

1- MU_FSCI_CHEM_ELEC_DATA_Magdy.Kamel



Name : *Magdi ABDEL AZZEM*

Date of Birth : 12 / 9 / 1954

Place of Birth : Cairo , Egypt

Marital Status : Married

Permanent Address : Faculty of Science, El Menoufia University
Shibin El Kom, Egypt.

Mobile : 012 240 5473

e mail : rumgdi@rusys.eg.net

Languages : Arabic , English , Spanish , French and German

Actual Position : Chairman of Chemistry Department

Professor of Physical Chemistry (since: 09.02.1995)

Ex-Vice Dean for Community and Environmental Development.

Faculty of Science, El Menoufia University, Egypt

Academic Qualifications

- a. Ph.D. in Physical Chemistry (1984) from Cairo University, Faculty of Science, Chemistry Department.
- b. M.Sc. in Physical Chemistry (1980) from Cairo University, Faculty of Science, Chemistry Department.
- c. Bachelor of Science in Chemistry with "Very Good" grade (1976) from Cairo University, Faculty of Science, Chemistry Department

2- MU_FSCI_CHEM_ELEC_LINK_Magdy.Kamel

Professional Award and Membership of Societies

- a. **Prize of the State for the Encouragement Winner 1996.**
- b. Who's Who in the World, 14th Edition 1997. published my biography.
- c. Alexander von Humboldt Fellow 1989.
- d. The Electrochemical Society (EC).
- e. The International Society of Electrochemistry (ISE).
- f. New York Academy of Science (NYAS).
- g. American Association for the Advancement of Science (AAAS).

Professional Experience

- 1- From August 2006 Until now, Chairman of Chemistry Department, Faculty of Science, El Menoufia University.
- 2- From February 2001 till July 2006, Professor in the Chemistry Department, Faculty of Science, El Menoufia University.
- 3- From January 1998 till January 2001, Vice Dean for Community and Environmental Development.
- 4- From February 1995 till now, Professor in the Chemistry Department, Faculty of Science, El Menoufia University.
- 5- From December 1989 till January 1995, Associate Professor in the Chemistry Department, Faculty of Science, El Menoufia University.
- 6- From April 1986 till September 1986 , "Maitre de Conference Associe" in the Universite Scientifique et Medical de Grenoble, France.
- 7- From January 1985 till November 1989, Lecturer in Chemistry Department, Faculty of Science, El Menoufia University.
- 8- From November 1981 till June 1983 , Demonstrator (Assistant Associe) in the Universite Scientifique et Medical de Grenoble, France.
- 9- From January 1981 till December 1984, Assistant Lecturer in the Faculty of Electronic Engineering, El Menoufia University.
- 10- From January 1978 till December 1980, Demonstrator in the Faculty of Electronic Engineering, El Menoufia University.

Patent in Germany with BASF Ger.Offen. Patent, DE 4,031,803, **1992**
Principal Investigator in a project entitled "*Indirect Electroorganic Synthesis of Some Heterocyclic Compounds with Expected Biological Activities at Nickel Hydroxide Electrode*" , financed by the Academy of Scientific Research and Technology (*ASTR*) , Egypt (**1996**).

Principal Investigator in a project entitled "*Electroynthesis, study and molecular device applications*" , in collaboration with Prof. Alain DERNOZIER, Grenoble, France financed by Egypt-France Scientific and Technological Cooperation Program "**IMHOTEP**" (**2008**).

Conferences : The list of conferences contains **6** national and **12** international.

Establishment a modern electrochemistry laboratory with scientific equipment donation from Alexander von Humboldt foundation (**1990**).

Professional Travel

- 1- September 1997, Paris, France, The 1997 International Joint Meeting of Electrochemistry.
- 2- February 1994, Universite Joseph Fourier, Grenoble, France, as a supervisor of Ph.D. student through the scientific channel system.
- 3- September 1993, Berlin, Germany, 44th Meeting of the International Society of Electrochemistry.
- 4- April 1992, Wiesbaden-Naurod, Germany, European Research Conference on Electrochemistry.

