Curriculum Vitae

Henry Odhiambo Otunga
Department of Physics and Materials Science
Maseno University
Private Bag
Maseno, Kenya

Personal Information

Date of Birth:	29th June, 1976
Sex:	Male
Religion:	Christianity
Marital Status:	Married
Nationality:	Kenyan

Education and Training

2008-2016: Doctor of Philosophy (PhD), Department of Physics and Materials Science, Maseno University, Kenya. PhD thesis titled *A Computational Study of the Structural, Electronic, Optical and Thermal Properties of Hexagonal and Cubic Germanium-Antimony-Telluride ($Ge_2Sb_2Te_5$)*.

2004-2007: Master of Science (MSc), Department of Physics and Materials Science, Maseno University, Kenya. MSc thesis titled *Optical Characterization of Thermally Deposited Zinc Sulphide Thin Films.*

1997-2001: Bachelor of Science (BSc), Department of Physics and Materials Science, Maseno University, Kenya.

Academic Positions

December, 2016 to date: Lecturer, Department of Physics and Materials Science, Maseno University, Kenya.

August, 2010 to December, 2016: Assistant Lecturer, Department of Physics and Materials Science, Maseno University, Kenya.

April, 2008 to August, 2010: Tutorial Fellow, Department of Physics and Materials Science, Maseno University, Kenya.

Membership of Professional Bodies

- Member, Physics Society of Kenya (PSK)
- Member, African Materials Research Society (AMRS)
- Member, Materials Research Society (MRS)

Conference Proceedings

1st to 31st May, 2016: Condensed Matter and Statistical Physics (CMSP) Section, The Abdus Salaam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

2nd to 6th December, 2013: Centre for High Performance Computing (CHPC) National Meeting, Cape Town International Convention Centre, Republic of South Africa.

3rd to 7th December, 2012: Centre for High Performance Computing (CHPC) National Meeting, Durban International Convention Centre, Republic of South Africa.

28th May to 8th June, 2012: 2nd African School on Electronic Structure Methods and Applications (ASESMA 2012), University of Eldoret, Kenya.

30th August to 9th September, 2010: The III Latin American Postgraduate Program of Biophysics Course/I Colloquium Brazil - Africa for Biophysics, Biophysical Institute of Carlos Chagas Filho, Health Science Center, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.

13th to 15th October, 2009: International Conference on Solar Energy Materials Research, University of Dar es Salaam, Tanzania.

6th to 9th April, 2009: Training Workshop on Laser Science and Applications-Development of CO_2 Lasers, Jomo Kenyatta University of Agriculture and Technology, Kenya.

19th August to 1st September, 2007: Summer School on Cost Effective Photovoltaics Research, Jomo Kenyatta University of Agriculture and Technology, Kenya.

26th July, 2003 to 7th August, 2003: 8th College on Thin Film Technology, University of Dar es Salaam, Tanzania.

Poster Presentations

Odhiambo H., Amolo G., Othieno H. and Oduor A., *Modeling the Transformation Kinetics of Phase-Change Materials*, **The III Latin American Postgraduate Program of Biophysics Course/I Colloquium Brazil - Africa for Biophysics** (2010).

Publications

1. Odhiambo H., Oduor A, Amuzu J., and Othieno H., *Production and Optical Characterization of Thermally Deposited ZnS Thin Films*, **Proceedings of the Eighth College on Thin Film Technology**, Volume 8.7 (2004).

2. Odhiambo H., Amolo G., Makau N., Othieno H., and Oduor A., *Ab Initio Study of the Electronic and Optical Properties of Hexagonal and Cubic $Ge_2Sb_2Te_5$*, **African Review of Physics**, Volume 10 (2015).

3. Odhiambo H. and Othieno H., *Ab Initio Study of the Structural, Vibrational and Thermal Properties of $Ge_2Sb_2Te_5$.* **International Journal of Computational Materials Science and Engineering,** Volume 4, No. 2 (2015).

Books

Odhiambo H., **Simulating Crystalline GST for Phase-Change Memory Applications: An *Ab Initio* Study**, Lambert Academic Publishing (LAP), Saarbrücken, Germany (2015).

Research Interests

- Electronic band structure of topological insulators using the tight-binding approximation as implemented in the code TBPW.

- GGA+U Studies on hematite clusters for photo-electrochemical splitting of water using plane wave pseudopotential approach as implemented in the Quantum Espresso computer package.

- *Ab initio* molecular dynamics studies on water molecules and biomolecules using the cp2k computer code.

Personal Skills

- Programming: Fortran and Python
- Operating systems: Linux and Windows
- Electronic structure codes: Quantum Espresso and cp2k
- Shell scripting: Bourn Again Shell (BASH)
- Web design: HTML and XHTML

Referees

Professor Andrew Oduor
Department of Physics and Materials Science
Maseno University
Private Bag
Maseno, Kenya

Professor Herick Othieno
Department of Physics and Materials Science
Maseno University
Private Bag
Maseno, Kenya

Professor George Amolo
Department of Physics and Space Science
Technical University of Kenya
P.O. Box 52428-00200
Nairobi, Kenya

Professor Nicola Seriani
Condensed Matter and Statistical Physics (CMSP) Section
The Abdus Salaam International Centre for Theoretical Physics (ICTP)
Strada Costiera, 11
I-34151 Trieste, Italy