

## Personal Details

**Name** MOHAMMED AWAD ALI  
KHALID  
**Date of Birth** 05/05/1974  
**Place of Birth** WADRAMLI – KHARTOUM  
BAHRY  
**Gander** MALE  
**Marital Status** Married (one child)  
**Nationality** SUDANESE  
**Academic Status** ASSOCIATE PROFESSOR  
**Department** CHEMISTRY  
**Faculty** SCIENCE  
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## Qualifications

Degree	Awarding Body	Country	Date
B. Sc. (Hons.) chemistry – 1 <sup>st</sup> class	University of Khartoum	Sudan	10/07/2000
Ph.D. – chemistry	University of Khartoum	Sudan	12/03/2007
Diploma – Intellectual property	World intellectual property organization	Sudan	06/03/2008

## ACADEMIC APPOINTMENTS

Date	Position	affiliation
2012-present	Associate Professor	Department of Chemistry, University of Khartoum, Khartoum, Sudan.

2011-present Assistant Professor Department of Chemistry, College of

		Applied Medical and Sciences, Taif University, Torabah, Saudi Arabia.
2007-2012	Assistant Professor	Department of Chemistry, University of Khartoum, Khartoum, Sudan.
2007-2009	Assistant Professor	Nile College for Medical Sciences, Om Dorman, Sudan
2004-2007	Lecturer	Department of Chemistry, University of Khartoum, Khartoum, Sudan.
2000-2004	Teaching Assistant	Department of Chemistry, University of Khartoum, Khartoum, Sudan.

## SPECIALISED TRAINING

Training	Date	Country
Post Doctorate	07/2009-06/2010	University of Sydney, School of Chemistry, Australia

## FIELD OF WORK

- P-type ATPase Enzyme Kinetics and Mechanisms.
- Kinetics and Mechanism of Redox Reactions.
- Autocatalytic reactions.
- Computational enzyme kinetics.

## Special Research Interest

- Allosteric acceleration of P-type ATPases by ATP.
- Dual mechanisms of P-type ATPases by ATP.
- Exploring the allosteric sites of ATPases.

## Professional Courses & Workshops Attended

Training Course/ workshop	Organizing Body	Country	Date
Applications of Nanotechnologies	faculty of Science, University of Neleen	Sudan	03-2009
Dual Mechanisms of Allosteric Acceleration of the Na <sup>+</sup> ,K <sup>+</sup> -ATPase by ATP	Australian Biophysical chemistry workshop	Australia	04-2010

## Scholarships

Awarding Body	Country	Date
German Exchange Academic Services	Sudan	2002-2003 and 2005-2007
World intellectual property organization (WIPO) and university of khartoum	Sudan	2007-2008
Ministry of higher education and scientific research	Australia	07.2009-06.2010

## Academic, Administration, Professional Responsibilities & Activities Administrative Responsibilities

Date	Position
12/2008 – 01/2009	Department of chemistry acting head
2006-2009	Department of chemistry examination officer
2005- 2009	Secretariat theboard of chemistry department

## Professional Affiliations

Type	Affiliation	Country	Date
Member	American Chemical Society	USA	2010-present

Member	Australian biophysical Society	Australia	2010-present
Member	Sudanese Chemical Society	Sudan	2008-present

## Committees Membership

Type	Committee	Country	Date
Member	Maintenance and promotion of department of chemistry laboratory committee, University of Taif.	Saudi Arabia	2013 – presnt
Member	Electronic and distance learning unit, college of applied medicine and sciences, Taif university	Saudi Arabia	2014-present
Member	Member Sport Committee, Faculty of Science, University of Khartoum	Sudan	2009-2010
Member	Graduate College Committee for Publishing Scientific Abstracts, University of Khartoum.	Sudan	2008-2009

## Teaching & Examination Experience

### Undergraduate

Course Title	Credit hours/per week	Semester/year	Faculty/Department
General Chemistry	3	2 <sup>nd</sup> /first year	Science/Chemistry
Basic Physical Chemistry	2	2 <sup>nd</sup> / Second year	Science/Chemistry
Kinetics and Mechanisms	3	1 <sup>st</sup> / Fourth year	Science/Chemistry
Molecular Symmetry	3	2 <sup>nd</sup> / Fourth year	Science/Chemistry
Statistical thermodynamics	3	1 <sup>st</sup> / fifth year	Science/Chemistry
Solid and liquid state chemistry	3	2 <sup>nd</sup> /fifth year	Science/Chemistry
Quantum mechanics	3	2 <sup>nd</sup> /fifth year	Science/Chemistry

