

CURRICULUM VITAE: PROF AS LUYT



A. Personal data

Name: Adriaan Stephanus Luyt
Birth date: 28 September 1957
Birth place: Bethal, Mpumalanga, South Africa
Matriculation: Three Rivers High School, Vereeniging, Gauteng, South Africa. Pass with distinctions in Afrikaans, English, Mathematics and Natural Sciences
Other interest: General reading, photography & road running
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B. Academic degrees

Year	1978	1979	1982	1985
Name	B.Sc (with distinction)	B.Sc. (Hons) (with distinction)	M.Sc.	D.Sc.
University	Potchefstroom University	Potchefstroom University	University of South Africa	Potchefstroom University
Subject(s)	Chemistry & Mathematics	Chemistry	Materials chemistry	Physical organic chemistry

C. Professional background

Period	Position	Institution
Jan.1980 – Dec.1981	Candidate Officer	School of Engineers, South Africa (Military service)
Jan.1982 – Mar.1985	Senior Research Scientist	Sasol One Ltd, South Africa
Apr.1985 – Jun.1991	Senior Lecturer (Physical Chemistry) & Head of Chemistry Department	PU vir CHO (Vaal Triangle Campus), South Africa
Jul.1991 – Jun.1993	Associate Professor (Physical Chemistry) & Head of Chemistry Department	Vista University (Soweto Campus), South Africa
Jul.1993 – Dec.2002	Professor (Physical Chemistry & Polymer Science)	University of the North (Qwa-Qwa Campus), South Africa
Jan.2003 – Jun.2015	Professor (Physical Chemistry & Polymer Science)	University of the Free State (Qwaqwa Campus), South Africa
Jul. 1993 – Feb. 1998	Head of Chemistry Department	University of the North (Qwa-Qwa Campus), South Africa
Jan.1995 – Dec.1996	Deputy-Dean of Faculty of Mathematics & Natural Sciences	University of the North (Qwa-Qwa Campus), South Africa
Jan. 1998 – Des. 2003	Director of Research	University of the North (Qwa-Qwa Campus), South Africa
Jan. 2004 – Aug. 2014	Assistant-Dean of Faculty of Natural & Agricultural Sciences	University of the Free State (Qwaqwa Campus), South Africa
Sept.2014 – present	Research Associate Professor Center for Advanced Materials	Qatar University, Qatar
Jul.2015 – present	Affiliated Professor Department of Chemistry	University of the Free State, South Africa
Sept.1983 –	Member	South African Chemical Institute
Nov.1992 – May 1997 May 1997 – Oct.2001	Secretary/Treasurer Vice-Chairperson	Southern African Thermal Analysis Society

D. Research abroad

Period	Jul.1986 – Jun.1987	Jul.1997 – Dec.1997
Institution	Department of Textile Industries, University of Leeds, England	Institute for Polymer Technology and Materials Engineering, University of Loughborough, England
Purpose	Post-doctoral research	Sabbatical
Financed by	Foundation for Research and Development in South Africa, PU vir CHO & several companies	Foundation for Research and Development in South Africa, University of the North (Qwaqwa Campus) & several companies
Scientific mentor	Dr JS Crighton	Dr M Reading

E. Present research field

Preparation and characterization of polymer blends, composites and nanocomposites

F. Post-graduate students

1. Co-supervisor for JGH Siebert (M.Sc. in Farmaceutics): “The effect of cationic polymers on the purcataneous absorption of urea and water in vitro” (1989)
2. Supervisor for NS Nhlapo (M.Sc. in Chemistry): “Thermoanalytical investigation of cross-linking of saturated and unsaturated long-chain hydrocarbons” (1996)
3. Supervisor for K Ishriperdadh (M.Tech. in Chemistry) at ML Sultan Technikon: “Cross-linking of long-chain hydrocarbons” (1999)
4. Supervisor for SP Hlangothi (M.Sc. in Chemistry): “Investigation of thermal and physical properties of cross-linked LLDPE/wax blends in the presence of dibenzoyl peroxide” (2002)

5. Supervisor for TN Mtshali (M.Sc. in Chemistry): “The influence of oxidized paraffin wax on the physical properties of LLDPE/wax and LDPE/wax blends” (2002)
6. Supervisor for MA Mokoena (M.Sc. in Chemistry): “The effects of peroxide treatment on composites of linear low density polyethylene and short sisal fibre” (2003)
7. Supervisor for ME Malunka (M.Sc. in Chemistry): “Preparation and characterization of EVA-sisal fibre composites” (2005)
8. Supervisor for JA Molefi (M.Sc. in Chemistry): “Thermal and mechanical properties of polymers filled with copper powder” (2005)
9. Supervisor for MG Salemane (M.Sc. in Chemistry): “Preparation and characterization of polypropylene-wood powder composites” (2005)
10. Supervisor for MJ Hato (M.Sc. in Chemistry): “Thermal fractionation and property determination of different PE/wax blends” (2005)
11. Supervisor for HS Mpanza (M.Sc. in Chemistry): “The influence of types and amounts of wax on the thermal and mechanical properties of PE/wax blends” (2005)
12. Supervisor for DG Dikobe (M.Sc. in Polymer Science): “Preparation and characterization of EVA – wood fibre composites” (2006)
13. Supervisor for JA Molefi (Ph.D. in Polymer Science): “Investigation of phase change conducting materials prepared from polyethylenes, paraffin waxes and copper” (2008)
14. Supervisor for TE Motaung (M.Sc. in Polymer Science): “Morphology and properties of sol-gel prepared LDPE silica nanocomposites” (2009)
15. Supervisor for MJ Hato (Ph.D. in Polymer Science): “Polyhedral oligomeric silsesquioxanes (POSS) based polymer nanocomposites” (2009)
16. Supervisor for ME Makhatha (Ph.D. in Polymer Science): “Thermal and thermomechanical properties of clay containing polymer nanocomposites” (2009)
17. Supervisor for ME Mngomezulu (M.Sc. in Polymer Science): “Phase change materials based on polyethylene, paraffin wax and wood flour” (2009)
18. Supervisor for LP Nhlapo (M.Sc. in Polymer Science): “Thermal and mechanical properties of LDPE/sisal fibre composites compatibilized with paraffin waxes” (2010)
19. Supervisor for SM Mohomane (M.Sc. in Polymer Science): “Preparation and characterization of polychloroprene/modified clay nanocomposites” (2010)
20. Supervisor for JP Mofokeng (M.Sc. in Polymer Science): “Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices” (2010)

21. Supervisor for JS Sefadi (M.Sc. in Polymer Science): “Morphology and properties of EVA/Malaysian empty fruit bunch composites” (2010)
22. Supervisor for TH Mokhothu (M.Sc. in Polymer Science): “Preparation and characterisation of natural fibre/co-polyester biocomposites” (2010)
23. Co-supervisor for J Ramontja (Ph.D. in Polymer Science): “Fabrication, characterization, and properties of bionanohybrids based on biocompatible polylactide and carbon nanotubes” (2010)
24. Co-supervisor for KP Matabola (Ph.D. in Polymer Science): “Processing and characterization of single polymer composites using electrospun nanofibres” (2011)
25. Supervisor for EEM Ahmad (Ph.D. in Polymer Science): “The influence of micro- and nano-sisal fibres on the morphology and properties of different polymers” (2011)
26. Supervisor for MJ Mochane (M.Sc. in Polymer Science): “Polymer encapsulated paraffin wax to be used as phase change material for energy storage” (2011)
27. Supervisor for SS Ndlovu (M.Sc. in Polymer Science): “Wood-polymer composites utilizing degraded polyolefins as compatibilizers” (2011)
28. Supervisor for TE Motaung (Ph.D. in Polymer Science): “Effect of metal oxide nanoparticles on the properties and degradation behaviour of polycarbonate and poly(methyl methacrylate)” (2012)
29. Supervisor for MA Sibeko (M.Sc. in Polymer Science): “Preparation and characterization of vinyl silane crosslinked thermoplastic composites filled with nanoclays” (2012)
30. Supervisor for TC Mokhena (M.Sc. in Polymer Science): “Preparation and characterization of vinyl silane crosslinked thermoplastic filled with natural fibres” (2012)
31. Supervisor for TS Motsoeneng (M.Sc. in Polymer Science): “The effect of crystalline phase morphology on the structure and properties of polypropylene impact copolymers” (2012)
32. Supervisor for TG Mofokeng (M.Sc. in Polymer Science): “Preparation and characterization of polymer nanocomposites with piezoelectric properties” (2013)
33. Supervisor for TH Mokhothu (Ph.D. in Polymer Science): “In situ preparation and properties of rubber/inorganic oxide nanocomposites” (2013)
34. Supervisor for JP Mofokeng (Ph.D. in Polymer Science): “Preparation and characterization of completely biodegradable polymer-titania nanocomposites” (2014)
35. Supervisor for JS Sefadi (Ph.D. in Polymer Science): “Preparation and properties of

