:

A lot of people always spent all their free time to vacation or perhaps go to the outside with them loved ones or their friend. Are you aware? Many a lot of people spent many people free time just watching TV, or playing video games all day long. If you want to try to find a new activity this is look different you can read a new book. It is really fun for you personally. If you enjoy the book that you just read you can spent all day long to reading a publication. The book Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) it is quite good to read. There are a lot of folks that recommended this book. These people were enjoying reading this book. When you did not have enough space to develop this book you can buy the actual e-book. You can m0ore effortlessly to read this book out of your smart phone. The price is not to cover but this book has high quality.

Santiago Bronson:

The book untitled Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) contain a lot of information on the idea. The writer explains the girl idea with easy method. The language is very easy to understand all the people, so do not really worry, you can easy to read it. The book was published by famous author. The author will take you in the new period of time of literary works. It is possible to read this book because you can keep reading your smart phone, or device, so you can read the book throughout anywhere and anytime. In a situation you wish to purchase the e-book, you can start their official web-site in addition to order it. Have a nice go through.

**Download and Read Online Topological Modelling of
Nanostructures and Extended Systems (Carbon Materials:
Chemistry and Physics) From Brand: Springer #XLAHPI3M8W7**

Read Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer for online ebook

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer 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 Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer books to read online.

Online Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer ebook PDF download

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer Doc

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer Mobipocket

Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer EPub

XLAHPI3M8W7: Topological Modelling of Nanostructures and Extended Systems (Carbon Materials: Chemistry and Physics) From Brand: Springer