

# 2010 Publications

1. N. Masilela and T. Nyokong

Synthesis and photophysical properties of water soluble Gallium tetrasulfonated, octacarboxylated and quaternised 2,(3)-tetra-(2 pyridiloxy) phthalocyanines.

Dyes and Pigments, 84 (2010) 242-248

<http://dx.doi.org/10.1016/j.dyepig.2009.09.011>

2. M. Yüksek, G. Koç, H.G Yaşar, M. Durmuş, T. Nyokong and A. Elmali

Good optical limiting performance of indium and gallium phthalocyanines in a solution and copolymer host

J. Optics A: Pure Applied Optics 12 (2010) 015208.

<http://iopscience.iop.org/article/10.1088/2040-8978/12/1/015208/meta>

3. M. Idowu and T. Nyokong

Spectroscopic interactions of cationic metallophthalocyanines and anionic quantum dots.

Spectrochim. Acta Part A 75 (2010) 411–416

<http://dx.doi.org/10.1016/j.saa.2009.10.050>

4. B.O. Agboola, K.I. Ozoemena, T. Nyokong, T. Fukuda and N. Kobayashi

Tuning the physico-electrochemical properties of novel cobalt (II) octa[(3,5-biscarboxylate)-phenoxy] phthalocyanine complex using phenylamine-functionalised SWCNTs.

Carbon, 48 (2010) 763-773.

<http://dx.doi.org/10.1016/j.carbon.2009.10.023>

5. S. A. Mamuru, K. I. Ozoemena, T. Fukuda, N. Kobayashi, T. Nyokong

Studies on the heterogeneous electron transport and oxygen reduction reaction at metal (Co, Fe)

octabutylsulphonylphthalocyanines supported on multiwalled carbon nanotube modified graphite electrode

Electrochim. Acta, 55 (2010) 6367

<http://dx.doi.org/10.1016/j.electacta.2010.06.056>

6. N. Nombona, E. Antunes and T. Nyokong

Synthesis and fluorescence behavior of phthalocyanines unsymmetrically substituted with naphthol and

carboxy groups.

Dyes and Pigments, 86 (2010) 68-73.

<http://dx.doi.org/10.1016/j.dyepig.2009.11.010>

7. J. Britton, E. Antunes and T. Nyokong

Fluorescence quenching and energy transfer in conjugates of quantum dots with zinc and indium tetraamino phthalocyanines.

J. Photochem. Photobiol. A. Chem. 210 (2010) 1-7.

<http://dx.doi.org/10.1016/j.jphotochem.2009.12.013>

8. Ali Erdem, and Tebello Nyokong

Novel Soluble Fluoro Functionalized Zinc Phthalocyanines; Synthesis, Characterization and Photophysicochemical Properties – Hot paper status

Dyes Pigments 86 (2010) 174-181

<http://dx.doi.org/10.1016/j.dyepig.2010.01.001>

9. T. Mugadza and T. Nyokong

Electrocatalytic oxidation of amitrole and diuron on iron(II) tetraaminophthalocyanine-single walled carbon nanotube dendrimer.

Electrochim. Acta 55 (2010) 2606-2613

<http://dx.doi.org/10.1016/j.electacta.2009.12.051>

10. I. A. Akinbulu and T. Nyokong

Syntheses and investigation of the effects of position and nature of substituent on the spectral, electrochemical and spectroelectrochemical properties of new cobalt phthalocyanine complexes

Polyhedron 29 (2010) 1257-1270

<http://dx.doi.org/10.1016/j.poly.2010.01.004>

11. R.C.George, G.O. Egharevba and T. Nyokong

Spectroscopic studies of nanostructures of negatively charged free base porphyrin and positively charged tin porphyrins

Polyhedron 29 (2010) 1469-1474.

<http://dx.doi.org/10.1016/j.poly.2010.01.028>

12. S. Moeno, E. Antunes, S. Khene, C. Litwinski and T. Nyokong

The effect of substituents on the photoinduced energy transfer between CdTe quantum dots and mercapto substituted zinc phthalocyanine derivatives

Dalton Trans. 39 (14) (2010) 3460-3471.

<http://pubs.rsc.org/en/content/articlehtml/2010/dt/b926535j>

13. A. Erdo?mu?, S. Moeno , C. Litwinski, and T. Nyokong

Photophysical properties of newly synthesized fluorinated zinc phthalocyanines in the presence CdTe quantum dots and the accompanying energy transfer processes.

J. Photochem. Photobiol. A: Chem. 210 (2010) 200-208

<http://dx.doi.org/10.1016/j.jphotochem.2009.12.014>

14. V. Chauke and T. Nyokong

Remarkable sensitivity for detection of bisphenol A on a gold electrode modified with nickel tetraamino phthalocyanine containing Ni-O-Ni bridges

J. Haz. Mat. 178 (2010) 180-186.

<http://dx.doi.org/10.1016/j.jhazmat.2010.01.061>

15. M. E. Brown, R.C. Cosser, M.T. Davies-Coleman, P.T. Kaye, R. Klein, E.Lamprecht, Kevin Lobb, T. Nyokong, J. D. Sewry, Z. R. Tshentu, T.der Zeyde, G. M. Watkins.