- conductive polymer nanocomposites” (2014)
36. Supervisor for MJ Mochane (Ph.D. in Polymer Science): “Thermal and mechanical properties of polymer/wax PCM blends prepared without and with expanded graphite” (2014)
 37. Supervisor for MP Molaba (M.Sc. in Polymer Science): “Influence of the presence and amount of metal nanoparticles on the thermal and mechanical properties of iPP/soft paraffin wax phase change materials for thermal energy storage” (2014)
 38. Supervisor for TP Gumede (M.Sc. in Polymer Science): “Kinetic study of the crystallization of LLDPE and wax in LLDPE/wax phase change blends used for thermal energy storage” (2014)
 39. Currently acting as supervisor for ME Mngomezulu (Ph.D. in Polymer Science), TA Tsotetsi (Ph.D. in Polymer Science), MA Sibeko (Ph.D. in Polymer Science), CE Clarke (M.Sc. in Polymer Science), TP Gumede (Ph.D. in Polymer Science), MF Mosoabisane, (Ph.D. in Polymer Science), and TB Motloun (M.Sc. in Polymer Science).
 40. Supervisor for post-doctoral research fellows, Dr I Krupa, from the Polymer Institute of the Slovak Academy of Sciences during 1999-2000, Dr V Djokovic, from the Institute of Physics, Serbia during 2001-2003, Dr H Krump, from Bratislava, Slovakia during 2003-2004, Dr BR Guduri, from India, during 2004-2005, Dr VG Geethamma, from Kottayam, India, during 2006, Dr SB Mishra and Dr AK Mishra, from Delhi, India, during 2006-2007, Dr SS Ochigbo, from Nigeria, during 2008-2009, Dr He Wei, from China, during 2010-2011, Dr NG Greesh, from Libya (during 2011-2012) and Dr D Dudic (current)
 41. External examiner for a number of local and overseas masters and doctoral students

G. Publications

Theses

1. “Thermal analysis of some univalent dihydrogen phosphates and arsenates”, M.Sc. thesis, UNISA, June 1982 (Supervisor : Prof AM Heyns, UNISA)
2. “The oxidation kinetics of a Fischer-Tropsch wax” (in Afrikaans), D.Sc. thesis, PU vir CHO, May 1985 (Supervisor : Prof ELJ Breet, PU vir CHO)

Publications in specialised journals

1. A.S. Luyt, J.B. Clark, A.M. Heyns. Phase transitions in univalent dihydrogen phosphates and arsenates. *South African Journal of Physics* 1984; 7:65-68.
2. E.L.J. Breet, A.S. Luyt, S. Oranje. Oxidation kinetics of a Fisher-Tropsch wax, I: Simple method for measuring oxygen consumption. *South African Journal of Chemistry* 1990; 43(3/4):83-86.
3. A.S. Luyt, W.J. McGill, D. Shillington. A DSC study of the interaction of 2-mecrpto= benzothiazole, sulphur, ZnO and stearic acid in the absence of rubber. *British Polymer Journal* 1990; 23:135-139.
4. J.G.H. Siebert, A.S. Luyt, C. Ackermann. A new transmission electron microscopic (TEM) method to determine differences between cationic polymers in solution. *International Journal of Pharmaceutics* 1990; 61:157-160.
5. J.G.H. Siebert, A.S. Luyt, C. Ackermann. Factors affecting the permeation of urea and water through nude mouse skin in vitro: VI. Polymer carriers. *International Journal of Pharmaceutics* 1990; 65:29-34.
6. J.G.H. Siebert, A.S. Luyt, C. Ackermann. The effect of various polymer applications on the physical structure of nude mouse skin. *International Journal of Pharmaceutics* 1990; 66:157-167.
7. E.L.J. Breet, A.S. Luyt. Oxidation kinetics of a Fischer-Tropsch wax, II: Induction period as first macroscopic stage. *South African Journal of Chemistry* 1991; 44(4):101-104.
8. A.S. Luyt. A differential scanning calorimetric study of the interaction of 2-mecrpto= benzothiazole, sulfur, ZnO and stearic acid/zinc stearate in the presence of polyisoprene. *Journal of Applied Polymer Science: Applied Polymer Symposium* 1991; 48:449-457.
9. A.S. Luyt. A differential scanning calorimetric study of the interaction of zinc benzothiazole-2-thiolate, sulfur, stearic acid and zinc stearate in the absence and presence of polyisoprene. *Journal of Applied Polymer Science* 1993; 47(12):2177.
10. A.S. Luyt, J.S. Crighton. Thermoanalytical procedures to identify the morphology of polycrystalline materials: the inhibition of reorganization. *Journal of Thermal Analysis* 1994; 41(2-3):583-604.
11. H.C.M. Vosloo, A.S. Luyt. Thermo-analytical characterization of polyphenylacetylene. I. High polyphenylacetylene synthesized through metathesis polymerization. *Journal of*

- Thermal Analysis 1995; 44:1261-1275.
12. A.S. Luyt, H.C.M. Vosloo. Thermo-analytical characterization of polyphenylacetylene. II. Comparison of polymers prepared through metathesis polymerization with different C₆H₅OH/Mo(CO)₆ molar ratios. *Journal of Thermal Analysis* 1995; 44:1277-1285.
 13. A.S. Luyt, H.C.M. Vosloo. Influence of different types of differential scanning calorimeter on analyses of polyphenylacetylene. *Thermochimica Acta* 1996; 286(2):399-402.
PII: S0040-6031(96)02957-7
 14. N.S. Nhlapo, A.S. Luyt, H.C.M. Vosloo. Comparison of two curing agents in thermal cross-linking. I. Hard paraffin wax. *Journal of Applied Polymer Science* 1998; 70:1551-1559.
 15. M. Reading, R. Luyt. TMDSC at the glass transition: Quantitative use of the phase lag correction. The effects of long annealing times. *Journal of Thermal Analysis* 1998; 54:535-544.
 16. A.S. Luyt, M. Reading, H.C.M. Vosloo. Thermoanalytical characterization of polyphenylacetylene. III. Use of modulated differential scanning calorimetry (MDSC). *Thermochimica Acta* 1998; 320:135-140.
PII: S0040-6031(98)00422-5
 17. A.S. Luyt, K. Ishripersadh. Comparative thermoanalytical investigation of the cross-linking behaviour of three different paraffin waxes in the presence of dicumyl peroxide. *Thermochimica Acta* 1999; 333:155-167.
PII: S0040-6031(99)00137-9
 18. A.S. Luyt, K. Ishripersadh, D.N. Timm. Comparative thermoanalytical investigation of the cross-linking behaviour of three different paraffin waxes in the presence of potassium persulphate. *Thermochimica Acta* 1999; 339:55-67.
PII: S0040-6031(99)00178-1
 19. A.S. Luyt, S.P. Hlangothi. Thermoanalytical investigation of the cross-linkability of a hard paraffin wax in the presence of benzoyl peroxide. *Thermochimica Acta* 2000; 360(1):41-46.
PII: S0040-6031(00)00527-X
 20. I. Krupa, A.S. Luyt. Thermal properties of uncross-linked and cross-linked LLDPE/wax blends. *Polymer Degradation and Stability* 2000; 70:111-117.

