



Research Scientist

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ResearchGate: https://www.researchgate.net/profile/William_Wilson_Anku/research

Profile

Dr William Wilson Anku is a Research Scientist at Water Research Institute of the Council for Scientific and Industrial Research, Ghana. He obtained his PhD Chemistry degree at the University of Johannesburg, South Africa in 2017, MSc Environmental Science degree in 2008 at Kwame Nkrumah University of science and technology (KNUST), Ghana, and BSc Chemistry degrees in 2003 also at KNUST. He did one-year postdoctoral research in the Applied Chemistry Department of the University of Johannesburg.

William has several years of teaching experience at the University and High school levels. He is an expert in nanomaterials synthesis and characterization. William also has experience in photocatalytic degradation of organic pollutants in water and the use of nanoparticles for the removal/reduction of heavy metals in polluted water. He has supervised many masters and PhD students from universities within and outside of Ghana. He has also been serving as an external examiner for masters and PhD theses. He also reviews manuscripts for journals, and proposals for fellowship programmes.

Research Interests

His current research interests are heterogeneous catalysis and materials chemistry, with a particular focus on environmental issues. These interests encompass:

1. Nanomaterials/nanocomposites research:

Design of nanocomposites with unique structural and physical properties, and the assessment of their structure-property relationships.

2. Semiconductor photocatalysis:

Development and evaluation of photocatalytic properties of semiconductors, their structural and property characterization, and their practical application for environmental studies including photocatalytic removal of organic and inorganic pollutants from drinking water/ wastewater.

3. Application agro-industrial wastes derived materials in water treatment

Preparation and application of ion exchange and carbon-based materials derived from agro-industrial wastes for the removal of cations and anions from polluted groundwater and industrial wastewater.

Prizes, awards, fellowships

- Postdoctoral research fellowship: Faculty of Science, University of Johannesburg, 2018.
- PhD studentship: Faculty of Science, University of Johannesburg, 2015-2018.
- Students travel fund award: National Research Foundation (NRF) of South Africa, 2016.
- Best poster presenter at the 5th UJ Cross Faculty Symposium held at UJ-Bunting Road Campus, South Africa on 13th October 2015.
- Second best poster presenter at the 3rd conference on “Emerging Frontiers for

Sustainable Water” held at the Protea Hotel
Wanderers, in Johannesburg, South Africa from 3-5 August 2015.

LIST OF PUBLICATIONS

(a) Journal Papers

1

2021

Obiri, Samuel, Gloria Addico, Saada Mohammed, Wilson William Anku, Humphry Darko, and Okrah Col

2

2021

Oppong, Samuel Osei-Bonsu, Francis Opoku, William Wilson Anku, and Penny P. Govender. Insights in

3

2020

Ama Onoyivwe Monday, Khotso Khoele, William Wilson Anku, Suprakas Sinha Ray, Peter Ogbemudia C

4

2020

Anku, William Wilson, Eric Selorm Agorku, Samuel Osei-Bonsu Oppong, and Anthony Yaw Karikari. "M

5

2020

Karikari Anthony Yaw, Asmah Ruby, Anku, William Wilson, Amisah Steve, Agbo Nelson Wheatson, Telf

6

2020

Manyedi, Sechaba, William W. Anku, Ephraim M. Kiarii, and Penny P. Govender. Thermoelectric, Electr

7

2020

Renu Kumari, Adeniyi Olugbenga Osikoya Adeniyi Olugbenga Osikoya, Francis Opoku, William Wilson

8

2019

Onoyivwe Monday Ama, William Wilson Anku, Suprakas Sinha Ray. Photoelectrochemical degradation

9

2019

Onoyivwe Monday Ama, Khotso Khoele, William Wilson Anku, Suprakas Sinha Ray. Photoelectrochemi

10

2019

Ndaba, Nokuthula, Marthe Carine Fotsing, William Wilson Anku, and Penny Poomani Govender. In vitro

11

2019

Samuel Osei-Bonsu Oppong, Francis Opoku, William Wilson Anku, Ephraim

Muriithi Kiarii, Penny Poomani Govender. Experimental and Computational Design of Highly Active Ce-