Introducing Chemistry Students to the "Real World" of Chemistry"

J. Chem. Edu. 87(5) (2010) 500-503.

<http://pubs.acs.org/doi/abs/10.1021/ed8001539>

16. M. Idowu, T. Loewenstein, A. Hastall, T. Nyokong and D. Schlettwein

Photoelectrochemical characterization of electrodeposited ZnO thin films sensitized by octacarboxy

metallophthalocyanine derivatives.

J. Porphyrins Phthalocyanines, 14 (2) (2010) 142–149.

<http://dx.doi.org/10.1142/S1088424610001854>

17. T. Mugadza and T.Nyokong

Facile electrocatalytic oxidation of diuron on polymerized nickel hydroxo tetraamino phthalocyanine modified glassy carbon electrodes.

Talanta 81 (2010) 1373-1379.

<http://dx.doi.org/10.1016/j.talanta.2010.02.037>

18. W. Chidawanyika, C. Litwinski, E. Antunes and T. Nyokong  
Photophysical study of a covalently linked quantum dot-low symmetry phthalocyanine conjugate  
*J. Photochem. Photobiol. A: Chem* 212 (2010) 27-35.  
<http://dx.doi.org/10.1016/j.jphotochem.2010.03.008>
19. P. Mashazi, C. Togo, J. Limson and T. Nyokong  
Applications of polymerized metal tetra-amino phthalocyanines towards hydrogen peroxide detection  
*J. Porphyrins Phthalocyanines* 14 (3) (2010) 252-263.  
<http://www.worldscientific.com/doi/abs/10.1142/S1088424610001994>
20. T.B. Ogunbayo and T. Nyokong  
Photophysical and photochemical properties of Ni(II), Pd(II) and Pt(II) aryloxo and alkylthio derivatised phthalocyanine  
*J. Mol. Struc.* 973 (2010) 96-103  
<http://dx.doi.org/10.1016/j.molstruc.2010.03.047>
21. W. Chidawanyika and T. Nyokong  
Characterization of amine-functionalized single-walled carbon nanotube-low symmetry phthalocyanine conjugates.  
*Carbon*, 48 (2010) 2831-2838  
<http://dx.doi.org/10.1016/j.carbon.2010.04.015>
22. M.P. Siswana, K. I. Ozoemena, D.A. Geraldo and T. Nyokong  
Nanostructured nickel (II) phthalocyanine–MWCNT as viable nanocomposite platform for electrocatalytic detection of asulam pesticide at neutral pH conditions.  
*J. Solid state Electrochem*, 14 (2010) 1351-1358  
<http://link.springer.com/article/10.1007/s10008-009-0958-3>
23. T. Mugadza, T. Nyokong  
Synthesis, characterization and the electrocatalytic behaviour of nickel (II) tetraamino-phthalocyanine chemically linked to single walled carbon nanotubes  
*Electrochim. Acta* 55 (2010) 6049-6057  
<http://dx.doi.org/10.1016/j.electacta.2010.05.065>
24. N. Masilela and T Nyokong  
The synthesis and photophysical properties of novel cationic tetra pyridiloxy substituted aluminium, silicon and titanium phthalocyanines in water.  
*J. Luminescence*, 130 (2010) 1787-1793  
<http://dx.doi.org/10.1016/j.jlumin.2010.04.011>
25. A. Erdo?mu?, I. A. Akinbulu and T. Nyokong  
Syntheses, spectroscopic, voltammetry and spectroelectrochemical properties of new cobalt and manganese phthalocyanine complexes, peripherally and non-peripherally tetra-substituted with 3,4-(methylenedioxy)-phenoxy. HOT paper status  
*Polyhedron* 29 (2010) 2352-2363  
<http://dx.doi.org/10.1016/j.poly.2010.05.012>
26. Ali Erdo?mu?, T. Nyokong  
Synthesis of zinc phthalocyanine derivatives with improved photophysicochemical properties in aqueous media. Hot paper status  
*J. Mol. Struc.* 977 (2010) 26-38

<http://dx.doi.org/10.1016/j.molstruc.2010.04.048>

27. Isaac Adebayo Akinbulu, Samson Khene and Tebello Nyokong  
Surface properties of self-assembled monolayer films of tetra-substituted cobalt, iron and manganese alkylthio phthalocyanine complexes.  
*Electrochim. Acta*, 55 (2010) 7085-7093  
<http://dx.doi.org/10.1016/j.electacta.2010.06.065>

28. F. Bedioui, D. Quinton, S. Griveau, T. Nyokong  
Designing Molecular Materials and Strategies for the Electrochemical Detection of Nitric Oxide, Superoxide and Peroxynitrite in Biological Systems  
*Phys. Chem. Chem Phys.* 12 (2010) 9976-9989  
<http://pubs.rsc.org/en/content/articlehtml/2010/cp/c0cp00271b>

