

**MAXWELL MAGETO, PhD**  
**DEPARTMENT OF PHYSICS, MASINDE MULIRO UNIVERSITY OF SCIENCE AND  
TECHNOLGY**



### QUALIFICATIONS

- **Doctor of Philosophy (Ph.D.)**, (2015) Solid State Physics, University of Eldoret, Kenya. This was a Sandwich programme done in collaboration with Uppsala University, Sweden; All Research work was carried out at Division of Solid State Physics, Angstrom Laboratory, Uppsala University, Sweden.
- **Master of Science in Physics (M.Sc.)** (2003), Materials and Solid State Physics, Norwegian University of Science and Technology, (NTNU), Trondheim, Norway-
- **Bachelor of .Education Science (B.Ed(Sc.))** (2000), Physics (major) and Mathematics (minor), Moi University, Eldoret, Kenya-

### RESEARCH INTEREST

Materials for Solar Energy Conversion; Thin film fabrication and Characterization: Optical, electrical, Magnetic and structural properties of thin films of transparent and conducting oxides for solar energy applications. Renewable Energy Technologies (Solar PhotoVoltaics and Biomass). New area of research is in DFT calculations and applications to solar energy materials.

### SELECTED PUBLICATIONS

| ARTICLE   |
|---|
| 1. Wycliffe Isoe, <b>Maxwell Mageto</b> , C.M. Maghanga, M. Mwamburi, V. Odari, and C. Awino (2020) "Thickness Dependence of Window Layer on $\text{CH}_3\text{NH}_3\text{PbI}_{3-x}\text{Cl}_x$ Perovskite Solar Cell" Hindawi International Journal of Photoenergy, Volume 2020, pp. 1-7 <a href="https://doi.org/10.1155/2020/8877744">https://doi.org/10.1155/2020/8877744</a>  |
| 2. Gloria Murila, Henry Wafula and Maxwell Mageto (2021) "Structural, Electronic and Electrochemical Properties of Vanadium Disulphide Material for Energy Conversion and Storage in Li/Na-ion Battery" Journal of Materials Science Research and Reviews Vol 7 issue 2, pp. 41 – 49. <a href="https://www.journaljmsrr.com/index.php/JMSRR/article/view/30177/56630">https://www.journaljmsrr.com/index.php/JMSRR/article/view/30177/56630</a> |

