Curriculum Vitae

1. Name: Alaa El-Din Ali El-Shafei 2. Date of Birth: 31.03.1961

3. Place of Birth: El-Mansoura, Egypt **4. Sex:** Male

5. Marital Status: Married
6. Nationality: Egyptian
7. Languages: (a) Mother Tongue: Arabic (b) Other Languages: (I) English (II) Germany

8. Degrees:

Year	Degree	Grade	University	Country
1982 1986 1990	B.Sc. (Chemistry) M.Sc. (Physical Chemistry) Ph.D. (Physical Chemistry)	Very Good	El-Mansoura """	Egypt Egypt Egypt

9. University Education:

Time	Degree	Main subjects	University	Country
September, 1982-March, 1986 May, 1982-March 1986 March, 1986-July, 1990	M.Sc.	Chemistry Physical Chemistry Physical Chemistry	El-Mansoura El-Mansoura Bonn & Mansoura	Egypt Egypt Germany & Egypt

10. Profession:

Time Position		Location				
May, 1982-March, 1986	Demonstrator	El-Ma	nsoura	Unive	ersity, l	Egypt
March, 1986-July, 1990 July, 1990-November, 1995	Assistant Lecturer Lecturer	"	"	"	"	"
November, 1995-October, 2001	Associate Prof. of Physical Chem.	"	"	"	"	"
October, 2001-Until now	Prof. of Physical Chemistry	"	"	"	"	"

11. Ph.D. Channel System, Germany (Financed by Egyptian government)

Time	Туре	Location
August, 1987-October, 1989	German language course	Goethe Institute, Germany
October, 1987-October, 1989	Channel system for Ph.D. study	Bonn University, Germany

12. Fellowships and Training Course

Time	Туре	Location	Financed by
09. 1993-02., 1994	Training course in Catalytic Science	CRC, Hokkaido University, Japan	JICA, Japan
06. 1995-11.1995	Postdoctoral Grant	CNRS, Meudon, France	CNRS, France
05. 1998-07. 1998	Postdoctoral Grant	RAL-ILLINOIS University Urbana-Champaign, U.S.A.	ILLINOIS Univ. U.S.A.
06. 2000-03. 2001	JSPS fellowship	CRC, Hokkaido University, Japan	JSPS, Japan
04. 2001-06. 2001	Alexander Von Humboldt fellowship	Department of Chemistry, Ulm University, Ulm, Germany	Alexander Von Humboldt
07. 2002-06. 2003	Alexander Von Humboldt fellowship	Department of Chemistry, Ulm University, Ulm, Germany	Alexander Von Humboldt
15-17.01. 2005	Innovative Methods for	Sann'a University, Yemen	UNSCO

	Teaching Science at the University Level		
07.2005-09.2005	Alexander Von Humboldt fellowship	Department of Chemistry, Ulm University, Ulm, Germany	Alexander Von Humboldt
09. 2006-08. 2007	Fellowship Economic&Social	FHI der Max-Planck-Gesellschaft, D-14195 Berlin, Germany	Arab Fund for
	Leonomicesociai		Development
08.2008-10.2008	Alexander Von Humboldt fellowship	Institut für Chemie, Technische Universität Chemnitz, Chemnitz,	Alexander Von
	•	Germany	Humboldt

13. Academic Awards:

Prize of Distinction in chemistry, El-Mansoura University, 1998/1999.

