

CURRICULUM VITAE
Georgios N. Anastassakis

Personal Details

Name: Georgios N. Anastassakis
Position: Professor
Year of Birth: 1958
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Address: National Technical University of Athens (N.T.U.A.)
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Degrees

1989: PhD in Mining Engineer and Metallurgy (Mineral Processing)
National Technical Univ. of Athens (NTUA)
Thesis Title: Contribution to the beneficiation of the unaltered
phosphate rock of Epirous area (Greece)

1983: Diploma in Mining Engineering and Metallurgy
National Technical University of Athens

Professional Details

2009 – today: Professor, School Mining Engineering and Metallurgy, NTUA
2005 – 2009: Associate Professor, School Mining Eng. and Metallurgy, NTUA
2000 – 2005: Assistant Professor, Dept. Mining Eng. and Metallurgy, NTUA
2000: **Invited Professor in Columbia University (New York) – Dept.
Earth and Environmental Engineering (working with Prof. P.
Somasundaran)**

1994 – 2000: Lecturer, Dept. Mining and Metallurgical Eng., NTUA
1992 – 1994: LARCO GMM SA Ferronickel Co. – Dept. R&D
1989 – 1994: Teaching Associate and Senior Researcher in NTUA
1989 – 1992: Teaching Associate on Contract in Technical University of Crete
(Dept. Mineral Resources Engineering)

Teaching Activities

COURSES

During his career he has taught and/ or teaching the following courses:

a. Undergraduate level

- **Mechanical Preparation and Mineral Processing I**

Introduction in Mineral Processing, Liberation, Separation Methods and Circuits, Mathematical Relationships of Separation, Mineral Processing Methods: Scrubbing, Sorting, Gravity separation (heavy media, jigging, tabling, air-concentration).

- **Mechanical Preparation and Mineral Processing II**

Magnetic Separation, Electrostatics, Flotation (Principles, Reagents, Circuits, Equipment), Thickening, Filtering, Pelletizing and Briquetting, Feeding and Transporting, Pumping, Sampling, Tailing Disposal, Environmental Protection, Lab training.

- **Physical Chemistry of Surfaces**

Liquid-Fluid Interface (surface tension, surface activity, thermodynamics of adsorption, micelles, insoluble monomolecular films, physical state of monolayer films), Solid-Vapor Interface (physical and chemical adsorption, isotherms, solid surface area calculation), Solid-Liquid Interface (wetting, adsorption, isotherms, electrical double layer, zeta-potential), Colloids and Colloidal Stability, Flocculation, Flotation (fundamentals on the flotation of oxides and silicates, salt type minerals, sulfides), Waste Water Purification (ion flotation, adsorption on natural adsorbents).

- **Study and Construction of Mineral Processing Plants.**

- **Solid Waste Recycling**

Solid Waste Generation and Management, Characterization and Sampling, Source separation, Collection – Transport - Storage, Methods of Separation, Thermal – Chemical and Biological Treatment, Recovery and Re-use of Recyclable Materials, Legal Frame, Economics, Flow - sheets.

b. Postgraduate level

- **Advanced topics of Physical Chemistry of Surfaces.**
- **Physical Chemistry of Flotation.**

Research

Research Activities: He has been Senior Researcher or Supervisor in more than 30 research projects in areas such as:

- Recovery of uranium from lignite
- Gold recovery
- Processing of many mineral deposits (mixed sulfides, phosphates, feldspars, kyanite and sillimanite, antimonite, barite, magnesite, nickeliferous laterites, wollastonite, coal, chromite, quartz, volcanic tuff, pumice etc) by using physical and physicochemical methods (gravimetric methods, magnetic separation, electrostatics, flotation, selective agglomeration)
- Recovery of by-products from tailings (e.g. nickel from slag, quartz from nickeliferous laterite processing, magnesite from rejected material before hand-sorting)

