



Molecular Orbitals and Organic Chemical Reactions

By Ian Fleming

Download now

Read Online ➔

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming

Winner of the PROSE Award for Chemistry & Physics 2010

Acknowledging the very best in professional and scholarly publishing, the annual PROSE Awards recognise publishers' and authors' commitment to pioneering works of research and for contributing to the conception, production, and design of landmark works in their fields. Judged by peer publishers, librarians, and medical professionals, Wiley are pleased to congratulate Professor Ian Fleming, winner of the PROSE Award in Chemistry and Physics for *Molecular Orbitals and Organic Chemical Reactions*.

Molecular orbital theory is used by chemists to describe the arrangement of electrons in chemical structures. It is also a theory capable of giving some insight into the forces involved in the making and breaking of chemical bonds—the chemical reactions that are often the focus of an organic chemist's interest. Organic chemists with a serious interest in understanding and explaining their work usually express their ideas in molecular orbital terms, so much so that it is now an essential component of every organic chemist's skills to have some acquaintance with molecular orbital theory.

Molecular Orbitals and Organic Chemical Reactions is both a simplified account of molecular orbital theory and a review of its applications in organic chemistry; it provides a basic introduction to the subject and a wealth of illustrative examples. In this book molecular orbital theory is presented in a much simplified, and entirely non-mathematical language, accessible to every organic chemist, whether student or research worker, whether mathematically competent or not. Topics covered include:

- Molecular Orbital Theory
- Molecular Orbitals and the Structures of Organic Molecules
- Chemical Reactions — How Far and How Fast
- Ionic Reactions — Reactivity
- Ionic Reactions — Stereochemistry
- Pericyclic Reactions
- Radical Reactions
- Photochemical Reactions

Slides for lectures and presentations are available on the supplementary website: www.wiley.com/go/fleming_student

Molecular Orbitals and Organic Chemical Reactions: Student Edition is an invaluable first textbook on this important subject for students of organic, physical organic and computational chemistry.

The Reference Edition edition takes the content and the same non-mathematical approach of the Student Edition, and adds extensive extra subject coverage, detail and over 1500 references. The additional material adds a deeper understanding of the models used, and includes a broader range of applications and case studies. Providing a complete in-depth reference for a more advanced audience, this edition will find a place on the bookshelves of researchers and advanced students of organic, physical organic and computational chemistry. Further information can be viewed [here](#).

"These books are the result of years of work, which began as an attempt to write a second edition of my 1976 book *Frontier Orbitals and Organic Chemical Reactions*. I wanted to give a rather more thorough introduction to molecular orbitals, while maintaining my focus on the organic chemist who did not want a mathematical account, but still wanted to understand organic chemistry at a physical level. I'm delighted to win this prize, and hope a new generation of chemists will benefit from these books."

-Professor Ian Fleming

 [Download Molecular Orbitals and Organic Chemical Reactions ...pdf](#)

 [Read Online Molecular Orbitals and Organic Chemical Reaction ...pdf](#)

Molecular Orbitals and Organic Chemical Reactions

By Ian Fleming

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming

Winner of the PROSE Award for Chemistry & Physics 2010

Acknowledging the very best in professional and scholarly publishing, the annual PROSE Awards recognise publishers' and authors' commitment to pioneering works of research and for contributing to the conception, production, and design of landmark works in their fields. Judged by peer publishers, librarians, and medical professionals, Wiley are pleased to congratulate Professor Ian Fleming, winner of the PROSE Award in Chemistry and Physics for *Molecular Orbitals and Organic Chemical Reactions*.

Molecular orbital theory is used by chemists to describe the arrangement of electrons in chemical structures. It is also a theory capable of giving some insight into the forces involved in the making and breaking of chemical bonds—the chemical reactions that are often the focus of an organic chemist's interest. Organic chemists with a serious interest in understanding and explaining their work usually express their ideas in molecular orbital terms, so much so that it is now an essential component of every organic chemist's skills to have some acquaintance with molecular orbital theory.

Molecular Orbitals and Organic Chemical Reactions is both a simplified account of molecular orbital theory and a review of its applications in organic chemistry; it provides a basic introduction to the subject and a wealth of illustrative examples. In this book molecular orbital theory is presented in a much simplified, and entirely non-mathematical language, accessible to every organic chemist, whether student or research worker, whether mathematically competent or not. Topics covered include:

- Molecular Orbital Theory
- Molecular Orbitals and the Structures of Organic Molecules
- Chemical Reactions — How Far and How Fast
- Ionic Reactions — Reactivity
- Ionic Reactions — Stereochemistry
- Pericyclic Reactions
- Radical Reactions
- Photochemical Reactions

Slides for lectures and presentations are available on the supplementary website: www.wiley.com/go/fleming_student

Molecular Orbitals and Organic Chemical Reactions: Student Edition is an invaluable first textbook on this important subject for students of organic, physical organic and computational chemistry.

The Reference Edition takes the content and the same non-mathematical approach of the Student Edition, and adds extensive extra subject coverage, detail and over 1500 references. The additional material adds a deeper understanding of the models used, and includes a broader range of applications and case studies. Providing a complete in-depth reference for a more advanced audience, this edition will find a place on the bookshelves of researchers and advanced students of organic, physical organic and computational chemistry. Further information can be viewed [here](#).

"These books are the result of years of work, which began as an attempt to write a second edition of my 1976 book *Frontier Orbitals and Organic Chemical Reactions*. I wanted to give a rather more thorough introduction to molecular orbitals, while maintaining my focus on the organic chemist who did not want a mathematical account, but still wanted to understand organic chemistry at a physical level. I'm delighted to win this prize, and hope a new generation of chemists will benefit from these books."

