

CURRICULUM VITAE



Prof. Dr. El-Sayed Ali Abdel-Aal

**Head of Minerals Technology Department,
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**Guest Editor of International J. of Nanoparticles
Editorial Board of Journal: Chemical & Environmental Research,
The Muslim Association for the Advancement of Science, India
H-Index: 16, Citation No.: 706 (www.scopus.com/home.url)**

<http://scholar.google.com.eg/citations?user=AA9nBG4AAAAJ&hl=en>

Education:

- B.Sc.** : Chemistry, Faculty of Science, Assiut University (Egypt), 1978
M. Sc. : Inorganic Chemistry, Faculty of Science, Cairo University (Egypt), 1984
Title : **Comparative Study on Phosphoric Acid Production from Egyptian Phosphate Ore Concentrates by the Wet Process.**
Ph.D. : Inorganic Chemistry, Faculty of Science, Cairo University (Egypt), 1989
Title : **Industrial Simulation for Wet Process Phosphoric Acid Production.**

Positions: June 2012 – Present: Head of Minerals Technology Department

- July 2010 – May 2012** Head of Chemical and Electrometallurgy Division
July 2010-Oct. 2010 Visiting Professor at Technical University of Chemnitz, Germany (DAAD)
March 2008 – July 2010 Head of Advanced Materials Department
March 2009-May 2009 Visiting Professor at Technical University of Chemnitz, Germany (DFG)
July 2006-Sep. 2006 Visiting Professor at Technical University of Chemnitz, Germany (DAAD)
Feb. 2003-Oct. 2003 Visiting Professor at University of Florida, USA (Fulbright)
Sept. 2001-May 2007 Teaching In Benha High Institute of Technology (Part Time)
June 2001- Present Professor in Chemical and Electrometallurgy Division, CMRDI
March 2000-June 2001 Associate Professor in Hydrometallurgy Division, CMRDI
Sep. 1997-March 2000 Research Associate in Department of Materials Science and Engineering, University of Florida, USA.
1995-1997 Associate Professor in Hydrometallurgy Division.
1990-1995 Researcher in CMRDI
1985-1989 Assistant Researcher in CMRDI
1979-1984 Researcher Assistant in CMRDI

Fields of Interest:

Studies for preparation and characterization of advanced nano materials including but not limited to: metals, oxides, and hydroxyapatite.
Preparation and coating of hydroxyapatite on titanium alloy for biomedical implant applications.
Continuous processing of phosphate for phosphoric acid production.
Crystal habit modification of phosphogypsum, gibbsite, calcium oxalate, ...
Chemical processing on laboratory and pilot plant scales of ores, e.g. zinc and lead ores, ilmenite, bauxite, clay, magnesite, bentonite, Kaolinite,etc.
Studies for purification of phosphoric acid by different techniques, solvent extraction, ion exchange and precipitation.

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Studies in the field of lignin separation for environmental protection.

Industrial waste water purification by different techniques.

Desalination of Sea water by different techniques.

Patents:	1 USA Patent, please see the list of publications.
Published Papers:	113 Papers
Industrial Reports:	28 Final Reports
Supervision of Thesis:	21 M. Sc. and 7 Ph. D. Theses

LIST OF PUBLICATIONS

I. Patents:

1. Treatment of Spent Pulping Liquor with Lignin Separation to recover Alkali Pulping Chemicals in Manufacture of Paper Pulp
Inventors: Hassan, E., El-Shall and El-Sayed, A., Abdel-Aal
International Publication Number: WO 2005/054572 A1, International Publication Date: 16 June 2005, UF # 11385, Akerman Senterfitt No. 5853 – 479.