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| <p>3. Wycliffe Isoe, <b>Maxwell J. Mageto</b> and Christopher M. Maghanga, (2020) "Optical Modeling of Fluorine Doped Tin Oxide Films for Spectrally Selective Applications" Kabarak Journal of research and innovation vol. 9 issue 1 pp 1-17. ISSN 2410-8383<br/> <a href="http://ojs.kabarak.ac.ke/index.php/journal1/article/view/339">http://ojs.kabarak.ac.ke/index.php/journal1/article/view/339</a></p>   |
| <p>4. Wellington Andati, Danstone Lilechi Baraza, <b>Maxwell Mageto</b>, (2018) "Biogas Production from Biomass Kitchen Waste Laced with Cow Dung in a Modified Laboratory-Scale Anaerobic Digester" East African Journal of Health and Science Vol. 1 issue 2 pp 53-61<br/> ISSN: 2707-3920. <a href="https://journals.eanso.org/index.php/eajhs/article/view/13">https://journals.eanso.org/index.php/eajhs/article/view/13</a></p>   |
| <p>5. Magdaline Ligavo, <b>Maxwell Mageto</b>, Henry Barasa and Emmanuel Kombe, (2019) "The Impact of Air Mass on the Performance of a Monocrystalline Silicon Solar Module in Kakamega" Physical Science International Journal Vol. 21 issue 2, pp 1-7<br/> <a href="http://www.journalpsij.com/index.php/PSIJ/article/view/30106">http://www.journalpsij.com/index.php/PSIJ/article/view/30106</a></p>  |
| <p>6. Magdaline Ligavo, Henry Barasa and Maxwell Mageto (2018), "The Effect of Irradiance and Temperature on the Performance of Silicon Solar Module in Kakamega" Physical Science International Journal Vol. 19 issue 43, pp 1-9<br/> <a href="http://www.journalpsij.com/index.php/PSIJ/article/view/28350">http://www.journalpsij.com/index.php/PSIJ/article/view/28350</a></p>  |
| <p>7. Andati Wellington, Lilechi D. Baraza, <b>Mageto Maxwell</b> and Kengara Fredrick Kengara (2017); "Energy Evaluation and Qualitative Analysis of Biogas Produced from Co-Digesting Kitchen Waste and Cow Dung" Physical Science International Journal Vol. 16 issue 4, pp 1-13.<br/> <a href="http://www.journalpsij.com/index.php/PSIJ/article/view/24483">http://www.journalpsij.com/index.php/PSIJ/article/view/24483</a></p>   |
| <p>8. Valentine Wabwire Muramba and <b>Maxwell Mageto</b> (2016) "Electrical and Structural properties of Aluminum doped tin oxide codoped with sulphur for solar energy applications" Science Direct, Energy Procedia vol. 93 pp 39 – 45<br/> <a href="http://www.sciencedirect.com/science/article/pii/S1876610216305744">www.sciencedirect.com/science/article/pii/S1876610216305744</a></p>   |
| <p>9. <b>Maxwell J. Mageto</b>, C.M. Maghanga, M. Mwamburi, Hassan Jafri (2015) "Transparent and Conducting TiO<sub>2</sub>:Nb Thin Films Prepared by Spray Pyrolysis Technique" American Research Journal of Physics Volume 1, Issue 2, pp 57- 68<br/> <a href="https://www.arjonline.org/papers/arjps/v1-i2/1.pdf">https://www.arjonline.org/papers/arjps/v1-i2/1.pdf</a></p>   |
| <p>10. Miller Elly Shatsala, <b>Maxwell Joel Mageto</b>, Maurice Mwamburi Mghendi and Victor Odari (2015) "Investigating Non-Uniformities in Mono-Crystalline Solar Cells Using Out-put Response Signal of LBIC/LBIV of Unknown of Probe Profile" International Journal of Innovative Science, Engineering &amp; Technology, Vol. 2 Issue 12, pp. 820 - 827.<br/> <a href="http://ijiset.com/vol2/v2s12/IJISSET_V2_I12_92.pdf">http://ijiset.com/vol2/v2s12/IJISSET_V2_I12_92.pdf</a></p> |
| <p>11. Miller Elly Shatsala, <b>Maxwell Joel Mageto</b>, Mwamburi Mghendi, and Francis Gaitho (2015) "Signal Processing of LBIC/LBIV System Using the Fourier Convolution Technique" Journal of Basic and Applied Scientific Research vol. 5 (12) pp. 53-59.<br/> <a href="http://www.textroad.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%205(12)53-59,%202015.pdf">http://www.textroad.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%205(12)53-59,%202015.pdf</a></p>           |
| <p>12. Valentine Muramba, <b>Maxwell Mageto</b>, Francis Gaitho, Victor Odari, Robinson Musembi, Silas Mureramanzi, and Kennedy Ayodo (2015), "Structural and Optical characterization of Tin</p>   |