29. A. Erdoğmuş, M. Durmuş, A. L. Uğur, O. Sener, U. Avciata, T. Nyokong  
Synthesis, Photophysical, Photochemistry and Fluorescence Quenching Studies on Highly Soluble Substituted oxotitanium (IV) Phthalocyanine Complexes  
*Synthetic metals* 160 (2010) 1868-1876  
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30. T. Mugadza, T. Nyokong  
Covalent linking of ethylene diamine functionalized single walled carbon nanotubes to cobalt (II) tetracarboxyl-phthalocyanines for use in electrocatalysis  
*Synthetic Metals* 160 (2010) 2089-2098  
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31. S. Moeno, T. Nyokong  
An investigation of the behaviour of quaternized peripherally tetra mercaptopyridine substituted metallophthalocyanines in the presence of quantum dots  
*J. Photochem. Photobiol. A: Chem.* 215 (2010) 196-204.  
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The effects of point of substitution on the electrochemical behavior of new manganese phthalocyanines, tetra-substituted with diethylaminoethanethiol.  
*Inorg. Chim. Acta* 323 (2010) 3229-3237.  
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33. Mevlude Canlica, Tebello Nyokong  
Synthesis and Photophysical Properties of 1,1'-binaphthol Substituted Phthalocyanines  
*Inorg. Chim Acta* 363 (2010) 3384-3389.  
<http://dx.doi.org/10.1016/j.ica.2010.06.034>

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Optical limiting properties of zinc phthalocyanines in solution and solid PMMA composite films  
*Optics Communications* 283 (2010) 4749-4753  
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35. F. Dumoulin, M. Durmuş, V. Ahsen, T. Nyokong  
Synthesis of water soluble phthalocyanines  
*Coord. Chem. Rev.* 254 (2010) 2792-2847  
<http://dx.doi.org/10.1016/j.ccr.2010.05.002>

36. V. Chauke, T. Nyokong

Synthesis and electrochemical characterization of new tantalum (V) alkythio phthalocyanines  
*Inorg. Chim. Acta*, 363 (2010) 3662-3669.  
<http://dx.doi.org/10.1016/j.ica.2010.05.003>

37. P. Mashazi, T. Nyokong  
Electrocatalytic studies of the covalently immobilized metal tetra-amino phthalocyanines onto derivatized screen-printed gold electrodes  
*Microchim. Acta* 171 (2010) 321-332  
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38. M. Coates, E. Antunes and T. Nyokong  
Electrochemical, spectroscopic and microscopic studies of new manganese phthalocyanine complexes: in solution and as self-assembled monolayers on gold  
*J. Porphyrins Phthalocyanines* 14 (2010) 568-581  
<http://dx.doi.org/10.1142/S1088424610002471>

39. J.H. Zagal, S. Griveau, J.F.Silva, T. Nyokong, F.Bedioui  
Metallophthalocyanine-based molecular materials as catalysts for electrochemical reactions.  
*Coord. Chem. Rev.* 254 (2010) 2755-2791.  
<http://dx.doi.org/10.1016/j.ccr.2010.05.001>

40. Adebayo Akinbulu, S. Khene, T. Nyokong  
The effects of point of substitution on the formation of manganese phthalocyanine based molecular materials: surface characterization and electrocatalysis  
*Thin Solid Films* 519 (2010) 911-918  
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Fabrication and characterization of single walled carbon nanotubes-iron phthalocyanine nano-composite: Surface properties and electron transport dynamics of its self assembled monolayer film.  
*New J. Chem.*, 34 (12) (2010) 2875 – 2886  
<http://pubs.rsc.org/en/content/articlehtml/2010/nj/c0nj00395f>

42. S. Khene, K. Lobb and T. Nyokong  
Interaction between nickel hydroxy phthalocyanine derivatives with p-chlorophenol: linking electrochemistry experiments with theory.  
*Electrochim Acta.* 56 (2010) 706-716  
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43. V. Akpe, H. Brismar, T. Nyokong, P.O. Osadebe  
Photophysical and photochemical parameters of octakis (benzylthio)phthalocyaninato zinc, aluminium and tin: Red shift index concept in solvent effect on the ground state absorption of zinc phthalocyanine derivatives  
*J. Mol. Struct.* 984 (2010) 1–14.  
<http://dx.doi.org/10.1016/j.molstruc.2010.08.033>

44. P. Mashazi, E. Antunes, T. Nyokong  
Probing electrochemical and electrocatalytic properties of cobalt(II) and manganese(III) octakis(hexylthio) phthalocyanines as self-assembled monolayers  
*J. Porphyrins Phthalocyanines* 14 (2010) 932-947  
<http://dx.doi.org/10.1142/S108842461000277X>

45. N. Masilela, N. Nombona, T. Loewenstein, T. Nyokong and D. Schlettwein

Photoelectrochemical characterization of electrodeposited nanoporous ZnO thin films sensitized by negatively and positively charged metallophthalocyanines.  
J Porphyrins Phthalocyanines 14 (11) (2010) 985-992  
<http://dx.doi.org/10.1142/S1088424610002793>