

Electrons in Molecules

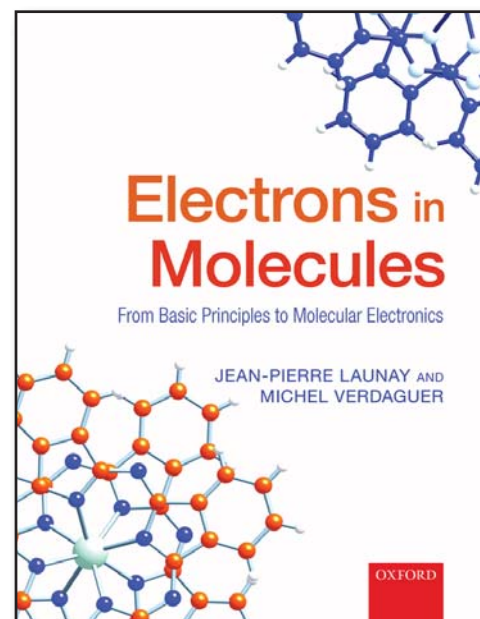
From Basic Principles to Molecular Electronics

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This book provides the reader with essential keys to a unified understanding of the rapidly expanding field of molecular materials and devices: electronic structures and bonding, magnetic, electrical and photo-physical properties, and the mastering of electrons in molecular electronics.

Chemists will discover how basic quantum concepts allow us to understand the relations between structures, electronic structures, and properties of molecular entities and assemblies, and to design elaborate new molecules and useful materials. Physicists and engineers will realize how the molecular world fits in with their need for systems flexible enough to check theories or provide original solutions to exciting new scientific and technological challenges. The non-specialist will find out how molecules behave in electronics at the most minute, sub-nanosize level.

Essential for: Undergraduate and graduate students, and post-doctoral fellows and faculty members in chemistry, physics, material sciences, and nanoscience.



- A wide range of electronic properties treated in an original, integrated approach
- Using qualitative, evidence-based discussion wherever possible
- Selected examples show path from basic principles to new materials and applications

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