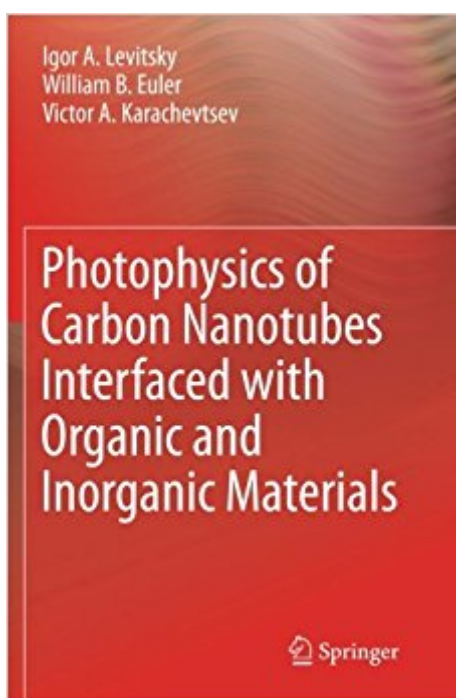




Ebook Directory
the best source of ebook

The book was found

Photophysics Of Carbon Nanotubes Interfaced With Organic And Inorganic Materials



Synopsis

This book surveys physical, optical and spectroscopic properties of nanocomposites formed from carbon nanotubes interfaced with organic and inorganic materials. Covers light harvesting, energy conversion, photoinduced charge separation and transport and more.

Book Information

Paperback: 164 pages

Publisher: Springer; 2012 edition (January 28, 2015)

Language: English

ISBN-10: 1447161998

ISBN-13: 978-1447161998

Product Dimensions: 6.1 x 0.4 x 9.2 inches

Shipping Weight: 9.6 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #722,850 in Books (See Top 100 in Books) #107 in Books > Science & Math > Physics > Nanostructures #111 in Books > Science & Math > Physics > Light #122 in Books > Science & Math > Technology > Nanotechnology

Customer Reviews

Photophysics of Carbon Nanotubes Interfaced with Organic and Inorganic Materials describes physical, optical and spectroscopic properties of the emerging class of nanocomposites formed from carbon nanotubes (CNTs) interfacing with organic and inorganic materials. The three main chapters detail novel trends in photophysics related to the interaction of light with various carbon nanotube composites from relatively simple CNT/small molecule assemblies to complex hybrids such as CNT/Si and CNT/DNA nanostructures. The latest experimental results are followed up with detailed discussions and scientific and technological perspectives to provide a thorough coverage of major topics including: Light harvesting, energy conversion, photoinduced charge separation and transport in CNT based nanohybrids CNT/polymer composites exhibiting photoactuation; and Optical spectroscopy and structure of CNT/DNA complexes. Including original data and a short review of recent research, Photophysics of Carbon Nanotubes Interfaced with Organic and Inorganic Materials makes this emerging field of photophysics and its applications available to academics and professionals working with carbon nanotube composites in fundamental and applied fields

Dr. I. A. Levitsky, Principal Scientist at Emitech, Inc. and Adjunct Faculty of Chemistry of the University of RI, has over 20 years of experience in experimental and theoretical study of optoelectronic properties of organic and nanocomposite materials, including carbon nanotubes, organic-inorganic nanocomposite and conjugated polymers. For the past ten years his scientific interests were concentrated on fundamental and applied aspects of optoelectronics and photophysics of various nanocomposites from carbon nanotubes and other organic and inorganic materials. In these studies the broad area of CNT based composites is covered from photoactuation phenomena to new generation of hybrid solar cells and photodetectors. He is the co-author of more than 50 publications in peer reviewed journals, and eight patents and patent applications. Dr. W. B. Euler, is a professor of Chemistry and co-director of the Center of the Sensor and Surface Technology Partnership of the University of RI. He has more than 90 publications in peer reviewed journals, covering topics such as solid state chemistry and physics, conducting materials, polymer synthetic chemistry, photochemistry, and IR, UV-Vis, and EPR spectroscopy. His interests also include carbon nanotube interaction with ionomeric polymers resulting in photomechanical effects. Dr. V.A. Karachevtsev, is Head of the Molecular Biophysics Department at the B.I. Verkin Institute for Low Temperature Physics & Engin., National Academy of Sciences of Ukraine. He is an author and co-author of 81 papers in peer reviewed journals. His research is focused on novel nanobiohybrids formed by interfacing carbon nanotubes with biological molecules/polymers and the study of their photophysical and biophysical properties. In these investigations he is combining the experimental methods (Luminescence, absorption, Raman & spectroscopy) with molecular dynamics simulations and ab initio calculation. An important aspect of his research is the application of these biohybrids in nanomedicine and biosensing.

[Download to continue reading...](#)

Photophysics of Carbon Nanotubes Interfaced with Organic and Inorganic Materials Carbon Nanotubes: Advanced Topics in the Synthesis, Structure, Properties and Applications (Topics in Applied Physics) 21st Century Guide to Carbon Sequestration - Capture and Storage to Fight Global Warming and Control Greenhouse Gases, Carbon Dioxide, Coal Power, Technology Roadmap and Program Plan Returning Carbon to Nature: Coal, Carbon Capture, and Storage Rodd's Chemistry of Carbon Compounds, Part D: Membered Heterocyclic Compounds With More Than 2 Heteroatoms in the Ring (Rodd's Chemistry of Carbon Compounds 2nd Edition) Study Guide: Ace Organic Chemistry I - The EASY Guide to Ace Organic Chemistry I: (Organic Chemistry Study Guide, Organic Chemistry Review, Concepts, Reaction Mechanisms and Summaries) Molecular Visions (Organic, Inorganic, Organometallic) Molecular Model Kit #1 by Darling Models to

accompany Organic Chemistry Reaction Mechanisms of Inorganic and Organometallic Systems (Topics in Inorganic Chemistry) Inorganic and Organometallic Polymers (Special Topics in Inorganic Chemistry) Organic Electronic Materials: Conjugated Polymers and Low Molecular Weight Organic Solids (Springer Series in Materials Science) Photochemistry and Photophysics: Concepts, Research, Applications Polymer Photophysics Graphene-based Materials in Health and Environment: New Paradigms (Carbon Nanostructures) Carbon Fibre from Lignin (SpringerBriefs in Materials) Organic Homemade Lotion Recipes - For All Skin Types (The Best Lotion DIY Recipes): Lotion Making For Beginners (organic lawn care manual, organic skin care, beauty and the beast) ChemistryÂ : Introducing Inorganic, Organic, and Physical Chemistry Organic & Inorganic Molecular Model Kit Molymod Part #62009 Organic & Inorganic Chemistry School Student Molecular Models Organic Soap Making: Beginners Guide To Making Handcrafted Luxurious Soap From Organic and Natural Materials Handbook of Organic Materials for Optical and (Opto)Electronic Devices: Properties and Applications (Woodhead Publishing Series in Electronic and Optical Materials)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)