



THE TECHNICAL UNIVERSITY OF KENYA

Haile Selassie Avenue, P.O. Box 52428, Nairobi, 00200, Tel +254(020) 343672, 2249974, 2251300, 341639

Fax 2219689, Email: vc@tukenya.ac.ke, Website: www.tukenya.ac.ke

NAME: DR PATRICK MUSYOKI SHEM

Current Designation:	Lecturer, CHEMICAL SCIENCE AND TECHNOLOGY
Office Telephone:	+254(020) 2219929, 3341639, 3343672
Official Email:	patrick.shem@tukenya.ac.ke
Consultation Hours:	8AM-5PM MON - FRI



EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Philosophy (PhD)	CHEMISTRY	UNIVERSITY OF UTAH(United States)	2012
Masters of Science (M.Sc.)	ENVIRONMENTAL CHEMISTRY	UNIVERSITY OF NAIROBI(Kenya)	2005
Bachelor of Science (BSc)	CHEMISTRY	UNIVERSITY OF NAIROBI(Kenya)	2001

WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
01/10/2014 - TO DATE	TECHNICAL UNIVERSITY OF KENYA	LECTURER
JAN 2008 - JULY 2012	UNIVERSITY OF UTAH	GRADUATE ASSISTANT
AUG 2012 - AUG 2013	UNIVERSITY OF OREGON	POST DOCTORAL RESEARCH ASSOCIATE
2014 - 2014	DEDAN KIMATHI UNIVERSITY	LECTURER
2005 - 2006	KAPA OIL REFINERIES	ASSISTANT PRODUCTION MANAGER
2003 - 2005	ICIPE	RESEARCH ASSISTANT

GENERAL STATEMENT ON RESEARCH AREAS

I am interested in the synthesis and application of the materials in drug delivery, diagnostics, sensors, catalysis, environmental analysis and remediation. I am also interested in the toxicology of nanomaterials.

SELECTED PUBLICATIONS

TITLE	LINK TO PULICATION
Sardar, R.; Shem, P.M.; Pecchia-Bekkum, C.; Bjorge, N.S.; Shumaker-Parry, J.S. Single-step generation of fluorophore-encapsulated gold nanoparticle core-shell materials. <i>Nanotechnology</i> 2010, 21, 345603 (Journal cover article)	Nanotechnology 2010, 21, 345603 (Journal cover article)
Shem, P.M.; Sardar, R.; Shumaker-Parry, J.S. One-Step Synthesis of Phosphine-Stabilized Gold Nanoparticles Using the Mild Reducing Agent 9-BBN. <i>Langmuir</i> 2009, 25(23), 3279-13283	Langmuir 2009, 25(23), 3279-13283
Shem, P.M.; Shiundu, P.M.; Gikonyo, N.K.; Hassanali, A.; Saini, R.K. Release Kinetics of a Synthetic Tsetse Allomone Derived from Waterbuck Odour from a Tygon Silicon Dispenser under Laboratory and Semi Field Conditions. <i>Am-Euras. J. Agric. & Environ. Sci.</i> 2009, 6(6), 625-636	Am-Euras. J. Agric. & Environ. Sci. 2009, 6(6), 625-636
Shem, P.M.; Sardar, R.; Shumaker-Parry, J.S. Soft Ligand Stabilized Gold Nanoparticles: Incorporation of Bipyridyls and Two-Dimensional Assembly. <i>J. Colloid Interface Sci.</i> 2014, 426, 107-116.	http://www.sciencedirect.com/science/article/pii/S0021979714001957
Shem, P.M.; Sardar, R.; Shumaker-Parry, J.S. Soft Ligand Stabilized Gold Nanoparticles: Incorporation of Bipyridyls and Two-Dimensional Assembly. <i>J. Colloid Interface Sci.</i> 2014, 426, 107-116.	http://www.sciencedirect.com/science/article/pii/S0021979714001957
Florence A. Opondo, Were L.L. Munyendo, Patrick M. Shem, Raphael O. Nyayieka. Different approaches for quantification of the bioactive metastable thiosulfinates in garlic using a validated High Performance Liquid Chromatography method. <i>International Journal of Biochemistry Research & Review.</i> 2017, 18(2): 1-9	http://www.sciencedomain.org/abstract/20228
Florence A. Opondo, Were L.L. Munyendo, Patrick M. Shem, Raphael O. Nyayieka. Different approaches for quantification of the bioactive metastable thiosulfinates in garlic using a validated High Performance Liquid Chromatography method.	http://www.sciencedomain.org/abstract/20228 International Journal of Biochemistry Research & Review. 2017, 18(2): 1-9 DOI: 10.9734/IJBCRR/2017/35180

PROFESSIONAL AFFILIATIONS AND SOCIETIES

TITLE	INSTITUTION
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MEMBER	American Chemical Society
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MEMBER	Kenya - German Academic Exchange Service (DAAD) Scholars Association
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MEMBER	Society for Applied Spectroscopy
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MEMBER	Kenya Chemical Society
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