



# Exploring Quantum Physics through Hands-on Projects

By David Prutchi, Shanni Prutchi

Download now

Read Online 

**Exploring Quantum Physics through Hands-on Projects** By David Prutchi, Shanni Prutchi

**Build an intuitive understanding of the principles behind quantum mechanics through practical construction and replication of original experiments**

With easy-to-acquire, low-cost materials and basic knowledge of algebra and trigonometry, *Exploring Quantum Physics through Hands-on Projects* takes readers step by step through the process of re-creating scientific experiments that played an essential role in the creation and development of quantum mechanics.

Presented in near chronological order—from discoveries of the early twentieth century to new material on entanglement—this book includes question- and experiment-filled chapters on:

- Light as a Wave
- Light as Particles
- Atoms and Radioactivity
- The Principle of Quantum Physics
- Wave/Particle Duality
- The Uncertainty Principle
- Schrödinger (and his Zombie Cat)
- Entanglement

From simple measurements of Planck's constant to testing violations of Bell's inequalities using entangled photons, *Exploring Quantum Physics through Hands-on Projects* not only immerses readers in the process of quantum mechanics, it provides insight into the history of the field—how the theories and discoveries apply to our world not only today, but also tomorrow.

By immersing readers in groundbreaking experiments that can be performed at home, school, or in the lab, this first-ever, hands-on book successfully demystifies the world of quantum physics for all who seek to explore it—from science enthusiasts and undergrad physics students to practicing physicists and engineers.

 [Download Exploring Quantum Physics through Hands-on Project ...pdf](#)

 [Read Online Exploring Quantum Physics through Hands-on Proj ...pdf](#)

# Exploring Quantum Physics through Hands-on Projects

By David Prutchi, Shanni Prutchi

**Exploring Quantum Physics through Hands-on Projects** By David Prutchi, Shanni Prutchi

**Build an intuitive understanding of the principles behind quantum mechanics through practical construction and replication of original experiments**

With easy-to-acquire, low-cost materials and basic knowledge of algebra and trigonometry, *Exploring Quantum Physics through Hands-on Projects* takes readers step by step through the process of re-creating scientific experiments that played an essential role in the creation and development of quantum mechanics.

Presented in near chronological order—from discoveries of the early twentieth century to new material on entanglement—this book includes question- and experiment-filled chapters on:

- Light as a Wave
- Light as Particles
- Atoms and Radioactivity
- The Principle of Quantum Physics
- Wave/Particle Duality
- The Uncertainty Principle
- Schrödinger (and his Zombie Cat)
- Entanglement

From simple measurements of Planck's constant to testing violations of Bell's inequalities using entangled photons, *Exploring Quantum Physics through Hands-on Projects* not only immerses readers in the process of quantum mechanics, it provides insight into the history of the field—how the theories and discoveries apply to our world not only today, but also tomorrow.

By immersing readers in groundbreaking experiments that can be performed at home, school, or in the lab, this first-ever, hands-on book successfully demystifies the world of quantum physics for all who seek to explore it—from science enthusiasts and undergrad physics students to practicing physicists and engineers.

**Exploring Quantum Physics through Hands-on Projects** By David Prutchi, Shanni Prutchi

## Bibliography

- Sales Rank: #797318 in Books
- Brand: Brand: Wiley
- Published on: 2012-02-07
- Original language: English
- Number of items: 1
- Dimensions: 9.20" h x .65" w x 6.20" l, .95 pounds
- Binding: Paperback
- 288 pages

 [\*\*Download\*\* Exploring Quantum Physics through Hands-on Project ...pdf](#)

 [\*\*Read Online\*\* Exploring Quantum Physics through Hands-on Proj ...pdf](#)

## Download and Read Free Online Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi

---

### Editorial Review

#### Review

“This unique book can also be highly recommended as supplementary reading, even in the absence of actual ‘hands-on’ participation in the many projects described.” (*Contemporary Physics*, 6 December 2013)

#### From the Back Cover

Build an intuitive understanding of the principles behind quantum mechanics through practical construction and replication of original experiments

With easy-to-acquire, low-cost materials and basic knowledge of algebra and trigonometry, *Exploring Quantum Physics through Hands-on Projects* takes readers step by step through the process of re-creating scientific experiments that played an essential role in the creation and development of quantum mechanics.

