RHODES UNIVERSITY, GRAHAMSTOWN, SOUTH AFRICA

STUDENT INFORMATION

MR NJEMUWA NJOKU NWAJI (DOCTORAL STUDENT)

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REGISTRATION DETAILS:

Academic Status: Postgraduate  
Faculty: Science  
Department: Chemistry  
Degree: PhD  
Academic Year: 2  
Registration Status: Full Time
EDUCATION DETAILS:

PhD (Chemistry) currently – Rhodes University, Grahamstown, South Africa (upgraded from MSc to PhD in March 2017). PhD Thesis submitted – awaiting examiners reports.
MSc 1st Year (Chemistry) 2016 - Rhodes University, Grahamstown, South Africa

RESEARCH PROJECT/TITLE:

Nonlinear optical responses of targeted phthalocyanines when conjugated with nanomaterials or fabricated into polymer thin films

PUBLICATIONS:

1. Nwaji, Njemuwa; Oluwole, David O.; Mack, John; Louzada, Marcel; Khene, Samson; Britton, Jonathan; Nyokong, Tebello
   Improved nonlinear optical behaviour of ball type indium(III) phthalocyanine linked to glutathione capped nanoparticles
   Dyes and Pigments (2017), 140, 417-430
   DOI:10.1016/j.dyepig.2017.01.066
   Publisher: Elsevier
   http://dx.doi.org/10.1016/j.dyepig.2017.01.066

2. Nwaji, Njemuwa; Mack, John; Britton, Jonathan; Nyokong, Tebello
   Synthesis, photophysical and nonlinear optical properties of a series of ball-type phthalocyanines in solution and thin films
   New Journal of Chemistry (2017), 41(5), 2020-2028
   DOI:10.1039/C6NJ03662G
   Publisher: Royal Society of chemistry
   http://pubs.rsc.org/en/content/articlehtml/2017/nj/c6nj03662g

3. Njemuwa Nwaji, Owolabi M. Bankole, Jonathan Britton and Tebello Nyokong
   Photophysical and nonlinear optical study of benzothiazole substituted phthalocyanines in solution and thin films
   Journal of Porphyrins and Phthalocyanines (2017), 21, 263-272
   DOI: 10.1142/S1088424617500079
   Publisher: World scientific
   http://dx.doi.org/10.1142/S1088424617500079

4. Nwaji, Njemuwa; Jones, Benjamin; Mack, John; Oluwole, David O.; Nyokong, Tebello
   Nonlinear optical dynamics of benzothiazole derivatized phthalocyanines in solution, thin films and when conjugated to nanoparticles
   DOI:10.1016/j.jphotochem.2017.05.042
   Publisher: Elsevier
   https://doi.org/10.1016/j.jphotochem.2017.05.042

5. Dube, Edith; Nwaji, Njemuwa; Oluwole, David O.; Mack, John; Nyokong, Tebello
   Investigation of photophysicochemical properties of zinc phthalocyanines conjugated to metallic
6. Nwaji, Njemuwa; Nyokong, Tebello
Nanosecond optical nonlinearities in low symmetry phthalocyanine nanoconjugates studied using the Z-scan technique
Journal of Luminescence (2017), 192, 1167-1179
DOI:10.1016/j.jlumin.2017.08.053
Publisher: Elsevier
http://dx.doi.org/10.1016/j.jlumin.2017.08.053

7. Njemuwa Nwaji, John Mack and Tebello Nyokong
4-Bis (4-aminophenoxy)phenoxy derivitized phthalocyanine conjugated to metallic nanoparticles: searching for enhanced optical limiting materials
New Journal Chemistry (2017) 41, 14351-14363
DOI: 10.1039/C7NJ02718D
http://pubs.rsc.org/en/content/articlelanding/2017/nj/c7nj02718d#!divAbstract

Photophysical and strong optical limiting properties of ball-type phthalocyanines dimers and their monomeric analogues
DOI:10.1016/j.jphotochem.2017.10.045
https://doi.org/10.1016/j.jphotochem.2017.10.045