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| <p>Oxide co-doped with Aluminum and Sulphur,” American Journal of Materials Science 2015, 5(2): 23-30.<br/> <a href="http://article.sapub.org/10.5923.j.materials.20150502.01.html">http://article.sapub.org/10.5923.j.materials.20150502.01.html</a></p>  |
| <p>13. Benjamin V. Odari, Robinson J. Musembi, <b>Maxwell J. Mageto</b>, H. Othieno, F. Gaitho, M. Mghendi and V. Muramba, (2013) “Optoelectronic Properties of F-co-doped PTO Thin Films Deposited by Spray Pyrolysis” American Journal of Materials Science 2013, 3(4): pp. 91-99.<br/> <a href="http://article.sapub.org/10.5923.j.materials.20130304.05.html">http://article.sapub.org/10.5923.j.materials.20130304.05.html</a></p>  |
| <p>14. Masoud Karimipour, <b>Maxwell Mageto</b>, R. Etefagh, E. Azhir, M. Mwamburi and Z. Topalian (2013), “Room Temperature Magnetization in Co doped Anatase phase of TiO<sub>2</sub>.” The European Physical Journal Applied Physics, Vol. 61: 10601 pg 1 – 6<br/> <a href="http://www.epjap.org/articles/epjap/abs/2013/01/ap120243/ap120243.html">http://www.epjap.org/articles/epjap/abs/2013/01/ap120243/ap120243.html</a></p>  |
| <p>15. Benjamin.V.Odari, <b>Maxwell Mageto</b>, Robinson Musembi, Henrick Othieno, Francis Gaitho and Valentine Muramba, (2013), “Optical And Electrical Properties Of Pd Doped SnO<sub>2</sub> Thin Films Deposited By Spray Pyrolysis,” Australian Journal of Basic and Applied Sciences, Vol. 7 issue 2 Pg 89-98, 2013<br/> <a href="http://ajbasweb.com/old/ajbas_february_2013.htm">http://ajbasweb.com/old/ajbas_february_2013.htm</a></p>   |
| <p>16. <b>Maxwell J. Mageto</b>, C.M. Maghanga, M. Mwamburi, (2012) “ The Lorentz Oscillator model simulations illustrating a broad maximum in the bulk reflectance for frequencies just above the resonance frequency”, The African Review of Physics, Vol. 7 : 0011, 95 – 105 (ISSN 2223-6589)<br/> <a href="http://www.aphysrev.org/index.php/aphysrev/article/view/533">http://www.aphysrev.org/index.php/aphysrev/article/view/533</a></p>  |
| <p>17. <b>Maxwell Mageto</b> and M. Mwamburi, (2012) “The influence of Al doping on optical, electrical and structural properties of transparent and conducting SnO<sub>2</sub> : Al thin films prepared by spray pyrolysis Technique”, Elixir Chem. Phys. Vol. 53 : 11922-11927 (ISSN 2229-712X)<br/> <a href="http://www.elixirpublishers.com/articles/1356079241_53%20(2012)%2011922-11927.pdf">http://www.elixirpublishers.com/articles/1356079241_53%20(2012)%2011922-11927.pdf</a></p> |
| <p>18. <b>Maxwell J. Mageto</b>, V. Muramba, M. Mwamburi, (2013), “Preparation and Characterization of Transparent and Conducting Aluminum doped Tin Oxide thin films prepared by Spray Pyrolysis Technique”, East African Journal of Engineering, Science and Technology, Vol. 1 Issue No. 2 April, pp.30 – 39 (ISSN 2219-8598)</p>   |
| <p>19. C. M. Maghanga, M. Mwamburi, <b>Maxwell Mageto</b> and G. A. Niklasson, and, (2008) “A study of the Influence of Nitrogen Doping on the Optical Properties of Sputter deposited TiO<sub>2</sub> Thin Films”, East African Journal of Pure and applied Sciences, Vol 1 issue no. 1, 76 -79, (ISSN 2070-0903)</p>   |
| <p>20. <b>Maxwell Mageto</b>, Zareh Topalian, Mwamburi Mghendi, (2008) “Superconducting properties of Niobium using SQUID, East African Journal of Pure and applied sciences”, Vol. 1 issue no. 1, 80-83 (ISSN 2070-0903)</p>  |
| <p>21. C. M. Maghanga, M. Mwamburi, G. A. Niklasson, A. Roos and Maxwell Mageto, (2008) “Influence of Nitrogen Doping on the Optical Properties of Sputter deposited TiO<sub>2</sub> Thin Films”, East African Journal of Pure and applied Sciences, Vol 1 issue no. 1, 86-89, (ISSN 2070-0903)</p>  |