14. Conferences:

- a. 3rd International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1994.
- b. 4th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1997.
- c. 2nd International Conference on electrochemistry and its application, Luxor, Egypt, February 1999.
- d. 5th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1999.
- e. 18th Annual Conference on Corrosion Problems in Industry, Ismailia, Egypt, November 1999.
- f. Meeting of the Electrochemical Society of Japan, Tokyo, Japan, September 2000.
- g. Meeting of the Electrochemical Society of Japan (Hokkaido Branch), Sapporo, Japan, January 2001
- h. Frontiers of Nano-scale Catalysis and Electrochemistry (CES21), Sapporo, Japan, March 2001.
- i. 52nd ISE Meeting in Duesseldorf, Germany, September 15-20, 2002
- j. 1st Spring ISE Meeting in Alicante, Spain, March 2-3, 2003.
- k. 4th International Conference on electrochemistry and its application, Aswan, Egypt, February 2004.
- 8th International Conference on Chem. and its role in development, Sharm El-Sheikh, Egypt, April 2005.
- m. 5th International Conference on electrochemistry and its application, Luxor, Egypt, February 2006.
- 9th International Conference on Chem. and its role in development, Sharm El-Sheikh, Egypt, April 2007.
- o. The Humbold Kolleg, Ismailia, Egypt, October 2007.
- p. The Humbold Kolleg On "The Advancement of Science and Technology In Africa", Assiut , March 2008.
- q. 4. Gerischer-Symposium: "Electrochemistry with spatial and temporal resolution" Berlin, June 2008.
- North African Conference on Computational Physics and Chemistry, Oran, Algeria, November 2008.
- s. 10th International Conference on Chem. and its role in development, Mansoura/Sharm El-Sheikh, Egypt, March 2009.

15. Affiliations:

- a) The Egyptian Corrosion Society.
- b) The Egyptian Chemical Society.
- c) The Egyptian Society of Electrochemistry.

16. Research group:

Mansoura University (the year of granted Ph.D. or M.Sc. and current employer)

Graduate Students	Grad	<u>Year</u>	Current Employment
A.A. El-Far	Ph.D.	2000	Chemist at Nasr Fertilizer Company
M.A. Migahed	Ph.D.	2000	Researcher at Petroluem Research Center
A.M.A. Ouf	Ph.D.	2004	Lecturer, Mansoura University
M. Abd Elfattah	Ph.D.	2007	Lecturer, Suez Canal University
A.F.M. Abo El-Wafa	Ph.D.	2010	Fellow, Mansoura University
Amira Abd Elhafeez	Ph.D.		Fellow, Mansoura University
H.M. Shabanah	M.Sc.	1993	
M.A. Migahed	M.Sc.	1994	
A.A. El-Far	M.Sc.	1996	
AA.Ouf	M.Sc.	1999	
H.S. Gadow	M.Sc.	2001	
A.F.M. Abo El-Wafa	M.Sc.	2002	
Amira Abd Elhafeez	M.Sc.	2008	Fellow, Egyptian Academy of science
Amar Awad	M.Sc.	2009	Demonstrator, Mansoura University
M. Abd El-menam	M.Sc.		

19. International Collaborations:

Name	<u>Address</u>
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Prof. D.M. Kolb Department of Electrochemistry, Ulm University, Ulm, Germany

Prof. A. Wieckowski RAL-Illinois University at Urbana-Champaign, U.S.A,

North American Editor for Electrochimica Acta

Prof. R. Holze Institut für Chemie, Technische Universität Chemnitz, Chemnitz, Germany

Prof. A.Aramata CRC, Hokkaido university, Sapporo, Japan.

Prof. M.Eiswirth FHI der Max-Planck-Gesellschaft, Faradayweg 4-6, D-14195 Berlin

Germany.

Prof. M. Enyo CRC, Hokkaido University, Sapporo, Japan

Prof. J. Clavilier CNRS, Meudon, France

20. Research interests:

 $Fuel cells, heterogeneous \ electrocatalysis \ , corrosion \ and \ corrosion \ inhibition, Electrochemical \ surface \ science \ and \ Electroanalysis.$

21. Other recognition:

Associate Editor: Global Journal of Physical Chemistry
Editorial board: Global Journal of Analytical Chemistry

Journal's reviewer: Electrocmemistry Communications

Surface Science

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22. Mailing Address:

(a) Permanent address:

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(b) Present address:

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E-mail: aelshafei@kfu.edu.sa

23. Publications

M.Sc. Thesis; Polarographic and spectrophotometric studies on some metal-ion organic ligand systems. El-Mansoura University (1986).