9. Fomo, G., Nwaji, N. and Nyokong, T.
Low symmetric metallophthalocyanine modified electrode via click chemistry for simultaneous detection of heavy metals
Journal of Electroanalytical Chemistry (2018), 813, 58-66
DOI: 10.1016/j.jelechem.2018.02.016
https://doi.org/10.1016/j.jelechem.2018.02.016

10. Ngoy, Bokolombe P.; Hlatshwayo, Zweli; Nwaji, Njemuwa; Fomo, Gertrude; Mack, John; Nyokong, Tebello
Photophysical and optical limiting properties at 532 nm of BODIPY dyes with p-benzyloxystyryl groups at the 3,5-positions
DOI:10.1142/S1088424617500857
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11. Nwaji, Njemuwa; Achadu, Ojodomo J.; Nyokong, Tebello
Photo-induced resonance energy transfer and nonlinear optical response in ball-type phthalocyanine conjugated to semiconductor and graphene quantum dots
New Journal of Chemistry (2018), 42(8), 6040-6050
DOI:10.1039/C7NJ05196D
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c7nj05196d

12. Dube, Edith; Oluwole, David O.; Nwaji, Njemuwa; Nyokong, Tebello
Glycosylated zinc phthalocyanine-gold nanoparticle conjugates for photodynamic therapy: Effect of
13. Nwaji, Njemuwa; Mack, John; Nyokong, Tebello
Enhanced nonlinear optical response of benzothiazole substituted ball-type phthalocyanines in the presence of metallic nanoparticles
Optical Materials (2018), 82, 93-103
DOI:10.1016/j.optmat.2018.05.052
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c8nj01707g

14. Oluwole, David O.; Nwaji, Njemuwa; Nene, Lindokuhle C.; Mokone, Lesedi; Dube, Edith; Nyokong, Tebello
Novel nano-dyad of homoleptic sandwich-type phthalocyanines with nitrogen doped graphene quantum dots for nonlinear optics
New Journal of Chemistry (2018), 42(12), 10124-10133
DOI:10.1039/c8nj01707g
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c8nj01707g

15. Nwaji, Njemuwa; Dingiswayo, Somila; Mack, John; Nyokong, Tebello
Photophysical and enhanced nonlinear optical response in asymmetric benzothiazole substituted phthalocyanine covalently linked to semiconductor quantum dots
DOI:10.1016/j.saa.2018.06.098
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c8nj01707g

16. Nwaji, Njemuwa; Mack, John; Nyokong, Tebello
An optical limiting study in aminophenoxy substituted phthalocyanine in the presence of semiconductor quantum dots
Journal of Luminescence (2018), 203, 247-256
DOI:10.1016/j.jlumin.2018.06.044
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c8nj02746c

17. Dube, Edith; Nwaji, Njemuwa; Mack, John; Nyokong, Tebello
The photophysicochemical behavior of symmetric and asymmetric zinc phthalocyanines, surface assembled onto gold nanotriangles
New Journal of Chemistry (2018), 42(17), 14290-14299
DOI: 10.1039/c8nj02746c
http://pubs.rsc.org/en/content/articlehtml/2018/nj/c8nj02746c

18. R Matshitse, N Nwaji, M Managa, Earl Prinsloo, T Nyokong
Effect of number of positive charges on the photophysical and photodynamic therapy activities of quarternary benzothiazole substituted zinc phthalocyanine
DOI: 10.1016/j.jphotochem.2018.08.033
http://doi.org/10.1016/j.jphotochem.2018.08.033
CONFERENCES/WORKSHOPS:

10th International Conference On Porphyrins And Phthalocyanines (ICPP-10), Munich, Germany
1-6 July 2018
Oral Presentation:
Njemuwa Nwaji, John Mack and Tebello Nyokong
Enhanced Nonlinear Optical responses in benzothiazole substituted ball-type phthalocyanines in the presence of metallic nanoparticles