II. Papers:

1. A. K. Ismail, E. A. Abdel-Aal; Evaluation of Abu-Tartur Phosphate as a potential Resource for Rare Earth Metals, Rare Metals'90 , 37-41, 1990.
2. E.A. Abdel-Aal and A.M. Amer, Evaluation of Egyptian Sebaiya-West Phosphate Concentrate For Nitrophosphate Fertilizer Production, Bulletin of the Faculty of Science, Alexandria University, Vol. 31(B), Dec. 1991, Alexandria, Egypt.
3. A.M. Amer and E.A. Abdel-Aal, Aspects of the Mineralogy and Hydrometallurgy of Bauxite Deposits, Um Bogma, South Western Sinai, Egypt, Bulletin of the Faculty of Science, Alexandria University, Vol. 31(B), Dec. 1991, Alexandria, Egypt.
4. N.N. Girgis, E.A. Abdel-Aal and W.A. Metwally, Corrosivity of Phosphoric Acid Produced by the Hemihydrate-Dihydrate Process Using Local Phosphate Rock, Delta Journal of Science, Vol. 16, No. 2, 1992, Tanta, pp. 75-92.
5. E.A. Abdel-Aal, I.A. Ibrahim, M.M. Rasha and A.K. Ismail, Hdrometallurgical Processing of Egyptian Magnesite Ore For Production of Magnesium Sulphate, Fizykochemiczne Problemy Mineralurgii Journal, 28 (1994), Poland, pp. 165-175.
6. E.A. Abdel-Aal and A.M. Amer, Evaluation of Sebaiya-West Phosphate Concentrate For Nitrophosphate Fertilizer Production, Minerals Engineering Journal, Vol. 8, No. 10, 1995, England, pp. 1221-1230.
7. E.A. Abdel-Aal and A.M. Amer, Nitrophosphate from Egyptian Phosrock, Sebaiya-West Tests Positive, Phosphorus & Potassium, March-April 1995, pp. 36-40.
8. E.A. Abdel-Aal, Possibility of Utilizing Egyptian Dolomite Ores For Production of Magnesium Oxide by Acid Leaching, Fizykochemiczne Problemy Mineralurgii Journal, 29 (1995), Poland, pp. 55-65.
9. I.A. Ibrahim, E.A. Abdel-Aal, N.A. El-Safty and A.K. Ismail, Hydrometallurgical Beneficiation of Manganese Ore From Sinai, Fizykochemiczne Problemy Mineralurgii Journal, 29 (1995), Poland, pp. 73-79.
10. E.A. Abdel-Aal, E. Abdel-Rahman, A. Amer and A.K. Ismail, Perspectives For The Introduction of Alumina Industry in Egypt - A Technical Approach, Transactions of The Indian Institute of Metals, Vol. 49, Nos. 1-2, Feb-April 1996, India, pp. 79-83.
11. A.M. Amer and E.A. Abdel-Aal, Mineralogical Studies and Hydrometallurgical Processing of Egyptian Bauxite, Transactions of the Indian Institute of Metals, Vol. 49, Nos. 1-2, Feb-April 1996, India, pp. 25-28.