12

2019

Renu Kumari, Adeniyi Olugbenga Osikoya, Francis Opoku, William Wilson Anku, Sudheesh Kumar Shu-

13

2019

Madima Ntakadzeni, William Wilson Anku, Penny Poomani Govender,	Leelakrishna Reddy
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14

2019

Madima Ntakadzeni, William Wilson Anku, Neeraj Kumar, Penny Poomani Govender, Leelakrishna Red
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15

2018

S. O.B. Oppong, W. W. Anku, F. Opoku, S. K. Shukla, E. S. Agorku and P. P. Govender. Photodegradat
--

16

2018

W. W. Anku, S. K. Shukla and P. P. Govender. Graft gum ghatti caped Cu
--

17

2018

C.N. Peter, W. W. Anku, R. Sharma, G. M. Joshi, S. K. Shukla, P. P. Govender. N-doped ZnO/graphene

18

2018

C.N. Peter, W. W. Anku, S. K. Shukla, P. P. Govender. Theoretical studies of the interfacial charge trans

19

2018

Renu Kumari, Adeniyi Olugbenga Osikoya, William Wilson Anku, Sudhees

20

2017

W. W. Anku, S. O. B. Oppong, S. K. Shukla, E. S. Agorku, and P. P. Govender. Cobalt doped ZrO

21

2017

S. O. Oppong, W. W. Anku, S. K. Shukla and P. P. Govender. Synthesis and characterisation of neodym

22

2016

W W Anku, S. O. B Oppong, S K Shukla and P P Govender.Comparative photocatalytic degradation of r

23

2016

W. W. Anku, S. O. B. Oppong, S. K. Shukla, E. S. Agorku, and P. P. Govender. Chitosan–sodium alginate

24

2016

W. W. Anku, S. O. B. Oppong, S. K. Shukla, E. S. Agorku, and P. P. Govender. Palladium-doped-ZrO

25

2016

W W Anku, S. O. B Oppong, S K Shukla and P P Govender. Influence of ZnO concentration on the opti

26

2016

S. O. B. Oppong, W. W. Anku, S. K. Shukla, E. S. Agorku and P. P. Govender. Photocatalytic degradati

27

2016

M. Mzoughi, W. W. Anku, S. O. Oppong, S. K. Shukla, E. S. Agorku and P. P. Govender. Neodymium D

28

2016

S. O.B. Oppong, W. W. Anku, K. S. Shukla and P. P. Govender. Lanthanum doped-TiO

(b) Refereed book chapters

1. William W. Anku, Messai A Mamo and Penny P Govender. Phenolic compounds in water: sources, reactivity, toxicity and treatment methods. *InTechOpen*. In book: Phenolic Compounds-Natural Sources, Importance and Applications. pp 420-443, 2017.

1. William W. Anku, Samuel OB Oppong and Penny P Govender. Bismuth-based nanoparticles as photocatalytic materials. *InTechOpen*. In book: Bismuth: Advanced Applications and Defects Characterization. pp 25-44, 2018.

1. William W. Anku, Ephraim M Kiarri, Sudheesh K Shukla, and Penny P Govender. Photocatalytic degradation of pharmaceuticals using graphene based materials. *Springer, Cham*. In book: A New Generation Material Graphene: Applications in Water Technology. pp 187-208, 2018.

1. Anku, William Wilson, Onoyivwe Monday Ama, Suprakas Sinha Ray, and Peter Ogbemudia Osifo. Application of Modified Metal Oxide Electrodes in Photoelectrochemical Removal of Organic Pollutants from Wastewater. *Springer, Cham*. In book: Nanostructured Metal-Oxide Electrode Materials for Water Purification, pp. 151-166, 2020.

1. Khoele, Khotso, Onoyivwe Monday Ama, Ikenna Chibuzor Emeji, William Wilson Anku, Suprakas Sinha Ray, David Jacobus Delport, and Peter Ogbemudia Osifo. Dynamic Degradation Efficiency of Major Organic Pollutants from Wastewater. *Springer, Cham*, In book: Nanostructured Metal-Oxide Electrode Materials for Water Purification, pp. 1-18, 2020.