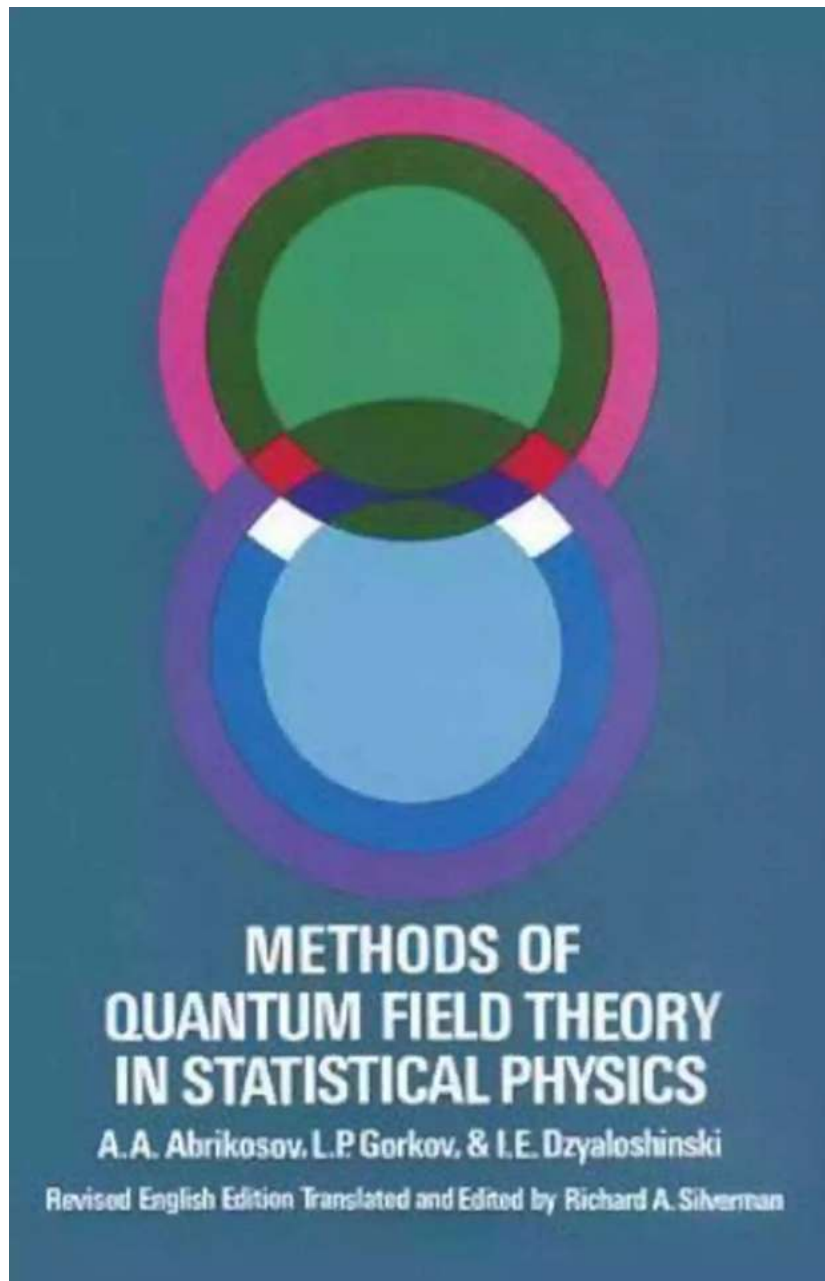


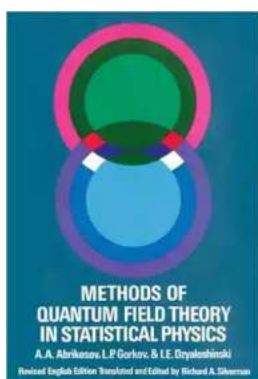
# Methods of Quantum Field Theory in Statistical Physics: Dover on Physics



Quantum field theory is a powerful mathematical framework that combines quantum mechanics and special relativity to describe the behavior of particles and fields on a fundamental level. In the realm of statistical physics, this field of

study finds applications in describing physical phenomena at macroscopic scales, such as phase transitions and critical phenomena.