- Iron removal from industrial minerals
- Fundamental and applied research on flotation
- Hydrodynamics of flotation cells
- Fine and ultra-fine particles processing by applying magnetic coating and selective agglomeration methods
- Flocculation and thickener operation both at industrial and lab scale
- Electro-osmotic dewatering of red mud slurry
- Heavy metal ion and phosphates removal from waste waters by flotation and by using natural sorbents
- Factors affecting fine particle generation rotary kilns
- Recovery of by-products from mineral processing wastes
- Soil cleaning using flotation
- Metals recovery from wastewaters
- Separation of useful materials from fine waste stream
- Selective separation of magnetic metals
- Copper recovery from waste electric cables
- Water purification from oil
- Gold flotation

During his service in NTUA he has been the supervisor of funded research projects related to the beneficiation of Greek lignites, up-grade of pumice, effluent purification from mines and metallurgical plants, factors affecting fine particle generation in rotary kilns, arsenic minerals removal from nickeliferous laterites etc. During his affiliation with GMM SA LARCO Ferronickel Co., he was supervising 11 research projects and participated in the submission of proposals. He has also participated in the working group of the company, which submitted investment project for funding.

He was member of the group in the frame of European Life-learning Project 2007-13 Leonardo da Vinci entitled “Valid for Europe E-learning Education in Sustainability – Waste Collection and Recycling of Plastics for the Environmental Protection” (LLP-LDV-TOI-07-BG-166-023).

Research Interests:

- Mineral Processing of ores, coal, industrial minerals and rocks
- Physical Chemistry of Surfaces (liquid-fluid, liquid/solid and air/solid interfaces) and the related phenomena (surface tension and activity, zeta-potential, specific surface area, etc.), Colloids
- Physical Chemistry and Hydrodynamics of Flotation (reagents, surface charge of minerals, flotation cells)
- Fine and ultra-fine particles processing, particle interactions, oil agglomeration
- Flocculation, Electro-osmotic dewatering
- Water effluent purification by flotation method and adsorption on natural sorbents
- Solid waste processing and recycling
- Soil cleaning by mineral processing methods

List of Publications

Scientific Papers:

1. **G.N. Anastassakis**, 1989. Contribution in the beneficiation of the unaltered phosphate rock of Epirous area (Greece), PhD Thesis, Dept. Mining and Metallurgical Engineering, NTUA.
2. **G.N. Anastassakis** and A.Z. Frangiskos, 1990. Heavy liquid analysis of the unaltered phosphate rock of Epirous area (Greece), *Mineral Wealth Journal*, 65, pp. 51 – 57 (in Greek with extended English summary).
3. **G.N. Anastassakis**, 1990. Influence of starch on phosphate rock flotation by using sodium oleate collector, *Mining and Metallurgical Annals*, 74, pp. 15 – 24 (in Greek with English abstract).
4. **G.N. Anastassakis**, 1990. Zeta-potential and its applications on Mineral Processing, *Mining and Metallurgical Annals*, 75, pp. 29 – 40 (in Greek with English abstract).
5. **G.N. Anastassakis**, 1992. Influence of sodium silicate (as calcite depressant) on phosphate rock flotation using sodium oleate collector, *Mineral Wealth J.*, 79, pp. 55 – 66 (in Greek with extended English summary).
6. **G.N. Anastassakis**, 1993. Influence of hydrodynamics on rougher flotation of antimonite, *Mining and Metallurgical Annals*, 3(2-3), pp. 51 – 64 (in Greek with English summary).
7. **G.N. Anastassakis** and G. Stamboltzis, 1993. Hydrodynamics of flotation cells with external air blow, *Mining and Metallurgical Annals*, 3(1), pp. 39 – 53 (in Greek with English summary).
8. Anders M., J. Burchardt, E. Reicherz, J. Spiekermann, C. Fotakis, S. Couris, J. Hadjinikolaidis, E. Frogoudakis, **G. Anastassakis**, A. Polydorou, T. El. Gammal, K. Mavrommatis, D.C. Papamantellos, G.N. Angelopoulos, D. Diamantopoulos, N. Diamianakis, E. Diakoumakos, A. Enotiadis, A. Fitas, 1993: “Development of an Automatic System for Controlling the Process of Metal Recovery from Slags” E.C. Contractors’ Workshop on Processing and Recycling, Delfi, November 2-5, 1993, 31-51.
9. **G.N. Anastassakis**, E.P. Chammas and A.Z. Frangiskos, 1995. A study on the beneficiation of Milos island (Greece) volcanic tuff for the production feldspar and barite concentrate by using flotation and magnetic separation methods, *Mineral Wealth J.*, 95, pp. 7 – 16 (in Greek with extended English summary).
10. **G.N. Anastassakis** and D. Tamam, 1997. Removal of ions from industrial and municipal waste waters by flotation methods – Application on the removal of lead, in: *Chemistry, Energy and the Environment*, C.A.C. Sequeira and J.B. Moffat (Eds.), The Royal Society of Chemistry, Cambridge, UK, pp. 435 – 445.
11. **G.N. Anastassakis**, E. Zafiriadou and H. Iskou, 1998. Physicochemical behavior of minerals during chromite flotation with fatty acids, Honorary volume in the memory Prof. K. Konofagos, NTUA Press, pp. 177 – 185 (in Greek with English summary).
12. **G.N. Anastassakis**, 1999. A study on the separation of magnesite fines by magnetic carrier methods, *Colloids and Surfaces – A: Physicochemical and Engineering Aspects*, 149, pp. 585 – 593.
13. E. Chammas, Em. Hondrellis, H. Iskou, D. Tamam, **G.N. Anastassakis**, A.Z. Frangiskos and Em. Frogoudakis, 1999. A study on the beneficiation of lignite of Servia area (Kozani, Northern Greece) by heavy media separation, *Mineral Wealth J.*, 112, pp. 17 – 28 (in Greek with extended English summary).

