**Publications (Updated June 27, 2024)**

1. **Peter N. Nelson**\*, Willem H. Mulder, *Thermodynamic and Kinetic Models for the photolytic and hydrolytic degradation of picaridin: a computational and theoretical study*, Journal of Computational and Theoretical Chemistry. 2024, https://doi.org/10.1016/j.comptc.2024.114706 (Impact Factor: 2.44; Citation: 0)
2. Andrew Wu, Daniel W. Ki,\* Patrick Hillesheim, **Peter N. Nelson**, Gia Carignan, and Jing Li, New type of Tin(iv) complex based Turn-on Fluorescent Chemosensor for Fluoride ion recognition: Elucidating the effect of Molecular Structure on Sensing Property, Dalton Transactions, 2024, 10.1039/D4DT00461B (Impact Factor: 4.00; Citation: 0)
3. Tysean A. Johnson, Ethan W. Roe, Matthew J. Crawford, Olivia N. Basile, Blake M. Shellenberger, Margaret Rudolph, Samuel Awad, Phillip Brogdon, **Peter N. Nelson\***, Geneive E. Henry\*,*Synthesis, Antioxidant, DNA Interaction, Electrochemical and spectroscopic properties of Chromene-based Schiff Bases: Experimental and Theoretical Studies,* Journal of Molecular Structure, <https://doi.org/10.1016/j.molstruc.2024.138020> (Impact Factor: 3.84; Citation: 0)
4. Vuyelwa Ngwenya, **Peter Nattaniel Nelson**, Lydia Rhyman, Ponnadurai Ramasami, Irvin Noel Booysen,·Allen Mambanda, Electrocatalytic performance of a nickel(II) phthalocyanine-carbon nanotube composite towards the detection of Hg2+ ions, *Journal of Applied Electrochemistry*, 2024, 1-19, <https://doi.org/10.1007/s10800-023-02049-w>, (Impact Factor: 2.925; Citation: 0)
5. André McGlashan, **Peter N. Nelson**, P. Syam Prasad, M. Iezid, F. Goumeidane, R. Rajaramakrishn, P. Venkateswara Rao, Physical , thermal, optical, shielding g an d elastic properties of Bi2O3 – B2O3 –TeO2 glass system dope d with Fe2O3, Radiation Physics and Chemistry, 2023, 10.1016/j.radphyschem.2023.111444 (Impact Factor: 2.776; Citation: 0)
6. Danica Moodley, Irvin Noel Booysen, Allen Mambanda,**Peter N. Nelson**,Xolani Nocanda, Construction of a functional and robust cobalt phthalocyanine-modified electrode for the electrocatalytic detection of paraquat*,* ChemElectroChem, 2023, [https://doi.org/10.1002/celc.202300427](https://xchg-lb.uwimona.edu.jm/owa/redir.aspx?C=2Kffnrcl_UmM8mc8sR1BnK188cqb59tItyWRnBeqL0TLrVX8OdkG--kjgrQN_vQnV5UlQ47clak.&URL=https%3a%2f%2fprotect-za.mimecast.com%2fs%2fV6k4Cqj8LJfpN8m1Tr4yfK%3fdomain%3ddoi.org) (Impact Factor: 4.782; Citation: 0)
7. Deneikah T. Jackson, **Peter N. Nelson\***,Kimberly Weston, Richard A. Taylor, Plasticizer-free Hydrazonic Dibenzo-18-crown-6 derived Lead Ion Sensing Electrodes, *Sensing and Bio-Sensing Research,* 2023, 10.1016/j.sbsr.2023.100570 Impact Factor: 0.659; Citation: 0)
8. Deneikah T. Jackson, **Peter N. Nelson\***, Kiara D. Shannan, Synthesis, Spectroscopic and Lead(II) Binding behaviour of three novel Dibenzo-18-crown-6 Hydrazones, *Molecular Crystals and Liquid Crystals*,2023, 10.1080/15421406.2023.2231682 (Impact Factor: 0.672; Citation: 0)
9. Deneikah T. Jackson, **Peter N. Nelson\***, Kimberly Weston and Richard A. Taylor, Preparation and Properties of three Plasticizer free Novel Di-benzo-18-crown-6 Aldimine derived Lead(II) Ion Selective Electrodes, *Inorganics*, 2023,11, 275. <https://doi.org/10.3390/inorganics11070275> (Impact Factor: 3.15; Citation: 0)
10. Tahjna I. Robertson, **Peter N. Nelson\***, Experimental and Computational Study on the Spectroscopic and Colorimetric Copper Sensing behaviour of Three ketimine derivatives, *Journal of Molecular Struct*ure, 2023, 1288, 135606 (Impact Factor: 3.84; Citation: 0)
11. **Peter N. Nelson**\*, A Computational Mechanistic Study of the Hydrolytic Degradation of three common Pyrethroid Insecticides, *Journal and Theoretical and Computational Chemistry*. 2022, (Impact Factor: 2.44; Citation: 0)
12. **Peter N. Nelson**\*, Willem H. Mulder, Thermodynamic and Kinetic Models for Acid Chloride Formation: A Computational and Theoretical Mechanistic Study, *Journal of Molecular Graphics and Modelling*. 2022, (Impact Factor: 2.51; Citation: 1)
13. Tahjna I. Robertson, **Peter N. Nelson**\*, A DFT and Experimental study of the Spectroscopic and Hydrolytic degradation behaviour of some Benzylideneanilines, *Journal of Molecular Struct*ure. 2021, 131625, DOI: [10.1016/j.molstruc.2021.131625](https://doi.org/10.1016/j.molstruc.2021.131625) (Impact Factor: 3.84; Citation: 4)
14. **Peter N. Nelson**\*, A DFT Mechanistic study of two possible Hydrolytic Evolution pathways of Thiamethoxam; Implications in Food and Environmental Safety, *Journal and Theoretical and Computational Chemistry*. 2021, [10.1016/j.comptc.2021.113333](https://doi.org/10.1016/j.comptc.2021.113333) (Impact Factor: 2.44; Citation: 6)
15. Dahryn A. Augustine, Grace-Anne Bent\*, **Peter Nelson**. Mechanistic evidence for the effect of sulphur-based additive: methionine on acrylamide reduction. FOOD ADDITIVES & CONTAMINANTS: PART A, 10.1080/19440049.2021.19251662021, (Impact Factor: 3.549; Citation: 3)
16. **Peter N. Nelson**\*. A Density Functional Theoretical Study of the Hydrolysis Mechanism of three Neonicotinoid based Pesticides, *Journal of Molecular Struct*ure. 2021, 129909 (Impact Factor: 3.84; Citation: 12)
