Curriculum Vitae CV

Izzeldin Abdullah Abbas Hamza

Summary

Am analytical chemist thinker. my research work is based on production of multi-functional hybrid materials (nanocomposites) from nonmaterial and agricultural waste or organic polymers products. This work covers their preparation, characterization and the application in adsorption of organic and inorganic contaminants from polluted waters. Experimental setup and a wide range of analytical measurement techniques are employed includes FTIR, Raman Spectra, SEM, TEM, TGA, BET, ICP and so further.

EDUCATION

- University of KwaZulu-Natal (UKZN), College of Agriculture, Engineering and Science, School of Chemistry and Physics, PhD in the School of Chemistry and Physics in March 2014.
- University of Khartoum, MSc in science-Chemistry, in 2002.
- University of Juba, College of Education, Bachelor of Education Science, Biology and Chemistry, BSc in 1995.

CORE SKILLS & EXPERIENCE

- Analytical Chemistry.
- Adsorption Studies.
- Kinetics and Thermodynamic of Adsorption
- Adsorption Isotherms.

- Water and Wastewater treatments.
- Synthesis and Characterization of Composites and
- ICP-OES and Voltammeter Analysis

PERSONAL DETAILS
ADDRESS

Department of Chemistry, College of Applied and Industrial (CAIS), University of Bahri, P.O.Box: 1660/11111, Khartoum, Sudan.

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Teaching Experience

- Lecture in Analytical Chemistry, University of Bahri, (2011-present).
- Lecturer in Chemistry, Department of chemistry, College of education, Upper Nile University, Malakal, South Sudan (2002-2011).
- Teaching Assistant, Department of chemistry, College of education, Upper Nile University, Malakal, South Sudan (1996-2002).

Research Interest

- Nanotechnology: Preparation and evaluation of nanocomposite from biopolymers (cellulose & its derivatives; chitosan and its derivatives; lignin and its derivatives) and Nonmaterial for removal and treatment of contaminated.

Publications

- Izzeldin A. A. Hamza, Bice S. Martincigh, Catherine J. Ngila, and Vincent O. Nyamori. Adsorption studies of aqueous Pb(II) onto a sugarcane bagasse/multi-walled carbon nanotube composite, Journal of Physics and Chemistry of the Earth, 2013, **66**, 157-166.

Manuscripts / Submitted

1. Izzeldin A.A. Hamza, Bice S. Martincigh, J. Catherine Ngila and Vincent O. Nyamori. Preparation and characterization of a sugarcane bagasse/MWCNT composite with good adsorption properties.
2. Izzeldin A.A. Hamza, Bice S. Martincigh, J. Catherine Ngila and Vincent O. Nyamori. Adsorption of Cu(II) from its aqueous solution onto sugarcane bagasse and a bagasse/MWCNT composite.
3. Izzeldin A.A. Hamza, Bice S. Martincigh, J. Catherine Ngila and Vincent O. Nyamori. Adsorption of Cd^{2+}, Ni^{2+} and Zn^{2+} ions from aqueous solutions onto sugarcane bagasse and a sugarcane bagasse/MWCNT composite.

4. Izzeldin A.A. Hamza, Bice S. Martincigh, J. Catherine Ngila and Vincent O. Nyamori. Adsorption of Cr(III) and Cr(VI) onto sugarcane bagasse and a sugarcane bagasse/MWCNT composite from aqueous solutions.

5. Izzeldin A.A. Hamza, Bice S. Martincigh, J. Catherine Ngila and Vincent O. Nyamori. Competitive adsorption of Cu^{2+}, Pb^{2+}, Cd^{2+}, Ni^{2+}, Zn^{2+} and Cr^{3+} ions from aqueous solutions onto a sugarcane bagasse/MWCNT composite.

CONFERENCE CONTRIBUTIONS

1. Poster Presentation:

The adsorption and kinetics of Pb(II) and Cu(II) on lignin materials: A comparative study of *Eucalyptus* extractive and commercial lignin. Analitika 2010 International Conference on Analytical Sciences, Stellenbosch, South Africa, 5-9 December 2010.

2. Oral Presentation:

Preparation of a sugarcane bagasse/MWCNT composite and its application for the adsorption of copper(II) from aqueous solutions. 4th SEANAC International Conference, Maputo, Mozambique, 7-11 July 2012.

3. Oral Presentation:

The adsorption of Pb(II) from aqueous solution by a sugarcane bagasse/CNT composite. Annual Postgraduate Research Day, UKZN, Pietermaritzburg, South Africa, 29 October 2012.

4. Oral Presentation:

The adsorption of Pb(II) from aqueous solution by a sugarcane bagasse/CNT composite. 13th WaterNet International Symposium on Integrated Water Resources Management (IWRM), Johannesburg, South Africa, 31 October-2 November 2012.

ADDITIONAL SKILLS/ATTRIBUTES

- Languages: 1- Arabic 2- English.
- Computer software like Microsoft word, Microsoft Excel, EndNote, Origin, R-software, Hyss software for speciation analysis, Non-linear regression (nlr) and SigmaPlot.

REFERENCES

1. Prof Bice S. Martincigh, School of chemistry and Physics, University of KwaZulu-Natal, Westville Campus, Private Bag x54001, Durban 4000, South Africa. Tel.: +27 31 2601394; fax: +27 31 2603091. E-mail address: martinci@ukzn.ac.za (B.S. Martincigh).
2. Prof J. Catherine Ngila, Faculty of Science, Department of Applied Chemistry, University of Johannesburg, Doornfontein Campus, P.O. Box 17011, Doornfontein, Johannesburg 2028, South Africa: e-mail: jcngila@uj.ac.za