Post Doctorate

1. August 2007, short visit to Universite Joseph Fourier, Grenoble, France.
2. August 2004, short visit to Universite Joseph Fourier, Grenoble, France.
3. July 2002, short visit to Universite Joseph Fourier, Grenoble, France.
4. July 2001, short visit to Universite Joseph Fourier, Grenoble, France.
5. August 2000, Short visit fellowship from Alexander von Humboldt foundation in Bonn University.
6. July 1998, Short visit fellowship from Alexander von Humboldt foundation in Bonn University.
7. From July 1997 till August 1997, short visit fellowship from DFG foundation in Bonn University.
8. From July 1995 till August 1995, short visit fellowship from DAAD foundation in Bonn University.
9. From July 1992 till September 1992, short visit fellowship from Alexander von Humboldt foundation in the same laboratory.
10. From July 1991 till August 1991, short visit fellowship from DAAD foundation with Prof. E. Steckhan in Bonn University.
11. From January 1989 till June 1990, post doctorate fellowship from Alexander von Humboldt Foundation in Germany. I carried research work in the field of indirect electrooxidation of heterocycles using organic and inorganic mediators at Prof. E. Steckhan laboratory in Bonn university.
12. From April 1986 till September 1986, "Maitre de Conference Associe" in the same laboratory with the same group.
13. From November 1981 till June 1983, Demonstrator (Assistant Associe) in the Universite Scientifique et Medical de Grenoble, France. I carried research work on electrooxidation of heterocyclic molecules in non aqueous media at Prof. G. Cauquis laboratory working with Prof. G Pierre.

Supervision of 32 M.Sc. and Ph.D. theses (24 were awarded)

- a. In El Menoufia University : 9 Ph.D. theses (7 were awarded)
22 M.Sc. theses (16 were awarded)
- b. In Cairo University : 1 Ph.D. theses (1 was awarded)

Referee of 18 M.Sc. and 7 Ph.D. theses in several universities.

Three books entitled

- a- "*Spotlights on Instrumental Chemical Analysis*". I.S.B.N. 977-17-4599-9
- b- "*Instrumental Chemical Analysis: A Laboratory Guide*". I.S.B.N. 977-17-4598-9
- c- "*Fundamental Modern Electrochemistry*" Under Publication.

Three scientific channels.

- 1- With Prof. A. DERONZIER, Universite Joseph Fourier, Grenoble, France, 2007.
- 2- With Prof. T. MEYER, University of North Carolina, USA, 1996.

3- With Prof. G. PIERRE, Universite
Joseph Fourier, Grenoble,
France, 1991.

Main Research Interests :

- b. Modified Electrodes and Conducting Polymers.
- c. Electropolymerization.
- d. Electroorganic Syntheses Using Indirect Methods.

Publications : The list of publications contains **66** articles in international journals.

Lectures : The list of lectures contains **18** numbers including conference contributions, invited papers and lectures in Germany and France.

LIST OF PUBLICATIONS
PROF. DR. MAGDI ABDEL AZZEM

1. A new modified electrode based on electrochemical oxidation of 1-amino-5,6,7,8-tetrahydronaphthalene in acetonitrile.
U.S. Yousef, A.Z.E. Ragab and M. Abdel-Azzem
Eur. Polym. J., Submitted for publication (2007).
2. Studies of the electrochemical behavior of poly 8-(3-acetylimino-6-methyl-2,4-dioxopyran)-1-aminonaphthalene films doped with an anionic surfactant.
A.A. Atia, A.A. Hathoot and M. Abdel-Azzem
Synth. Met., Submitted for publication (2007).
3. The influence of electro-synthesis conditions and electrolytic solutions composition on the electrochemical properties of poly 8-(3-acetylimino-6-methyl-2,4-dioxopyran)1-aminonaphthaline films.
A.H. Hathoot, A.E. Taha and M. Abdel Azzem.
Corrosion Problems in Industry Conference, El-Ain El-Sukhna, Egypt (2003).
Bull. Fac. of Sci., Alexandria University, 43(1,2), 53(2004).
4. Electrochemical preparation and characterization of poly(1-amino-9,10- anthraquinone) films.
K.M. Ismail, Z.M. Khalifa, M. Abdel Azzem and W.A. Badawy
Electrochimica Acta, 47, 1867(2002).
5. Electrochemical synthesis and characterization of poly [8-(3-acetylimino-6-methyl-2,4-dioxopyran)-1-aminonaphthaline] film electrode in acidic aqueous medium.
U.S. Yousef, A.H. Hathoot and M. Abdel Azzem.
Eur. Polym. J., 37, 1267(2001).
6. **New modified electrodes from the electropolymerization of some thiophene derivatives.**
M. Abdel Azzem and A. Hathoot.

