**CURRICULUM VITAE**

ING. MRS. EMMANUELA KWAO-BOATENG

**PERSONAL INFORMATION**

Maiden Name: Emmanuela Boatemaa Bosomtwi

Date of Birth: 18th June, 1987

Hometown: Kumawu, Ashanti Region

Nationality: Ghanaian

Languages: English, Russian and Twi (Fluent in writing and speech)

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**EDUCATIONAL BACKGROUND**

Kwame Nkrumah University of Science and Technology, Kumasi

August 2018 – date

* **Programme**: PhD Chemical Engineering
* **Research Topic**: Biodesulphurization of Crude Oil and
* **Relevant Courses**: Biochemical Engineering, Enzymes and Enzymatic Processes, Research Methods

Gubkin Russian State University of Oil and Gas, Moscow-Russia

September 2012-June 2014

* **Programme**: Master’s in Chemical Engineering (Oil Refining Technology)
* **Research Topic**: The effect of Different Properties of Petroleum Wax on the Qualitative Characteristics of Wax Emulsions
* **Relevant Courses**:

Computer Learning Systems of Oil And Gas Processing Management, Oil and Gas Processing Management, Oil and Gas Processing Equipment, Mass Transfer Processes in Systems with Solid Phase, Existing State and Development Prospects of Oil Refining Processes, Theoretical and Experimental Research Methods in Chemistry, Physical and Chemical Mechanics of Disperse Systems, Philosophy and Methodology of Science, Materials Chemistry, Organic Chemistry, Inorganic Chemistry, Catalytic Processes in Oil Refining, Mathematical Software Packages for Engineering and Scientific Computations, Research Training, Industrial Gas Conversion Processes, Processing of Residual Fuels and Heavy Oil Stock, Modern Hydrogenation Processes, Contemporary Issues of Chemical Oil and Gas Technologies, Economics and Management of Oil and Gas Production, Automated Systems of Management of Chemical Technology Processes, Petrochemicals-Based Additives to Crude Oils, Gas Condensates, Fuels, Oils and Working Fluids, Modern Methods of Oil and Petrochemicals Analysis, Technological Estimation of Oil and Gas Refining Processes with the Use Of Computer Software, Ecological Aspects of Oil Dispersed Systems Production and Application, Production and Application of Greases, Technology of Organically Binding Materials.

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Gubkin Russian State University of Oil and Gas, Moscow-Russia

October 2011-June 2012

• **Programme**: Preparatory Programme (Russian Language training and other courses)

Kwame Nkrumah University of Science and Technology, Kumasi

August 2006 – June 2010

* **Programme**: BSc. (Hons) Chemical Engineering
* **Academic Stance**: Second Class (Hons) Upper Division
* **Research Topic**: Plant Design for Biological Treatment of Acid Mine Drainage (Final Year), Semi-Quantitative Optimization of Biogas Technology (Third Year)
* **Relevant Courses**:

Linear Algebra and Multivariable Calculus, Chemical Reaction Engineering, Chemical Process Calculations, Fluid Transport Phenomenon, Computer Applications for Engineers, Process Control and Instrumentation, Material Science, Thermodynamics, General Chemistry, Practical Chemistry, Polymer Technology, Heat Transfer Phenomenon, Food Processing Technology, Biochemical Technology, Chemical Process Design and Economics, Mechanical separation Process, Mass Transfer Phenomenon, Simultaneous Heat and Mass Transfer, Safety and Pollution Control.

Saint Louis Secondary School, Kumasi

August 2002 – June 2005

* **Programme**: General Science
* **Academic Stance**: Aggregate 08
* **Relevant Courses**:

Core Mathematics, English Language, Social Studies, Integrated Science, Elective Mathematics, Physics, Biology, Chemistry

**WORK EXPERIENCE**

Department of Chemical Engineering, KNUST Kumasi

**Lecturer**: February, 2015- to date

**Core duties**: Teaching, Research and Service to the Community

**Teaching**:

Courses taught include: Petroleum Refining Engineering, Separation Processes I and II, Introduction to Information Technology, Refining Processes Technology, Pollution Control in the Petrochemical Industries, Introduction to the Petrochemical Industries and Enginering in Society.

