

DR. FANUEL MUGWANGA KEHEZE

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Date of Birth: 27.01.1974, **Place of Birth:** Vihiga county, Kenya

EDUCATION BACKGROUND

2014 - 2018:	Ph.D. (Physics) University of Freiburg	Correlation between ordered structures and the corresponding optical and thermal properties of bulky substituted polythiophenes.
2007 - 2011	Masters of science Kenyatta University	Characterization of $Cu_xO_y - ZnO:Al$ P-N Junction for Solar Cell Applications
1995 - 1998	Bachelors of Education (Science) Kenyatta University	Physics, Mathematics and Education

RESEARCH INTRESTS

1. Characterization of properties of materials
2. Studies on semiconducting materials for photovoltaic applications
3. Electronics and instrumentation
4. Solar cell technology

WORK EXPERIENCE

June 2018 - Present	Lecturer Pwani University	<ul style="list-style-type: none">✚ Teaching undergraduates and post graduates✚ Marking and supervision of undergraduate projects✚ Supervision of postgraduates students projects and thesis✚ Acting chair of department✚ Head of curriculum review and implementation
2012- June 2018	Assistant Lecturer Pwani University	<ul style="list-style-type: none">✚ Teaching undergraduates✚ Marking and supervision of undergraduate projects✚ Experimental work
2001 – 2012	Assistant Teacher: Teachers Service Commission of Kenya	<ul style="list-style-type: none">✚ Teaching mathematics and physics✚ Class teacher✚ Guidance and counselling master✚ Head of department and acting deputy principal✚ Games teacher
2000-2001	Lecturer at Railway Training Institute, Nairobi.	<ul style="list-style-type: none">✚ Marking and supervision of students projects✚ Teaching mathematics and electronics

ORGANIZATIONAL / MANAGERIAL SKILLS

2000-2012 Rose through ranks to a head of department while teaching with the

Teachers Service Commission

SCIENTIFIC RELATED SKILLS

- ✚ Skills in vacuum sputtering and thermal evaporation.
 - ✚ Skills in thin film science and preparation.
 - ✚ Skills in Optical Microscopy
 - ✚ Skills in Optical Spectroscopy
 - ✚ Skills in electrical, optical, and structural characterization in thin film Semiconductors.
 - ✚ Sound knowledge in semiconductors and solar cell fabrication and characterization.
 - ✚ Skills in solar cells technology
- Computer Skills Good command of Microsoft Office tools, PowerPoint and excel, origin, and python
- Communication Skills Good command of English and Kiswahili and Little bit of Deutsche

AWARDS

- 2012 NACOSTE grant for research of Ksh. 550,000
- 2013-2017 DAAD scholarship to study in Germany, University of Freiburg

SELECTED PUBLICATIONS

1. **Keheze, F. M.**; Raithel, D.; Wu, T.; Schiefer, D.; Sommer, M.; Hildner, R.; Reiter, G. *Signatures of Melting and Recrystallization of a Bulky Substituted Poly(thiophene) Identified by Optical Spectroscopy*. *Macromolecules* **2017**, *50* (17), 6829–6839.
2. Schiefer, D.; Komber, H.; **Mugwanga Keheze, F.**; Kunz, S.; Hanselmann, R.; Reiter, N.; Sommer, M. *Poly(3-(2,5-Dioctylphenyl)thiophene) Synthesized by Direct Arylation Polycondensation: End Groups, Defects, and Crystallinity*. *Macromolecules* **2016**, *49*, 7230–7237.
3. **Keheze, F. M.**., Karimi PK, Njoroge WK and Omayio O. *Characterization of Aluminum Doped Zinc Oxide (Azo) Thin Films Prepared by Reactive Thermal Evaporation for Solar Cell Applications*. *Journal of Fundamentals of Renewable Energy and Applications* , 2015 5(4)
4. **Keheze, F. M.**, Karimi P.K, Njoroge W.K, Omayio O, and Waita S.M. *Optical Characterization of Copper Oxide Thin Films Prepared By Reactive Dc Magnetron Sputtering For Solar Cell Applications*. *Int. J. Thin Film Sci. Tec.* 1, 15-24(2013)
5. Omayio E O, Karimi P M, Njoroge W K and **Keheze, F: M.** *Current-voltage characteristics of p-CuO/n-ZnO:Sn Solar cell*. *Jan 2013*. *Int. J. Thin Film Sci. Tec.* 1, 25-28

SEMINARS, CONFERENCE AND WORKSHOPS ATTENDED

1. Consistently attended a weekly institute seminar organized by the **International Research Training Group (IRTG) “Soft Matter Science”** which was based on a **collaboration** between the universities of **Freiburg** and **Strasbourg** (with scientists from **Basel** and **Mulhouse** participating) with a focus on polymer science.
2. Attended summer school organized by (International Research Training Group) which took place in Mittelwihr/France each one week in July 2017:
3. Attended summer school organized by (International Research Training Group) which took place in Mittelwihr/France each one week in July 2016, where I presented a poster on my results of research.
4. Attended summer school organized by (International Research Training Group) which took place in Mittelwihr/France each one week in July 2015, where I presented a poster on my results of research.
5. Attended summer school organized by (International Research Training Group) which took place in Mittelwihr/France each one week in, July 2014, where I presented a poster on my results of research.
6. Attended a 3 days international conference on polymer materials in Bayreuth/Germany in September 2015 where I presented a poster
7. Attended a two days International Research Training Group workshop in October 2015 which took place in Breisach/Germany, where I made an oral presentation.
8. Attended the International Research Training Group workshop in April 2016, which took place at the Freiburger Institut für interaktive Materialien und bioinspirierte Technologien FIT for 2 days.

REFERENCES

Prof. Dr. Günter Reiter

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