14. **G.N. Anastassakis**, 1999. Mineral processing techniques and environmental protection, *Mineral Wealth J.*, 113, pp. 33 – 46 (in Greek with extended English summary).
15. E. Chammas, Em. Hondrellis, **G.N. Anastassakis** and A.Z. Frangiskos, 2000. A study on the beneficiation of coal from Servia area (Kozani, Northern Greece) by jigging and tabling, *Mineral Wealth J.*, 115, pp. 17 - 28 (in Greek with extended English summary).
16. **G.N. Anastassakis**, 2000. Hydrodynamics of conventional flotation cells with external air blow and its effect on metallurgical results, XXI IMPC Proceedings, P. Massacci (Editor), Elsevier, Amsterdam, Vol. B, pp. 64 – 70.
17. **G.N. Anastassakis**, 2001. Fine particles separation by using physicochemical methods, Honorary volume in the memory Prof. J. Papageorgakis, pp. 17 - 34.
18. E. Chammas, D. Pantias, M. Taxiarchou, **G.N. Anastassakis** and I. Paspaliaris, 2001. Removal of iron and other major impurities from silica sand for the production of high added value materials, Proceedings IX Balkan Mineral Processing Congress “New Developments in Mineral Processing”, G. Önal, S. Atak, A. Güney, M. Celik, A.E. Yüce (Eds.), pp. 289 – 295.
19. E. Chammas, H. Iskou, Em. Hondrellis, D. Tamam, **G.N. Anastassakis**, A.Z. Frangiskos and Em. Frogoudakis, 2001. Beneficiation of Greek lignite. The case of the lignite deposit of Servia area (Kozani, Macedonia – Greece), extension of the Proceedings IX Balkan Mineral Processing Congress “New Developments in Mineral Processing”, G. Önal, S. Atak, A. Güney, M. Celik, A.E. Yüce (Eds.), pp. 711 - 720.
20. **G. Anastassakis**, 2002. Design of an integrated resource management system for total resource recovery. Technical/ Economical problems and future perspectives, Proceedings TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, B. Bjorkman, C. Samuelsson, J-O Wiksström (Eds.), Vol. 1, pp. 199 – 208.
21. C.A.C. Sequeira, N.R. Sousa, R.P.C. Neto and **G. Anastassakis**, 2002. Electrochemical oxidation of hydrosulphide ions in aqueous media, TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, B. Bjorkman, C. Samuelsson, J-O Wiksström (Eds.), Vol. 1, pp. 663 – 670.
22. **G.N. Anastassakis**, 2002: Separation of fine mineral particles by selective magnetic coating, *J. Colloid and Interface Science*, 256(1), pp. 114 - 120.
23. **G.N. Anastassakis** and Charis Dolgyras, 2003: Quartz recovery from the tailings of nickeliferous laterite processing, Proceedings X Balkan Mineral Processing Congress “Mineral Processing in the 21st Century”, L. Kuzev, I. Nishkov, A. Boteva and D. Mochev (Eds.), pp. 676-681.
24. P. Somasundaran, J. Wang, Z. Pan, D.R. Nagaraj, T. Chen and **G. Anastassakis**, 2003: Interactions of gum depressants with talc: Study of adsorption by spectroscopic and allied techniques, Proceedings XXII IMPC, Vol. 2, pp. 912 - 919.
25. **G.N. Anastassakis**, 2003: Physicochemical behavior of chromite and olivine during flotation with anionic collectors, XXII International Mineral Processing Congress, Cape Town, S. Africa, September 28 – October 3, 2003. (Oral-Poster Presentation)
26. **G.N. Anastassakis**, 2004: Beneficiation of the Greek lignites, *Coal Preparation*, Vol. 124, issues 1-2, pp. 19-34.

