

# Unlock the Future of Transportation with Hybrid Electric Vehicle Design and Control

In a rapidly evolving automotive landscape, hybrid electric vehicles (HEVs) are paving the way for a greener, more sustainable future. With their ability to combine the efficiency of electric motors with the power and range of gasoline engines, HEVs offer a compelling solution to the challenges of modern transportation.

To harness the full potential of HEV technology, comprehensive knowledge of their design and control is essential. The book "Hybrid Electric Vehicle Design and Control" provides an in-depth exploration of every aspect of HEV development, from concept to execution.



## Hybrid Electric Vehicle Design and Control: Intelligent Omnidirectional Hybrids by Yangsheng Xu

★★★★★ 5 out of 5

Language : English  
File size : 8662 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Print length : 304 pages



## Content Overview

- **Fundamentals of HEV Technology:** Understand the basic principles, configurations, and powertrain components of HEVs.

- **Electric Machine and Power Electronics:** Delve into the theory and design of electric motors, generators, and power converters used in HEVs.
- **Battery and Energy Management:** Learn about the different types of batteries used in HEVs, their characteristics, and techniques for optimal management.
- **Hybrid Control Strategies:** Explore various control algorithms for HEVs, including energy management, power split, and torque distribution.
- **Performance and Optimization:** Analyze the performance metrics of HEVs, such as fuel economy, emissions, and drivability, and identify strategies for optimization.
- **Case Studies and Real-World Applications:** Gain practical insights from real-world HEV designs and their applications in automotive industries.

## **Benefits for Readers**

Whether you're a student, engineer, or industry professional, "Hybrid Electric Vehicle Design and Control" offers invaluable benefits:

- **Comprehensive Knowledge:** Gain a thorough understanding of the fundamentals and advanced concepts of HEV technology.
- **Design and Control Expertise:** Develop the skills necessary to design, analyze, and implement HEV systems effectively.
- **Real-World Applications:** Learn from practical case studies and gain insights into the latest HEV technologies used in the automotive

industry.

- **Career Advancement:** Position yourself as a leader in the field of HEV development with the knowledge and expertise acquired from this book.

## Target Audience

"Hybrid Electric Vehicle Design and Control" is ideal for:

- Automotive engineers and students pursuing careers in HEV development
- Researchers and academics specializing in electric and hybrid vehicle technologies
- Industry professionals seeking to enhance their knowledge and skills in HEV design and control
- Anyone interested in understanding the future of transportation and the role of HEVs in sustainable mobility

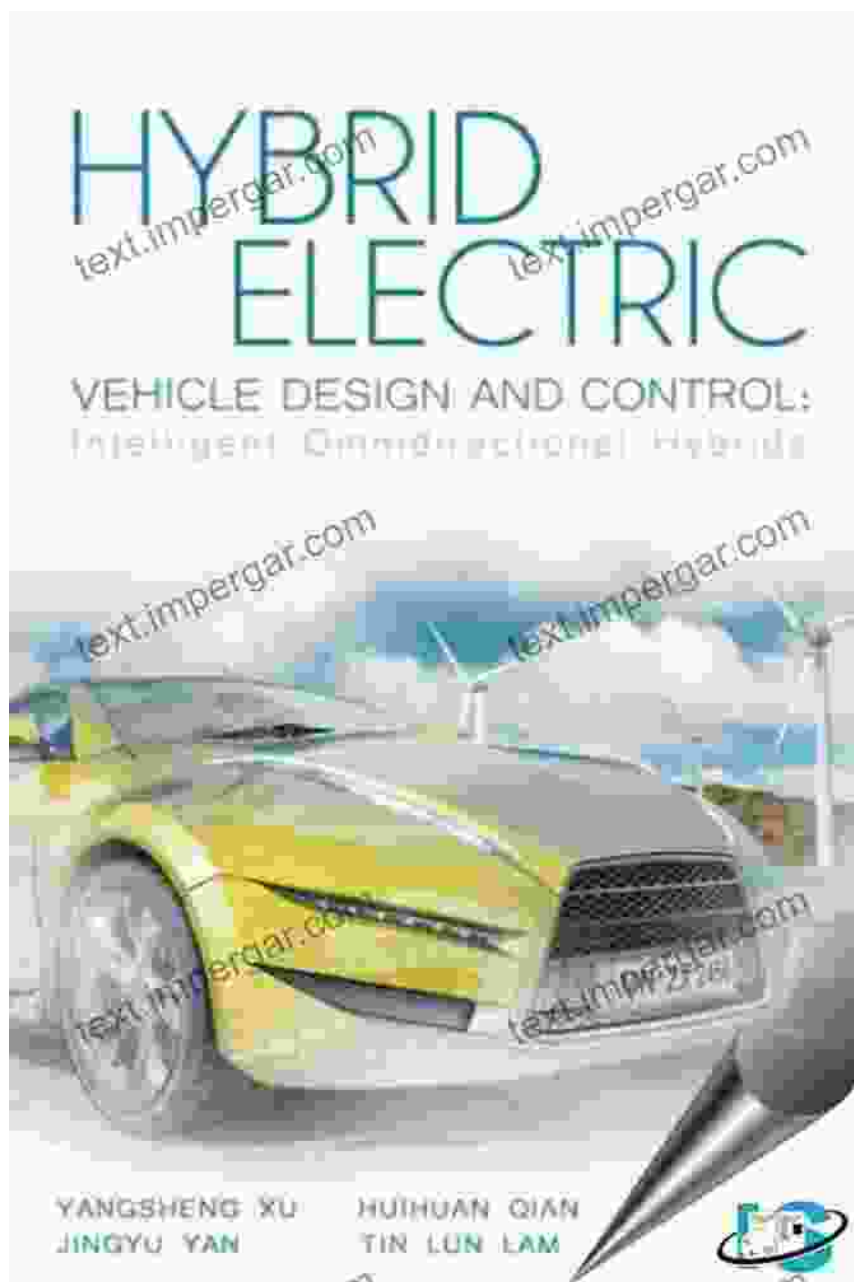
## Book Specifications

- **Author:** [Author Name]
- **Publisher:** [Publisher Name]
- : [ Number]
- **Pages:** [Number of Pages]
- **Illustrations:** [Number of Figures and Tables]
- **Format:** Hardcover, Paperback, E-book

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Embark on a transformative journey into the world of hybrid electric vehicle design and control. Free Download your copy of "Hybrid Electric Vehicle Design and Control" now to unlock the knowledge and skills that will empower you in the future of transportation.

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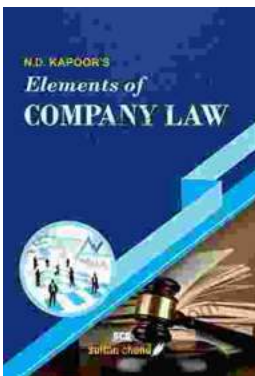
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