- PII: S0141-3910(00)00097-5
21. I. Krupa, A.S. Luyt. Mechanical properties of uncross-linked and cross-linked LLDPE/wax blends. *Journal of Applied Polymer Science* 2001; 81(4):973-980.
 22. J. Bariyanga, A.S. Luyt. Synthesis, Fourier transform infrared, nuclear magnetic resonance and thermal analysis of sodium and platinum complexes of 6-mercaptopurine. *Journal of Molecular Structure* 2001; 559(1-3):49-54.
PII: S0022-2860(00)00671-2
 23. I. Krupa, A.S. Luyt. Thermal and mechanical properties of LLDPE cross-linked with gamma radiation. *Polymer Degradation and Stability* 2001; 71:361-366.
PII: S0141-3910(00)00186-5
 24. I. Krupa, A.S. Luyt. Thermal and mechanical properties of extruded LLDPE/wax blends. *Polymer Degradation and Stability* 2001; 73:157-161.
PII: S0141-3910(01)00082-9
 25. I. Krupa, A.S. Luyt. Thermal properties of polypropylene/wax blends. *Thermochimica Acta* 2001; 372(1-2):137-141.
PII: S0040-6031(01)00450-6
 26. I. Krupa, A.S. Luyt. Physical properties of blends of LLDPE and an oxidized paraffin wax. *Polymer* 2001; 42(17):7285-7289.
PII: S0032-3861(01)00172-0
 27. I. Krupa, A.S. Luyt. Thermal properties of isotactic polypropylene degraded with gamma irradiation. *Polymer Degradation and Stability* 2001; 72(3):505-508.
PII: S0141-3910(01)00052-0
 28. T.N. Mtshali, A.S. Luyt, I. Krupa. The effect of cross-linking on the thermal properties of LDPE/wax blends. *Thermochimica Acta* 2001; 380(1):47-54.
PII: S0040-6031(01)00636-0
 29. F.M. Mhlongo, A.S. Luyt, C.G.C.E Van Sittert. Effect of cross-linking on the thermal stability and molar mass distribution of paraffin waxes. *Polymer Degradation and Stability* 2001; 73:151-155.
PII: S0141-3910(01)00081-7
 30. I. Krupa, A.S. Luyt. Cross-linking of LDPE/wax blends in the presence of dicumyl peroxide. *South African Journal of Chemistry* 2002; 55:52-60.
 31. A.S. Luyt, I. Krupa. PE/wax blends: Interesting observations. *Macromolecular Symposia*

- 2002; 178:109-116.
32. V. Djokovic, T.N. Mtshali, A.S. Luyt. The influence of wax content on the physical properties of low-density polyethylene – wax blends. *Polymer International* 2003; 52(6):999-1004.
DOI: 10.1002/pi.1180
 33. S.P. Hlangothi, I. Krupa, V. Djokovic, A.S. Luyt. Thermal and mechanical properties of cross-linked and uncross-linked polyethylene – wax blends. *Polymer Degradation and Stability* 2003; 79(1):53-59.
PII: S0141-3910(02)00238-0
 34. T.N. Mtshali, C.G.C.E. Van Sittert, V. Djokovic, A.S. Luyt. Binary mixtures of polyethylene and oxidized wax: Dependence of thermal and mechanical properties upon mixing procedure. *Journal of Applied Polymer Science* 2003; 89(9):2446-2456.
 35. Z.H. Mbhele, M.G. Salemane, C.G.C.E. Van Sittert, J.M. Nedeljkovic, V. Djokovic, A.S. Luyt. Fabrication and characterization of silver – polyvinyl alcohol nanocomposites. *Chemistry of Materials* 2003; 15(26):5019-5024.
DOI: 10.1021/cm034505a
 36. P. Sreekumari Nair, T. Radhakrishnan, N. Revaprasadu, C.G.C.E. Van Sittert, V. Djokovic, A.S. Luyt. Characterization of polystyrene films containing HgS nanoparticles. *Materials Letters* 2004; 58:361-364.
DOI: 10.1016/S0167-577X(03)00501-9
 37. M.A. Mokoena, V. Djokovic, A.S. Luyt. Composites of linear low density polyethylene and short sisal fibres: The effects of peroxide treatment. *Journal of Materials Science* 2004; 39(10):3403-3412.
 38. I. Novak, I. Krupa, A.S. Luyt. Modification of a Fischer-Tropsch wax by grafting with maleic anhydride. *Journal of Applied Polymer Science* 2004; 93(2):662-668.
DOI: 10.1002/app.20513
 39. I. Novak, I. Krupa, A.S. Luyt. Modification of polarity of isotactic polypropylene through blending with oxidized paraffin wax. *Journal of Applied Polymer Science* 2004; 94(2):529-533.
DOI: 10.1002/app.20935
 40. A.S. Luyt, R. Brüll. Investigation of polyethylene-wax blends by CRYSTAF and SEC-FTIR. *Polymer Bulletin* 2004; 52:177-183.

- DOI: 10.1007/~00289-004-0274-0
41. H. Krump, A.S. Luyt, J.A. Molefi. Changes in free surface energy as an indicator of polymer blend miscibility. *Materials Letters* 2005; 59(4):517-519.
DOI: 10.1016/j.matlet.2004.10.039
 42. H. Krump, M. Šimor, I. Hudec, M. Jaššo, A.S. Luyt. Adhesion strength study between plasma treated polyester fibres and a rubber matrix. *Applied Surface Science* 2005; 240(1-4):268-274.
DOI: 10.1016/j.apsusc.2004.06.109
 43. I. Novak, I. Krupa, A.S. Luyt. Improvement of polarity of polyethylene using oxidized Fischer-Tropsch paraffin wax and its influence on the final mechanical properties. *Journal of Applied Polymer Science* 2005; 95(5):1164-1168.
DOI: 10.1002/app.21283
 44. A.S. Luyt, M.E. Malunka. Composites of low density polyethylene and short sisal fibres: The effect of wax addition and peroxide treatment on thermal properties. *Thermochimica Acta* 2005; 426(1-2):101-107.
DOI: 10.1016/j.tca.2004.07.010
 45. H. Krump, P. Alexy, A.S. Luyt. Preparation of a maleated Fischer-Tropsch paraffin wax and FTIR analysis of grafted maleic anhydride. *Polymer Testing* 2005; 24:129-135.
DOI: 10.1016/j.polymertesting.2004.09.011
 46. H. Krump, I. Hudec, A.S. Luyt. Influence of plasmas on the structural characterization of polyester fibres determined by Hg-porosimetry. *International Journal of Adhesion and Adhesives* 2005; 25(3):269-273.
DOI: 10.1016/j.ijadhadh.2004.09.001
 47. A.S. Luyt, M.J. Hato. Thermal and mechanical properties of LLDPE/LDPE/wax ternary blends. *Journal of Applied Polymer Science* 2005; 96:1748-1755.
DOI: 10.1002/app.21642
 48. P. Sreekumari Nair, T. Radhakrishnan, N. Revaprasadu, G.A. Kolawole, A.S. Luyt, V. Djoković. Structure and properties of PbS-polyacrylamide nanocomposites. *Applied Physics A* 2005; 81:835-838.
DOI: 10.1007/s00339-005-3283-4
 49. P. Sreekumari Nair, T. Radhakrishnan, N. Revaprasadu, G.A. Kolawole, A.S. Luyt, V. Djokovic. Preparation and characterization of polystyrene films containing PbS