Ph.D. Thesis; Electrochemical studies on some metallic and organic compounds containing systems. El-Mansoura University (1990).

(A) Articles in Journals

1. El-Asmy, A.A., Morsi, M.A. and El-Shafei, A.A.

Cobalt (II), Nickal (II), Copper (II), Zinc (II) and Uranyl (VI) complexes of Acetylacetone bis (4-phenylthiosemicarbazone).

Transition Met. Chem., 11 (1986) 494-496.

2. El-Asmy, A.A., Morsi, M.A., and El-Shafei, A.A.

Studies of bivalent metal complexes of P-chloro& P-methoxy-benzylidene-4phenylthiosemicarbazone.

Indian J. of Chemistry, **26A** (1987) 766-769.

3. El-Asmy, A.A., Moussa, M.N.H. and El-Shafei, A.A.

Ligational behaviour of 1-(2-methoxy-4-hydroxy-benzylidene)-4phenylthiosemi-

carbazone (H2V.P.T.S.) towards some dipositive metal ions.

Bulletin De La Societe Chimique De France No.2. (1987) 247-249.

4. **El-Shafei, A.A.**, Abd El-Maksoud, S.A. and Moussa, M.N.H.

Effect of some ad-atoms on the electrocatalytic oxidation of ethanol on a Pt electrode in alkaline medium.

J.Electroanal. Chem., 336 (1992) 73-83.

5. **El-Shafei, A.A.**, Abd El-Maksoud, S.A. and Moussa, M.N.H.

Electrocatalytic oxidation of the propanol isomers on Pt ad-atoms electrodes in alkaline medium.

Z.Phys.Chem., 177 (1992) 211-223...

6. El-Shafei, A.A., Shabanah, H.M. and Moussa, M.N.H.

Electrocatalytic oxidation of formic acid on Pt-Binary, Ternary electrodes in

Н₃**Р**О₄.

J.Electroanal. Chem., 362 (1993) 159-165.

7. **El-Shafei, A.A.**, Shabanah, H.M. and Moussa, M.N.H.

Catalytic influence of upd submonolayers of different metals on ethylene glycol oxidation on various nobal metal electrodes in alkaline medium.

J.Power Sources, 46 (1993) 17-27.

8. Helmy, A.M.A, **El-Shafei, A.A.**, Migahed, M.A. and Morsi, M.A.

Azo-Hydrazo tautomerism: further evidence based on polarographic reduction and acidity funcation of some heterocyclic compounds containing oximinogroup.

Commun. Fac. Sci. Univ. Ank., 40 B (1994) 59-72.

9. **El-Shafei, A.A.**, Ohmori, T. and Enyo, M.

Observations on the electrochemically oriented Pt surfaces.

J. Electroanal. Chem., 379 (1994) 247-252.

10. El-Shafei, A.A.

Hydrogen adsorption and zinc UPD for surface structures Characterization of the electrochemically oriented Pt electrodes.

J. Electroanal. Chem., 380 (1995) 269-272.

11. Fouda, A.S., Madkour, L.H., El-Shafei, A.A. and Elasklany, A.H.

Inhibitory effect of some carbazides on corrosion of aluminium in hydrochloric acid and sodium hydroxide solutions.

Mat-Wiss u. Werkstoftech., 26 (1995) 342-346.

12. El-Shafei, A.A.

Methanol oxidation at electrochemically oriented Pt electrodes in acidic medium.

Z. Phy. Chem., **190** (1995) 231-239.

13. Fouda, A.S., Madkour, L.H., El-Shafei, A.A. and Abd El-Maksoud, S.A.

Corrosion inhibitors for zinc in 2M HCl solution.

The Korean Chemical Society, **16** (**5**) (1995) 454-458.

14. Abd El-Maksoud, S.A., **El-Shafei,A.A.**, Mostafa, H.A. and Fouda, A.S.

Inhibition of copper in 1M nitric acid with some benzoyl benzaldhyde derivatives.

Materials and Corrosion, **40** (1995) 468-472.

