

TSIWAH ACHEAMPONG EMMANUEL

Department of Materials Engineering

KNUST.

Kumasi, Ghana

Tel:0541886057

tsiwaheate@yahoo.com/ea.tsiwah@knust.edu.gh

Career objective

My career objective is to broaden my knowledge base, experience and skills particularly in the materials processing industry.

Education/Qualifications with dates

September 2021 – Date	PhD. Materials Science and Engineering. University of Science and Technology of China Hefei – Anhui Province China. Kwame Nkrumah University of Science and Technology Kumasi, Ghana Project: Fabrication of Perovskite Solar Cells Supervisors: Prof Kwadwo Mensah Darkwa and Prof. Chan-Qi Ma
September 2016 – June 2019	MSc. Materials Science and Technology Wuhan University of Technology Wuhan-Hubei Province China Project: Synthesis of Perovskite Nanocrystals Supervisor: Prof Xie Yi
September 2011 – June 2015	BSc. Materials Engineering Kwame Nkrumah University of Science and Technology (KNUST) Kumasi – Ashanti Region Project: 2014-2015 Design and fabrication of a device for measuring wear Supervisor: Dr. Kwadwo-Mensah Darkwa Project: 2013-2014

Casting of a bench vice

Supervisor: Mr Emmanuel Amankwah

September 2006 – June 2009 West African Senior Secondary Certificate Examination (WASSCE)
Mfantipim School. Cape Coast
Electives pursued: Technical Drawing, Physics, Chemistry and Elective Mathematics

August 2001 – April 2006 Basic Education Certificate Examination (BECE)
AngloGold Ashanti Bibiani Limited School.
Bibiani - Western Region

Publications

1. One-Pot Scalable Synthesis of All-Inorganic Perovskite Nanocrystals with Tunable Morphology, Composition and Photoluminescence

Emmanuel Acheampong Tsiwah^{†a}, Yanxi Ding^{†a}, Zixiong Lia, Zhiyong Zhao^a, Mingqing Wang^{b*}, Chao Hua, Xiaoqing Liuc, Chenghua Sund, Xiujian Zhao^a, Yi Xie^{a*}

2. Heat-up and gram-scale synthesis of Cu-poor CZTS nanocrystals with controllable compositions and shapes
Santosh Kumar Verma,^{ab} Rameshwari Verma,^a Yi Xie,^{*a} Dehua Xiong,^a Wenhui Chen,^a Chao Hu,^a Tsiwah Acheampong Emmanuel,^a Mingqing Wang^c and Xiujian Zhao^{*ab}

3. Constructing non-fluorinated porous superhydrophobic SiO₂-based films with robust mechanical properties
Chao Hu, Wenhui Chen, Tan Li, Yanxi Ding, Han Yang, Shuangjie Zhao, Emmanuel Acheampong Tsiwah, Xiujian Zhao, Yi Xie

4. Trivalent Ions Mediated Abnormal Growth of All-Inorganic Perovskite Nanocrystals and the Divergent Emission Properties

Xunyi Dong ^{†a}, Emmanuel Acheampong Tsiwah ^{†a}, Tan Li, Junjie Hu ^b, Zixiong Li ^a, Yanxi Ding ^a, Zhao Deng ^c, Wenhui Chen ^a, Like Xua, Peng Gao^{*b}, Xiujian Zhao ^a, Yi Xie^{*}

5. Tin-assisted growth of all-inorganic perovskite nanoplatelets with controllable morphologies and complementary emissions”

Yanxi Ding,^a Tan Li,^a Xiaoyun Li,^a Emmanuel Acheampong Tsiwah,^a Chengzhen Liu,^a Peng Gao,^{*b} Tao Zeng,^c Yunxia Chen,^{cd} Xiujian Zhao^a and Yi Xie^{*a}. “

6. Advances and challenges in covalent organic frameworks as an emerging class of materials for energy and environmental concerns

Daniel Nframah Ampomg, Elijah Effah, Emmanuel Acheampong Tsiwah, Anuj Kumar, Emmanuel Agyekum, Esther Naa Ayorkor Doku, Obed Issaka, Frank Ofori Agyemang, Kwadwo Mensah-Darkwa, Ram K Gupta

7. Realization of molecular models as heterogeneous electrocatalysts for activation of dioxygen

Kwadwo Mensah-Darkwa, Daniel Nframah Ampong, Emmanuel Acheampong Tsiwah, Anuj Kumar, Martinson Addo Nartey, Patrick Aggrey, Frank Ofori Agyemang, Ram K Gupta