## BOOKS

1. **Maxwell J. Mageto**, (2019) Optical and Electromagnetic Properties of Doped Titanium Oxide Films, Book, LAP Lambert academic publishing Ap & Co. Germany ISBN: 978-3-659-55317-2  
<https://www.amazon.com/Optical-Electromagnetic-Properties-doped-Titanium/dp/3659553174>
  2. Wycliffe Isoe, Maxwell Mageto and Christopher Maghanga (2020), Optical Modeling of TCO based FTO/TiO<sub>2</sub> multilayer thin films, , Book, LAP Lambert academic publishing Ap & Co. Germany ISBN 978-6202815178  
<https://www.amazon.com/OPTICAL-MODELING-BASED-MULTILAYER-FILMS/dp/6202815175>
  3. **Maxwell J. Mageto**, (2009) Al-Mg-Si Alloys: Microstructure, Hardness and Tensile properties, Book, LAP Lambert academic publishing Ap & Co. Germany ISBN: 978-3-8383-2922-2  
[http://www.amazon.com/s?ie=UTF8&page=1&rh=n%3A283155%2Cp\\_27%3AMAXWELL%20MAGETO](http://www.amazon.com/s?ie=UTF8&page=1&rh=n%3A283155%2Cp_27%3AMAXWELL%20MAGETO)
- BOOK CHAPTER**
4. Zhu D., **Mageto M.**, Zhao S., Roos A. (2008) Optical and Thermal Characterization of Energy-Efficient Windows in Anhui District in China. In: Goswami D.Y., Zhao Y. (eds) Proceedings of ISES World Congress 2007 (Vol. I – Vol. V). **Springer**, Berlin, Heidelberg. Online ISBN 978-3-540-75997-3 Print ISBN 978-3-540-75996-6  
[https://link.springer.com/chapter/10.1007/978-3-540-75997-3\\_87](https://link.springer.com/chapter/10.1007/978-3-540-75997-3_87)

## THESES

5. **Maxwell J. Mageto**, (2015), “Electromagnetic Properties of Titanium-Oxide-based thin films:- Electrical and optical performance of TiO<sub>2</sub>:Nb and magnetic performance of TiO<sub>2</sub>:Co,” Ph.D. Thesis, University of Eldoret, Eldoret, Kenya.
6. **Maxwell J. Mageto**, (2003), “TEM Study of microstructure in relation to hardness and ductility in 6xxx Alloys” MSc Thesis, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. <http://www.diva-portal.org/smash/get/diva2:125771/FULLTEXT01.pdf>

## WORKSHOPS, CONFERENCES PARTICIPATION AND PROCEEDINGS

1. Wycliffe Isoe, **Maxwell Mageto**, C.M. Maghanga, M. Mwamburi, V. Odari, and C. Awino (2020) “Thickness Dependence of Window layer on CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>-XCIX Perovskite Solar Cell” 2<sup>nd</sup> Young Scientists’ MSSEESA Conference on Materials for Solar Energy Conversion, Materials Science and Solar Energy Network for Eastern and Southern Africa

- Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 4th – 6<sup>th</sup> November 2020.
2. Nancy Obare, **Maxwell Mageto** and Victor Odari (2020) “Optical, Electrical and Structural Properties of Copper Antimony Sulphide (CuSbS<sub>2</sub>) Films Deposited by Spray Pyrolysis technique for Photovoltaic Applications” 2<sup>nd</sup> Young Scientists’ MSSEESA Conference on Materials for Solar Energy Conversion, Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 4th – 6<sup>th</sup> November 2020.
  3. David Osiyo Ng’anga, **Maxwell Mageto** and Francis Gaitho (2020) “Performance of Sunflower Oil as a Thermal Storage Medium in a Flat Plate Solar Water Heating Collector” 2<sup>nd</sup> Young Scientists’ MSSEESA Conference on Materials for Solar Energy Conversion, Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 4th – 6<sup>th</sup> November 2020.
  4. David Osiyo, **Maxwell Mageto**, Christopher Maghanga and Mghendi Mwamburi (2019) “Temperature Variation Dependence on Parametric Configuration of a Solar Parabolic Dish Concentrator” Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 16<sup>th</sup> – 17<sup>th</sup> October 2019.
  5. Nancy Obare, **Maxwell J. Mageto** and Benjamin V. Odari (2019) “Structural Properties of Copper Antimony Sulphide (CuSbS<sub>2</sub>) Prepared by Spray Pyrolysis” Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 16<sup>th</sup> – 17<sup>th</sup> October 2019.
  6. Benard Oloo, George S. Manyali and **Maxwell Mageto** (2019) “Lattice Parameter and Band Gap of AgAlS<sub>2</sub>” Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 16<sup>th</sup> – 17<sup>th</sup> October 2019.
  7. Isoe M. Wycliffe, **Maxwell J. Mageto**, Christopher M. Maghanga and Benjamin V. Odari (2019) “Optical Modeling of TCO Based FTO/TiO<sub>2</sub> Multilayer Thin films for Silicon Solar Cell Application” Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 16<sup>th</sup> – 17<sup>th</sup> October 2019.
  8. Miller Shatsala, Mwamburi Mghendi, Celine Awino and **Mageto Maxwell** (2019) “Stability Analysis of Hybrid Organic-Inorganic Lead Halide Perovskite Photovoltaic Cells” Materials Science and Solar Energy Network for Eastern and Southern Africa Postgraduate Students Seminar University of Nairobi, School of Physical Sciences, 16<sup>th</sup> – 17<sup>th</sup> October 2019.
  9. **Maxwell Mageto** (2019), “Scientific Writing” Workshop for Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA) – University of Eldoret Node, 3<sup>rd</sup> – 4<sup>th</sup> May 2019, Grand Winston Hotel, Nakuru.
  10. Isoe Wycliffe and **Maxwell Mageto** (2019), “Optical Modeling of Al<sub>2</sub>O<sub>3</sub> on MgF<sub>2</sub> substrate for Solar Energy Applications” Workshop for Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA) – University of Eldoret Node, 3<sup>rd</sup> – 4<sup>th</sup> May 2019, Grand Winston Hotel, Nakuru.
  11. Nancy Obare, **Maxwell Mageto** and Victor Odari (2019), “Optical, Electrical and Structural Properties of Copper Antimony Sulphide (CuSbS<sub>2</sub>)” Workshop for Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA) – University of Eldoret Node, 3<sup>rd</sup> – 4<sup>th</sup> May 2019, Grand Winston Hotel, Nakuru.