- nanoparticles. *Journal of Materials Science* 2005; 40(16):4407-4409.
50. P. Sreekumari Nair, T. Radhakrishnan, N. Revaprasadu, G.A. Kolawole, A.S. Luyt, V. Djoković, Polystyrene-co-maleic acid/CdS nanocomposites: preparation and properties. *Journal of Physics and Chemistry of Solids* 2005; 66:1302-1306.
DOI: 10.1016/j.jpcs.2005.05.002
51. M.E. Malunka, A.S. Luyt, H. Krump. Preparation and characterization of EVA-sisal fibre composites. *Journal of Applied Polymer Science* 2006; 100:1607-1617.
DOI: 10.1002/app.23650
52. I. Novak, I. Krupa, A.S. Luyt. Modification of polarity and adhesive properties of polyolefins through blending with maleic anhydride grafted Fischer-Tropsch paraffin wax. *Journal of Applied Polymer Science* 2006; 100(4):3069-3074.
DOI: 10.1002/app.23707
53. A.S. Luyt, J.A. Molefi, H. Krump. Thermal, mechanical and electric properties of copper powder filled low-density and linear low-density polyethylene composites. *Polymer Degradation and Stability* 2006; 91:1629-1636.
DOI: 10.1016/j.polymdegradstab.2005.09.014
54. M.G. Salemane, A.S. Luyt. Thermal and mechanical properties of polypropylene – wood powder composites. *Journal of Applied Polymer Science* 2006; 100:4173-4180.
DOI: 10.1002/app.23521
55. H. Krump, M. Jasso, I. Hudec, E. Dayss, A.S. Luyt. Physical-morphological and chemical changes leading to an increase in adhesion between plasma treated polyester fibres and a rubber matrix. *Applied Surface Science* 2006; 252:4264-4278.
DOI: 10.1016/j.apsusc.2005.07.003
56. H.S. Mpanza, A.S. Luyt. Influence of different waxes on the physical properties of linear low-density polyethylene. *South African Journal of Chemistry* 2006; 59:48-54.
57. B.R. Guduri, A.S. Luyt. Mechanical and morphological properties of carbon fibre reinforced-modified epoxy composites. *Journal of Applied Polymer Science* 2006; 101:3529-3536.
DOI: 10.1002/app.24592
58. H.S. Mpanza, A.S. Luyt. Comparison of different waxes as processing agents for low-density polyethylene. *Polymer Testing* 2006; 25(4):436-442.
DOI: 10.1016/j.polymertesting.2006.01.008

59. H. Krump, A.S. Luyt, I. Hudec. Effect of different modified clays on the thermal and physical properties of polypropylene-montmorillonite nanocomposites. *Materials Letters* 2006; 60:2877-2880.
DOI: 10.1016/j.matlet.2006.02.006
60. B.R. Guduri, A.V. Rajulu, A.S. Luyt. Effect of alkali treatment on the flexural properties of “*Hildegardia*” fabric composites. *Journal of Applied Polymer Science* 2006; 102:1297-1302.
DOI: 10.1002/app.23522
61. A.S. Luyt, I. Krupa, I. Novak. The influence of Fischer-Tropsch paraffin wax on the thermal, mechanical and surface properties of polyolefin/wax blends. *Focus on Polymeric Materials Research*, (edited by B.M. Caruta), Nova Science Publishers, Inc., New York 2006.
62. T. Radhakrishnan, M.K. Georges, P. Sreekumari Nair, A.S. Luyt, V. Djoković. Study of sago starch-CdS nanocomposite films: fabrication, structure, optical and thermal properties. *Journal of Nanoscience and Nanotechnology* 2007; 7:986-993.
DOI: 10.1166/jnn.2007.212
63. D.G. Dikobe, A.S. Luyt. Effect of filler content and size on the properties of ethylene vinyl acetate copolymer – wood fiber composites. *Journal of Applied Polymer Science* 2007; 103(6):3645-3654.
DOI: 10.1002/app.25513
64. B.R. Guduri, A.S. Luyt. Effect of ethylene glycidyl methacrylate compatibilizer on the structure and mechanical properties of clay nanocomposites modified with ethylene vinyl acetate copolymer. *Journal of Applied Polymer Science* 2007; 103(6):4095-4101.
DOI: 10.1002/app.25512
65. I. Krupa, G. Mikova, A.S. Luyt. Polypropylene as a potential matrix for the creation of shape stabilized phase change materials. *European Polymer Journal* 2007; 43(3):895-907.
DOI: 10.1016/j.eurpolymj.2006.12.019
66. M.J. Hato, A.S. Luyt. Thermal fractionation and properties of different PE/wax blends. *Journal of Applied Polymer Science* 2007; 104(4):2225-2236.
DOI: 10.1002/app.25494
67. V.G. Geethamma, A.S. Luyt. Effect of oxidized paraffin wax on the thermal and mechanical properties of linear low-density polyethylene–layered silicate nanocomposites.

- Polymer Testing 2007; 26:461-470.
DOI: 10.1016/j.polymertesting.2006.12.015
68. D.G. Dikobe, A.S. Luyt. Effect of poly(ethylene-*co*-glycidyl methacrylate) compatibilizer content on the morphology and physical properties of ethylene vinyl acetate-wood fiber composites. *Journal of Applied Polymer Science* 2007; 104(5):3206-3213.
DOI: 10.1002/app.26080
69. B.R. Guduri, A.S. Luyt. Comparison of the influence of different compatibilizers on the structure and properties of EVA/modified clay nanocomposites. *Journal of Applied Polymer Science* 2007; 105(6):3612-3617.
DOI: 10.1002/app.26532
70. B.R. Guduri, A.V. Rajulu, A.S. Luyt. Chemical resistance, void content and morphological properties of *Hildegardia* fabric – polycarbonate toughened epoxy composites. *Journal of Applied Polymer Science* 2007; 106(6):3945-3951.
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H. Conference papers

1. Luyt AS & Crighton JS, "A thermoanalytical study of polypropylene morphology", Royal Society of Chemistry Symposium on Applications of Thermal Methods of Polymers, Loughborough, England, 7-9 January 1987
2. Breet ELJ & Luyt AS, "The oxidation kinetics of a Fischer-Tropsch wax", 75 Jubilee Convention of the South African Chemical Institute, Durban, South Africa, 6-10 July 1987
3. Luyt AS & Crighton JS, "A thermo-analytical study of polypropylene morphology", SASTA3, Cape Town, South Africa, 1-2 February 1988
4. Luyt AS & Breet ELJ, "The thermolysis of an oxalato complex of tin(IV) in aqueous solution", National Physical Chemistry Symposium, Dikhololo, Northern Province, South Africa, 3-6 July 1988
5. Breet ELJ & Luyt AS, "The oxidation kinetics of a Fischer-Tropsch wax", IX International Conference of Physical Organic Chemistry, Regensburg, Germany, 21-26 August 1988
6. Siebert JGH, Luyt AS & Ackermann C, "The influence of cationic polymers on the percutaneous absorption of water through nude mouse skin in vitro", Prediction of Percutaneous Penetration Conference, Manchester, England, 4-6 April 1989
7. Siebert JGH, Luyt AS & Ackermann C, "The influence of cationic polymers on the permeability of water and urea in vitro", 16th International Symposium on Controlled Release of Bioactive Material, Chicago, United States of America, 6-9 August 1989
8. Luyt AS & McGill WJ, "Vulcanization and curative interaction by DSC", *Macromolecules'89*, Oxford, England, 4-8 September 1989