## Postgraduate

Course Title	Credit hours/per week	Master/Diploma	Faculty
Enzyme Kinetics	3	Master	Science/Chemistry
Electrochemistry	3	Higher diploma	Science/Chemistry
Photochemistry	3	Master	Science/Chemistry
Advanced Physical Chemistry – selected topics	3	Master	Science/Chemistry
Chemical kinetics	3	Higher diploma	Science/Chemistry

## Supervision Of Research

### Undergraduate (selected)

Thesis Title	University	Date
Determination of chloramines in drinking water supply, Khartoum state	Khartoum	2007/2008
Determination of Aluminum in drinking water supply, Khartoum State	Khartoum	2007/2008
Determination of Lead in drinking water supply, Gadarif state	Khartoum	2007/2008
Kinetics of the oxidation of Asparagine by peroxydisulfate in aqueous media	Khartoum	2008/2009
Kinetics of the oxidation of glutamic acid by peroxydisulfate in aqueous media	Khartoum	2008/2009
Kinetics of the oxidation of glutamine by peroxydisulfate in aqueous media	Khartoum	2008/2009
Kinetics of the oxidation of Galactose by peroxydisulfate in aqueous media	Khartoum	2008/2009
Kinetics of the oxidation of Arabinose by peroxydisulfate in aqueous media	Khartoum	2008/2009
Determination of Vitamin-C in the common daily consumption Sudanese food	Khartoum	2009/2010

## Postgraduate

## Master

Thesis Title	University	Date
Investigation of Pharmaceutical active Components in the leaves of <i>BosciaSenegalensis</i> .	BakhtAlrodaa	2010
Presence of ATP active and allosteric sites in $H^+, K^+$ -ATPase, and interactions with some inhibitors.	Khartoum	2011
Determination of Allosteric site of $Ca^{+2}$ -ATPase and discovery of novel inhibitors using docking programme	Khartoum	2011
Allosteric Acceleration of $Na^+, K^+$ -ATPase by ATP, Finding the the Allosteric Site and Evaluating Binding Affinity.	Khartoum	2011

## PhD

Thesis Title	University	Date
Kinetics and mechanisms of some amines by persulfate in aqueous acidic media	Khartoum	2008-
Kinetics and mechanisms of epoxidation of some hydrocarbons using some heavy metalscomplexes	Khartoum	2013-

## Publications

### Publications List

1. **Mohammed A. A. Khalid**, Kinetics and mechanisms of  $\alpha$ -amino acids-peroxodisulphate reaction, part I, *The Sudan journal for basic sciences*, part (C), 2008.
2. **Mohammed A. A. Khalid**, Oxidative kinetics of amino acids by peroxydisulfate, effect of dielectric constant, *the Arabian journal for science and engineering*, volume 33, number 2a, pp 199-210 July 2008.
3. **Mohammed A. A. Khalid**, SaifEldin M. B. Siddeeg, Alfatih A. A. Osman Oxidation of some  $\alpha$ -amino acids by peroxydisulfate in an aqua-sulfuric acid medium, kinetics studies, *Phil. Nat.* 1 (2009), no.1, pp. 43-59
4. SaifEldin M. B. Siddeeg, A. K. Sam, Alfatih A. A. Osman, IsamSalih and

**Mohammed A. A. Khalid**, Distribution of  $^{238}\text{U}$ ,  $^{232}\text{Th}$ ,  $^{40}\text{K}$  and  $^{137}\text{Cs}$  in River Nile Sediments, Khartoum, Sudan, , *Phil. Nat.* 1 (2009), no.1, pp. 109-120

5. **M. Khalid**, G. Fouassier, H.-J. Apell, F. Cornelius and R. J. Clarke. Interaction of ATP with the phosphoenzyme of the  $\text{Na}^+,\text{K}^+$ -ATPase. *Biochemistry* 49 (2010) 1248-58. (journal impact factor 3.379)
6. **M. Khalid**, F. Cornelius and R. J. Clarke, Dual mechanisms of allosteric acceleration of the  $\text{Na}^+,\text{K}^+$ -ATPase by ATP, *Biophysical Journal*, [Volume 98, Issue 10](#), 2290-2298, 2010, (journal impact factor 4.683)
7. [Awad A. Momen](#), [Ali D. M. H.](#), [Mohammed A. Khalid](#), Malik A.Elsheikh,Assessment of Digestion Procedure for Determination of Trace Elements by ICP-OES,Open Science Repository Chemistry, 2013.