27. C.A.C. Sequeira and **G.N. Anastassakis**, 2004: Solid-state electrochemical sensors for the metallurgical industry, *Mineral Wealth*, issue 131, p. 47-55.
28. **G.N. Anastassakis**, K. Karageorgiou and M. Paschalis, 2004: Removal of phosphate species from solution by flotation, *Proceedings of REWAS '04, Global Symposium on Recycling, Waste Treatment and Clean Technology*, I. Gaballah, B. Mishra, R. Solozabal and M. Tanaka (Eds.), TMS-Inasmet, Volume II, pp. 1147-54.
29. C.A.C. Sequeira, Y. Chen and **G. Anastassakis**, 2004: Galvanostatic oxidation of high TOC plating bath, *Proceedings of REWAS '04, Global Symposium on Recycling, Waste Treatment and Clean Technology*, I. Gaballah, B. Mishra, R. Solozabal and M. Tanaka (Eds.), TMS - INASMET, Volume II, pp. 1117-24.
30. C.A.C. Sequeira, Y. Chen and **G. Anastassakis**, 2004: Electrochemical reduction of Vanadium (V) ions in aqueous solution, *Proceedings of REWAS '04, Global Symposium on Recycling, Waste Treatment and Clean Technology*, I. Gaballah, B. Mishra, R. Solozabal and M. Tanaka (Eds.), TMS - INASMET, Volume III, pp. 2197-2204.
31. **G.N. Anastassakis**, 2005. The physico-chemistry of flocculation with polyelectrolytes, Honorary volume to Prof. A.Z. Frangiskos, pp. 113-128 (in Greek with English abstract).
32. **G.N. Anastassakis**, 2005: Physicochemical factors affecting flocculation of pre-reduced nickeliferous laterite suspension, *Separation and Purification Technology*, 45, pp. 16-24.
33. C.A.C. Sequeira, R.F. Lobo and **G.N. Anastassakis**, 2005: A study of the Redox chemistry of anthraquinone 2.7-disulphonate, *Proceedings of the 1st International Conference on Diffusion in Solids and Liquids (DSL-2005)*, A. Ochster, J. Gracio and F. Barlat (Eds.), University of Aveiro, Portugal, 6-8 July, Vol. II, pp. 655-658.
34. C. Dolgyras, **G.N. Anastassakis**, K. Kavouridis, N. Koukouzas, E. Kakaras and F. Pavloudakis, 2005: Demineralization of Greek lignite from Ptolemais and Florina, North Greece, *Proceedings of International Conference on Coal Science and Technology (ICCST)*, Okinawa, Japan, paper 3P202, October 2005.
35. C.A.C. Sequeira, R.F. Lobo and **G.N. Anastassakis**, 2006: Electrochemical reduction of AQ2.7DS in aqueous solution, *Materials Science Forum*, Vol. II, pp.
36. M.B. Frangiskos, **G.N. Anastassakis** and A.Z. Frangiskos, 2006: Electro-osmotic dewatering of red mud slurry, in: *Proceedings of XXIII IMPC*, G. Onal et al (Eds.), Vol. 2, pp. 1667-71.
37. K. Karageorgiou, M. Paschalis and **G.N. Anastassakis**, 2007: Removal of phosphate species from solution onto calcite used as natural adsorbent, *Journal of Hazardous Materials*, A139, pp. 444-452.
38. E. Hristoforou, **G.N. Anastassakis**, K. Efthymiades, 2007: Selective magnetic separation by means of temperature and frequency, in: *Proceedings XII Balkan Mineral Processing Congress (BMPC)*, G.N. Anastassakis (Ed.), pp. 161-166.
39. Y. Chen, **G.N. Anastassakis**, C.A.C. Sequeira, 2007: Chemical metathesis of chalcopyrite in sulfuric acid, in: *Proceedings XII Balkan Mineral Processing Congress (BMPC)*, G.N. Anastassakis (Ed.), pp. 517-521.
40. C.A.C. Sequeira, **G.N. Anastassakis**, 2007: Potential-pH diagram for the sulfur-water system at ambient temperature, in: *Proceedings XII Balkan Mineral Processing Congress (BMPC)*, G.N. Anastassakis (Ed.), pp. 615-619
41. C.A.C. Sequeira, D.M. Santos, Y. Chen, **G. Anastassakis**, 2008: Chemical metathesis of chalcopyrite in acidic solutions, *Hydrometallurgy*, 92, pp. 135-140.