9. Luyt AS, "DSC analysis of polyisoprene vulcanization and qualitative determination of unreacted compounds through HPLC", 3rd International Symposium of Polymer Analysis and Characterization, Brno, Czechoslovakia 23-26 July 1990
10. Luyt AS, "Mechanism of the interaction of zinc benzothiazole-2-thiolate, sulfur, stearic acid and zinc stearate in the absence and presence of polyisoprene", National Physical Chemistry Symposium, Durban, South Africa, 29-31 January 1992
11. Luyt AS & Vosloo HCM, "Structure and thermal properties of polyphenylacetylenes", University of Witten/Herdecke, Germany, 7 July 1992
12. Luyt AS, Vosloo HCM & Du Plessis JAK, "Molecular mass determination of polyphenylacetylenes and correlation with structure", MACRO'92, Prague, Czechoslovakia, 13-17 July 1992
13. Luyt AS & Vosloo HCM, "Correlation between thermo-analytical data and structural analyses of polyphenylacetylenes", MACRO'92, Prague, Czechoslovakia, 13-17 July 1992
14. Luyt AS & Vosloo HCM, "Thermal behaviour of polyphenylacetylenes", SASTA5, Pretoria, South Africa, 2-3 November 1992
15. Luyt AS & Vosloo HCM, "Thermal behaviour of polyphenylacetylene synthesized under different conditions", 32nd Convention of the South African Chemical Institute, Midrand, South Africa, 31 January - 3 February 1994
16. Luyt AS & Vosloo HCM, "Thermal behaviour of polyphenylacetylene synthesized under different conditions", Interscience'94, University of the North, South Africa, 3-4 February 1994
17. Luyt AS & Vosloo HCM, "Thermal behaviour of polyphenylacetylene synthesized under different conditions", MacroAkron'94 University of Akron, Ohio, U.S.A., 10-15 July 1994
18. Luyt AS & Nhlapo NS, "Cross-linking study of paraffin waxes and polyphenylacetylene", MacroAkro'94 University of Akron, Ohio, U.S.A., 10-15 July 1994
19. Luyt AS & Nhlapo NS, "Cross-linking of saturated and unsaturated long-chain hydrocarbons", ANALYTICA'94, University of Stellenbosch, South Africa, 7-13 December 1994
20. Luyt AS & Vosloo HCM, "Modulated differential scanning calorimetric analysis of polyphenylacetylene synthesized under different conditions", SASTA 6, University of

- Pretoria, South Africa, 2-3 May 1995
21. Nhlapo NS & Luyt AS, “Thermo-analytical investigation of cross-linking of saturated and unsaturated long-chain hydrocarbons”, SASTA 6, University of Pretoria, South Africa, 2-3 May 1995
 22. Nhlapo NS & Luyt AS, “Thermo-analytical investigation of cross-linking of saturated and unsaturated long-chain hydrocarbons”, 33rd Convention of the South African Chemical Institute, University of Cape Town, 29 January - 2 February 1996
 23. Luyt AS & Vosloo HCM, “Modulated differential scanning calorimetric analysis of polyphenylacetylene synthesized under different conditions”, 33rd Convention of the South African Chemical Institute, University of Cape Town, 29 January - 2 February 1996
 24. Luyt AS & Ishripersadh K, “Cross-linking of saturated long-chain hydrocarbons”, IUPAC MacroSeoul’96, Seoul, Korea, 4-9 August 1996
 25. Nhlapo NS, Luyt AS & Vosloo HCM, “Thermoanalytical investigation of cross-linking of saturated and unsaturated long-chain hydrocarbons”, IUPAC MacroSeoul’96, Seoul, Korea, 4-9 August 1996
 26. Luyt AS & Ishripersadh K, “Cross-linking of saturated long-chain hydrocarbons”, 4th ISABC including the Carman Physical Chemistry Conference, Cape Town, 1-4 April 1997
 27. Luyt AS & Ishripersadh K, “Cross-linking of saturated long-chain hydrocarbons”, SASTA 7, University of Pretoria, 22-24 May 1997
 28. Luyt AS & Ishripersadh K, “Cross-linking of long-chain hydrocarbons”, MACRO’98, Gold Coast, Australia, 17-22 July 1998
 29. Luyt AS, Webber G & Reading M, “Verification of wax structures through MTDSC parsing analysis”, MACRO’98, Gold Coast, Australia, 17-22 July 1998
 30. Luyt AS & Ishripersadh K, “Cross-linking of long-chain hydrocarbons”, SASTA 8, Pretoria, 3-4 June 1999
 31. Luyt AS, “Cross-linking of waxes and polymers”, Invitation lecture given at the Polymer Institute of the Slovak Academy of Sciences in Bratislava, Slovakia, July 1999
 32. Luyt AS, “Cross-linking and physical properties of waxes and LDPE/wax blends”, Invitation lecture given in Strasbourg, France, November 1999
 33. Krupa I & Luyt AS, “Mechanical and rheological properties of uncross-linked and cross-linked LLDPE/wax blends”, UNESCO Polymer Symposium, Stellenbosch, 9-12 April

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34. Hlangothi SP, Krupa I & Luyt AS, “Thermal properties of uncross-linked and cross-linked LLDPE/wax blends”, UNESCO Polymer Symposium, Stellenbosch, 9-12 April 2000
35. Krupa I & Luyt AS, "Mechanical and rheological properties of uncross-linked and cross-linked LLDPE/wax blends”, IUPAC World Polymer Congress, Warsaw, Poland, 9-14 July 2000
36. Krupa I & Luyt AS, “Thermal properties of uncross-linked and cross-linked LLDPE/wax blends”, IUPAC World Polymer Congress, Warsaw, Poland, 9-14 July 2000
37. Krupa I & Luyt AS, "Thermal and mechanical properties of LLDPE cross-linked by gamma-irradiation”, 35th Convention of the South African Chemical Institute, 25-29 September 2000, Potchefstroom
38. Hlangothi SP, Krupa I & Luyt AS, "Investigation of thermal properties of cross-linked and uncross-linked LLDPE/wax blends”, 35th Convention of the South African Chemical Institute, 25-29 September 2000, Potchefstroom
39. Luyt AS & Krupa I, “PE/wax blends: Interesting observations”, Plenary lecture at the IUPAC/UNESCO Symposium on Macromolecules, 8-12 April 2001, Stellenbosch
40. Mtshali TN, Luyt AS & Van Sittert CGCE, “Spectroscopic investigation of grafting and cross-linking of paraffin wax and PE/wax blends”, CSI Conference, 8-13 July 2001, Pretoria
41. Luyt AS & Krupa I, “Thermal and mechanical properties of polyethylene/wax blends”, EPF Congress, 15-20 July 2001, Eindhoven, The Netherlands
42. Mtshali TN, Luyt AS, Van Sittert CGCE & Djokovic V, “PE/wax blends: Influence of oxygen groups and mode of preparation on blend properties”, UNESCO School & IUPAC Conference on Macromolecules & Materials Science, 23-28 March 2002, Stellenbosch
43. Mokoena MA, Djokovic V & Luyt AS, “The effects of crosslinking on the mechanical properties of sisal fibre – polyethylene composites”, UNESCO School & IUPAC Conference on Macromolecules & Materials Science, 23-28 March 2002, Stellenbosch
44. Mtshali TN, Djokovic V & Luyt AS, “The influence of wax content on the physical properties of low-density polyethylene - wax blends”, 7th European Symposium on Polymer Blends, 27-29 May 2002, Lyon, France
45. Hlangothi SP, Luyt AS, Krupa I & Djokovic V, “Investigation of thermal and mechanical properties of cross-linked and uncross-linked LLDPE / wax blends”, 36th Convention of