15. **El-Shafei, A.A.**, Abd El-Maksoud, S.A. and Fouda, A.S.

Noble metals / Glassy carbon modified electrodes for ethylene glycol oxidation

in alkaline medium.

J. Electroanal. Chem., 395 (1995) 181-187.

16. Clavilier, J., Klein, L.H., Vaskevich, A. and **El-Shafei,A.A.** Irreversibly adsorbed silver on Pt(111) and transformation of the electrosorption behaviour induced by thermal annealing. J.Chem. Soc. Faraday Trans., **92** (**20**) (1996) 3777-3789.

17. El-Shafei, A.A., Moussa, M.N.H. and El-Far, A.A.

Inhibitory effect of amino acids on the Al pitting corrosin in 0.1M NaCl. J.Appl.Electrochem. **27** (1997) 1075-1078.

18. Abd El-Maksoud, S.A., El-Shafei, A.A. and Fouda., A.S.

Corrosion Inhibition of iron by 1-Benzylidene-4-Phenyl-Thiosemicarbazone Derivatives.

Mat-Wiss u. Werkstoftech., 28 (1997) 439-443.

19. El-Shafei, A.A.

Study of nickel UPD at polycrystalline Pt electrode and its influence on HCOOH oxidation in acidic and nearly neutral media.

J.Electroanal. Chem., 447 (1998) 81-89.

20. El-Shafei, A.A.

Electrocatalytic oxidation of methanol at a nickel hydroxide/glassy carbon modified electrode in alkaline medium.

J. Electroanal. Chem., **471** (1999) 89-95.

21. Abd El-Maksoud, S.A., El-Shafei, A.A. and Fouda., A.S.

Pitting corrosion of aluminium in halide solutions containing some anionic surfactants.

Portugaliae Electrochimica Acta, **18** (1) (2000) 35.

22. El-Shafei, A.A., Moussa, M.N.H. and El-Far, A.A.

The corrosion inhibition character of thiosemicarbazide and its derivatives for C-Steel in hydrochloric acid solution.

Mater. Chem. Phys., **70** (2001) 175.

- 23. Mohamed, A.K., **El-Shafei,A.A.**, Abo El-Wafa, A.F.M. and El-Ewady, Y.A. Inhibition of iron and aluminium corrosion in hydrochloric acid solutions. Bulletin of Electrochemistry, **17(4)** (2001) 145.
- 24. Fouda, A.S., **El-Shafei, A.A.** and Gadow, H.S.

The use of chalcones as corrosion inhibitors for nickel corrosion in nitric acid solution.

Portugaliae Electrochimica Acta, **20(1)** (2002) 13.

25. Migahed, M.A., El-Shafei, A.A., Fouda, A.S. and Morsi, M.A.

"Corrosion inhibition of carbon steel in hydrochloric acid solution using barbituric acid and its substituted derivatives."

Egypt. J. Chem., **45(3)** (2002) 571.

26. El-Shafei, A.A., Fouda, A.S. and Gadow, H.S.

The use of chalcones as corrosion inhibitors for nickel corrosion in HCl and H_2SO_4 Solutions.

Korróziós Figyelő, 43(3) (2003) 95.

27. El-Shafei, A.A., S.A. Abd El-Maksoud and Fouda, A.S.

The role of indole and its derivatives in the pitting corrosion of Al in neutral chloride solution.

Corrosion Science, **46** (2004) 579.

28. **El-Shafei, A.A.**, Hoyer, R., Kibler, L.A. and Kolb.D.M.

Methanol oxidation on Ru-modified preferentially-oriented Pt electrodes in acidic medium.

J. Electrochem. Soc., **151**(6) (2004) F141.

29. El-Shafei, A.A. and Aramata, A.

Borate adsorption at Pt(111) in acidic medium: I. Specific adsorption.

J. Solid Stat Electrochem., **11** (2007) 430.

30. Moussa, M.N.H., El-Far, A.A. and El-Shafei, A.A.

The use of water soluble hydrazones as inhibitors for the corrosion of c-steel in acidic medium.