8. Stabilizing red-emitting all-inorganic perovskite nanocrystals by a ligand-mediated room-temperature procedure

Ling Li, Hao Dong, Yongfei Hu, Tao Zeng, Yunxia Chen, Kwadwo Mensah-Darkwa, Emmanuel Tsiwah Acheampong, Ghafar Ali, Yi Xie

9. Multi-site Passivation of ZnO Metal Oxides via Biomolecules for Efficient and Highly Stable Organic Solar Cells

rfaan Ismail, Maria Khalil, Xiaomei Gao, Xingze Chen, Muhammad Jawad, Rong Huang, Zhiyun Li, Emmanuel Acheampong Tsiwah, Wei-shi Li, Qun Luo, Chang-Qi Ma

10. Organic Electrodes for Flexible Energy Storage Devices. Kwadwo Mensah-Darkwa, Daniel N Ampong, Daniel Yeboah, Emmanuel A Tsiwah, Ram K Gupta

Book Chapters

1. 2D Nanomaterials Using Thin Film Deposition Technologies

Kwadwo Mensah-Darkwa, Daniel Nframah Ampong, Daniel Yeboah, Emmanuel Acheampong Tsiwah, Ram K Gupta

Skills

Microsoft (Word, Excel, PowerPoint, Publisher), Solid edge drawing tool and origin lab. Also good in using Xpert Highscore for XRD analysis, Image J and Digital Micrograph

Internship

July 2014 – August 2014 KLM Royal Dutch Airlines. Accra
Interned at KLM Engineering and Maintenance Department

Responsibilities: Examine and inspecting of aircraft components, including landing gear, hydraulic Systems, and de-icers to locate cracks, breaks, leaks or other problems. Oil changing Battery servicing, hydraulic system servicing and other aircraft servicing tasks.

Skills Acquired: Inspected, detected and rectified defects on Boeing 747, Boeing 777-300, Boeing 767 Airbus A330 and Airbus A340

July 2013 – August 2014 KLM Royal Dutch Airlines. Accra
Interned at KLM Engineering and Maintenance Department

Responsibilities: Checking for corrosion, distortion, and invisible cracks in the fuselage, wings, and tail, using x-ray and magnetic inspection equipment. Cleaning, refuelling, and Changing oil in line service aircraft.

Skills Acquired: Inspected, detected, rectified defects and refuelled on Boeing 747, Boeing 777-300, Boeing 767, Airbus A330 and Airbus A340

Employment

October 2022 – Date Kwame Nkrumah University of Science Technology
PMB Kumasi
Ghana

Responsibilities: Assistant Lecturer

October 2017- June 2019 Wuhan Shuneng New Materials Company limited
Room 1401, Building 8, SBI Chuangye street, Guangu,
Wuhan, Hubei China

Responsibilities: Study and research into superhydrophobic materials

Skills Acquired: Good researching skills and processing of materials

Sept 2010 – August 2011 Hollywood School Complex
Elmina, Central Region

Responsibilities: Technical Drawing Teacher

Skills Acquired: Good communication skills, good listener,
Punctuality and commitment to work.

Seminars

May 2012 Success Conference

August 2014 Seminar on reservoir characterization

November 2, 2018 Heat Transfer in Fiberglass Insulation: Fundamental and Applied Aspects hosted by Dr. Manoj choudhary

Professional membership

Student Member: National society of Black Engineers.

Ghana Engineering Students Association

Positions held

April 2014 – April 2015 **Deputy Electoral Commissioner**, Ghana Engineering Students Association.

March 2008 – March 2009 **House Prefect**, Bartels Sneath house, Mfantshipim School.

April 2005 – April 2006 **School Prefect**, AngloGold Ashanti Bibiani Limited School.

Language

Fante – fluent

English – Excellent in oral and written communication skills

French – Beginner; oral and written communication skills

Chinese- fluent

Hobbies

Writing, playing computer games and football

Referees

1. Prof. Xie Yi
Wuhan University of Technology
Wuhan-Hubei
China.
+8615527835639
2. Prof. Samuel Kwofie
Head of Department, Department of Materials Engineering
KNUST – Kumasi, Ghana
+233 3220 60238
3. Dr Kwadwo Mensah Darkwa (Lecturer)
Department of Materials Engineering
KNUST – Kumasi
+233544387772

3. Mr. Ayayi G. Apedo. (Maintenance Manager)

KLM Engineering and Maintenance.

Accra.

+233 4319509

4. Mr. John Kofi Asare (Aircraft Engineer)

KLM Engineering and Maintenance

Accra-Ghana

+233 244372307