42. **G. Anastassakis**, C.A.C. Sequeira, 2008: Electrochemical and analytical surface studies of silver deposition for industrial electroplating, *Materials Science Forum*, Vols. 587-588, pp. 829-833.
43. N. Tsoni, **G.N. Anastassakis**, 2008: Fine particles separation through hydrophobic agglomeration. Application on the system magnesite/quartz, *Proceedings XXIV IMPC*, Beijing, China, 23-28 Sept. 2008.
44. **G.N. Anastassakis**, N. Georgiou, 2008: Purification of oil-contaminated soil by flotation, *Proceedings REWAS 2008*, Cancun, Mexico, 12-15 October 2008.
45. K. Karageorgiou, M. Paschalis, **G.N. Anastassakis**, 2009. Removal of orthophosphate species from aqueous solution with flotation using dodecylamine collector, *Proceedings of XIII Balkan Mineral Processing Congress*, Eds. S. Krausz, L. Ciobanu, N. Cristea, V. Ciocan, G. Christae, Publisher Focus – Petrosani, Romania, Vol. 1, pp. 227-233.
46. M. Panayotova, P. Pavlov, V. Panayotov, **G. Anastassakis**, M. Koutsoukos, 2009: Education on waste processing and recycling, *Proceedings of XIII Balkan Mineral Processing Congress*, Eds. S. Krausz, L. Ciobanu, N. Cristea, V. Ciocan, G. Christae, Publisher Focus – Petrosani, Romania, Vol. 2, pp. 964-969.
47. **G.N. Anastassakis**, 2009. Mineral Processing reality in Greece: Current industrial activities and education, *Revista Minelor Journal*, Vol. 15, No 4-5, pp. 22-26.
48. **G.N. Anastassakis**, 2009. Mineral resources conservation through improving fine particles recovery with Mineral Processing methods, *Proceedings of The 3rd International Seminar ECOMINING – Europe in the 21st Century*, Milos Island, Greece, 4-5 September 2009, pp. 85-94.
49. **G.N. Anastassakis**, 2010. Coal deposits in Greece – Current status and prospects for coal preparation, *CPSA Journal - The Magazine by the Coal Preparation Society of America*, 9(1).
50. **G.N. Anastassakis**, 2011. Hydrodynamic Modeling and Optimization of Processes in Flotation Cells with External Air-blow, *Knovel, Engineering Cases – Where Theory Meets Practice*, <http://engineeringcases.knovelblog.com> (4-2-2011)
51. G. Raftopoulos, G. Katsoulas, **G.N. Anastassakis**, 2012. Pilot implementation of separate municipal solid waste collection system in Greek Universities. Application at National Technical University of Athens (NTUA), *Proceedings of International Conference on Sustainable Solid Waste Management*, June 28-29 2012, Athens, Greece.
52. E. Dimopoulos, **G.N. Anastassakis**, 2013. Recovery of magnesite from waste material rejected before hand-sorting, *Proceedings of XV Balkan Mineral Processing Congress*, Sozopol, Bulgaria, 12-16 June 2013.
53. **G.N. Anastassakis**, 2013. Relationship between phosphates mineralogy and mineral processing – The case of Greece. *Bulletin of the Geological Society of Greece*, vol. XLVII 2013, *Proceedings of the 13th International Congress*, Chania, Greece, 5-8 Sept. 2013.
54. M. Tsezos, **G. Anastassakis**, V. Kapsimalis, N. Xirokostas, 2014. Management of dredged material in Greek ports and its disposal at the sea, *Proceedings 6th Pan-Hellenic Congress of Harbour Works*. Lab of Harbour Works, School of Civil Engineering, November 11-14, 2014, Athens, 10p.
55. **G.N. Anastassakis**, 2014. Separation of mineral fine particles, *Proceedings of 14th International Mineral Processing Symposium*, 15-17 October 2014, Kusadasi, Turkey, U. Ipekoglu, V. Arslan, S. Sen (eds.), pp. 27-34.
56. **G. Anastasakis**, 2014. On the processing of fine mineral particles: A review, *The Journal of Ore Dressing*, 16(32), pp. 1-10.

