

CURRICULUM VITAE

Name **Julia Puseletso Mofokeng**
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Academic degree: Assistant professor
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Career Overview

Graduate study	Bachelor of Science Honours (B.Sc. Hons) - 16MY 2009 Polymer Science
Postgraduate (MSc) From	07May 2011 -Polymer Science - M.Sc. dissertation. Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices.
Postgraduate study (PhD) From	09May 2015- Polymer Science . Ph.D . thesis : Preparation and characterization of completely biodegradable polymer-Titania nanocomposites.

C. PROFESSIONAL EXPERIENCE

POSITION 1: **SENIOR LECTURER / RESEARCHER**

EMPLOYER: University of the Free State, Chemistry Department.

DUTIES: Manage research laboratory facilities, and postgraduate students.
Lecture Polymer Science modules at Honours degree level.
Supervise post-graduate research students,
Perform analysis on different research instruments.
Conduct research and produce high-level research outputs.
Source external funds to support research interest.
Contribute to curriculum development within the department.
Perform administrative duties and participate in the development of Honours modules.

MODULES: **THEORY AND PRACTICAL:** Physical Polymer Science (CMPP 6814), Polymer Testing and Characterization II (CMPC 8614), and Polymer Science Research project (CMPR 6808).

PRACTICALS: Polymers and Polymerization (CMPO 6814), Polymer Testing and Characterization I (CMPA 6814), Applied Polymer Science (CMPA 6824), Polymers and Polymer Reactions (CMPR 6814), Polymer Blends, Composites and Nanocomposites (CMPB 6824).

RESEARCH: Master of Science in Polymer Science (PLYS8900)

Publications المنشورات

PUBLICATIONS IN SPECIALIZED PEER-REVIEWED JOURNALS

1. L. S Mokoena, **J. P. Mofokeng**. Morphology and thermal properties of poly(lactic acid)(PLA)/poly(3-hydroxybutyrate-co-3-hydroxyvalerate)(PHBV)/graphene oxide (GO) polymeric composites. Polymer Engineering & Science (**ACCEPTED ON 28 JULY 2024**).
[DOI: 10.1002/PEN.26919](https://doi.org/10.1002/PEN.26919).
2. L.S. Mokoena, **J. P. Mofokeng**. Preparation of poly(lactic acid) (PLA) / poly(3hydroxybutyrate-co-3-hydroxyvalerate) (PHBV) / graphene oxide (GO) polymeric composites for the selective removal of lead ions (Pb(II)) in water. Polymer Composites 2024; 45:8527–8542.
[DOI: 10.1002/pc.28358](https://doi.org/10.1002/pc.28358)
3. L.S. Mokoena, **J.P. Mofokeng**. Synthesis and characterization of graphene Oxide (GO) for the removal of lead ions in water. Carbon Trends 2024; 15:100339-100352 [DOI: 10.1016/j.cartre.2024.100339](https://doi.org/10.1016/j.cartre.2024.100339)
4. M. J. Phiri, **J. P. Mofokeng**, M. M. Phiri, M. Mngomezulu, Z. Tywabi-Ngeva. Chemical, thermal and morphological properties of polybutylene succinate-waste pineapple leaf fibres composites. Heliyon 2023; 9: 21238-21247 [DOI: 10.1016/j.heliyon.2023.e21238](https://doi.org/10.1016/j.heliyon.2023.e21238)

