Accepted Manuscript



Title: Electroluminescence of Carbon "Quantum" Dots - From Materials to Devices

Author: L. Monica Veca Andreea Diac Iuliana Mihalache Ping Wang Gregory E. LeCroy Emil Pavelescu Raluca Gavrila Eugeniu Vasile Anamaria Terec Ya-Ping Sun

PII: DOI: Reference: S0009-2614(14)00734-9 http://dx.doi.org/doi:10.1016/j.cplett.2014.08.059 CPLETT 32451

To appear in:

Received date:	20-6-2014
Revised date:	22-8-2014
Accepted date:	24-8-2014

Please cite this article as: L.M. Veca, A. Diac, I. Mihalache, P. Wang, G.E. LeCroy, E. Pavelescu, R. Gavrila, E. Vasile, A. Terec, Y.-P. Sun, Electroluminescence of Carbon "Quantum" Dots - From Materials to Devices, *Chem. Phys. Lett.* (2014), http://dx.doi.org/10.1016/j.cplett.2014.08.059

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Submitted to Chem. Phys. Lett.

Electroluminescence of Carbon "Quantum" Dots - From Materials to Devices

L. Monica Veca,^{†,*} Andreea Diac[⊥], Iuliana Mihalache[†], Ping Wang,[‡] Gregory E. LeCroy,[‡] Emil Pavelescu[†], Raluca Gavrila[†], Eugeniu Vasile^{||}, Anamaria Terec[⊥], Ya-Ping Sun[‡]

[†]National Institute for Research and Development in Microtechnologies, IMT-Bucharest, Bucharest 077190, Romania, [⊥] Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca 400084, Romania, [‡]Department of Chemistry and Laboratory for Emerging Materials and Technology, Clemson University, Clemson, South Carolina 29634, USA, and ^{||} Faculty of Applied Chemistry and Material Science, Department of Oxide Materials and Nanomaterials, University Politehnica of Bucharest, Bucharest, Romania ^{*}Corresponding Author: monica.veca@imt.ro

Highlights

- Carbon "quantum" dots have shown their potential application in optoelectronic devices.
- The multilayer light emitting diode devices have emitted white light with slight blue color.
- The broad electroluminescence spectrum suggests the simultaneous charge recombination in the entire distribution of the emissive states existent in the carbon "quantum" dots.

Download English Version:

https://daneshyari.com/en/article/5380567

Download Persian Version:

https://daneshyari.com/article/5380567

Daneshyari.com