

Personal Information

Name: Ahmed Hassan Alamin Ebrahim
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Education

- 2012-2016 PhD. in Chemical and Environmental Engineering, Prince of Songkla University (PSU) - Thailand.
- 2005-2006 MSc. in Chemical Engineering, University of Gezira- Sudan.
- 1999- 2003 B. Sc. in Chemical Technology, Faculty of Science and Technology, of Al-Neelain University - Sudan

Key Qualification

I have 15 years' **experience in environmental engineering, chemical and water field and Health & safety position.** Including 5 year as Assistant Prof., in environmental college- **National Ribat University in charge of teaching Master degree and undergraduate students on many courses related Health and Safety** and preparing document and supervising of students in Lectures and laboratory practice on **environmental science, fluid mechanics, thermodynamic, unit operations, Water quality, Heat Process Transfer, and Bioreactor process respectively.** I have published 4 papers in international journal related environmental field, adsorption, synthesis, materials design, and surface chemistry analytical technique, also During the time I spent as researcher I have been learning and applying my experience on the field of **adsorbents chemistry and synthesis, materials design, and surface and soil chemistry** analytical techniques such as FTIR, XPS, SEM, TEM, XRD, and TGA, for **adsorption of heavy metals and phenolic compounds form in representative complex aqueous solutions,** also I have good experience and did many studies during work in Thailand, most of them are focused on degradation of some pollutants found in

the **petroleum wastewater**_such as **organic materials, phenols, sulphides and ammonia**. Furthermore, I have a good experience in LC, ICP-AE, AAS, IC, HPLC-UV/VIS/FLD, LC-MS and Q-TOF-MS. I **have acquired broad range of academic and technical skills, and accomplished outstanding professional performances**. However, I did and **associate in many Environmental Impact Assessment studies for Dams including Merowe and GERD**. Also I have multi-skilled, such as ability to conduct research, talented, hard worker, punctual, motivated duty bounded, socially friendly, with high commitment for work place and capable of functioning in stressful environments. Furthermore I have excellent computer skills, fluency of English language.

Employment Record

| Period | Employing Organization / Position | Country |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 2019 - Present | The National Ribat University <u>Position:</u> Assistant Professor, HSE Department- Environmental Science and Disaster college | Sudan |
| 2016 - Present | Ministry of Water Resources and Irrigation, Electricity, Khartoum, Sudan. <u>Position:</u> - Environmental & Sustainability Specialist, -Member of (TNC),Tripartite National Committee | Sudan |
| 2012 - 2016 | Chemical Engineering Department , Prince of Songkla University – Hatyai- Thailand <u>Position:</u> Lecturer and Ph.D. Student. | Thailand |
| 2012 - 2013 | Central Laboratory for Technical Services and Calibration- Sudanese Company for Distribution of electricity. <u>Position:</u> Head of Oil and lubricant Research lab, Chemical and Environmental Engineer | Sudan |
| 2007 –2012 | Hydrology Department and HSE Department Merowe Dam Project, Reserise Dam Heightening project Dams Implementation Unit, Ministry of Water Resources and Irrigation, Electricity, | Sudan |

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|-------------|---------------------------------------------------------------------------------------------------------------|-------|
| | Khartoum, Sudan. <u>Position:</u> Chemical, HSE, Environmental and water quality Engineer | |
| 2005 - 2007 | Khartoum State Water Corporation <u>Position:</u> Chemical Engineer | Sudan |

Training, Modules and Courses

- ✚ ***Training of Trainer Course (TOT), Institute of Development Studies and Research, Khartoum University, September 2019, Khartoum- Sudan.***
- ✚ ***Skills and Methods of University Teaching, Institute of Development Studies and Research, Khartoum University, October 2018 Khartoum- Sudan.***
- ✚ ***Capacity Building for The National Negotiation Team II, Advanced Hydro-Diplomacy, Tailored for SUDAN. (German Cooperation-giz- ENTRO, April 2019).***
- ✚ ***Towards Cooperative Water Management; Legal and Developmental Approaches.(IHE Delft- UNISCO-University of Khartoum, January 2019)***
- ✚ ***Skills and Methods of University Teaching, Institute of Development Studies and Research, Khartoum University, October 2018 Khartoum- Sudan.***
- ✚ ***Watershed modeling by using WMS, HEC-HMS, Global mapping, September 2018, Khartoum, Sudan.***
- ✚ ***Environmental Compliance in Renewable Energy Projects –(The case of hydropower), International Centre for Hydropower (ICH) Ladysmith, South Africa, 16–20 October 2017***
 - Module1 Understanding the Environmental Compliance Process (Auditing/ Inspection, Monitoring and Evaluation)
 - Module 2 Principles and Techniques
 - Module 3 Environmental Compliance in Practice
- ✚ ***Cleaner Production Course Sirim Institute-May 2008- Malaysia***
 - ✓ Development of full scale Rabar process for treatment of palm oil mill effluent.
 - ✓ Cleaner production in managing waste water in the food industry.
 - ✓ Anaerobic waste water treatment for sustainable treatment.