Second International Conference of Pure, Applied and Environmental Chemistry, Irbid, Jordan, April (2000).

7. Electrochemical polymer film formed from the schiff base product of 1,8-diaminonaphthalene and dehydroacetic acid.
1. Preparation and characterization.
H. Abdel Rahman, A. Hathoot, **M. Abdel Azzem** and M. El Bagoury
J. Electrochem. Soc., 147(1), 242 (2000).
8. Electrochemical preparation of a novel conducting polymer resulting from the electropolymerization of thiophenylidene 8-naphthylamine schiff base.
A. S. Diab, A. Hathoot, **M. Abdel Azzem** and A Merz.
Eur. Polym. J., 36, 1959 (2000).
9. Synthesis, characterization and electrochemical properties of the ruthenium complexes of some schiff bases complexes derived from 4-aminoantipyrine.
F.A. El-Saied, **M. Abdel Azzem**, R.M. El-Bahnasawy and A.K. El-Sawaf.
Accepted for publication in Egypt. J. Chem. (1999).
10. A Cyclic voltammetric and coulometric study of a modified electrode prepared by electrooxidative polymerization of nickel complex of 1,5-diaminonaphthalene in acetonitrile.
U.S. Yousef and **M. Abdel Azzem**.
Polish. J., 72, 2583 (1998).
11. Cyclic voltammetry and coulometry studies of the electropolymerization of 1,5-diaminonaphthalene in aqueous medium.
M. Abdel Azzem, U.S. Yousef, and G. Pierre.
Eur. Polym. J., 34, 819 (1998).
12. Electrochemical polymerization of some new schiff bases of 1,8-diaminonaphthalene.
M. Abdel Azzem and A. Hathoot
Second International Conference on Electrochemistry and its Applications, Luxor, Egypt (1998).
13. Corrosion of CrNi Steel of different thin oxide films in aqueous halides solutions.
Corrosion Problems in Industry Conference, Ismailia, Egypt (1998).
A.S. Diab, A. Hathoot, L. Zian and **M. Abdel Azzem**
14. Electrochemical preparation of a novel conducting polymer resulting from the electropolymerization of the schiff-base of 3-acetylthiophene.
A. S. M. Diab, A. Hathoot and **M. Abdel Azzem**.
The 5th Ibn Sina International Conference on Pure and Applied Heterocyclic Chemistry, Cairo, Egypt (1997).
15. Electrochemistry of modified electrodes prepared by the electropolymerization of schiff-bases of dehydroacetic acid.
M. Abdel Azzem and A. Hathoot.

The 1997 Joint International Meeting of Electrochemistry, Paris, France (1997).

16. Electrochemical synthesis of some schiff base complexes
A. Hathoot, M.A. Ayhed and **M. Abdel Azzem**.
The 4th International Conference on Chemistry and its Role in Development,
Mansoura, Egypt (1997).
17. Corrosion of CrNi steel of different thin oxide films in aqueous halides solutions.
A.S.M. Diab, A. Hathoot, L. Zian and **M. Abdel Azzem**.
The 4th International Conference on Chemistry and its Role in Development,
Mansoura, Egypt (1997).
18. Electroanalytical study of a modified electrode by electrooxidative polymerization of 1,5-diaminonaphthalene in aqueous medium.
M. Abdel Azzem, and U.S. Yousef.
Fourth International Symposium on New Trends in Chemistry, Cairo, Egypt (1997).
19. A new electrochemically modified electrode with nickel complex of 1,5-diaminonaphthalene.
U.S. Yousef, S. Hamdalla and **M. Abdel Azzem**.
First International Conference on Electrochemistry and its Applications,
Luxor, Egypt (1996).
20. Electroorganic synthesis of nucleosides and heterocyclic compounds at nickel hydroxide electrode.
M. Abdel Azzem and M. Zahran.
First International Conference on Electrochemistry and its Applications,
Luxor, Egypt (1996).
21. Electrooxidative oligomerization of 1,5-diaminonaphthalene in acetonitrile medium.
M. Abdel Azzem, U.S. Yousef, D. Limosin and G. Pierre.
J. Electroanal. Chem., 417, 163 (1996).
22. Iron (III) complexes of some pyrazolone derivatives, synthesis, characterization and electrochemical properties.
M. Abdel Azzem, F.A. El-Saied, R.M. El-Bahnasawy and A.K. El-Sawaf.
Egypt. J. Chem., 39(3), 287 (1996).
23. Electrolytically initiated p-chloro- α -methylstyrene polymerization.
M. Abdel Azzem, U.S. Yousef and G. Pierre
Eur. Polym. J. , 32(1), 111 (1996).
24. Electrocatalytic reduction of some imino compounds on glassy carbon electrode electrochemically modified with a new copper-salen complex.
M. Abdel Azzem, Z.F. Mohamed and H.M. Fahmy.
J. Electroanal. Chem. , 399(1-2), 121 (1995).

