



## Light And Vacuum: The Wave-particle Nature Of The Light And The Quantum Vacuum. Electromagnetic Theory And Quantum Electrodynamics Beyond The Standard Model (Hardback)

By Constantin Meis

World Scientific Publishing Co Pte Ltd, Singapore, 2017. Hardback. Condition: New. Second Edition. Language: English . Brand New Book. Light and Vacuum presents a synthesis of selected fundamental topics of electromagnetic wave theory and quantum electrodynamics (QED) and analyzes the main theoretical difficulties encountered to ensure a coherent mathematical description of the simultaneous wave-particle nature of light, put in evidence by the experiments. The notion and the role of the quantum vacuum, strongly related to light, are extensively investigated. Classical electrodynamics issued from Maxwell's equations revealed the necessity of introducing the notion of volume for an electromagnetic wave to stand entailing precise values of cut-off wavelengths to account for the shape and dimensions of the surrounding space. Conversely, in QED, light is considered to be composed of point particles disregarding the conceptual question on how the frequency of oscillating electric and magnetic fields may be attributed to a point particle. To conciliate these concepts, the book provides a comprehensive overview of the author's work, including innovative contributions on the quantization of the vector potential amplitude at a single photon state, the non-local simultaneous wave-particle mathematical representation of the photon and finally the quantum vacuum. The purpose of the...

### Reviews

*Very helpful to all type of individuals. It really is rally interesting throug looking at time. Its been designed in an extremely basic way which is just soon after i finished reading this pdf through which basically modified me, change the way i believe.*

-- **Tyshawn Brekke**

*The publication is easy in read through preferable to fully grasp. It is writter in simple phrases instead of hard to understand. You will not sense monotony at at any moment of your respective time (that's what catalogs are for concerning if you request me).*

-- **Kevin Bergstrom Sr.**