17. **Peter Nattaniel Nelson**\***,** Deneikah T. Jackson, Irvin N. Booysen. A Lead Ion Selective Electrodes from Dibenzo-18-crown-6 derivatives: An exploratory study. *Journal of Molecular Struct*ure. 2021, 1227, 129575 (Impact Factor: 3.84; Citation: 3)
18. **Peter Nattaniel Nelson**\*, A Theoretical Study of the interactions between Carbon Dioxide and some Group(III) Trihalides: Implications in Carbon Dioxide Sequestration. *Journal of Molecular Struct*ure. 2020, 1223, 129212 (Impact Factor: 3.84; Citation: 0)
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20. Tishana Green, **Peter N. Nelson**\*,Mark A. W. Lawrence.Optical sensing and metal binding behavior of 1, 5-dipenylhydrazone. *Journal of Molecular Struct*ure. 2019, 1195, 426 - 434(Impact Factor: 3.84; Citation: 8)
21. Deneikah T. Jackson, **Peter N. Nelson**\*, Preparation and Properties of Some Ion Selective Membranes: A Review. *Journal of Molecular Struct*ure. 2019, 1182, 241 – 259.(Impact Factor: 3.84; Citation: 10)
22. **Peter N. Nelson**\***.** 1H-indazoles from phenylhydrazienes: A Exploratory DFT study of a possible Intramolecular Evolutionary synthetic Route. *Journal of Molecular Struct*ure.2019, 1181, 423 - 427.(Impact Factor: 3.84; Citation: 0)
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24. Rivka Maoz, Jonathan Berson, Doron Burshtain, **Peter N. Nelson**, Ariel Zinger, Ora Bitton, and Jacob Sagiv\*. Interfacial Electron Beam Lithography: Chemical Monolayer Nanopatterning via Electron Beam-Induced Interfacial Solid-Phase Oxidation, ACSNano. 2018, 12(10), 9680 - 9692 (Impact Factor: 13.71; Citation: 3)
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26. Rivka Maoz, Doron Burshtain, Hagai Cohen, **Peter Nelson**, Jonathan Berson, Alexander Yoffe, and Jacob Sagiv\*. Site-Targeted Interfacial Solid-Phase Chemistry. 2016, *Angewandte Chemie*. 2016, 128(40), 12554 – 12559. (Impact Factor: 12.10; Citation: 5)
27. Mohammed Bakir\*, Mark Lawrence, **Peter Nelson.** Spectroscopic, X-ray crystallographic and electrochemical properties of di-2-thienyl ketone·di-2-thienyl ketone thiosemicarbazone hybrid [dtk.dtktsc] and [dsktsc]*. Electrochemica Acta*.2016, 212, 1010 – 1020 (Impact Factor: 4.79; Citation: 9)
28. **Peter N. Nelson**\*, Temperature and Chain Length Dependence of the Vibrational Spectra of some Anhydrous Silver(I) *n*-Alkanoates. *International Journal of Spectroscopy*. 2016, 2016, 1 – 10 (Impact Factor: 0.76; Citation: 0)
29. **Peter N. Nelson**\*, Henry A. Ellis, Nicole A. S. White. Solid State 13C-NMR, Infrared, X-ray Powder Diffraction and Differential Thermal Studies of the Homologous Series of some Mono-valent Metal (Li, Na, K, Ag) *n*-alkanoates: A comparative study. *Spectrochimica Acta Part A*. 2015, 145, 440 – 453. (Impact Factor: 2.88; Citation: 7)
30. **Peter N. Nelson,** Richard A. Taylor\*. Powder X-ray Diffraction, Infrared and 13C-NMR Spectroscopic Studies of the Homologous Series of some Solid-state Zinc(II) and Sodium(I) n-alkanoates.*Spectrochimica Acta Part A*. 2015, 138, 800 – 806. (Impact Factor: 2.88; Citation: 9)
31. **Peter N.** **Nelson**, Henry A. Ellis\*. Odd-even Chain Packing, Molecular and Thermal Models for some Long Chain Sodium(I) *n*-alkanoates. *Journal of Molecular Struct*ure. 2014, 1075, 299 – 310. **(**Impact Factor: 3.84; Citation: 5)
32. **Peter N. Nelson**, Henry A. Ellis\*, Richard A. Taylor. Reply to comments on the Inter-planar Structures and Lamellar Packing of Short and Long chain Zinc (II) *n*-Alkanoates. *Journal of Molecular Struct*ure. 2014, 1070, 106 – 109. (Impact Factor: 3.84; Citation: 0)
33. **Peter N. Nelson**, Richard A. Taylor\*. Theories and Experimental Investigations of the Structural and Mesomorphic Phase Behaviours of Metal Carboxylates. *Applied Petrochemical Research*. 2014, 4, 253–285. Impact Factor: 0.8 ; Citation: 48)
34. **Peter N. Nelson**, Henry A. Ellis\*, Richard A. Taylor. Effects of Molecular and Lattice Structure on the Thermal Behaviors of some Long Chain Length Potassium(I) *n*-Alkanoates. *Journal of Molecular Structure*. 2014, 1058, 234 – 243. (Impact Factor: 3.84; Citation: 10)
35. **Peter N. Nelson**, Richard A. Taylor and Henry A. Ellis\*. The effects of Molecular and Lattice Structures on the Thermotropic Phase behaviour of Zinc(II) Undecanoate and Isomeric zinc(II) Undecynoates. *Journal of Molecular Structure*. 2013, *1034,* 75-83. (Impact Factor: 3.84; Citation: 9)
36. **Peter Nattaniel Nelson** and Henry Anthony Ellis\*. Structural, Odd-Even chain Alternation and Thermal investigation of a Homologous series of Anhydrous Silver(I) *n*-Alkanoates. *Dalton Trans*. 2012, *41*, 2632-2638. (Impact Factor: 4.10; Citation: 21)
37. N. A. S. White, H. A. Ellis\* and **Peter N. Nelson**, P.T. Maragh.Thermal and Odd-Even behaviour in a Homologous series of Lithium(I) *n*-alkanoates. *Journal of Chem*ical *Thermodynamics* 2011, *43*, 584-590. (Impact Factor: 2.63; Citation: 9)
38. **Peter N. Nelson**, H. A. Ellis\* and R. A. Taylor. Odd-even Alternation in a Homologous series of Zinc(II) *n*-alkanoates. *Journal of Molecular Struct*ure. 2011, *986*, 10-15. (Impact Factor: 3.84; Citation: 15)