25. Electrochemical copolymerization of 2-(4-aminophenyl)-6-methyl benzothiazole and aniline.
M. Abdel Azzem, S.H. El-Hamouly and A.A. Hathout.
Eur. Polym. J. , 31(12) , 1207, (1995).
26. Quantum mechanical interpretation of the indirect electrochemical oxidation of picoline and its N-oxide.
H. Moustafa and **M. Abdel Azzem**
Egypt. J. Chem., 38(3),301 (1995).
27. Preparation and electrochemistry of a modified electrode by electrooxidative polymerization of copper and cobalt complexes of 2,6-diacetylpyridine-mono(ethylenediamine).
M. Abdel Azzem, F.A. El-Saied, M.A. Aboutabl and Z.F. Mohamed
J. Electrochem. Soc. , 142(8), 2517 (1995).
28. Characterization and electrochemical properties of antipyrine-4-azo-2-(5,5-dimethyl-1,3-cyclohexanedione) complexes of palladium(II) , iron(III) and ruthenium(III).
F.A. El-Saied, **M. Abdel Azzem**, R.M. El-Bahnasawy and A.K. El-Sawaf.
Pol. J. Chem. , 69(3), 341 (1995).
29. Electropolymerization of N-methacryloyloxy phthalimide monomer using sacrificial nickel anode and characterization of the resulting polymer.
M. Abdel Azzem, S.H. El Hamouly, M.M. Azab and A.A. Hathoot.
Eur. Polym. J. , 31(4), 369 (1995).
30. Formation of a new electroactive film by potential sweep electrolysis of 4-aminoquinoline.
M. Abdel Azzem.
Eur. Polym. J. , 31(3), 285 (1995).
31. Electroactive film of polyaniline substituted with heterocyclic benzothiazole ring.
M. Abdel Azzem.
Eur. Polym. J. , 31(2), 205 (1995).
32. Electrocopolymerization grafting of a new N-substituted pyrrole.
M. Abdel Azzem, S.H. El-Hamouly, S.A. El-Kafrawi and A.Z. El-Fayoumy
Third Conference on Chemistry and its Role in Development, Mansoura, Egypt (1994)
33. Synthesis, characterization and electrochemical properties of β -diketone complexes of ruthenium(III).
F.A. El Saied, R.M. El Bahnasawy, **M. Abdel Azzem** and A.K. El Sawaf.
Polyhedron , 13(11), 1781 (1994).
34. Electrosynthesis of 5-chloro- and 5-azido-4-pyrazole carboxylic acid at the nickel hydroxide electrode.

- M. Abdel Azzem** and M. Zahran.
Bull. Chem. Soc. Jpn. , 67(7), 1879 (1994).
35. Electrooxidation of catechol in the presence of 1,3-dimethylbarbituric acid at graphite anode and nickel hydroxide electrode.
M. Abdel Azzem, M. Zahran and E. Hagagg.
Bull. Chem. Soc. Jpn. , 67(5), 1390 (1994).
36. Electropolymerization of 1,5-diaminonaphthalene in acetonitrile and in aqueous solution.
M. Abdel Azzem, U.S. Yousef, D. Limosin and G. Pierre
Synth. Met. , 63(1), 79 (1994).
37. Voltammetric studies of the indirect electrochemical side-chain oxidation of some alkyl heterocyclic compounds using triaryl amines as organic mediators.
M. Abdel Azzem
13th Egyptian Chemical Conference, Cairo, Egypt (1993); Sci. J. Fac. Sci., Menoufia Univ., VII, 1 (1993).
38. Electrochemical polymerization of a new heterocyclic monomer using a sacrificial nickel anode.
S. H. El Hamouly, **M. Abdel Azzem** and U. S. Yousef
Eur. Polym. J. , 29(9), 1271 (1993).
39. Preparation of pyridine acylals.
D. Hermeling, E. Steckhan and **M. Abdel Azzem**
Ger. Offen. Patent, DE 4, 031, 803, 1992; Chem. Abstr. 117, 263606 (1992).
40. Organisch oxidationsreaktionem mit electrochemischen in-situ regenerierbaren redoxkatalysatoren ein beitrage zum umweltschutz.
M. Abdel Azzem, W. Hoffmann, K. Peters and E. Steckhan.
Electrochemie in Energie und Umwelttechnik Conference, Kassel, Germany (1990).