-Professor Ian Fleming

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming Bibliography

- Rank: #1251264 in eBooks
- Published on: 2011-08-31
- Released on: 2011-08-31
- Format: Kindle eBook

 [Download Molecular Orbitals and Organic Chemical Reactions ...pdf](#)

 [Read Online Molecular Orbitals and Organic Chemical Reaction ...pdf](#)

Editorial Review

Review

"Fleming uses nonquantitative molecular orbital theory to explain many common phenomena in organic chemistry. As such, this is a very powerful tool for students of advanced organic chemistry. Much of what is taken simply on faith or with some hand waving in sophomore organic chemistry can be readily explained with molecular orbital theory, which is usually considered too advanced for students at that level. Though this book could be used as the primary textbook for a course solely on molecular orbitals in organic chemistry, it will more likely be used as a reference source for an advanced organic chemistry course for upper-level undergraduates or graduate students." (*CHOICE*, August 2010)

"The new 'Fleming' is a must for every lecturer and every student of chemistry—a fantastic book. In this new form the textbook will last for another 30 years and remain as fresh as did its predecessor!" (*Angewandte Chemie International Edition* March 2010)

From the Back Cover

Molecular orbital theory I used by chemists to describe the arrangement of electrons in chemical structures. It is also a theory capable of giving some insight into the forces involved in the making and breaking of chemical bonds – the chemical reactions that are often the focus of an organic and breaking of chemical bonds – the chemical reactions that are often the focus of an organic chemist's interest. Organic chemists with a serious interest in understanding and explaining their work usually express their ideas in molecular orbital terms, so much so that it is now an essential component or every organic chemist's skills to have some acquaintance with molecular orbital theory.

Molecular Orbitals and Organic Chemical Reactions is both a simplified account of molecular orbital theory and a review of its applications in organic chemistry; it provides a basic introduction to the subject and a wealth of illustrative examples. In this book molecular orbital theory is presented in a much simplified, and entirely non-mathematical language, accessible to every organic chemist, whether student or research worker, whether mathematically competent or not. Topics covered include:

- Molecular Orbital Theory
- Molecular Orbitals and the Structures of Organic Molecules
- Chemical Reactions – How Far and How Fast
- Ionic Reactions – Reactivity
- Ionic Reactions – Stereochemistry
- Pericyclic Reactions
- Radical Reactions
- Photochemical Reactions

Molecular Orbitals and Organic Chemical Reactions: Student Edition serves in a sense as a second edition of the author's influential earlier book *Frontier Orbitals and Organic Chemical Reactions*, but has been completely rewritten, greatly enlarging the chapters on molecular orbital theory itself, and on the theoretical basis for the principle of hard and soft acids and bases, and a whole chapter on the stereochemistry of the fundamental organic reactions. Correlation diagrams have been added to the discussion of pericyclic chemistry, and a great deal more in that, the largest chapter. A number of new topics, both omissions from

the earlier book and work that has taken place in the intervening years, are included, and there are more words of caution in discussing frontier orbital theory itself.

Molecular Orbitals and Organic Chemical Reactions: Student Edition is an individual textbook on this important subject for student or organic, physical organic and computational chemistry.

Users Review

From reader reviews:

Zola Campbell:

The book *Molecular Orbitals and Organic Chemical Reactions* will bring you to definitely the new experience of reading a new book. The author style to clarify the idea is very unique. In case you try to find new book to see, this book very acceptable to you. The book *Molecular Orbitals and Organic Chemical Reactions* is much recommended to you to study. You can also get the e-book from the official web site, so you can quickly to read the book.

Kurt Chapman:

The book untitled *Molecular Orbitals and Organic Chemical Reactions* is the reserve that recommended to you to see. You can see the quality of the book content that will be shown to anyone. The language that author use to explained their way of doing something is easily to understand. The copy writer was did a lot of analysis when write the book, so the information that they share for your requirements is absolutely accurate. You also could get the e-book of *Molecular Orbitals and Organic Chemical Reactions* from the publisher to make you more enjoy free time.

Franklin Richter:

Don't be worry should you be afraid that this book will certainly filled the space in your house, you could have it in e-book method, more simple and reachable. That *Molecular Orbitals and Organic Chemical Reactions* can give you a lot of pals because by you checking out this one book you have issue that they don't and make a person more like an interesting person. This particular book can be one of one step for you to get success. This book offer you information that perhaps your friend doesn't realize, by knowing more than different make you to be great individuals. So , why hesitate? We should have *Molecular Orbitals and Organic Chemical Reactions*.

Michelle Garrett:

A lot of book has printed but it is unique. You can get it by net on social media. You can choose the top book for you, science, amusing, novel, or whatever simply by searching from it. It is called of book *Molecular Orbitals and Organic Chemical Reactions*. Contain your knowledge by it. Without leaving the printed book, it may add your knowledge and make you happier to read. It is most crucial that, you must aware about

reserve. It can bring you from one destination to other place.

Download and Read Online Molecular Orbitals and Organic Chemical Reactions By Ian Fleming #I7VS6RHJYN4

Read Molecular Orbitals and Organic Chemical Reactions By Ian Fleming for online ebook

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming 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 Molecular Orbitals and Organic Chemical Reactions By Ian Fleming books to read online.

Online Molecular Orbitals and Organic Chemical Reactions By Ian Fleming ebook PDF download

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming Doc

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming Mobipocket

Molecular Orbitals and Organic Chemical Reactions By Ian Fleming EPub

I7VS6RHJYN4: Molecular Orbitals and Organic Chemical Reactions By Ian Fleming