**Posters (5)**

1. **Peter N, Nelson**, Tahjna I. Robertson. *Exploratory, experimental, and DFT study of three small molecular benzylideneaniline-based Cu(II) sensors*. Crossroads of Chemistry (March 26 **–** 30, 2023)

**Conference:** American Chemical Society (ACS)

**Theme:** Crossroads of Chemistry

**Location:** Indianapolis, United States of America

1. Tahjna Robertson, **Peter Nelson**.*An Exploratory, Experimental and DFT study of three Small molecular copper(II) sensors.* **(September 28 - 29, 2022)**

**Conference: 3rd Commonwealth Poster Conference 2022**

**Theme/ Topic area:** Water and Environmental Chemistry

**Location:** Virtual

1. **Deneikah T. Jackson and Peter N. Nelson. *Crown ether based lead(II) sensing electrodes: towards the development of lead sensing electrodes for lead in drinking water.* (September 30 – 1 October, 2021)**

**Conference: 2nd Commonwealth Poster Conference**

**Theme/ Topic area:** Water and Environmental Chemistry

**Location:** Virtual

1. **Tahjna I. Robertson and Peter N. Nelson. *A DFT and experimental study of the hydrolytic degradation behaviour of some benzylideneanilines: towards the development of optical metal sensors.* (September 30 – 1 October, 2021)**

**Conference: Commonwealth Poster Conference**

**Theme/ Topic area:** Water and Environmental Chemistry

**Location:** Virtual

1. André McGlashan, Venkateswara Penugonda, **Peter Nelson**. *Physical, thermal, optical, shielding and elastic moduli parameters of Bi2O3 -B2O3 -TeO2 glass system doped with Fe2O3*. (August 10-14, 2022)

**Conference:** FORECAST

**Theme:** Science and Technology: a D.R.I.V.E.R. of Transformation

**Location:** St. Andrew, Jamaica