- the South African Chemical Institute, 1-5 July 2002, Port Elizabeth
46. Mbhele ZH, Salemane GM, Van Sittert CGCE, Nedeljkovic JM, Djokovic V & Luyt AS, “Influence of nanoparticle content on the physical properties of PVA-Ag nanocomposites”, 6th Annual UNESCO/IUPAC Conference, 14-17 April 2003, Kruger National Park
 47. Hato MJ, Djokovic V & Luyt AS, “Thermal and mechanical properties of uncross-linked LLDPE/LDPE/wax blends”, 6th Annual UNESCO/IUPAC Conference, 14-17 April 2003, Kruger National Park
 48. Malunka ME, Djokovic V & Luyt AS, “Preparation and characterization of polyolefin-sisal fibre composites”, 6th Annual UNESCO/IUPAC Conference, 14-17 April 2003, Kruger National Park
 49. Mokoena MA, Djokovic V & Luyt AS, “The effects of peroxide treatment on the physical properties of sisal fibre-polyethylene composites”, 6th Annual UNESCO/IUPAC Conference, 14-17 April 2003, Kruger National Park
 50. Luyt AS, Djokovic V, Sreekumari Nair P, Radhakrishnan T & Revaprasadu N, “Synthesis and characterization of hybridized PbS-polyacrylamide nanocomposites”, Europolymer Congress 2003, 23-27 June 2003, Stockholm, Sweden
 51. Novak I, Krupa I & Luyt AS, “Nonconventional modification of polarity of polyethylene through blending with oxidized Fischer–Tropsch paraffin wax’, 6th Austrian Polymer Meeting, XXIst International H.F. Mark – Symposium, 15-17 September 2003, Vienna, Austria
 52. Luyt AS, “The influence of wax on the morphology and properties of polymer blends and composites”, Special invited lecture at the International Conference on Modified Polymers (ModPol2003), 7-9 October 2003, High Tatras, Slovak Republic
 53. Krupa I, Novak I & Luyt AS, “Investigation of surface and mechanical properties of low-density polyethylene modified using oxidized paraffin wax”, International Conference on Polymer Materials, 29-30 October 2004, Bratislava, Slovak Republic
 54. Malunka ME & Luyt AS, Preparation and characterization of EVA–sisal fibre composites”, 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
 55. Mpanza HS & Luyt AS, “The influence of type and amount of wax on the thermal and mechanical properties of different types of polyethylene in uncrosslinked PE/wax blends”,

- 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
56. Hato MJ & Luyt AS, “Thermal fractionation studies on different PE/wax blends”, 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
 57. Krump H & Luyt AS, “Effects of different clays on organoclay dispersion and mechanical, structural and thermal properties of polypropylene nanocomposites”, 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
 58. Mokoena MA & Luyt AS, “The influence of peroxide treatment on sisal fibre reinforced linear low density polyethylene composites”, 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
 59. Molefi JA & Luyt AS, “Thermal conductivity and mechanical properties of polymers filled with metal powder”, 7th Annual UNESCO/IUPAC Conference on Macromolecules, 4-9 April 2004, Stellenbosch
 60. Djokovic V, Sreekumari Nair P, Radhakrishnan T & Luyt AS, “CdS-polymer nanocomposites: Fabrication, structure, optical and thermal properties”, Macro 2004 World Polymer Congress, 4-9 July 2004, Paris, France
 61. Luyt AS, Hato MJ & Mpanza HS, “Polyethylene/wax blends: Thermal fractionation and physical properties”, Macro 2004 World Polymer Congress, 4-9 July 2004, Paris, France
 62. Djokovic V, Sreekumari Nair P, Radhakrishnan T & Luyt AS, “PbS nanoparticles in polyacrylamide matrix: Structure, optical properties and influence on the host polymer”, XVI National Symposium on Condensed Matter Physics, 19-24 September 2004, Sokobanja, Serbia and Montenegro
 63. Krump H, Malunka ME, Luyt AS & Jurica L, “Preparation and characterization of EVA-Sisal fibre composites”, Invited lecture at ICBC 2005, 20 – 23 March 2005, Kottayam, India (also chairperson of technical session)
 64. Luyt AS, Guduri BR & Mishra S, “EVA-clay nanocomposites: An overview”, Invited lecture at POLYCHAR-14, 16-22 April 2006, Nara, Japan (also chairperson of technical session)
 65. DG Dikobe & AS Luyt, “Effect of EGMA compatibilizer content on EVA-WF composites”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 66. VG Geethamma, MA Mokoena & AS Luyt, “Effect of oxidized wax on the properties of

- linear low-density polyethylene-clay nanocomposites”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
67. AK Mishra, SB Mishra & AS Luyt, “Low density polyethylene-wood fibre-silica nanocomposites: Thermal and mechanical properties”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 68. SB Mishra & AS Luyt, “EVA-clay nanocomposites: Thermal and mechanical properties”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 69. ME Mngomezulu, I Krupa & AS Luyt, “Phase change materials based on polyethylene, paraffin wax and wood flour”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 70. JA Molefi, I Krupa & AS Luyt, “Phase change conductive polymer composite materials”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 71. TE Motaung, SB Mishra & AS Luyt, “Thermal and mechanical properties of LDPE-g-MAH-silica nanocomposites”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 72. LP Nhlapo & AS Luyt, “Thermal and mechanical properties of polyethylene-sisal fiber composites compatibilized with modified paraffin waxes”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 73. I Krupa & AS Luyt, “Shape stabilized phase change materials based on low density polyethylene and paraffin waxes”, UNESCO/IUPAC Conference on Macromolecules, 19-23 November 2006, Stellenbosch
 74. DG Dikobe & AS Luyt, “Effect of EGMA compatibilizer content on EVA-WF composites”, 4th International Conference of Advanced Materials & Processing (ICAMP4), 10-13 December 2006, Hamilton, New Zealand
 75. AK Mishra, SB Mishra & AS Luyt, “Effect of sol-gel derived nano-silica on the thermal and mechanical properties of low-density polyethylene/wood fibre composites”, 3rd China-Europe Conference on Processing and Properties of Reinforced Polymers, 11-15 June 2007, Budapest, Hungary
 76. SB Mishra, AK Mishra & AS Luyt, “Influence of organic peroxides on morphology and properties of EVA-organoclay nanocomposites”, 46th Microsymposium on Nanostructured polymers and Polymer Nanocomposites, 8-12 July 2007, Prague, Czech Republic
 77. AS Luyt & ME Mngomezulu, “Phase change materials based on polyethylene, paraffin

- wax and wood flour”, Invited lecture at the International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, Their Composites, Blends, IPNs and Gels: Macro to Nano Scales, 19-22 November 2007, Mahatma Gandhi University, Kottayam, India
78. DG Dikobe & AS Luyt, “Thermal and mechanical properties of PP/EVA-WF and MAPP/EVA-WF polymer blend composites”, International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, Their Composites, Blends, IPNs and Gels: Macro to Nano Scales, 19-22 November 2007, Mahatma Gandhi University, Kottayam, India
 79. AS Luyt & DG Dikobe, “Thermal and mechanical properties of PP/EVA-WF and MAPP/EVA-WF polymer blend composites”, Composites 2007, 10-13 December 2007, Port Elizabeth
 80. DG Dikobe & AS Luyt, “Thermal and mechanical properties of polymer blend/wood flour composites”, 13th European Conference on Composite Materials, 2-5 June 2008, Stockholm, Sweden
 81. SM Mohomane & AS Luyt, “Morphology and properties of polychloroprene nanocomposites”, Polymer Processing Society 24th Annual Meeting, 15-19 June 2008, Salerno, Italy
 82. AS Luyt, “Paraffin wax in polymer blends and composites: Is it worth investigating?”, Polyméry 2008, 28 September – 1 October 2008, Stará Lesná, Slovakia (special guest lecture after receiving an honorary medal from the Polymer Institute, Slovak Academy of Sciences)
 83. DG Dikobe & AS Luyt, “Morphology and thermal properties of PP/LLDPE/WP and MAPP/LLDPE/WP polymer blend composites”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park
 84. SM Mohomane & AS Luyt, “Thermal, mechanical, and morphological properties of polychloroprene/montmorillonite nanocomposites”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park
 85. MA Mokoena & AS Luyt, “Investigation of fibre reinforced HDPE composites crosslinked/grafted through siloxane linkage”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park
 86. JA Molefi, AS Luyt & I Krupa, “Thermal and mechanical properties of phase change conductive polymer composite materials”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park