Electrochemical Reduction of pyrazolo (5,1-c) triazine.

M.A. Aboutabl, H.M. Fahmy, **M. Abdel Azzem**, Z.M. El Massry
J. Chem. Soc. Pak., 12(3), 267(1990).

Electrochemical synthesis of some heterocyclic molecules in aqueous media.

1) Large scale preparative electrolysis on mercury pool electrode.
H.M. Fahmy, **M. Abdel Azzem**, M.A. Aboutabl
J. Chem. Soc. Pak., 12(4), 285(1990).

On the electrochemical reduction of α -cyanothioacetamide derivatives.

1) Polarographic behavior of 2-arylhydrazono-2-cyanothioacetamides.
M.A. Abdel Aziz, H.M. Fahmy, **M. Abdel Azzem**, A.A. Hathoot,
J. Chin. Chem. Soc. (Taipei, Taiwan), 37(4), 411 (1990).

41. Indirect electrochemical oxidation of 4-picoline and its N-oxide to pyridine-4-aldehyde diacetate with electrogenerated cobalt (III) acetate in an in-cell process.
M. Abdel Azzem and E. Steckhan.
Heterocycles, 31(11), 1959 (1990).
42. A novel electroorganic synthesis of pyrrolo-pyrazole derivatives.
H.M. Fahmy, M.A. Aboutabl, M.M.M. Ramiz, **M. Abdel Azzem** and H. Abdel Rahman
J. Chem. Soc., Perkin Trans II, 1607 (1990).
43. Electroorganic synthesis of some cyclopentanone derivatives.
M. Abdel Azzem, G.E.H. Elgemeie, M.A. Neguid, H.M. Fahmy and Z.M. El-Masry.
J. Chem. Soc., Perkin Trans II, 545 (1990).
44. Electrochemical reduction of pyrazolo[5,1-c] triazine.
M.A. Aboutabl, H.M. Fahmy, **M. Abdel Azzem** and Z.M. El-Masry.
J. Chem. Soc. of Pak., 12(3), 267 (1990).
45. Electrochemical behaviour of some 1,3,4-thiazoles derivatives. Part 2 : The effect of acid and base on the electrooxidation mechanism of 2-benzoylamino-5-(1-cyanoarylhydrazono)-1,3,4-thiadiazole at a platinum anode.
M. Abdel Azzem, M.A. Aboutabl, N.F. Abdel Fattah and H.M. Fahmy.
Indian J. Chem., 28(A), 864 (1989).
46. Studies on the electroreduction behaviour of 2-benzoylamino-5-(1-cyanoarylhydrazono)-1,3,4-thiadiazole.
H.M. Fahmy, **M. Abdel Azzem**, M. Abdel Wahab, N.F. Abdel Fattah and M.A. Aboutabl
Bull. Chem. Soc. Jpn., 62(8), 2650 (1989).
47. The electroreduction of series of 5-arylidene-3-phenyl-4-thiohydantoin in aqueous solutions.
H.M. Fahmy, M.A. Aboutabl, **M. Abdel Azzem** and H. Abdel Rahman.
Bull. Fac. Pharm. Cairo Univ., 27(1), 104 (1989).
48. Effect of cyano group on the ionization and electroreduction of the olefinic double bond.
H.M. Fahmy, **M. Abdel Azzem**, M.A. Aboutabl and A.M.A. Helmy.
Bull. Fac. Pharm. Cairo Univ., 27(1), 96 (1989).
49. Electroreduction of a series of 2-benzoylamino-5-(1-cyano-2-aryl-vinyl)-1,3,4-thiadiazole.
H.M. Fahmy, N.F. Abdel Fattah, M.R.H. Elmoghayar and **M. Abdel Azzem**.
J. Chem. Soc., Perkin Trans. II, 1 (1988).
50. Electroreduction of some activated olefinic double bond in some 2-aryl-(2-acetylamino-1,3,4-thiazole-5-yl) propionitrile derivatives.
M. Abdel Azzem, M.M.M. Ramiz, E.A. Ghali, H.M. Fahmy and M.R.H.