57. **G.N. Anastassakis**, 2015. Feldspar-containing rocks of Greece: Mineralogical characteristics and processing flow-sheets, Proceedings of XVI Balkan Mineral Processing Congress, Belgrade, Serbia, 17-19 June 2015, N. Calic, L. Andric, I. Milanovic, I. Simovic (eds), pp. 565-572.
58. **G. Anastassakis**, P. Bevilacqua, L. De Lorenzi, 2015. Recovery of residual copper from low-content tailings derived from waste electrical cable treatment, *International Journal of Mineral Processing*, 143, pp. 105-111.
59. N. Georgiou, **G.N. Anastassakis**, 2016. Decontamination of diesel-polluted soil through flotation, *Environmental Engineering & Management Journal (EEMJ)*, 15(2), pp. 381-388.
60. **G.N. Anastassakis**, 2016. Amenability of representative Greek lignite deposits to beneficiation. An overview, Proceedings XVIII International Coal Preparation Congress, 28 June-01 July 2016, St. Petersburg, Russia, Springer, vol. 2, pp. 803-808.
61. J. Rubinstein, A. Swanson, M. Holuszko, Z. Shaoqiang, D. Ziaga, **G. Anastassakis**, L. Bokanyi, R.K. Sachdev, N. Bekturganov, E. Abduldinov, I. Baic, W. Blaschke, G.J. de Korte, G. Ozbayoglu, D. Jenkinson, M. Laurila, S. Vorobev, 2016. Coal preparation in the World – current status and global trends: A review, *Mining Journal*, June 2016, pp. 1-60.
62. G. Bimpilas, **G.N. Anastassakis**, 2016. Magnetic separation of fine gangue minerals from magnesite as hydrophobic co-agglomerates, Paper No 338, XXVIII International Mineral Processing Congress Proceedings - ISBN: 978-1-926872-29-2, Published by the Canadian Institute of Mining, Metallurgy and Petroleum.
63. C.-M. Katsari, **G.N. Anastassakis**, 2016. Copper recovery from electric cable scrap by shaking tables, Paper No 339, XXVIII International Mineral Processing Congress Proceedings - ISBN: 978-1-926872-29-2, Published by the Canadian Institute of Mining, Metallurgy and Petroleum.
64. **G.N. Anastassakis**, 2016. Waste management from mineral processing operations: The case of phosphate rocks, Proceedings of International Solid Waste Association, 19-21 September 2016, Novi Sad, Serbia.