Mater. Chem. Phys., **105** (2007) 105.

31. Ouf, A.M.A. Abd Elhafeez, A.M. and El-Shafei, A.A.

Ethanol oxidation at metal/zeolite modified electrodes in alkaline medium.

Part-1: Gold/zeolite modified graphite electrode.

J. Solid Stat Electrochem., 12 (2008) 601.

32. El-Shafei, A.A., Taguchi, S. and Aramata, A.

Zinc unedrpotential deposition (Zn UPD) at Platinum under the influence of anions, boric acid and chloride.

Russian J of electrochemistry, 44 (6) (2008) 745.

33. El-Shafei, A.A., Abd Elhafeez, A.M. and Mostafa, H.A.

Ethanol oxidation at metal/zeolite modified electrodes in alkaline medium.

Part-2: Palladium/zeolite modified graphite electrode.

J. Solid Stat Electrochem., **14** (2010) 185.

34. El-Shafei, A.A., and Markus, E.

Electrochemical activity testing with Sn modified Pt single crystals for ethanol oxidation in acidic media.

Surf. Sci., 604 (2010) 862.

35. El-Shafei, A.A., Awad, A. and Ouf. A.M.A

Influence of CeO₂ on the activity of Pt/GC electrode towards ethylene glycol oxidation in alkaline solution.

J. Appl. Electrochem., Submitted.

36. A.M.A. Ouf, A.A. Ibrahim and A.A. El-Shafei

The reactivity of Pt/WO₃/GC electrode towards ethylene glycol oxidation in 0.1M H₂SO₄.

J. Catalysis, Submitted.

37. El-Shafei, A.A. and Ouf, A.M.A

Preparation of Pd-Au alloy incorporated in Zeolites modified graphite electrodes.

Elecrochem. Communication, submitted.

38. **El-Shafei, A.A.** and Ouf, A.M.A

Influence of the sequence of the incorporation of Pd-Au particles into Zeolites matrix on ethanol electrooxidation in alkaline medium.

J. Electrochem. Soc., submitted.

39. El-Shafei, A.A., and Markus, E.

Activity of Sn- modified preferentially-oriented Pt electrodes towards ethanol oxidation in 0.1M H₂SO₄.

In preparation

40. **El-Shafei, A.A.**, Ouf. A.M.A and Holze, R.

Electro-oxidation of methanol at Pt/Sepiolite/GC electrode in NaOH solution. In preparation

41. El-Shafei, A.A., Mostafa, H.A. and Awad, A.

Reactivity and stability of SnO₂/Pt/GC electrode for ethylene glycol oxidation in 0.1M NaOH.

In preparation

(B) Contribution to academic conferences

42. El-Shafei, A.A., Migahed, M.A. and Helmy, A.M.A.

Cyclic voltammetric studies on barbituric, 1,3-dimethyl barbituric and 5-phenylazobarbituric acid.

4th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1994.

43. Mostafa, H.A., El-Shafei, A.A. and Fouda, A.S.

Anodic dissolution of nickel in acid chloride solutions.

4th International Conference on Chem. and its role in development,

El-Mansoura, Egypt, April 1997.

44. Abd El-Maksoud, S.A., El-Shafei, A.A. and Fouda., A.S.

3-Arylazo-pentane-2,4-dione derivatives as corrosion inhibitors for aluminium in HCl solution.

4th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1997.

45. Helmy, A.M.A., **El-Shafei, A.A.**, Ouf, A.F. and Morsi, M.A.

Electrochemical reduction of some β -diketons at the DME and its acid dissociation constant.

4th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1997.

46. El-Shafei, A.A.

Electrocatalytic oxidation of methanol at nickel hydroxide/glassy carbon modified electrode.

2nd International Conference on electrochemistry and its application, Luxor, Egypt, February 1999.

47. El-Shafei, A.A., Helmy, A.M.A., Ateya, M. and Fouda, A.S.

Barbituric acid derivatives as corrosion inhibitors for aluminium dissolution in acid chloride solution.