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12. E.A. Abdel-Aal, I.A. Ibrahim, M.M. Rashad and A.K. Ismail, Hydrometallurgical Processing of Egyptian Magnesite Ore, *Fizykochemiczne Problemy Mineralurgii Journal*, 30 (1996), Poland, pp. 207-216.
13. El-Sayed A. Abdel-Aal, Direct Leaching of Oxidised Zinc Ore, *The Institution of Engineers (India), IE(I) Journal-MM*, Vol. 78, May 1997, India, pp. 25-29.
14. E.A. Abdel-Aal and M.M. Rashad, Hydrometallurgical Processing of Egyptian Magnesite Ore With Nitric Acid, *Fizykochemiczne Problemy Mineralurgii Journal*, 31 (1997), Poland, pp. 7- 17.
15. E.A. Abdel-Aal and Z.E. Shukry, Application of Quick Leaching Method to an Egyptian Zinc Silicate Ore, *Transactions of the Institution of Mining and Metallurgy (imm) (Section C, Mineral Processing and Extractive Metallurgy)*, Vol. 106 23 Sep. 1997.
16. Abdel-Aal E.A., Ibrahim I.A., Mahmoud M.H.H., Ismail A.K.; Industrial Simulation of Continuous Leaching and Filtration Processes; Case Study of Phosphoric Acid Production, *Acta Metallurgica Slovaca*, 4, Special Issue 1, 1998, pp. 25-32.
17. E.A. Abdel-Aal, I.A. Ibrahim, M.H.H. Mahmoud, T.A. El-Barbary and A.K. Ismail, Iron Removal From Wet-Process Phosphoric Acid by Sludge Precipitation, *Minerals & Metallurgical Processing, A Publication of SME*, Vol. 16, No. 3, Aug. 1999, pp. 44-48.
18. Abdel-Aal E A; Defluorination of wet-process phosphoric acid for production of dicalcium phosphate, *Hungarian Journal of Industrial Chemistry, VESZPREM*, Vol. 27, No. 3, 1999, pp. 165-168.
19. H. El-Shall, E.A. Abdel-Aal and B. Moudgil; Effect of Surfactants on Phosphogypsum Crystallization and Filtration During Wet-Process Phosphoric Acid Production; *Separation Science and Technology Journal*, Vol. 35, No. 3, 2000, pp. 395-410.
20. El-Sayed A. Abdel-Aal; Recovery of Phosphoric Acid From Egyptian Nile Valley Phosphate Tailings, *Minerals Engineering Journal*, Vol. 13, No. 2, 2000, England, pp. 223-226.
21. E.A. Abdel-Aal; Kinetics of Sulfuric Acid Leaching of Low-Grade Zinc Silicate Ore, *Hydrometallurgy*, Vol. 55, No. 3, 2000, pp. 247-254.
22. E. A. Abdel-Aal; E.A. Fouad and Z.E. Shukry; Extraction of Zinc Metal from Zinc Ore, *Journal of Egyptian Chemical Engineering*, October 2002.
23. H. El-Shall, M.M. Rashad, E.A. Abdel-Aal; Effect of phosphonate additive on crystallization of gypsum in phosphoric and sulfuric acid medium, *Crystal Research and Technology* 37, 12, 2002, pp. 1264-1273.
24. M.M. Rashad, H.M. Baioumy, and E.A. Abdel-Aal; Structural and spectral studies on gypsum crystals under simulated conditions of phosphoric acid production with and without organic and inorganic additives, *Crystal Research and Technology* 38, 6, 2003, pp. 433-439.
25. E. A. Abdel-Aal; Crystallization of phosphogypsum in continuous phosphoric acid industrial plant, *Crystal Research Technology* 39, No. 2, 121 – 128 (2004).
26. H. El-Shall, Jin-hwan Jeon, E. A. Abdel-Aal, S. Khan, L. Gower, and Y. Rabinovich; A study of primary nucleation of calcium oxalate monohydrate: I-Effect of supersaturation, *Crystal Research and Technology* 39, No. 3, 214 – 221 (2004).
27. H. El-Shall, Jin-hwan Jeon, E. A. Abdel-Aal, S. Khan, L. Gower, and Y. Rabinovich; A study of primary nucleation of calcium oxalate monohydrate: II-Effect of urinary species, *Crystal Research and Technology* 39, No. 3, 222 – 229 (2004).
28. E. A. Abdel-Aal, M. M. Rashad, and H. El-Shall; Crystallization of calcium sulfate dihydrate at different supersaturation ratios and different free sulfate concentrations, *Crystal Research Technology* 39, No. 4, 313 – 321 (2004).
29. M.H. Mahmoud, M.M. Rashad, I.A. Ibrahim, and E.A. Abdel-Aal; Crystal Modification of Calcium Sulfate Dihydrate in the Presence of some Surface-Active Agents, *Journal of Colloid and Interface Science* 270 (2004) 99-105.
30. M.M. Rashad, M.H.H. Mahmoud, I.A. Ibrahim, and E.A. Abdel-Aal; Crystallization of Calcium Sulfate Dihydrate under Simulated Conditions of Phosphoric Acid Production in