5. L.S. Mokoena, **J.P. Mofokeng**. A review on graphene (GN) and graphene oxide (GO) based biodegradable polymer composites, and their usage as selective adsorbents for heavy metals in water. *Materials* 2023; 16(6):2527-2557. [DOI: 10.3390/ma16062527](https://doi.org/10.3390/ma16062527)
6. S.C. Mojaki, S. Bhardwaj Mishra, A.K. Mishra, **J.P. Mofokeng**. Influence of polysiloxane as nanofiller on the surface, optical and thermal properties of guar gum grafted polyaniline matrix. *International Journal of Biological Macromolecules* 2018; 114:441452.
[DOI: 10.1016/j.ijbiomac.2018.03.049](https://doi.org/10.1016/j.ijbiomac.2018.03.049)
7. T.B. Motlounq, D. Dudic, **J.P. Mofokeng**, A.S. Luyt. Properties and thermo-switch behaviour of LDPE mixed with carbon black, zinc metal and paraffin wax. *Journal of Polymer Research* 2017; 23:43-54.
[DOI:10.1007/s10965-017-1205-8](https://doi.org/10.1007/s10965-017-1205-8)
8. **J.P. Mofokeng**, I. Kelnar, A.S. Luyt. Effect of layered silicates on the thermal stability of PCL/PLA microfibrillar composites. *Polymer Testing* 2016; 50:9-14.
[DOI: 10.1016/j.polymertesting.2015.12.004](https://doi.org/10.1016/j.polymertesting.2015.12.004)
9. **J.P. Mofokeng**, A.S. Luyt. Morphology and thermal degradation studies of melt-mixed poly(hydroxybutyrate-co-valerate) (PHBV)/poly(ϵ -caprolactone) (PCL) biodegradable polymer blend nanocomposites with TiO₂ as filler. *Journal of Materials Science* 2015; 50: 3812-3824.
[DOI: 10.1016/j.polymertesting.2015.05.007](https://doi.org/10.1016/j.polymertesting.2015.05.007)
10. **J.P. Mofokeng**, A.S. Luyt. Morphology and thermal degradation studies of melt-mixed PLA/PHBV biodegradable polymer blend nanocomposites with TiO₂ as filler. *Journal of Applied Polymer Science* 2015; 132:42138.
[DOI: 10.1002/app.42138](https://doi.org/10.1002/app.42138)
11. **J.P. Mofokeng**, A.S. Luyt. Morphology and thermal degradation studies of melt-mixed poly(lactic acid) (PLA)/poly(ϵ -caprolactone) (PCL) biodegradable polymer blend nanocomposites with TiO₂ as filler. *Polymer Testing* 2015; 45: 93-100. [DOI: 10.1016/j.polymertesting.2015.05.007](https://doi.org/10.1016/j.polymertesting.2015.05.007)
12. **J.P. Mofokeng**, A.S. Luyt. Dynamic mechanical properties of PLA/PHBV, PLA/PCL, PHBV/PCL blends and their nanocomposites with TiO₂ as nanofiller. *Thermochimica Acta* 2015; 613:41–53.
[DOI: 10.1016/j.tca.2015.05.019](https://doi.org/10.1016/j.tca.2015.05.019)
13. Stephen S. Ochigbo, Adriaan S. Luyt, **Julia P. Mofokeng**, Željka Antić, Miroslav D. Dramićanin, Vladimir Djoković. Dynamic mechanical and thermal properties of the composites of thermoplastic starch and lanthanum hydroxide nanoparticles. *Journal of Applied Polymer Science* 2013; 127(1):699-709. [DOI: 10.1002/app.37859](https://doi.org/10.1002/app.37859)
14. A.S. Luyt, M. Messori, P. Fabbri, **J. P. Mofokeng**, R. Taurino, T. Zanasi, F. Pilati, Polycarbonate reinforced with silica nanoparticles. *Springer Polymer Bulletin* 2011; 66:991–1004.

[DOI: 10.1007/s00289-010-0408-5](https://doi.org/10.1007/s00289-010-0408-5)

15. **J.P. Mofokeng**, A.S. Luyt, T. Tábi, J. Kovacs. Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices. Journal of Thermoplastic Composite Materials 2011; 25(8):927-948.

[DOI: 10.1177/0892705711423291](https://doi.org/10.1177/0892705711423291).

16. W. Mhike, W.W. Focke, **J.P. Mofokeng**, A.S. Luyt. Thermally conductive phase-change materials for energy storage based on low-density polyethylene, soft Fischer–Tropsch wax and graphite. Thermochimica Acta 2011; 527:75-82. [DOI: 10.1016/j.tca.2011.10.008](https://doi.org/10.1016/j.tca.2011.10.008)

17. A.S. Luyt, I. Krupa, H.J. Assumption, E.E.M. Ahmad, **J.P. Mofokeng**. Blends of polyamide 12 and maleic anhydride grafted paraffin wax as potential phase change materials. Polymer Testing 2010; 29:100-106.

[DOI: 10.1016/j.polymertesting.2009.09.010](https://doi.org/10.1016/j.polymertesting.2009.09.010)

CONFERENCE PAPERS

J.P. Mofokeng, A.S. Luyt. Morphology, thermal degradation, and mechanical properties of biodegradable polyester blends and nanocomposites. Conference: 20th International Conference on Composite Materials (ICCM20), 19-24 July 2015, At: Copenhagen,

Denmark. [THIS IS THE COMPTEST CONFERENCE IN LAUSANNE \(researchgate.net\)](https://www.researchgate.net/publication/271111111)

My research work has been presented in 19 local, and international conferences:

1. L.S. Mokoena, **J.P. Mofokeng**. Preparation of PLA/ PHBV/graphene oxide polymeric composites for selective removal of lead ions in water. 5th International Conference on Bio-based Polymers and Composites – BiPoCo 2024, held at Grand Hotel, Esztergom, 1 – 5 September 2024, Hungary.

2. L.S. Mokoena, **J.P. Mofokeng**. Morphology and thermal properties of PLA/ PHBV/GO polymeric composites for possible application in water purification. 5th International Conference on Bio-based Polymers and Composites – BiPoCo 2024, held at Grand Hotel, Esztergom, 1 – 5 September 2024, Hungary.

3. **Curriculum Renewal Programme (CRP) Qwaqwa Cohort** organised by UFS Centre for Teaching and Learning (CTL), held at Golden Gate Hotel (5 – 9 February 2024), and I have also received the Curriculum Renewal Innovation in Higher Education Certificate at the completion of the course.