12. Gloria Murila, George Manyali, Henry Barasa and **Maxwell Mageto** (2019), "Simulation of Gravimetric Capacity, Structural and Electronic Properties of Vanadium Disulphide for Energy Applications" Workshop for Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA) – University of Eldoret Node, 3<sup>rd</sup> – 4<sup>th</sup> May 2019, Grand Winston Hotel, Nakuru.
13. Andati Wellington, **Maxwell Mageto** & Lilechi D Baraza (2018), "Biogas production from biomass kitchen waste laced with cow dung in a modified laboratory - scale anaerobic digester" Joint MSSEESA and DAAD International Conference on Materials Science Research for Sustainable Energy in Africa, University of Nairobi, School of Physical Sciences, 26<sup>th</sup> – 27<sup>th</sup> September, 2018.
14. Magdaline Ligavo, Henry Barasa and **Maxwell Mageto** (2018), "Outdoor Performance Characterization of monocrystalline Silicon Solar Module Based on Ambient Conditions in Kakamega", Joint MSSEESA and DAAD International Conference on Materials Science Research for Sustainable Energy in Africa, University of Nairobi, School of Physical Sciences, 26<sup>th</sup> – 27<sup>th</sup> September, 2018.
15. Henry Barasa and **Maxwell Mageto** (2017), "Department of Physics infrastructure, Masinde Muliro University of Science and Technology" Computational Modelling and Materials Science (CMMS) Workshop 6<sup>th</sup> – 7<sup>th</sup> July 2017, Shieywe Guest House, Kakamega, Kenya.
16. Miller Elly Shatsala, **Maxwel Mageto**, Mwamburi Mughendi, and George Manyalia (2016), "Photo-Catalytic Water Splitting Using ABX Compound From Computational Approach For Hydrogen Energy System" BALEWARE 2016 Sustainable Energy and Clean Water 11-13 December 2016 Nelson Mandela African Institution of Science and Technology Arusha, Tanzania.  
<https://www.ansole.org/download/Book%20of%20Programme%20and%20Abstracts%20%20BALEWARE%202016.pdf>
17. Victor Odari\*, **Maxwell Mageto**, Francis Gaitho, Valentine Muramba, Robinson Musembi, Silas Mureramanzi and Kennedy Ayodo (2016), "Structural and Optical Characterization of Tin Oxide co-doped with both Aluminum and Sulphur." 5<sup>th</sup> Anniversary of ANSOLE (2011-2016): International Conference on Renewable Energy (INCORE2016) 3 – 6 February 2016, Sharm El-Sheikh, Egypt.
18. Miller Elly Shatsala, **Maxwell Mageto** and George Manyali (2016), "Thermodynamic Stability of ABX heavy elements of TaIrGe, TiIrSb, TaIrSn and ZrIrSb TCOs Using the half-Heusler technique" African – EU Symposium on Renewable Energy Research and Innovation 8 – 10 March 2016 Tlemcen, Algeria  
<http://toc.proceedings.com/31954webtoc.pdf>
19. Valentine Bwire Muramba and **Maxwell Mageto** (2016), "Electrical and Structural Properties of Aluminum doped Tin Oxide codoped with Sulphur for Solar Energy Applications" African – EU Symposium on Renewable Energy Research and Innovation 8 – 10 March 2016 Tlemcen, Algeria  
<http://toc.proceedings.com/31954webtoc.pdf>
20. **Maxwell J. Mageto** (2016), "IEEE Virtual Event on Energy-Efficient Communications and Communications Technologies" Part of the IEEE Virtual Events Program in Africa on January 12 – 14, 2016 at the University of Nairobi.  
Miller Shatsala, **Maxwell Mageto**, Mwamburi Mghendi, Victor Odari and Musungu Murila, (2016) "Investigating Non-Uniformities in Mono-Crystalline Solar Cells Using out-Put Response Signal of LBIC/LBIV of Unknown Probe Profile" 3<sup>rd</sup> Chuka University International Research Conference, 26-28/10/2016