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- Presence of Aluminum and Magnesium Ions, *Journal of Crystal growth* 267 (2004) 372-379.
31. E.A. Abdel-Aal and M.M. Rashad; Kinetic study on the leaching of spent nickel oxide catalyst with sulfuric acid, *Hydrometallurgy*, Vol. 74, 2004, pp. 189-194.
 32. M.M. Rashad, M.H.H. Mahmoud, I.A. Ibrahim, and E.A. Abdel-Aal; Effect of Citric Acid and 1,2-dihydroxybenzene 3,5-disulfonic Acid on Crystallization of Calcium Sulfate Dihydrate under Simulated Conditions of Phosphoric Acid Production, *Crystal Research and Technology* 40, No. 8, 739 – 745 (2005).
 33. H. El-Shall, M. M. Rashad, and E. A. Abdel-Aal; Effect of Cetyl Pyridinium Additive on Crystallization of Gypsum in Phosphoric and Sulfuric Acids Medium, *Crystal Research and Technology* 40, No. 9, 860 - 866 (2005).
 34. A.A. Ismail, A. El-Midany, E.A. Abdel-Aal, H. El-Shall; Application of Statistical Design to Optimize the Preparation of ZnO Nanoparticles via Hydrothermal Technique, *Materials Letters* 59 (2005) 1924-1928.
 35. E.A. Abdel-Aal, A.A. Ismail, M.M. Rashad, H. El-Shall; New Approach for Measuring Gelation Rate during Synthesis of ZnO/SiO₂, *Journal of Non-Crystalline Solids* 352 (2006) 399-403.
 36. E.A. Abdel-Aal, S.A. Dardeer, N.M. Rageh, H.M. Rageh, Decreasing Iron Content in Fertilizer-Grade Phosphoric Acid Using Ion Exchange Method, *Chemical Technology, An Indian Journal*, Vol. 1, Issue 2-4, 2006.
 37. E.A. Abdel-Aal, M.H.H. Mahmoud, H. El-Shall, A.K. Ismail; Increasing the filtration rate of phospho-gypsum using surfactant, *Hydrometallurgy*, 85 (2007) 53-58.
 38. E.A. Abdel-Aal, S.M. Malekzadeh, M.M. Rashad, A.A. El-Midany, H. El-Shall; Effect of synthesis conditions on preparation of nickel metal nanopowders via hydrothermal reduction technique, *Powder Technology* 171 (2007) 63-68.
 39. E.A. Abdel-Aal, and F.E. Farghaly; Preparation of Silver Powders in Micron Size from Used Photographic Films via Leaching - Cementation Technique, *Powder Technology*, 178 (2007) 51-55.
 40. R.R. Zaky, M.M. Hessien, A.A. El-Midany, M.H. Khedr, E.A. Abdel-Aal, K. A. El-Barawy, Preparation of silica nanoparticles from semi- burned rice straw ash, *Powder Technology* 185 (2008) 31-35.
 41. E.A. Abdel-Aal, A.A. El-Midany, and H. El-Shall, Mechanochemical-Hydrothermal Preparation of Nano-crystallite Hydroxyapatite Using Statistical Design, *Materials Chemistry and Physics* 112 (2008) 202-207
 42. E.A. Abdel-Aal, D. Dietrich, S. Steinhäuser, B. Wielage; Electrocrystallization of Calcium Phosphate Coatings on Titanium Substrate at Different Current Densities, *Surface and Coating Technology* 202 (2008), 5895-5900.
 43. M.M.S. Sanad, E.A. Abdel-Aal, F.E. Farghaly, "Hydrochloric acid leaching of calcite from celestite ore", *Egyptian Bulletin of Tabbin Institute for Metallurgical Studies*, Vol. 92, No. 1110-2519, 2008.
 44. E.A. Abdel-Aal, S. Daosukho, H. El-Shall, Effect of supersaturation ratio and Khella extract on nucleation and morphology of kidney stones, *Journal of Crystal Growth*, 311, (2009) 2673-2681.
 45. M.M. Hessien, M.M. Rashad, R.R. Zaky, E.A. Abdel-Aal, K. A. El-Barawy, Controlling the synthesis conditions for silica nanospheres from semi-burned rice straw, *Materials Science and Engineering B*, 162 (2009) 14-21.
 46. Abdel-Aal, E.A.; Abdel Rahman, E.A. and Kandil, A.T.; "Enhancing Filtration Rate of New Valley oxidized Phosphate Ore Concentrate with Organic additives", *Egyptian Bulletin of Tabbin Institute for Metallurgical Studies*, Vol. 93, 2009.
 47. E.A. Abdel-Aal, M. H. H. Mahmoud, M.M.S. Sanad, A. Criscuoli, A. Figoli, E. Drioli; Membrane Contactor as A Novel Technique for Separation of Iron Ions from Ilmenite Leachant, *International Journal of Mineral Processing*, 96 (2010) 62–69.

