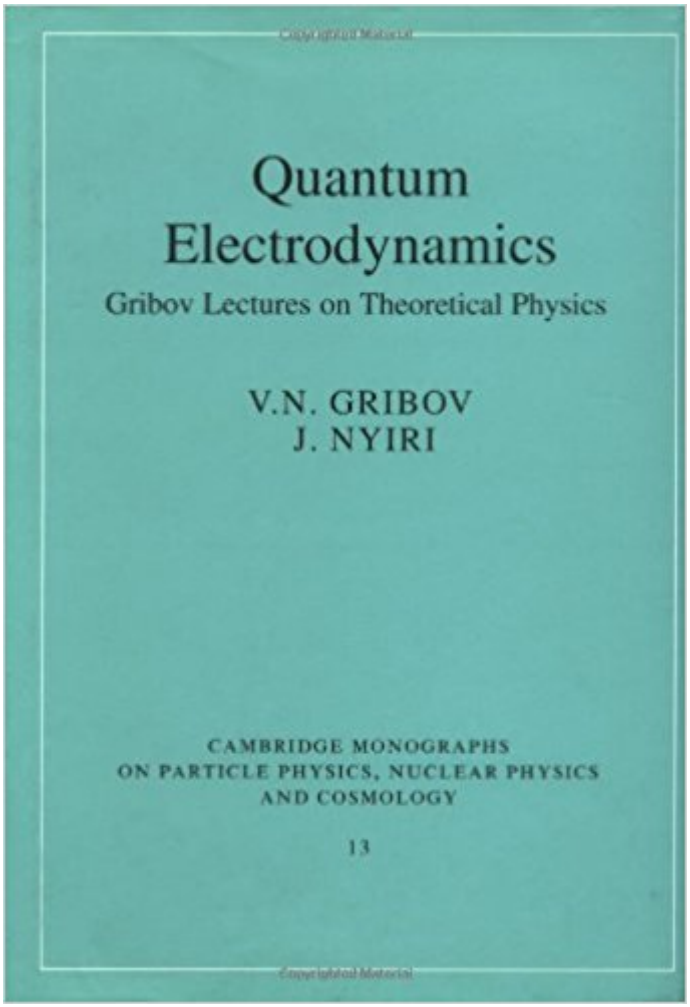
Quantum Electrodynamics: Gribov Lectures On Theoretical Physics (Cambridge Monographs On Particle Physics, Nuclear Physics And Cosmology)

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Synopsis

Based on lectures given by the highly original and distinguished physicist V.N. Gribov, this book provides an accessible introduction to quantum electrodynamics. It presents the theory of quantum electrodynamics in the shortest and clearest way for applied use. A distinctive feature of Gribov's approach is the systematic use of the Green function method, which allows a straightforward generalization to the cases of strong and weak interactions. The book starts with an introduction that uses the basics of quantum mechanics to gently introduce the reader into the world of propagation functions and particle interactions. The following chapter then focuses on spin 1/2 particles. The text goes on to discuss symmetries, the CPT theorem, causality, and unitarity followed by a detailed presentation of renormalization theory. A final chapter looks at difficulties with the theory and possible routes to their resolution. This book should become an indispensable part of any physical library, graduate students will value it as a helpful companion and experts will find in it many original ideas and deep insights.

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