<https://www.chuka.ac.ke//adverts/Abstracts%20for%2026-8th%20October,%202016%20Conference.pdf>

21. **M.J. Mageto**, C.M. Maghanga, H. Jafri and M. Mwamburi (2013), “Transparent and Conducting TiO<sub>2</sub>:Nb Thin Films Prepared by Spray Pyrolysis Technique,” The 1<sup>st</sup> Young Scientist Material Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA), Conference on Material Science and Solar Cell Technology, held at the United Kenya Club, Nairobi, Kenya, on 28<sup>th</sup> and 29<sup>th</sup> November, 2013.
22. V. Odari, R. Musembi, V. Muramba, **M. Mageto**, F. Gaitho, K. Ayodo, (2015), Structural Electrical and Optical Characterization of Tin Oxide Co-doped with Aluminum and Sulphur, International Summer School for Young Scientists, July 13 – 18, 2015, Arusha, Tanzania  
[https://www.isp.uu.se/digitalAssets/586/c\\_586822-1\\_1-k\\_ken02.pdf](https://www.isp.uu.se/digitalAssets/586/c_586822-1_1-k_ken02.pdf)
23. **Maxwell Mageto**, C.M. Maghanga, G.A. Niklasson, C.G. Granqvist and M. Mwamburi, (2013) “Electrical and Optical properties of Nb doped TiO<sub>2</sub> prepared by Spray Pyrolysis technique,” African Network for Solar Energy (ANSOLE) Mini-Symposium in Kenya (AMSK 2013), Department of Physics, Chiromo Campus, University of Nairobi, 9<sup>th</sup> May 2013.  
<http://www.ansole.org/download/Abstract%20booklet%20AMSK-2013.pdf>
24. M. Karimipour, **M. Mageto**, N. Shahtahmasebia, M. Rezaee Roknabada, R. Etefagha, E. Azhira, and M. Mwamburi, (2012) “Room temperature magnetization of Co-doped TiO<sub>2</sub> thin films prepared by spray pyrolysis Technique”, Proceedings of the 4th International Conference on Nanostructures (ICNS4) 12-14 March, 2012, Kish Island, I.R. Iran, Vol. 2 page 6 – 9
25. **Maxwell J. Mageto**, C.M. Maghanga, M. Mwamburi, (2012), “Optical and Electrical Properties of TiO<sub>2</sub>:Nb Prepared by spray Pyrolysis technique”, SPIE International conference, August 12 – 16, 2012, San Diego, California USA
26. S. Kioko, C.M. Maghanga, **M. Mageto**, M. Mwamburi, (2012) ”The effect of temperature on the output characteristics of mono crystalline solar cells using LBIC and LBIV techniques”, Moi University International Conference, Eldoret, Kenya, 11<sup>th</sup> July 2012.
27. **Maxwell Mageto**, C.M. Maghanga and M. Mwamburi, (2010) “The influence of Aluminum doping on optical, electrical and structural properties of transparent and conducting SnO<sub>2</sub>:Al prepared by Spray Pyrolysis technique” Conference on opto-electronic devices: Their potential for sustainable development, Department of Physics, Chiromo Campus, University of Nairobi, July 8<sup>th</sup>-9<sup>th</sup>, 2010.
28. **Maxwell. J. Mageto**, M. Mwamburi, G. A. Niklasson and C. G. Granqvist, (2009) “Structural and Opto-electronic properties of SnO<sub>2</sub>:Al thin films made by spray Pyrolysis”, The 1<sup>st</sup> International Conference on Solar Energy Materials Research 13<sup>th</sup> - 15<sup>th</sup> October, 2009, Belinda Ocean Resort, organized by University of Dar es Salaam, Tanzania.
29. Dechun Zhu, **Maxwell Mageto**, Shuxi Zhao and Arne Roos, (2007); in: D. Yogi Goswami and Yuwen Zhao (Eds), “Optical and Thermal Characterization of Energy-Efficient Windows in Anhui District in China”, Proceedings of ISES World Congress in Beijing, China, 2007 Vol. I page 486 – 490  
[http://link.springer.com/chapter/10.1007%2F978-3-540-75997-3\\_87](http://link.springer.com/chapter/10.1007%2F978-3-540-75997-3_87)