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48. E.A. Abdel-Aal, M.M. Rashad, R.M. Mohammed; Gelation Rate of Silica Nanoparticles at Different Supersaturation with and without Ammonium Fluoride Additive, International Journal of Nanoparticles, Vol. 3, No. 2, 2010, 192-203.
49. E.A. Abdel-Aal; Electrodeposition of Calcium Phosphate Coatings on Titanium Alloy Implant at Different Ca/P Ratios and Different Times, International Journal of Nano and Biomaterials, Vol. 3, No. 2, (2010), 187-202.
50. M.M. Rashad, M.M. Hessien, E.A. Abdel-Aal, K. El-Barawy, R.K. Singh; Transformation of silica fume into Chemical Mechanical Polishing (CMP) nano-slurries for advanced semiconductor manufacturing, Powder Technology, 205, 1-3, (2011) 149-154.
51. E.A. Abdel-Aal; Inserting of Strontium during Coating of Hydroxyapatite compound on Titanium substrate, Int. J. of Nanoparticles, Vol. 4, No. 1, (2011), 77-92.
52. E.A. Abdel-Aal, Effect of Mechanochemical-Hydrothermal Preparation Conditions on Hydroxyapatite Powder Hardness, Accepted for Publication, Int. J. of Nano and Biomaterials (2011).
53. M.M. Rashad, R.M. Mohamed, M.A. Ibrahim, L.F.M. Ismail, E.A. Abdel-Aal; Magnetic and Catalytic Properties of Cubic Copper Ferrite Nanopowders synthesized from Secondary Resources, Advanced Powder Technology, 23, 3, (2012), 315-323.
54. Abdel-Aal, E.A.; Dietrich, D.; Steinhäuser, S.; Lampke, T.; Strontium-substituted Hydroxyapatite Coatings on Titanium by Electrodeposition Technique. Journal for Electrochemistry and Plating Technology, (2011) 3, pp. 29-40. ISSN 1866-7406.
55. M.M.S. Sanad, M.M. Rashad, E.A. Abdel-Aal, M.F. El-Shahat; Synthesis and characterization of nanocrystalline mullite powders at low annealing temperature using a new technique, Journal of the European Ceramic Society 32 (2012) 4249–4255 2012.
56. M.M.S. Sanad, M.M. Rashad, E.A. Abdel-Aal, M.F. El-Shahat; Mechanical, morphological and dielectric properties of sintered mullite ceramics at two different heating rates prepared from alkaline monophasic salts, Ceramics International, 39 (2), 2013, pp. 1547-1554.
57. E.A. Abdel-Aal, D. El-Sayed, M. Shoeib, A.T. Kandil; Enhancing coating of brushite/hydroxyapatite layer on titanium alloy implant surface with additives; Applied Surface Science, Volume 285, Part B, 15 November 2013, Pages 136-143.
58. E.A. Abdel-Aal, A. N. El-Shazly, M.F. El-Shahat; Crystal nucleation of nano crystalline strontium malonate without and with additives, Crystal Growth and Design, 13 (10), 2013, pp. 4395-4401.
59. M.M.S. Sanad, M.M. Rashad, E.A. Abdel-Aal, M.F. El-Shahat, K. Powers; Effect of Y^{3+} , Gd^{3+} and La^{3+} dopant ions on structural, optical and electrical properties of o-mullite nanoparticles, Journal of Rare Earths, Volume 32, Issue 1, January 2014, Pages 37–42.
60. M.M.S. Sanad, M.M. Rashad, E.A. Abdel-Aal, M.F. El-Shahat, K. Powers; Optical and electrical properties of Y^{3+} ion substituted orthorhombic mullite $Y(x)Al(6-x)Si_2O_{13}$ nanoparticles, Journal of Materials Science: Materials in Electronics 25 (6), 2487-2493, (2014).
61. MMS Sanad, MM Rashad, EA Abdel-Aal, MF El-Shahat, K Powers; Structural, Microstructure, Mechanical and Electrical Properties of Porous Zr^{4+} -Cordierite Ceramic Composites, Journal of materials engineering and performance 23 (3), 867-874 (2014).
62. MMS Sanad, MM Rashad, EA Abdel-Aal, MF El-Shahat, K Powers; Extending and Enhancing the Properties of Porous Cordierite Ceramics by Mo^{6+} ion Incorporation via Facile Combined Synthesis Technique, International Journal of Applied Ceramic Technology, 2014.
63. E.A. Abdel-Aal and A. N. El-Shazly; Synthesis and characterisation of strontium tartrate nanoparticles with and without Triton X-100, Int. J. Nanoparticles, Vol. 7, Nos. 3/4, 2014, pp. 278-293.
- 64.