**Research**: Some research supervised over the period include but not limited to:

1. Microbial Isolation from Fuel Contaminated Soils and Store Fuels.
2. Optimization of Wax Emulsion Production from Beeswax and Petroleum Wax
3. Coconut Milk Process Development and Process Commercialization
4. Comparison of Different Methods in the Re-Refining of Used Engine Oil
5. Extraction, Characterization and Optimization of Lemongrass Oil
6. Extraction, Characterization and Optimization of Cashew Oil
7. Assessment of the Quality of Diesel Oil Sold at Filling Stations Within Kumasi

Lukoil Overseas Company Limited, Moscow-Russia

**Intern**: June 2013-July 2013

**Duties**: Using the HYSYS software to treat crude oil containing large volume of water from the Kazakhstan oilfields.

Department of Chemical Engineering, KNUST

**National Service Personnel**: August 2010 – August 2011

**Duties**:

Administrative work at the departmental general office, helping students in laboratory and computer practical courses, helping two lecturers with research work.

**PERSONAL COMPETENCE**

Highly computer literate with daily usage of Microsoft Office Suite (Word, Excel, PowerPoint), Basic skills in using MATLAB, HYSYS and AUTOCAD, Analytical and dynamic to suit diverse situations, A good team player to achieve desired results, Good communication and interpersonal skills, Ability to work independently or with less supervision, Problem solving, proactive and resourceful, Committed to meet deadlines with desired results, Self-motivated and able to remain calm and focused under pressure.

**RESEARCH INTERESTS**

* Petrochemistry
* Refining of Crude Oil
* Optimization and Upgrading of Refinery Products
* Separation Processes etc.

**PROFESSIONAL AFFILIATION**

November, 2016 to date: Ghana Institution of Engineers- Corporate Member

**RESEARCH PUBLICATION**

Tuan Thanh Dang, Thi Le AnhNguyen, Khursheed B. Ansari, Van Ha Nguyen, Nguyen Thanh Binh, Thi To Nga Phan, Thanh Huyen Pham, Dinh Thi Thuy Hang, Prince Nana Amaniampong, **Emmanuela Kwao-Boateng**, Quang ThangTrinh (2021), Chapter 7 - Perovskite materials as photocatalysts: Current status and future perspectives: Nanostructured Photocatalysts: From Fundamental to Practical Applications, Pages 169-216

**Kwao-Boateng, E.,** Kapustin, V. M., Makhin, D. Y., (2017). ‘‘**Emulsifier Effects on the Stability of Different Wax Emulsions**”. Chemical and Process Engineering Research (CPER, IISTE) ISSN 2224-7467 (Paper) ISSN 2225-0913 (Online) Vol.54, 2017.

**Kwao-Boateng, E.,**Aboagye, E. A., Appiah, F. A., (2017). ‘‘Comparing the properties of wax emulsions formed from petroleum wax and beeswax”. Presented at the 2nd International Conference on Engineering, Science, Technology, and Entrepreneurship, 17th – 20th July, 2017, IDL conference Center, KNUST.

**OTHER ROLES**

Quiz Mistress for “**The Gas Challenge”,** a competition organized by Ghana National Gas Company for Tertiary Students on the advancement of knowledge in the oil and gas sector.

**REFEREES**

1. Zsuzsanna G. Momade (Mrs.) – Senior Lecturer, Department of Chemical Engineering, College of Engineering, KNUST, Kumasi Tel.: (+233)-244731876 E-mail: zsuzsamomade@yahoo.co.uk
2. Emmanuel G. Ankudey (Dr.) - Senior Lecturer, Department of Chemical Engineering, College of Engineering, KNUST, Kumasi. Tel.: (+233)-504956644 E-mail: egankudey@yahoo.com