<http://www.open-science-repository.com/assessment-of-digestion-procedure-for-determination-of-trace-elements-by-icp-oes.html#INV>.

8. **Mohammed Khalid**, Rania Suliman, Rasha Ahmed, Haifa Salim, and Ronald J Clarke,The high and low affinity binding sites of digitalis glycosides to Na,K-ATPase,Arabian Journal for science and engineering, published online through Springer, January 2014, Volume 39, [Issue 1](#), pp 75-85.
9. AwadAbdallaMomen, **Mohammed Awad Ali Khalid**, Malik AbdallaAbdelrahmanElsheikh, Dafaalla Mohamed Hag Ali,Assessment and modifications of digestion procedures for determination of trace elements in urine of hypertensive and diabetes mellitus individuals,Journal of Health Specialties, Vol. 1, Issue 3, 122-128, October 2013.
10. [Awad A. Momen](#), Ali D. M. H., **Mohammed A. Khalid**,Malik A. Elsheikh, Validation and quantification of Cd, Cr, Cu, Pb, and Zn in Scalp Hair and Finger Nails of Diabetes Miletus and Hypertensive Patients by ICP-OES, J. Ind. Chem. Soc., 2014, (manuscript accepted).
11. AwadAbdallaMomen, **Mohammed Awad Ali Khalid**, Malik AbdallaAbdelrahmanElsheikh, Dafaalla Mohamed Hag Ali,Trace elements in scalp hair and finger nails as biomarkers in clinical studies, Journal of Health Specialties, , Vol. 3, 2015, 28-34.
12. AwadAbdallaMomen, **Mohammed Awad Ali Khalid**, Malik AbdallaAbdelrahmanElsheikh, Dafaalla Mohamed Hag Ali, Validation and quantification of some trace elements in drinking water and wells from Turabah province, KSA by ICP-OES,International Journal of Multidisciplinary and Current Research, Vol.3, 2015, 13-22.

## Textbooks

Textbook	Date	publisher
Co-authored: University Teacher's Chemistry Hand-Book.	2005	Open Sudan University
<a href="http://www.intechopen.com/books/electrochemistry">http://www.intechopen.com/books/electrochemistry</a>	2013	INTECH Open access publisher
Pumps, Channels and Transporters: Methods of Functional Analysis (In process (Proposal accepted))	2015	Wiley

## Chapters published in international Books

Membrane Electrochemistry and Bioelectrochemistry.		INTECH
<a href="http://www.intechopen.com/books/electrochemistry/membrane-electrochemistry-electrochemical-processes-in-bilayer-lipid-membrane">http://www.intechopen.com/books/electrochemistry/membrane-electrochemistry-electrochemical-processes-in-bilayer-lipid-membrane</a> , p71-92.	2013	Open access publisher

## Chapters Edited in international books

Chapter title	Book title	Date	publisher
Shape Classification for Micro and Nanostructures by Image Analysis	Electrochemistry	2013	INTECH Open access publisher
Oxidation Chemistry of Metal(II)–salen Type Complexes	Electrochemistry	2013	INTECH Open access publisher
Electron beam ablation phenomenon theoretical model and applications	Electrochemistry	2013	INTECH Open access publisher
Electroanalytical Sensor Technology	Electrochemistry	2013	INTECH Open access publisher
Potentiometric determination of ion-pair formation constants of crown ether-complex ions with some pairing anions in water using commercial ion-selective electrodes	Electrochemistry	2013	INTECH Open access publisher
Chomatographic, polarographic and	Electrochemistry	2013	INTECH



ion-selective electrodes methods for  
chemical analysis of groundwater  
samples in hydrogeological studies  
Membrane Electrochemistry and  
Bioelectrochemistry.

Open access  
publisher

Electrochemistry 2013

INTECH  
Open access  
publisher