III. Presentation:

1. A.K. Ismail, E.A. Abdel-Aal, I.A. Ibrahim, "Hydrochemical Processing of Phosphate Concentrates", Proceedings of The 1st. International Conference on Hydrometallurgy, 12-15 October, 1988, China, pp. 404-408.
2. A.K. Ismail, I.A. Ibrahim, E.A. Abdel-Aal, "Leaching of Clay With Hydrofluosilicic Acid", Proceedings of The 1st. International Conference on Hydrometallurgy, 12-15 October, 1988, China, pp. 126-130.
3. A.K. Ismail, E.A. Abdel-Aal, I.A. Ibrahim, "Evaluation of "Abu-Tartur" Phosphate as a Potential Resource For Rare Earth Metals", Proceedings of The International Symposium on Processing of Rare Metals, 14-16 November 1990, Japan, pp. 37-41.
4. E.A. Abdel-Aal, I.A. Ibrahim, A.K. Ismail, "Problems Encountered During Acidulation of Phosphate Rocks With High Iron, Potassium And Carbonate Contents For Phosphoric Acid Production", Proceedings of the International Conference on Advances in Chemical Metallurgy, 9-11 January, 1991, India, pp. 629-648.
5. I.A. Ibrahim, E.A. Abdel-Aal, N.A. El-Safty and A.K. Ismail, "Production of Welding Manganese Feed-Stock Through Acid Leaching of Medium Grade Manganese Ore", Al-Azhar Engineering 2nd. International Conference, AEC'91, Faculty of Engineering, Al-Azhar University, Vol. IX, Mining Engineering, 21-24 Dec. (1991), Cairo.
6. E.A. Abdel-Aal, I.A. Ibrahim, A.S. Shabaan, A.K. Ismail, "Alumina Production From Egyptian Non-Bauxitic Aluminum Ores", Proceedings of the 7th. International Congress of ICSOBA (International Committee for Study of Bauxites, Alumina and Aluminum), 22-26 June, 1992, Hungary.
7. I.A. Ibrahim, E.A. Abdel-Aal, T.A. Ali and A.K. Ismail, "Removal of Iron from Phosphoric Acid by Solvent Extraction", Proceedings of the 13th. Egyptian Chemical Conference, 10-13 April, 1993, Vol. 3, Cairo, pp. 93-104.
8. A.K. Ismail, E.A. Abdel-Aal, "Role of Central Metallurgical R&D Institute for Development of Phosphoric Acid Industry in Egypt", Proceedings of the 6th. Technical Conference for Arab Federation of Chemical Fertilizers Producers (AFA), 20-21 April, 1993, Syria
9. A.K. Ismail, E.A. Abdel-Aal, I.A. Ibrahim, "Improvement of Filtration Rate During Phosphoric Acid Production From Egyptian Phospho-Concentrates", Proceedings of 6th. World Filtration Congress, 18-21 May, 1993, Japan, pp. 739-742.
10. E.A. Abdel-Aal, E. Abdel-Rahman, A. Amer and A.K. Ismail, "Perspectives For The Introduction of Alumina Industry in Egypt - A Technical Approach", 6th. Arabian Conference For Aluminum, ARABAL 93, 11-14 Dec. 1993, Cairo.
11. E.A. Abdel-Aal, "Possibility of Utilizing Egyptian Dolomite Ores For the Production of Magnesium Oxide", The 4th. International Conference For Mining, Petroleum and Metallurgical Engineering, Faculty of Engineering, Assiut University, 4-6 Feb. 1994, Assiut, Egypt.
12. S.Z. El-Tawil, K.A. El-Barawi, I.M. Morsi, M.M. Nasr, A.K. Ismail, I.A. Ibrahim and E.A. Abdel-Aal, "Transfer and Adaptation of Technology in the Area of Chemical Processing of Ores", Proceedings of 1st. International Conference of University Industry Interaction, Mansoura University, 22-24 March, 1994, Cairo, pp. 101-114.
13. I.A. Ibrahim, E.A. Abdel-Aal, A.K. Ismail, "Novel Solutions of Environmental Problems of Egyptian Phosphate Industry", International Seminar on: "Umweltschutz in Industriebetrieben", (Environmental Protection in Industrial Plants), 24 May – 10 June 1994, Berlin, Germany.
14. E.A. Abdel-Aal, I.A. Ibrahim, M.H. H. Mahmoud, A.K. Ismail, "Leaching of Egyptian Phosphate Concentrate For Phosphoric Acid Production by The Hemihydrate-Dihydrate Process", AFA International Conference, 6-8 May, 1997, Jordan, pp. 1-13.