Elmoghayar
Monatshefte fur Chemie, 118, 229 (1987).

51. On the electrochemical behaviour of some 2,3-dihydrothiazolo[3,2]-benzimidazol-3-one and 1-ethylmercapto-3(4H)isoquinolones derivatives.
H.M. Fahmy, M. Aboutabl and **M. Abdel Azzem**.
Chin. Chem. Soc., 33, 123 (1986).
52. Polarographic behaviour of dimedone-2-arylazo derivatives in alcoholic aqueous media.
H.M. Fahmy, A.M.A. Helmy and **M. Abdel Azzem**.
J. Electroanal. Chem., 201, 101 (1986).
53. Ionization and electroreduction of some benzthiazin-4- one azo dyes.
N.M. Abed, B. Nashed, H.M. Fahmy and **M. Abdel Azzem**.
Monatshefte fur Chemie, 117, 599 (1986).
54. The electrochemical reduction of some fused ring systems.
H.M. Fahmy, B. Nashed, F.A. Khalifa, A. Abdel Moneim and **M. Abdel Azzem**
J. Electroanal. Chem., 384, 146 (1985).
55. Hydrogen generator for polarography and related techniques.
H.M. Fahmy, S. Abdou and **M. Abdel Azzem**.
Indian J. Chem., 24(A), 352 (1985).
56. The electrochemical behavior of some 1-ethylmercapto-3(4H)-isoquinolones derivatives. Part II : Electrooxidation of some 4-arylazo-1-ethylmercapto-3(4H)-isoquinolones derivatives in non aqueous media.
H.M. Fahmy, **M. Abdel Azzem**, G. Cauquis and G. Pierre.
Gazz. Chim. Ital., 115, 329 (1985).
57. The electrochemical behavior of some 1-ethylmercapto-3(4H)-isoquinolones derivatives. Part I : Electroreduction of 4-arylazo-1-ethylmercapto-3(4H)-isoquinolones derivatives in alcoholic aqueous media.
H.M. Fahmy, H.A. Daboun, **M. Abdel Azzem**, G. Cauquis and G. Pierre.
Can. J. Chem., 62, 2904 (1984).
58. Anodic oxidation of some 2,3-dihydro thiazolo[3,2-a]benzimidazol-3-one derivatives.
G. Cauquis, G. Pierre, H.M. Fahmy and **M. Abdel Azzem**
Electrochimica Acta, 29(5), 597 (1984).
59. Electrochemical behavior of some 2,3-dihydro thiazolo[3,2-a]benzimidazol-3-one derivatives. Part II : Polarographic reduction of a series of 2-arylidene-2,3-dihydro thiazolo[3,2-a]benzimidazol-3-one.
H.M. Fahmy, H.A. Daboun, **M. Abdel Azzem** and G. Pierre.
Electrochimica Acta, 28(5), 605 (1983).

60. Electrochemical behavior of some thiazolo[3,2-a]benzimidazol-3(2H)-one derivatives. Part I:Electroreduction of a series of 2-arylazothiazolo[a]benzimidazol-3(2H)-ones.
H.M. Fahmy, H.A. Daboun, K. Azziz and **M. Abdel Azzem**
J. Chem. Soc., Perkin Trans.II, 425 (1983).
61. Effect of ring type on ionization of the hydrazo-linkage in aqueous media.
M.A. Morsi, H.M. Fahmy, M.H. Elnagdi and **M. Abdel Azzem**
J. Electroanal. Chem., 133, 269 (1982).
62. Tautomerism of some 5-arylazo-2-thiohydantoin derivatives as a criterion of their acidity.
H.M. Fahmy, M.A. Abdel Aziz, M. Aboutabl and **M. Abdel Azzem**
Indian J. Chem., 20A(4), 593 (1981).
63. Electroreduction of a series of arylazo thiohydantoin derivatives at the DME.
H.M. Fahmy, M.A. Abdel Aziz, A.H. Badran and **M. Abdel Azzem**
J. Electroanal. Chem., 127, 103 (1981).