Books, Chapter in Books and other Contributions:

1. **G.N. Anastassakis**, Solid Waste Separation and Processing – Principles and Equipment, Chapter in: Handbook of Environmental Engineering, Myer Kutz (Ed.), J. Wiley & Sons (under review)
2. **G.N. Anastassakis**, 2012. Fine/Ultrafine Mineral Particles Separation through Hydrophobic Agglomeration, Encyclopedia of Colloids and Surfaces, P. Somasundaran (ed.), Taylor & Francis, pp. 1-22, DOI: 10.1081/E-ESCS-120047358.
3. **G.N. Anastassakis**: a) Mineral processing methods, with special emphasis on tailings production and water management. Chapter 2.4 Phosphate processing, pp. 105-120 and b) Parameters, Chapter 7.3 Phosphate processing, p. 379, in: Tailings Management Facilities, T. Meggyes, K.E. Roehl, D. Dixon-Hardy (eds), EPP Publications Ltd, 2008.
4. **G.N. Anastassakis**, Solid Waste Disposal and Recycling, Chapter 11, in: Handbook of Environmentally Conscious Materials and Chemical Processing, Myer Kutz (Ed.), J. Wiley & Sons, 2007, pp. 307-355.

5. N. Tsoni, M. Koutsoukos, **G.N. Anastassakis**, 2008. Separate Collection of Waste and its Recycling, pp. 41-76. European Lifelearning Project 2007-13 Leonardo da Vinci entitled “Valid for Europe E-learning Education in Sustainability – Waste Collection and Recycling of Plastics for the Environmental Protection” (LLP-LDV-TOI-07-BG-166-023).
6. N. Tsoni, M. Koutsoukos, **G.N. Anastassakis**, 2009. a) Health and Safety, b) Sustainability, pp. 1-39. European Life-learning Project 2007-13 Leonardo da Vinci entitled “Valid for Europe E-learning Education in Sustainability – Waste Collection and Recycling of Plastics for the Environmental Protection” (LLP-LDV-TOI-07-BG-166-023).
7. **G.N. Anastassakis**, “Solid waste recycling” (in Greek), NTUA Press, 2001, p. 156.
8. **G.N. Anastassakis**, “Physical Chemistry of Surfaces” (in Greek), NTUA Press, 1990, p. 142.
9. **G.N. Anastassakis**, notes 88 pages totally on: a) Comminution, b) selected topics of Mineral Processing and c) Coal Beneficiation, 1989-90.
10. He has also written the chapter of “Flotation” in the book of another author, 49 pages, NTUA Press, 1994.

Participation in International Congresses and Seminars

He has attended more than 40 Seminars and Congresses, among which the following are included (selected):

1. Innovations on Advanced Flotation Technology (NATO-ASI Seminar, Greece, 1991).
2. 4th Seminar E.C. Workshop on Mineral Processing, Extractive Metallurgy and Recycling (Greece, 1993).
3. Mineral Processing and Environment: Improving the quality of our life (NATO-ASI Seminar, Varna - Bulgaria, 1996).
4. Assessment and Promotion of the use of the new technologies on European Lignites and Brown Coal (THERMIE Workshop, Greece, 1997).
5. 3rd European Workshop on Chemistry, Energy and the Environment (Estoril – Portugal, 1997). Paper presentation entitled “Removal of ions from industrial and municipal waste waters by flotation methods – Application on the removal of lead” (included in the Proceedings)
6. 9th Intern. Congress on Surface and Colloid Science (Sofia - Bulgaria, 1997). Paper presentation entitled “Study on the separation of magnesite fines by magnetic carrier methods (published in: Colloids and Surfaces A – Physicochemical and Engineering Aspects).
7. NATO Advanced research Workshop on “Application of Natural Microporous Materials to the Environmental Technology” (Smolenice – Slovakia, 1998).
8. XXI International Mineral Processing Congress (Rome – Italy, 2000). Paper presentation entitled “Hydrodynamics of conventional flotation cells with external air blow and its effect on metallurgical results”.
9. 13th International Symposium on Surfactants in Solution (SIS-2000) (Florida – USA, 2000). Paper presentation entitled “Separation of fine mineral particles by selective magnetic coating”.
10. Workshop “New Deal for Recycling” (Rome – Italy, 2001). **Invited paper presentation** entitled “Design of an integrated resource management system for raw materials conservation. Present status and incentives for future research”.