5th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1999.

48. El-Shafei, A.A., Gadow, H.M. and Fouda, A.S.

Corrosion inhibition of nickel in acidic media.

5th International Conference on Chem. and its role in development, El-Mansoura, Egypt, April 1999.

49. El-Shafei, A.A., Helmy, A.M.A., Ouf, A.F. and Morsi, M.A.

Polarographic and spectrophotbehaviour of 3-phenylazo-3-beethylpyrovate.

5th International Conference on Chem. and its role in development,

El-Mansoura, Egypt, April 1999.

50. El-Shafei, A.A., Moussa, M.N.H. and El-Far, A.A.

Inhibitory effect of amino acids on the Al pitting corrosin in 0.1M NaCl.

18th Annual Conference on Corrosion Problems in Industry, Ismailia, Egypt, November 1999.

51. El-Shafei, A.A.

Study of Nickel UPD at polycrystalline Pt electrode in acidic and nearly neutral media.

Meeting of the Electrochemical Society of Japan, Tokyo, Japan, September 2000.

52. El-Shafei, A.A. and Aramata, A.

Specific adsorption of borate at Pt(111) in acidic solution.

Meeting of the Electrochemical Society of Japan (Hokkaido Branch), Sapporo, Japan, January 2001.

53. El-Shafei, A.A. and Aramata, A.

Specific adsorption of borate at Pt(111) and the effect of borate adsorption on Zn and Ni upd in acidic medium.

Frontiers of Nano-scale Catalysis and Electrochemistry (CES21), Sapporo, Japan, March 2001.

54. El-Shafei, A.A., Aramata, A and Taguchi, S.

Specific adsorption of Borate and its effect on Zn UPD at Pt(111) in acidic media: In comparison with those of phosphate.

52nd ISE Meeting in Duesseldorf, Germany, September 2002.

55. Aramata, A., Taguchi, S. and El-Shafei, A.A.

Oxoacid adsorption induced on Zn underpotential deposition and specific adsorption of borate on Pt(111).

1st Spring ISE Meeting in Alicante, Spain, March 2003.

56. El-Shafei, A.A.

Methanol oxidation on Ru-modified preferentially oriented Pt surfaces in acidic medium.

4th International Conference on electrochemistry, Aswan, Egypt, February 2004.

57. **El-Shafei, A.A.** and Fouda, A.S.

The influence of some N-containing heterocyclic compounds on the Pitting Corrosion of Al in Neutral Chloride Solution.

8th International Conference on Chem. and its role in development, Sharm El- Sheikh, Egypt, April 2005.

58. El-Shafei, A.A. and Aramata, A.

Specific Adsorption of Borate and Its Effect on Zinc Underpotential Deposition at Pt(111) in Acidic Media.

5th International Conference on electrochemistry and its application, Luxor, Egypt, February 2006.

59. Morsi; M.A., El-Shafei, A.A., Helmy, A.M.A. and Oauf, A.M.

Differential pulse anodic stripping voltammetry determination of trace mercury using rotating gold disc electrode

9th International Conference on Chem. and its role in development, Sharm El-Sheikh, Egypt, April 2007.

60. Morsi; M.A., El-Shafei, A.A., Oauf, A.M. and El-Khawaga, O.M.

Simultaneous Determination of Copper, Lead, Cadmium and Zinc Using Differential Pulse Anodic Stripping Voltammetry

9th International Conference on Chem. and its role in development, Sharm El-Sheikh, Egypt, April 2007.

61. **El-Shafei, A.A.,** Ouf, A.M. and Abd Elhafeez, A.M.

Ethanol oxidation at noble metal/zeolite modified electrodes in alkaline medium.

North African Conference on Computational Physics and Chemistry (NAC-CPC'08), Oran, Algeria, November 2008.

62. El-Shafei, A.A.

10th International Conference on Chem. and its role in development, Sharm El-Sheikh, Egypt,March 2009.