Presented in near chronological order—from discoveries of the early twentieth century to new material on entanglement—this book includes question- and experiment-filled chapters on:

- Light as a Wave
- Light as Particles
- Atoms and Radioactivity
- The Principle of Quantum Physics
- Wave/Particle Duality
- The Uncertainty Principle
- Schrödinger (and his Zombie Cat)
- Entanglement

From simple measurements of Planck's constant to testing violations of Bell's inequalities using entangled photons, *Exploring Quantum Physics through Hands-on Projects* not only immerses readers in the process of quantum mechanics, it gives them insight into the history of the field—how the theories and discoveries apply to our world not only today, but also tomorrow.

By immersing readers in groundbreaking experiments that can be performed at home, school, or in the lab, this first-ever, hands-on book successfully demystifies the world of quantum physics for all who seek to explore it—from science enthusiasts and undergrad physics students to practicing physicists and engineers.

#### About the Author

DAVID PRUTCHI, PhD, is Vice President of Engineering at Impulse Dynamics. An adept do-it-yourselfer, he is dedicated to bringing cutting-edge experimental physics within the grasp of fellow science buffs. In addition to being the lead author of *Design and Development of Medical Electronic Instrumentation* (Wiley), he has published over 30 scientific publications and holds over 70 patents.

SHANNI R. PRUTCHI is a high-school junior at Jack M. Barrack Hebrew Academy in Bryn Mawr, Pennsylvania. An avid science and engineering enthusiast, she conducts research with her father in the areas of radio astronomy and quantum physics.

## Users Review

### From reader reviews:

#### **Belinda Bedard:**

Have you spare time for just a day? What do you do when you have considerably more or little spare time? Yep, you can choose the suitable activity with regard to spend your time. Any person spent their particular spare time to take a go walking, shopping, or went to typically the Mall. How about open or perhaps read a book allowed Exploring Quantum Physics through Hands-on Projects? Maybe it is for being best activity for you. You already know beside you can spend your time along with your favorite's book, you can cleverer than before. Do you agree with the opinion or you have other opinion?

#### **Kevin Diaz:**

People live in this new time of lifestyle always make an effort to and must have the free time or they will get wide range of stress from both day to day life and work. So , whenever we ask do people have time, we will say absolutely of course. People is human not a robot. Then we question again, what kind of activity are there when the spare time coming to an individual of course your answer will probably unlimited right. Then ever try this one, reading publications. It can be your alternative with spending your spare time, typically the book you have read is Exploring Quantum Physics through Hands-on Projects.

#### **Herlinda Jerkins:**

With this era which is the greater person or who has ability to do something more are more important than other. Do you want to become considered one of it? It is just simple way to have that. What you must do is just spending your time almost no but quite enough to have a look at some books. On the list of books in the top list in your reading list is Exploring Quantum Physics through Hands-on Projects. This book that is qualified as The Hungry Inclines can get you closer in growing to be precious person. By looking upwards and review this guide you can get many advantages.

#### **Helen Christopher:**

A lot of people said that they feel weary when they reading a book. They are directly felt this when they get a half parts of the book. You can choose typically the book Exploring Quantum Physics through Hands-on Projects to make your own personal reading is interesting. Your own skill of reading skill is developing when you such as reading. Try to choose straightforward book to make you enjoy you just read it and mingle the feeling about book and studying especially. It is to be very first opinion for you to like to open a book and learn it. Beside that the reserve Exploring Quantum Physics through Hands-on Projects can to be a newly purchased friend when you're feel alone and confuse using what must you're doing of these time.

**Download and Read Online Exploring Quantum Physics through  
Hands-on Projects By David Prutchi, Shanni Prutchi  
#VOPS2R0MWC6**

# **Read Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi for online ebook**

Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi 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 Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi books to read online.

## **Online Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi ebook PDF download**

**Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi Doc**

**Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi Mobipocket**

**Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi EPub**

**VOPS2R0MWC6: Exploring Quantum Physics through Hands-on Projects By David Prutchi, Shanni Prutchi**