4. **African Research Universities Alliance (ARUA) Capacity Building workshop**, under the theme: "Building capacity for sustainable development in Materials, energy and nanotechnology" hosted at WITS University 31 July 2023 to 03 August 2023
5. L.S. Mokoena, **J.P. Mofokeng**. The effective removal of lead ions from solution using synthesized graphene oxide and prepared biodegradable polymer/graphene oxide composites. Sasol Postgraduate Research Seminar, Virtual, 2nd – 3rd November 2022, South Africa.
6. L. Seromo, **J.P. Mofokeng**. Effect of SiO₂ nanoparticles on the morphology, thermal and thermomechanical properties of biodegradable polymer blends. Sasol Postgraduate Research Seminar, Virtual, 2nd – 3rd November 2022, South Africa.
7. L. Seromo, **J.P. Mofokeng**. Effect of SiO₂ nanoparticles on the morphology, thermal and thermomechanical properties of biodegradable polymer blends. 2022 QwaQwa Campus Research Conference, 29th and 30th September 2022, at Harrismith Inn Hotel, in Harrismith, South Africa.
8. T.A. Tsotetsi, **J.P. Mofokeng**. Preparation and characterization of flame retarded natural fibre reinforced biopolymer blends. The 4th International Conference on Bio-based Polymers and Composites (BiPoCo 2018), was held at Balatonfüred, Hungary in Europe (01-07 September 2018).
9. M. Makhalema, **J.P. Mofokeng**. Structure and properties of DAP flame retarded PLA/PCL/Natural fibre blend composites. The 6th International Conference on Bio-based Polymers (ICBP2017) conference, held at Yuan Ze University, in Taiwan (14-17 May 2017).
10. L.T. Mukwada, **J.P. Mofokeng**. Structure and properties of PLA/PCL blend nanocomposites with Mg(OH)₂ and APTMS_TiO₂. UNESCO/IUPAC workshop & conference on macromolecules & materials, Stellenbosch, South Africa (10-13 April 2017).
11. T.A. Tsotetsi, **J.P. Mofokeng**. Preparation and characterization of flame retarded natural fibre reinforced biopolymer blends. UNESCO/IUPAC workshop & conference on macromolecules & materials, Stellenbosch, South Africa (10-13 April 2017).
12. **J.P. Mofokeng**, A.S. Luyt. Morphology, thermal degradation and mechanical properties of biodegradable polyester blends and nanocomposites. 20th International Conference on Composite Materials (ICCM20), Copenhagen, Denmark (19-24 July 2015).
13. **J.P. Mofokeng**, A.S. Luyt, 'Preparation and characterization of biodegradable PLA/PHBV, PLA/PCL and PHBV/PCL polymer blends and their nanocomposites with TiO₂ as filler. BiPoCo 2014, 2nd international conference on Bio-based polymers and composites, held at Visegrád, in Hungary, Europe (24-28 August 2014).
14. **J.P. Mofokeng**, A.S. Luyt. Preparation and characterization of completely biodegradable polymer-titania nanocomposites. Keynote lecture presented at EUROFILLERS 2013, Bratislava, Slovakia (25-29 August 2013).

15. **J. P. Mofokeng**, A. S. Luyt. Preparation, and characterisation of biodegradable PLA/PHBV, PLA/PCL, and PHBV/PCL polymer blends and their nanocomposites with TiO₂ as filler. 12th Annual UNESCO/IUPAC Workshop (24 March 2013) and Conference on Macromolecules & Materials, Stellenbosch, South Africa (25 - 28 March 2013).
16. **J.P. Mofokeng**, A.S. Luyt, J. Kovacs. Comparison of injection moulded natural fibre reinforced composites with PP and PLA as matrices. The 11th international conference on frontiers of polymers and advanced materials, Pretoria, South Africa (22-27 May 2011).
17. **J.P. Mofokeng**, A.S. Luyt, J. Kovacs. Comparison of injection moulded natural fibre reinforced composites with PP and PLA as matrices. 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, Stellenbosch, South Africa (26-29 April 2011).
18. **J.P. Mofokeng**, A.S. Luyt, J. Kovacs. Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices. POLYCHAR 19 – World Forum on Advanced Materials, Kathmandu, Nepal (20-24 March 2011).
19. S.S. Ochigbo, A.S. Luyt, **J.P. Mofokeng**, T. Antić, M.D. Dramićanin, V. Djoković. Thermoplastic starch- La(OH)₃ nanocomposites: Preparation and properties. Invited lecture at the 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, Stellenbosch, South Africa (26-29 April 2011).
20. S.S. Ochigbo, A.S. Luyt, **J.P. Mofokeng**, T. Antić, M.D. Dramićanin, V. Djoković. Thermoplastic starch- La(OH)₃ nanocomposites: Preparation and properties. Invited lecture at the 11th International Conference on Frontiers of Polymers and Advanced Materials, Pretoria, South Africa (22-26 May 2011).
21. S.S. Ochigbo, A.S. Luyt, **J.P. Mofokeng**, T. Antić, M.D. Dramićanin, V. Djoković. Thermoplastic starch- La(OH)₃ nanocomposites: Preparation and properties. Frontiers in Polymer Science, Lyon, France (29-31 May 2011).