CV & List of Publications of Prof. El-Sayed Ali Abdel-Aal

15. E.A. Abdel-Aal, I.A. Ibrahim, M.H.H. Mahmoud, T.A. El-Barbary, A.K. Ismail, "Iron Removal From Wet-Process Phosphoric Acid by Sludge Precipitation", 1998 SME Annual Meeting & Exhibition, March 9-11, Orlando, Florida, USA.
16. H. El-Shall, B. Moudgil, E.A. Abdel-Aal; "Enhanced Filtration of Phosphogypsum by Crystal Modification", Proceedings of the 11th. Annual National Technical Conference of the American Filtration & Separations Society, May 4-7, 1998, St. Louis, Missouri, USA.
17. H. El-Shall, E.A. Abdel-Aal and B. Moudgil, "Crystal Habit Modifiers for Enhanced Filtration of Phosphogypsum", AIChE Clearwater Convention, 1998, Central Florida Section, USA., 20-21 May 1998.
18. H. El-Shall, B. Moudgil & E. Abdel-Aal; "Enhanced Filtration of Phosphogypsum by Crystal Modification", Presented at The 13th. Annual Regional Phosphate Conference, Oct. 15-16, 1998, Lakeland, Florida, USA.
19. H. El-Shall, E.A. Abdel-Aal, B. Moudgil; Filtration Efficiency and Size Distribution of Phosphogypsum: Effect of Organic Additives; Beneficiation of Phosphates: Advances in Research and Practice, ed. P. Zhang, H. El-Shall and R. Wiegel, A Publication of SME, 1999, pp. 345-354.
20. E.A. Abdel-Aal, I.A. Ibrahim, A.A.I. Afifi and A.K. Ismail; Production of Synthetic Rutile from Egyptian Ilmenite Ore by A Direct Hydrometallurgical Process, 2nd. International Conference on Processing Materials for Properties, Edited by B. Mishra and C. Yamauchi, TMS (The Minerals, Metals & Materials Society), 2000, pp. 955-960.
21. M.M. Emara, A.K. Ismail, E.A. Abdel-Aal, M.E.M. Khader; Physico-chemical Studies on Wet-Process Phosphoric Acid Sludges and Suggested Method for Recycling: I. Characterization of the Sludges, 2nd. International Conference of Pure, Applied and Environmental Chemistry, Yarmouk University, Jordan, 17-19 April 2000.
22. H. El-Shall, B. Moudgil, E. Abdel-Aal, R. Stana; Role of Surfactants as Crystal Modifiers for Enhanced Filtration of Phosphogypsum: Effect of Method of Addition, 13rd Annual National Technical Conference of the American Filtration & Separations Society (AFS), May, 2000, USA.
23. Mostafa M. Emara, Adel K. Ismail, El-Sayed A. Abdel-Aal, Mohamed Ezz-Eldin M. Khader; Physico-chemical Studies on Wet-Process Phosphoric Acid Sludges and Suggested Method for Recycling: II. Recovery of P₂O₅ from the Sludge, The Arab Fertilizer Association (AFA), 13th. International Annual Technical Conference, 27-30 June 2000, Tunisia.
24. I.A. Ibrahim, E.A. Abdel-Aal, A.A. Ismail, A.K. Ismail, "Direct Acid Leaching of Pyrolusite Ore", Proceedings of the XXI International Mineral Processing Congress, Vol. A, July 23-27, 2000, Rome, Italy, pp. A6 (67-73).
25. A.K. Ismail, E.A. Abdel-Aal, Hassan El-Shall, H.R. Cooper, "Resolving Black Liquor Effluent by Lignin Separation", Proceedings of 5th. International Conference on Pulp & Paper Industry, December 14-16, 2001, New Delhi, India, pp. 199-209.
26. E.A. Abdel-Aal, I.A. Ibrahim, M.H.H. Mahmoud, H. El-Shall, and A.K. Ismail, "Improvement of Phosphoric Acid Production Parameters from Egyptian Phosphoconcentrate Through Inorganic and Organic Additives", Mineral Processing Technology Conference, MPT 2002, 3-5 January 2002, Bangalore, India, pp. 85-93.
27. El-Sayed Ali Abdel-Aal and El-Sayed Ali Fouad, "Hydrochloric Acid Leaching of Egyptian Phosphate Tailing from Nile Valley", The 2nd. Minia International Conference For Advanced Trends In Engineering, 7-9 April 2002, El-Minia University, El-Minia, Egypt, pp. 1396- 1402.
28. El-Sayed Ali Fouad and El-Sayed Ali Abdel-Aal, "Solvent Extraction of Uranium from H₃PO₄ - HCl - CaCl₂ Medium", Ibid., pp. 126-130.
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