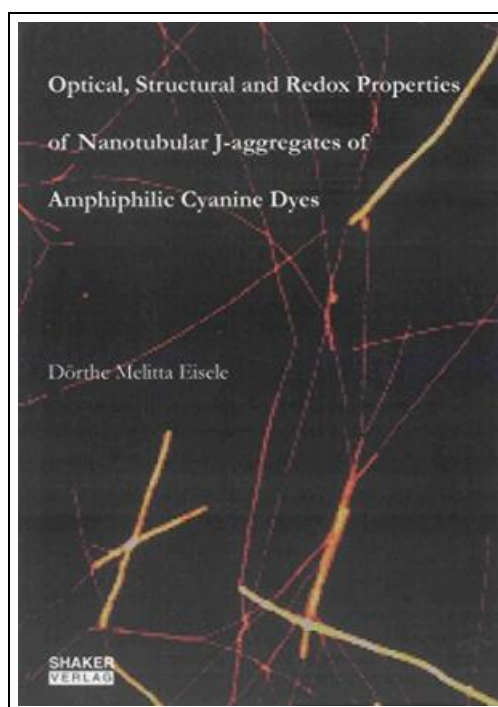


Optical, Structural and Redox Properties of Nanotubular J-aggregates of Amphiphilic Cyanine Dyes



Filesize: 2.16 MB

Reviews

Certainly, this is the very best work by any writer. It is loaded with knowledge and wisdom I am just quickly will get a satisfaction of reading through a created publication.

(Donavon Okuneva)

OPTICAL, STRUCTURAL AND REDOX PROPERTIES OF NANOTUBULAR J-AGGREGATES OF AMPHIPHILIC CYANINE DYES

[DOWNLOAD PDF](#)

Shaker Verlag Mai 2010, 2010. Taschenbuch. Condition: Neu. Neuware - This work addresses fundamental questions in the field of supramolecular nanoscale systems of self-assembled pi-conjugated molecules by presenting a comprehensive investigation of one particular supramolecular system: the double-walled nanotubular J-aggregates of amphiphilic cyanine dye 3,3'-bis(2-sulfopropyl)-5,5',6,6'-tetrachloro-1,1'-dioctylbenzimidacarbocyanine (C8S3). (i) It is shown that single tubular J-aggregates and bundles composed of several tubes can be distinguished by their unique optical spectra. The effects of the aggregation time, dye concentration, pH value, and surface treatment on the formation of bundled tubes were determined. Using this information, the controlled preparation of aggregate solutions containing mainly single tubular J-aggregates was possible. (ii) The drop-flow technique was developed to isolate individual tubular C8S3 J-aggregates by deposition from solution onto solid substrates without damaging their delicate supramolecular structure. Polarization resolved near-field scanning optical microscopy of individual tubular J-aggregates exhibits that they have a remarkably uniform structure along the individual tube, as well as among different tubes within the ensemble. Moreover, the linear reduced emission dichroism of the single tubular J-aggregates was determined to $D_0 = 0.71 \pm 0.05$, which fundamentally impacts for future theoretical calculations of the excitonic transitions of such double-walled cylindrical aggregate systems. These findings make this C8S3 J-aggregates excellent model systems for the investigation of exciton transport in individual quasi-one-dimensional nanostructures as well as for light harvesting. (iii) Spectro-electrochemical studies of C8S3 J-aggregates immobilized on an indium tin oxide (ITO) and on new graphene-based optical transparent (G-OTES) electrodes reveal excellent correlation of J-aggregate redox potentials with the optical response, which allows to associate the observed optical phenomena with electron-transfer processes. An overall electrochemical-chemical-electrochemical (ECE) mechanism is determined, in which the oxidation of the J-aggregate is attributed to dimerization processes of its p-conjugated systems. 128 pp. Englisch.

[Read Optical, Structural and Redox Properties of Nanotubular J-aggregates of Amphiphilic Cyanine Dyes Online](#)[Download PDF Optical, Structural and Redox Properties of Nanotubular J-aggregates of Amphiphilic Cyanine Dyes](#)

Related Kindle Books



Dom's Dragon - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Dom's Dragon - Read it Yourself with Ladybird: Level 2, Mandy Ross, One day, Dom finds a little red egg and soon he is the owner...

[Download Book »](#)



Read Write Inc. Phonics: Purple Set 2 Storybook 5 Tag

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 201 x 146 mm. Language: N/A. Brand New Book. These engaging Storybooks provide structured practice for children learning to read the Read...

[Download Book »](#)



Read Write Inc. Phonics: Blue Set 6 Non-Fiction 1 Save the Whale

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 185 x 72 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books...

[Download Book »](#)



Decameron and the Philosophy of Storytelling: Author as Midwife and Pimp (Hardback)

Columbia University Press, United States, 2005. Hardback. Book Condition: New. New.. 236 x 155 mm. Language: English . Brand New Book. In this creative and engaging reading, Richard Kuhns explores the ways in which Decameron...

[Download Book »](#)



Hands Free Mama: A Guide to Putting Down the Phone, Burning the To-Do List, and Letting Go of Perfection to Grasp What Really Matters!

ZONDERVAN, United States, 2014. Paperback. Book Condition: New. 211 x 137 mm. Language: English . Brand New Book. Rachel Macy Stafford's post The Day I Stopped Saying Hurry Up was a true phenomenon on...

[Download Book »](#)

**Six Steps to Inclusive Preschool Curriculum: A UDL-Based Framework for Children's School Success**

Brookes Publishing Co. Paperback. Book Condition: new. BRAND NEW, Six Steps to Inclusive Preschool Curriculum: A UDL-Based Framework for Children's School Success, Eva M. Horn, Susan B. Palmer, Gretchen D. Butera, Joan A. Lieber, How

[Read PDF »](#)

**Kidz Bop - A Rockin' Fill-In Story: Play Along with the Kidz Bop Stars - and Have a Totally Jammin' Time!**

Adams Media. PAPERBACK. Book Condition: New. 144050573X.

[Read PDF »](#)

**The Kid Friendly ADHD and Autism Cookbook The Ultimate Guide to the Gluten Free Casein Free Diet by Pamela J Compart and Dana Laake 2006 Hardcover**

Book Condition: Brand New. Book Condition: Brand New.

[Read PDF »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 5: Dolphin Rescue (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 x 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK's best-selling home reading series. It

[Read PDF »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 6: Uncle Max (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 x 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK's best-selling home reading series. It

[Read PDF »](#)