One of the most renowned books on this topic is "Methods of Quantum Field Theory in Statistical Physics" by A.A. Abrikosov, L.P. Gorkov, and I.E. Dzyaloshinskii, published by Dover on Physics. This comprehensive text provides a detailed exploration of the principles and techniques of this fascinating field, making it an indispensable resource for physicists and researchers.



## Methods of Quantum Field Theory in Statistical Physics (Dover Books on Physics)

by A. A. Abrikosov(Rev English ed. Edition, Kindle Edition)

★★★★☆ 4.8 out of 5

Language : English

File size : 29933 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

Print length : 383 pages

Lending : Enabled



### Overview of the Book

The book is divided into several chapters, each covering different aspects of quantum field theory in statistical physics. Starting from the basics, the authors introduce the necessary mathematical tools and concepts required for understanding more advanced topics.

Throughout the book, the authors offer clear and concise explanations, making it accessible to readers with various levels of expertise. They also provide

numerous examples and exercises to reinforce the learning process, enabling readers to apply the theoretical concepts to practical problems.

## Key Topics Explored

The authors cover a wide range of topics, including:

- to quantum mechanics and statistical physics
- Path integrals and the functional approach
- Renormalization group methods
- Symmetry breaking and spontaneous symmetry restoration
- Topological defects and solitons
- Quantum chromodynamics and the standard model
- And much more!

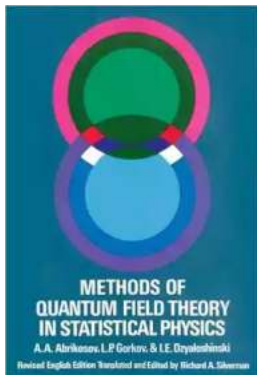
## Why Choose This Book?

There are several reasons why "Methods of Quantum Field Theory in Statistical Physics" is highly regarded among physicists:

1. **Comprehensive Coverage:** The book covers a wide range of topics, ensuring readers gain a thorough understanding of the subject matter.
2. **Clear Explanations:** The authors present complex concepts in a clear and accessible manner, making it easier for readers to grasp the material.
3. **Practical Applications:** The book provides numerous examples and exercises that allow readers to apply the theories to real-world problems, enhancing their problem-solving skills.

4. **Relevance:** The principles and techniques explored in this book are highly relevant to current research in statistical physics, making it an invaluable reference for physicists and researchers in the field.
5. **Legacy:** Published by Dover on Physics, this book is part of a renowned series that has been trusted by generations of physicists. It has stood the test of time, establishing itself as a classic in the field.

"Methods of Quantum Field Theory in Statistical Physics" by A.A. Abrikosov, L.P. Gorkov, and I.E. Dzyaloshinskii is an indispensable resource for anyone interested in understanding the intricacies of quantum field theory in statistical physics. Its comprehensive coverage, clear explanations, and practical applications make it a must-read for physicists and researchers in the field. Whether you are a novice or an expert, this book will undoubtedly enhance your understanding of this fascinating subject.



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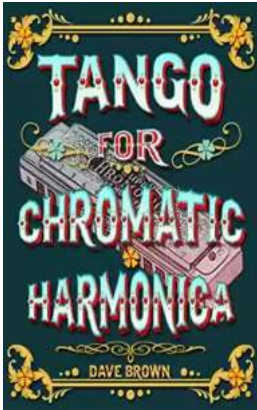
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This comprehensive text on many-body theory was written by three renowned physicists and acclaimed by American Scientist as "a classic text on field

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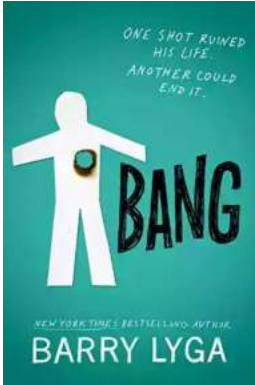
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