**SUPERVISION OF GRADUATE THESIS RESEARCH STUDENTS**

|    | <b>Name of Student</b> | <b>Title of Thesis</b>  |
|----|------------------------|---|
| 1. | Benjamin Victor Odari  | Palladium and Fluorine doped Tin Oxide thin films prepared by Spray Pyrolysis for gas sensing applications (MSc Thesis). Co-Supervisor: Dr. Robinson Musembi, Deptment of Physics, University of Nairobi. Graduated 2013      |
| 2. | Valentine Muramba      | Preparation and Characterization of Al -doped and Al & S- co-doped tin oxide thin films prepared by Spray Pyrolysis technique (MSc Thesis). Co-Supervisor: Prof. Kennedy Ayodo, Deptment of Physics, MMUST. Graduated 2013    |
| 3. | Miller Elly Shatsala   | Application of signal processing of an LBIC/LBIV system to a solar cell through the fourier convolution (MSc Thesis). Co-Supervisor: Prof. Mwamburi Mghendi, Department of Physics, University of Eldoret. Graduated 2015     |
| 4. | Wellingtone Andati     | Experimental Studies on a modified Laboratory Scale Biogas Digester Using Biomass Kitchen waste mixed with Cow Dung (MSc Thesis). Co-Supervisor: Dr. Lilechi Barasa, Department of Chemistry, MMUST. Graduated 2018           |
| 5. | Margdalene Ligavo      | Characterization of a photovoltaic solar cell based on ambient conditions in kakamega region (MSc Thesis). Co-supervisor: Dr. Henry Barasa, Department of Physics, MMUST. Graduated 2018                                      |
| 6. | Wycliffe Isoe (2021)   | Optical Modeling of TCO Based FTO/TiO <sub>2</sub> Multilayer Thin films for Silicon Solar Cell Applications (MSc Thesis). Co-Supervisor: Dr. Christopher Maghanga, department of Physics, Kabarak University. Graduated 2021 |

### **MEMBERSHIP IN PROFFESIONAL / LEARNED SOCIETIES**

Kenya Physical Society (KPS), African Network for Solar Energy (ANSOLE), Materials Research Society of Kenya and International Solar Energy Society (ISES) and Materials Science and Solar Energy for Eastern and Southern (MSSEESA)

### **CURRENT TEACHING**

**Postgraduate Courses:** Mathematical Physics, Energy bands, Magnetism and Amorphous solids, Electricity, Magnetism and Optics, Advanced Techniques in Experimental Physics.

**Undergraduate Courses:** Fundamentals of Physics, Solar Energy Physics, Photovoltaics I & II, Solar Energy Materials & Processes, Electricity and Magnetism, Modern Physics, Vibrations and Waves, Mathematical Physics II, Quantum Physics, Mathematical Physics, Solid State Physics

### **CONTACT DETAILS**

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