



# Light and Vacuum: The Wave-Particle Nature of the Light and the Quantum Vacuum Through the Coupling of Electromagnetic Theory and Quantum Electrodynamics (Hardback)

By Constantin Meis

WORLD SCIENTIFIC PUBLISHING, Singapore, 2015. Hardback. Book Condition: New. 234 x 157 mm. 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#x0027;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#x0027;s work, including innovative contributions on the quantization of the vector potential amplitude at a single photon state, the nonlocal simultaneous wave?particle mathematical representation of the photon and finally the quantum vacuum. The purpose of the advanced elaborations is to...

#### Reviews

I just began looking over this pdf. It is one of the most amazing pdf i have study. I discovered this book from my dad and i recommended this pdf to understand.

-- Merritt Kilback II

Good e book and useful one. I have got read and that i am confident that i will likely to go through once more again later on. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- Angela Blick

## See Also



Write Better Stories and Essays: Topics and Techniques to Improve Writing Skills for Students in Grades 6 - 8: Common Core State Standards Aligned

Createspace Independent Publishing Platform, United States, 2012. Paperback. Book Condition: New. 277 x 211 mm. Language: English. Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*\*.Mr. George Smith, a children s book author, has been conducting writing workshops at schools since 2004....



I Am Reading: Nurturing Young Children's Meaning Making and Joyful Engagement with Any Book

Heinemann Educational Books, United States, 2015. Paperback. Book Condition: New. 234 x 185 mm. Language: English . Brand New Book. It s vital that we support young children s reading in ways that nurture healthy reading identities, that foster an attraction to...



## **Oxford Very First Dictionary**

Oxford University Press, United Kingdom, 2012. Paperback. Book Condition: New. Georgie Birkett (illustrator). 234 x 182 mm. Language: English . Brand New Book. A fully illustrated alphabetical first dictionary for 4-5 year-olds. A fresh new look for the Oxford Very First Dictionary...



### Oxford First Illustrated Maths Dictionary

Oxford University Press, United Kingdom, 2013. Paperback. Book Condition: New. 234 x 180 mm. Language: English . Brand New Book. The Oxford First Illustrated Maths Dictionary supports the curriculum and gives your child a head start in understanding first maths concepts. Organised...



### No Friends?: How to Make Friends Fast and Keep Them

Createspace, United States, 2014. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. Do You Have NO Friends? Are you tired of not having any friend and being lonely all the time...



## The Well-Trained Mind: A Guide to Classical Education at Home (Hardback)

WW Norton Co, United States, 2016. Hardback. Book Condition: New. 4th Revised edition. 244 x 165 mm. Language: English. Brand New Book. The Well-Trained Mind will instruct you, step by step, on how to give your child an academically rigorous, comprehensive...