Molecular electronics is a fast moving and exciting subject that exploits the electronic and optoelectronic properties of organic and biological materials. Areas of application and potential application range from chemical and biochemical sensors to plastic light emitting displays.

Molecular Electronics: From Principles to Practice provides an introduction to the interdisciplinary subject of molecular electronics with detailed examples of applications. The topics covered include:

- Scope of Molecular Electronics
- Materials Foundations
- Electrical Conductivity
- Optical Phenomena
- Electroactive Organic Compounds
- Tools for Molecular Electronics
- Thin Film Processing and Device Fabrication
- Liquid Crystals and Devices
- Plastic Electronics
- Chemical Sensors and Actuators
- Molecular-Scale Electronics
- Bioelectronics

This book is aimed at final year science or engineering undergraduate students. It will also be accessible to readers from a wide range of backgrounds (from physicists, chemists, biologists, electrical engineers to materials scientists) in both industry and academia.
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2.3 Chemical bonding.

2.4 Bonding in organic compounds.

2.5 Crystalline and noncrystalline materials.

2.6 Polymers.

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