- ✚ ***Industrial Effluent, wastewater Remediation and Safe Disposal, Waste Water Management for Institution. Khartoum- Sudan***
- ✚ ***Applied techniques for drinking water & wastewater and Remediation quality control-Environmental & water Lab, Khartoum- Sudan.***
- ✚ ***Environmental Equipment apparatus Operation and maintenance, ELE International- England.***
- ✚ ***Laboratory Safety and wastewater treatment, Central Laboratory for Environmental Soil Research, Khartoum- Sudan***
- ***The 3rd EnvironmentAsia International Conference on “Towards International Collaboration for Up grading performance of waste water treatment plant ATKAPAR Coconut industries SDN.BHD an Environmentally Sustainable World” 17-19 June 2015, Montien Riverside Hotel, Bangkok, THAILAND.***

Workshop and Conference participation

- *Tekeze-Atbara Water Related Studies Conference, 24-26 March 2019, Khartoum, Sudan.*
- *Experts meeting entitled ‘Towards sustainable operation, maintenance, and management systems of water harvesting facilities in Sudan’, 4-5 February 2018, Khartoum, Sudan.*
- *The Third scientific seminar –Hydraulic Research Center, January 2018, Khartoum, Sudan.*
- *Fundamentals and ethics of scientific research, August 2017 Khartoum, Sudan.*
- *The role of water harvesting programs in resilience and adaptation to climate change in Sudan, April 2017, Khartoum- Sudan.*
- *Assessment of needs & Priorities in research capacity building in water harvesting 19-20 November 2016, Khartoum, Sudan.*

- *“Towards International Collaboration for an Environmentally Sustainable World Conference” Thai Society of Higher Education Institutes on Environment June 2015. Bangkok, Thailand*

Language Skills

Arabic: Fluent speaking and writing
English: Very good speaking and writing
Thai: Fair

Technical Software Usage:

- Water Quality model, **CE-QUAL-W2**, Software model
- **Environmental Impact Assessment Software.**
- **Aspen Plus** (Process simulation and optimization) software.
- **Aspen HYSYS** Process simulation and optimization
- Mathcad Professional and Standard for applied math in Chemical Engineer.
- **MATLAB** for Chemical Engineering.
- **Polymath Software**
- Mercury program for Equation solving and graphics
- **Batch Column Simulation and Optimization of batch distillation columns**
- **SuperPro Designer**
- Watershed modeling by using **WMS, HEC-HMS**

Technical Analysis Equipment's usage

- Atomic Absorption Spectroscopy
- Atomic Absorption graphite Furnace
- Inductive Coupled Plasma Atomic Emission

- **Flam photometer**
- **Spectrophotometer**
- **Ion Chromatography**
- **HPLC-**
- **UV/VIS/FLD**
- **LC-MS**
- **Q-TOF-MS**
- **Distillation Digestion Unit**
- **Statistical Programmes (STATISTICA 8, PASW Statistics 18, MS Excel).**
- **MS office, PowerPoint, Corel Paint Shop Pro Photo X2.**

Membership in Professional Associations and Publications

- **Membership of American Chemical Society (ACS)**, since 2015. Address: American Chemical Society, 1155 Sixteenth Street NW, Washington, DC 20036, USA. Website: www.acs.org.
- **Membership of Chemical Engineering Specialist–Sudanese Engineering Council.** Address Khartoum-Sudan.
- **Membership of Sudanese Engineering Society.** Khartoum- Sudan.

Publications

Books

1. Applications of Calcium Compounds, Bamboo biochar and Sudanese Clay for wastewater treatment. (2015). PhD thesis. OPAC, TD755 A36 2015, Prince of Songkla University, Hatyai – Thailand. <https://opac.psu.ac.th/BibDetail.aspx?bibno=409424>

Technical Report:

- Environmental Impact Assessment of GERD in Sudan.
- **Environmental Impact Assessment of Haloub Feed Mill Factory**, March-August 2019.

Peer Reviewed Journal Articles

1. A.Hassan and L. Kaewsichan, “Equilibrium and kinetic studies of sorption of 2,4-dichlorophenol onto 2 mixtures: bamboo biochar plus calcium sulphate (BC) and hydroxyapatite plus bamboo biochar plus calcium sulphate (HBC), in a fluidized bed circulation column”, *Pol. J. Chem. Tech., Vol. 18, No. 2, (2016), 59-67.*
2. A. Hassan and L. Kaewsichan, “Removal of Pb(II) from Aqueous Solutions Using Mixtures of Bamboo Biochar and Calcium Sulphate, and Hydroxyapatite and Calcium Sulphate”, *EnvironmentAsia 9(1) (2016) 37-44.*
3. A. Hassan and L. Kaewsichan, “Adsorption of Pb(II) Ions from Aqueous Solution in Fixed Bed Column by Mixture of Clay plus Bamboo Biochar”, *Walailak J. Sci. & Tech., Vol. 13, No.11, pp949-963, November 2016.*
4. A. H. Alamin, L. Kaewsichan, “Adsorption of Zn(II) and Cd(II) ions from aqueous solutions by Bamboo biochar cooperation with Hydroxyapatite and Calcium Sulphate ”, *International Journal of ChemTech Research, Vol.7, No.5pp 2159-2170, 2014-2015.*
5. Two more paper under review in the international journal, about the heavy meatal in industrial wastewater treatment Techniques

Reviews Experience:

Journals Reviews

- **BioResources** (ISSN: 1930-2126), (5 papers)

- **Oriental Journal of Chemistry** (ISSN : 0970 - 020X, Online ISSN : 2231-5039), (1 paper)

Conferences Reviews

- **International Conference on Materials Chemistry and Environmental Protection (MEEP).**

Awards

- ✓ Young researcher award for the paper “Removal of Pb(II) from Aqueous Solutions Using Mixtures of Bamboo Biochar and Calcium Sulphate, and Hydroxyapatite and Calcium Sulphate”, “Towards International Collaboration for an Environmentally Sustainable World” Thai Society of Higher Education Institutes on Environment June 2015. Bangkok, Thailand.

Reference

Eng. Karory Elhag Hamad Eltayeb

M.Sc. (Hydraulic Structures), B.Sc. (Civil Eng.)

Water Resources Projects Coordinator.

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