87. TE Motaung, SB Mishra & AS Luyt, “Morphology and properties of sol-gel prepared LDPE silica nanocomposites”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park
88. LP Nhlapo & AS Luyt, “Thermal and mechanical properties of the LDPE/sisal fibre composites compatibilized with modified paraffin waxes”, 10th Annual UNESCO/IUPAC Conference on Macromolecules & Materials, 7-11 September 2008, Kruger National Park
89. AS Luyt, “Paraffin wax in polymer blends and composites: Is it worth investigating?”, Keynote lecture at the 39th National Convention of the South African Chemical Institute, 30 November – 5 December 2008, Stellenbosch (also chairperson of technical session)
90. AS Luyt, MD Dramićanin, Ž Andrić, V Djoković, “Morphology and properties of composites of polypropylene and a nanostructured wollastonite filler”, Invited lecture at NanoAfrica 2009, 2-4 February 2009, Pretoria
91. JA Molefi, AS Luyt, I Krupa, “Thermal and mechanical properties of phase change conductive polymer composite materials”, ICCM-17, 27-31 July 2009, Edinburgh, Scotland
92. TE Motaung and AS Luyt, ‘Morphology and properties of sol-gel prepared LDPE-silica nanocomposites’, ICOM 2009, 27-30 August 2009, Herceg Novi, Montenegro
93. M.E. Makhatha, S.S. Ray, A.S. Luyt. Unusual thermal properties of poly(ethylene succinate) nanocomposites. Division of Polymeric Materials: Science & Engineering; 236th ACS National Meeting, Philadelphia, PA, 2008.
94. EEM Ahmad, AS Luyt, ‘The influence of peroxide initiated crosslinking on the morphology and physical properties of PE/sisal fibre micro- and nanocomposites’, The Polymer Processing Society 26th Annual Meeting, 4-8 July 2010, Banff, Canada
95. ME Mngomezulu, AS Luyt, I Krupa, ‘Phase change materials based on polyethylene, paraffin wax and wood flour’, MACRO2010 43rd IUPAC World Polymer Congress, 11-16 July 2010, Glasgow, Scotland
96. AS Luyt, ‘Polymer/wax blends as phase change materials for energy storage: Benefits and challenges’, Plenary lecture at the International Conference on Recent Trends in Materials Science and Technology (ICMST 2010), 28-31 October 2010, Thiruvananthapuram, Kerala, India
97. JP Mofokeng, AS Luyt, J Kovacs, ‘Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices’, POLYCHAR 19 – World Forum on

- Advanced Materials, 20-24 March 2011, Kathmandu, Nepal
98. SS Ochigbo, AS Luyt, JP Mofokeng, Ž Antić, MD 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, 26-29 April 2011, Stellenbosch, South Africa
 99. EEM Ahmad, AS Luyt, ‘Sisal whiskers-reinforced polylactic acid’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa
 100. W He, Y-Y Jiang, AS Luyt, ‘Synthesis and degradation kinetics of a novel polyester containing bithiazole rings’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa
 101. MJ Mochane, AS Luyt, ‘Preparation and characterization of polymer encapsulated paraffin wax to be used as a phase change material for energy storage’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa
 102. JP Mofokeng, AS Luyt, J. Kovács, T. Tábi, ‘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, 26-29 April 2011, Stellenbosch, South Africa
 103. TH Mokhothu, BR Guduri, AS Luyt, ‘Preparation and characterisation of natural fibre/co-polyester biocomposites’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa
 104. T.E. Motaung, A.S. Luyt, M.Messori, L. Saladino, E. Caponetti, ‘The effect of silica nanoparticles on the morphology, mechanical properties and thermal degradation kinetics of PMMA’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa
 105. SS Ndlovu, AS Luyt & AJ van Reenen, ‘Effect of using degraded LDPE as a compatibilizer in wood polyolefin composites’, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa (best poster prize)

106. SS Ochigbo, AS Luyt, JP Mofokeng, Ž Antić, MD 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, 22-26 May 2011, Pretoria, South Africa
107. EEM Ahmad, AS Luyt, 'Sisal whiskers-reinforced polylactic acid', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
108. MJ Mochane, AS Luyt, 'Preparation and characterization of polymer encapsulated paraffin wax to be used as a phase change material for energy storage', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
109. JP Mofokeng, AS Luyt, J. Kovács, T. Tábi, 'Comparison of injection moulded, natural fibre reinforced composites with PP and PLA as matrices', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
110. T.E. Motaung, A.S. Luyt, M.Messori, L. Saladino, E. Caponetti, 'The effect of silica nanoparticles on the morphology, mechanical properties and thermal degradation kinetics of PMMA', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
111. SS Ndlovu, AS Luyt & AJ van Reenen, 'Effect of using degraded LDPE as a compatibilizer in wood polyolefin composites', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
112. JS Sefadi, AS Luyt, 'Comparison of EVA/EFB composites containing two different types of EVA copolymer', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
113. W. He, AS Luyt, 'Enhanced thermal and mechanical properties of polyamide-6/mesoporous MCM-41 nanocomposites formed by *in situ* polymerization', 11th International Conference on Frontiers of Polymers and Advanced Materials, 22-26 May 2011, Pretoria, South Africa
114. SS Ochigbo, AS Luyt, JP Mofokeng, Ž Antić, MD Dramićanin, V Djoković, 'Thermoplastic starch- La(OH)₃ nanocomposites: Preparation and properties', Frontiers in Polymer Science, 29-31 May 2011, Lyon, France

115. W Mhike, WW Focke, AS Luyt, ‘Thermal and mechanical properties, as well as conductivities, of LDPE filled with paraffin wax and different grades of graphite’, EUROFILLERS 2011, 21-25 August 2011, Dresden, Germany
116. ML Saladino, TE Motaung, AS Luyt, D Chillura Martino, E Caponetti, ‘Preparation and characterization of polymethylmetacrilate and nano-SiO₂, -TiO₂ and -ZrO₂ composites’, Convegno Congiunto delle Sezioni Calabria e Sicilia 2011, 1-2 December 2011, Messina, Italy
117. J Pionteck, F Piana, E Melchor, AS Luyt, ‘Percolation phenomena of modified expanded graphites in TPU and PP composites’, 15th European Conference on Composite Materials (ECCM15), 24-28 June 2012, Venice, Italy
118. J Pionteck, F Piana, E Melchor, AS Luyt, SJ Sefadi, ‘Percolation of modified expanded graphites in TPU and PP Composites’, Nanofair 2012, 9th International Nanotechnology Symposium – New Ideas for Industry, 12-13 June 2012, Dresden, Germany
119. EEM Ahmad, AS Luyt, V Djoković, ‘Morphology and properties of poly(lactic acid)/sisal whiskers nanocomposites’, BiPoCo 202, an International Conference on Bio-Based Polymers and Composites, 27-31 May 2012, Siófok, Hungary
120. AS Luyt, ‘Polymer/wax blends as phase change materials for energy storage: Benefits and challenges’, Plenary lecture during the 60th Anniversary Celebration Symposium of the Shenyang University of Chemical Technology, 19-20 September 2012, Shenyang, China
121. TS Motsoeneng, AS Luyt, AJ van Reenen, ‘The effect of crystalline phase morphology on the structure and properties of impact polypropylene copolymer’, 4th International Conference on Polyolefin Characterization, 21-24 October 2012, Houston, United States of America
122. MA Sibeko, TC Mokhena, AS Luyt, ‘Preparation and characterization of vinylsilane crosslinked thermoplastic composites filled with nanoclays and sisal nanowhiskers’, The 28th International Conference of Polymer Processing Society (PPS-28), 11-15 December 2012, Pattaya, Thailand
123. J Pionteck, F Piana, E Melchor, AS Luyt, M Omastova, ‘Percolation phenomena of polypyrrole modified expanded graphites in polypropylene composites’, 12th International Conference on Polymers for advanced Technologies, 29 September – 2 October 2013, Berlin, Germany
124. JP Mofokeng, AS 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 and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
125. T.E. Motaung, M.L. Saladino, A.S. Luyt, D. Chillura Martino, ‘Influence of the modification, induced by zirconia nanoparticles, on the structure and properties of polycarbonate’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
126. MA Mokoena, AS Luyt, ‘Morphology, mechanical and thermal properties of polypropylene (PP)/kenaf reinforced composites subjected to different fibre treatments’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
127. MJ Mochane, AS Luyt, ‘Thermal and mechanical properties of polyolefins/wax PCM blends prepared with and without expanded graphite’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
128. CE Clarke, AS Luyt, ‘Preparation and characterization of polymer composites with bloodmeal’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
129. TS Motsoeneng, AS Luyt, AJ van Reenen, ‘The effect of crystalline phase morphology on the structure and properties of the impact polypropylene copolymer (IPC)’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
130. TC Mokhena, AS Luyt, ‘Preparation and characterization of vinylsilane crosslinked thermoplastic nanocomposites filled with sisal nanowhiskers’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
131. TG Mofokeng, AS Luyt, V Djoković, ‘Preparation and characterization of polymer nanocomposites with piezoelectric properties’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
132. MA Sibeko, AS Luyt, ‘Preparation and characterization of vinylsilane crosslinked thermoplastic composites filled with nanoclays’, 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013,

