

NASHWA EASSA



2015 ELSEVIER FOUNDATION AWARDS IN PHYSICS AND MATH FOR
EARLY-CAREER WOMEN SCIENTISTS IN THE DEVELOPING WORLD
Physics Department, Faculty of Science & Technology, Al Neelain University,
Khartoum, Sudan | +249912409242 | nash.eassa@gmail.com

CURRENT RESEARCH INTERESTS

Materials Synthesis and Characterization

- Photonics Materials
- Bandgap engineering of oxide semiconductors photocatalyst to be used in:
 - (i) Water treatment
 - (ii) Solar Energy

EXPERIENCE

- Sep 2013-present Assistant Professor of Physics, *Al Neelain University, Khartoum, Sudan*
Teaching physics modules and Research Supervision
- Sep 2013– Sep 2014 Postdoctoral researcher, Department of Physics, *Nelson Mandela Metropolitan University, Port Elizabeth, South Africa*
Development of TiO₂ nanoparticles and nanotubes for solar water splitting system using photoelectric chemical cells (PECs)
- Sep 2008-April 2013 PhD Student, Department of Physics, Nelson Mandela Metropolitan University Port Elizabeth, South Africa
Surface modification of InAs (111)A and (001) to study effect of chemical processing such as passivation, etching and oxidation on electronic structure and photoluminescence properties.
Characterization: Photoluminescence Spectroscopy, Raman Spectroscopy, X-Ray diffraction (XRD) X-Ray Photoelectron Spectroscopy (XPS), Auger electro spectroscopy (AES), Scanning electron Microscopy (SEM). Current -Voltage (IV) and Capacitance - Voltage (CV) measurements
- June 2007-Aug 2008 Lecturer of Physics, *Al Neelain University, Khartoum, Sudan*
Teaching physics modules and Research Supervision

EDUCATION

- 2008-2013 Ph.D. (Physics), *Nelson Mandela Metropolitan University Port Elizabeth, South Africa*
- 2005-2007 M.Sc. (Material Physics and Nanotechnology), *Linkoping University, Linkoping, Sweden*
- 1999-2004 B.Sc. (Physics), *University of Khartoum, Sudan*

SPECIAL AWARDS

2015	Elsevier Foundation Award in Physics and Math for Early-Career Women Scientists in the Developing World
2014	AGNES Grant for Junior Researchers 2014 – supported by AvH and TWAS
2012	One of ~550 young scientists selected worldwide to attend the 62nd Lindau Nobel Laureate Meeting, Lindau, Germany
2009	Most outstanding poster presentation award in field of material science delivered at South African Institute of Physics (SAIP), South Africa

SCHOLARSHIP

2014-2015	Research Capacity Development fellowship (RCD), Nelson Mandela Metropolitan University, South Africa
2008-2013	Organization for Women Scientists for the Developing World (OWSD) Fellowship

CONFERENCES AND WORKSHOPS

Dec 2015	Sida Science Day, Stockholm, Sweden
Dec 2015	Third Arab-American Frontiers of Science, Engineering, and Medicine symposium, King Abdullah University of Science and Technology (KAUST), Saudi Arabia
May 2015	Research Partnership Workshop on Water Resources for Women Scientists from the U.S. and Africa, Windhoek, Namibia
Feb 2015	American Association for Advancement of Science (AAAS) annual meeting, San Jose, USA
June 2014	AAAS-TWAS Course on Science and Diplomacy, Trieste, Italy
Sep 2013	Career Development for women in physics, Trieste, Italy
Jan 2013	Khartoum Workshop On Advance in Materials Science (KWAMS13), Khartoum, Sudan
July 2012	62nd Lindau Nobel Laureate Meeting, Lindau, Germany
May 2011	South African Conference on Photonic Materials (SACPM), Kariega, South Africa
July 2009	South African Institute of Physics (SAIP) Conference, Durban, South Africa

Membership

2013	Sudanese Women in Science Organization (SWSO)
2009	South African Institute of Physics (SAIP)
2008	Organization for Women Scientists for the Developing World (OWSD)

List Of publications

- 2014 Photoluminescence of chemically treated InAs (111)A, N. Eassa et al Proc. SPIE 9257, 925703 (2014).
- 2013 Surface modification of InAs (111)A etched in bromine-methanol N. Eassa et al. Current Applied Physics 13, 366 (2013).
- 2012 Treatment for GaSb surfaces using a sulphur blended (NH₄)₂S/(NH₄)₂SO₄ solution, D. M. Murape, N. Eassa et al. Applied Surface Science 258 (18), 6753 (2012).
- 2012 Surface morphology InAs and electronic structure of halogen etched InAs (111)", N. Eassa et al. Physica B: Condensed Matter, 407(10), 1591(2012)
- 2012 Improved GaSb surface using [(NH₄)₂S / (NH₄)₂SO₄] solution D. M. Murape, N. Eassa et al. Physica B: Condensed Matter 407(10), 1675 (2012).
- 2011 Chalcogen based treatment of InAs with [(NH₄)₂S / (NH₄)₂SO₄], N.Eassa et al. Surface Science 605(11-12), 994 (2011).

Dr. Musbah Babikier, Head of the Physics Department, Al Neelain University, Sudan
Email: musbah22@gmail.com

Dr. Asma A. Ahmed, Faculty of Science and Technology, Al Neelain University, Sudan
Email: asmabelrahmahmed780@gmail.com