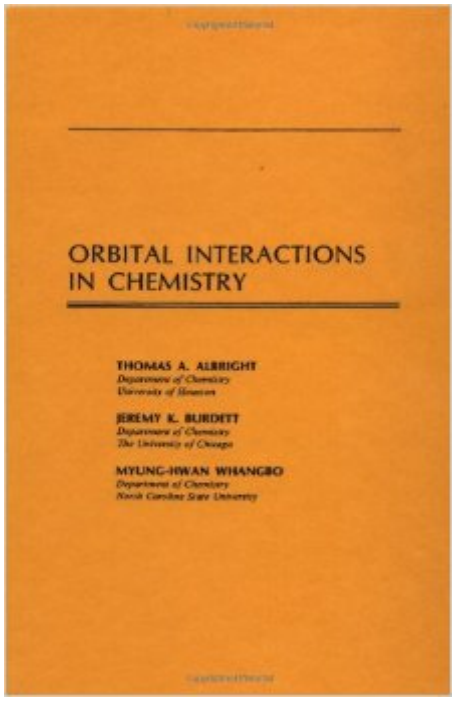
Orbital Interactions In Chemistry



Synopsis

This advanced text on applied molecular orbital theory covers organic, organometallic, inorganic and solid state chemistry to demonstrate how common orbital situations arise throughout the whole chemical spectrum. Highlights the relationships among orbitals, enabling readers to see the theoretical connections across the traditional boundaries of chemistry subdisciplines, thus simplifying structure and reactivity problems.

Book Information

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Average Customer Review: 4.7 out of 5 starsÂ Â See all reviewsÂ (3 customer reviews)

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Customer Reviews

This book is an indispensible source of straightforward description of qualitative MO theory for any organic, organometallic, coordination, or materials chemist who uses MO theory. As a professor, I use it for my graduate class in inorganic chemistry regularly.

I got this book for my graduate inorganic course. This book was very helpful for looking at atomic/molecular orbitals, their wavefunctions and how the orbitals interact with each other. I will be keeping it around for reference for sure.

Yes, you may say this book is out-of-dated. Neither about nano- nor bio-. Also not green-. But this book is about one of the most essential languages of modern chemistry, the MO. When I took Quantum Chemistry classes, I always felt like mimicking physicists. After perturbation methods were introduced, then my lecturer just applied them to some spectroscopic problems and atoms in

external fields, etc. They were good, but those are always dealt in the physics classes. Originality is with them! Why bother with them in the Quantum Chemistry again? This book is whole different. They show how chemists can take the advantage of the perturbation theory. Structural distortion, functional groups, and even chemical reaction. All these things are described with simple perturbation picture and in unified way. As the title tells, we can understand orbital interaction if we have a basic understanding on the elementary perturbation theory which is usually covered in undergraduate Quantum Chemistry classes. Only with a help of this book, I can understand the diagrams in Physical Chemistry, Inorganic Chemistry, or even in General Chemistry. Math required is just undergrad, but the application in the book is profound. I have been heard that two of the authors are now working on their 2nd edition.

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