Stellenbosch

133. TH Mokhothu, AS Luyt, 'In situ preparation and properties of EPDM/SiO₂ nanocomposites', 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
134. JS Sefadi, AS Luyt, 'Preparation and properties of conductive polymer nanocomposites based on polyolefin matrices reinforced with expanded graphite', 12th Annual UNESCO/IUPAC Workshop and Conference on Macromolecules & Materials, 25-28 March 2013, Stellenbosch
135. MJ Mochane, AS Luyt, 'Thermal and mechanical properties of polyolefins/wax PCM blends prepared with and without expanded graphite', Invited lecture at BIT's 2nd Annual World Congress of Advanced Materials, 5-7 June 2013, Suzhou, China
136. MP Molaba, D Dudic, AS Luyt, 'Effect of thermal history on melting behavior of melt mixed isotactic polypropylene/paraffin/nano silver composite', Sixth International Conference on Contemporary Materials, 4-6 July 2013, Banja Luka, Bosnia and Hercegovina
137. MP Molaba, D Dudic, AS Luyt, 'Electrical properties of thermally treated polyethylene/paraffin/nano silver composites', Sixth International Conference on Contemporary Materials, 4-6 July 2013, Banja Luka, Bosnia and Hercegovina
138. JP Mofokeng, AS Luyt, 'Preparation and characterization of completely biodegradable polymer-titania nanocomposites', Keynote lecture presented at EUROFILLERS 2013, 25-29 August 2013, Bratislava, Slovakia
139. T.P. Gumede, A.S. Luyt, A.J. Müller, 'Kinetic study of the crystallization of LLDPE and wax in LLDPE/wax phase-change blends used for thermal energy storage', ICFPAM 2013, 8-13 December 2013, Auckland, New Zealand
140. M.P. Molaba, D. Dudić, A.S. Luyt, 'Thermally stimulated redistribution of silver nanoparticles in polyolefin/wax matrices', ICFPAM 2013, 8-13 December 2013, Auckland, New Zealand
141. T.P. Gumede, A.S. Luyt, A.J. Müller, 'Kinetic study of the crystallization of LLDPE and wax in LLDPE/wax phase-change blends used for thermal energy storage', POLYCHAR 22, 8-11 April 2014, Stellenbosch
142. T.G Mofokeng, A.S. Luyt, V. Djoković, D. Dudić, 'Preparation and characterization of polymer nanocomposites with piezoelectric properties', POLYCHAR 22, 8-11 April

- 2014, Stellenbosch
143. M.P. Molaba, A.S. Luyt, D. Dudić, ‘Improving of thermal and electrical conductivities of iPP/wax/Ag nanocomposites through different melt-mixing conditions’, POLYCHAR 22, 8-11 April 2014, Stellenbosch
 144. T.P. Gumede, A.S. Luyt, A.J. Müller, ‘Kinetic study of the crystallization of LLDPE and wax in LLDPE/wax phase-change blends used for thermal energy storage’, 27th International Symposium on Polymer Analysis and Characterization, 15-18 June 2014, Les Diablerets, Switzerland
 145. TP Gumede, AS Luyt, AJ Müller, ‘Kinetic study of the crystallization of LLDPE and wax in LLDPE/wax phase-change blends used for thermal energy storage’, ARC’14, 18-19 November 2014, Doha, Qatar
 146. SJ Sefadi, AS Luyt and J Pionteck, ‘Influence of electron beam irradiation on the thermal, mechanical and conductivity properties of EVA/expanded graphite (EG) and PP/EG composites’, EUROFILLERS Polymer Blends 2015, 26-30 April 2015, Montpellier, France
 147. M Saladino, Francesco Armetta, Motshabi Sibeko, Adriaan S. Luyt, Eugenio Caponetti, ‘Preparation and characterization of Ce:YAG-PMMA and Ce:YAG-PC composites for white LED’, X INSTM Conference, 28 June – 1 July 2015, Favignana, Italy
 148. J.P. Mofokeng and A.S. Luyt, ‘Morphology, thermal degradation and mechanical properties of biodegradable polyester blends and nanocomposites’, 20th International Conference on Composite Materials (ICCM20), 19-24 July 2014, Copenhagen, Denmark
 149. I. Petronijevic, J. Dojilovic, A.S. Luyt, D. Dudic, ‘Relaxation of AC conductivity of iPP/WAX blend after treatment in a solution of lithium salt at a high positive electrical potential’, Fourth International Conference on Multifunctional, Hybrid and Nanomaterials, 9-13 March 2015, Barcelona, Spain

I. International collaboration

1. Formal inter-governmental project on natural fibre – polymer composites: Dr T Czigany and Prof B Pukanszky, Budapest University of Technology and Economics, Hungary (2002 – 2004)
2. Project on grafted wax blends with polymers: Dr I Krupa & Dr I Novak, Polymer

- Institute, Slovak Academy of Sciences, Bratislava, Slovak Republic (2003 – 2004)
3. Project on solution cross-linking of polyethylenes: Prof I Chodak, Polymer Institute, Slovak Academy of Sciences, Bratislava, Slovak Republic (2002 – 2003)
 4. Formal inter-governmental project on polymer phase change materials: Dr I Krupa, Polymer Institute, Slovak Academy of Sciences, Bratislava, Slovak Republic (2008-2010)
 5. Formal inter-governmental project on latex-based nanocomposites: Prof S Thomas, Mahatma Gandhi University, Kottayam, India (2006-2008)
 6. Formal inter-governmental project on nano-particle containing polymer composites: Prof M Messori, University of Modena and Reggio Emilia, Italy (2008-2010)
 7. Formal inter-governmental project on natural fibre containing biodegradable polymer composites: Prof T Czigany, Budapest University of Technology and Economics, Hungary (2008-2009)
 8. Formal inter-governmental project on nano-silica containing EPDM composites: Prof M Messori, University of Modena and Reggio Emilia, Italy (2011-2013)
 9. Formal inter-governmental project on expanded graphite containing polyolefins: Dr J Pionteck, Leibniz Institute of Polymer Research, Germany (2011-2013)

J. Other

1. Regularly reviewing papers for 15-20 different polymer-related journals
2. Regularly used as reviewer and evaluator by the NRF
3. Member of International Advisory Board of eXPRESS Polymer Letters
4. Member of the Editorial Board, Malaysian Polymer Journal
5. NRF rating: C1
6. Awards for outstanding research:
 - Faculty of Natural and Agricultural Sciences, University of the Free State (2005)
 - Jubilee Committee, University of the Free State (Qwaqwa Campus) (2007)
 - Polymer Institute, Slovak Academy of Sciences (2008)