11. IX Balkan Mineral Processing Congress, Istanbul 11 – 13 September 2001. Paper presentation entitled “Beneficiation of Greek lignites. The case of the lignite deposit of Servia area (Kozani, Macedonia – Greece) and co-author in another paper.
12. TMS Fall 2002 Extraction and Processing Division Meeting on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, 16 – 20 June 2002, Lulea, Sweden. Paper presentation and co-author in another paper.
13. Technical Univ. of Cape Town, Dec. 2001. Co-author in the invited lecture by Prof. P. Somasundaran entitled “Interactions of gum depressants with talc: Study of adsorption by spectroscopic and allied techniques”.
14. XXII International Mineral Processing Congress, Cape Town, S. Africa, September 28 – October 3, 2003. Paper Presentation entitled “Physicochemical behavior of chromite and olivine during flotation with anionic collectors”. (Oral-Poster Presentation)
15. REWAS 2004 – Global Symposium on Recycling, Waste Treatment and Clean Technology, Madrid, Spain, September 26 – 29, 2004. Paper Presentation entitled “Removal of phosphate species from solution by flotation.
16. 1st International Conference on Engineering for Waste Treatment, Beneficial Use of Waste and By-products “WasteEng2005”, Albi, Γαλλία, 16-18 May 2005. Paper Presentation entitled “Removal of phosphate species from solution onto calcite used as natural adsorbent”. (Selected for publication in Journal of Hazardous Materials)
17. XXIII International Mineral Processing Congress, Istanbul, Turkey, September 3-8, 2006. Paper Presentation entitled “Electro-osmotic dewatering of red mud slurry”.
18. XII Balkan Mineral Processing Congress, Delphi, Greece, June 10-14, 2007 (**Congress Chairman**).
19. 2nd International Conference on Engineering for Waste Valorization “WasteEng2008”, 3-5 June 2008, Patras, Greece. Poster presentation entitled “Electro-dewatering of red mud slurry for waste volume reduction and solids valorization”.
20. XXIV International Mineral Processing Congress, Beijing, China, September 23-28, 2008. Paper Presentation entitled “Fine particles separation through hydrophobic agglomeration. Application on the system magnesite/quartz”.
21. REWAS 2008 – Global Symposium on Recycling, Waste Treatment and Clean Technology, Cancun, Mexico, October 12 – 15, 2008. Keynote Lecture entitled “Purification of oil-contaminated soil by flotation”.
22. XIII Balkan Mineral Processing Congress, Bucharest, Romania, 14-17 June 2009, Paper Presentation entitled “Removal of orthophosphate species from aqueous solution with flotation using dodecylamine collector”.
23. **Invited speaker** in the following 10 Seminars organized by Forgea International (Italy) -Training and Cooperation Centre in the field of Geomining and Environment: a) Sardinia, Italy: October 2010, December 2011, March 2012, October 2012, and May 2013 b) Eski-Sehir, Turkey, March 2011, and November 2013 c) Marakesh, Morocco, November 21-23, 2011, d) Hammamet, Tunisia: February 2013, and February 2014. The topics developed were the following: Integrated pollution prevention in industry; Land contamination from mining operations: Prevention strategies and polluted sites management; Industrial waste characterization; Tailings management from mineral processing operations: I.

Dam design, safety and legislation items, and II. Application on waste from phosphate rock beneficiation; Energy production: renewable vs. non-renewable sources; Industrial and municipal solid waste; Waste management: disposal and treatment; Primary raw materials used in ceramic industry: minerals, specifications and beneficiation methods; ceramic production steps and fundamentals.

24. XV Balkan Mineral Processing Congress, Sozopol, Bulgaria, 12-16 June 2013, oral presentation entitled: Recovery of magnesite from waste material rejected before hand-sorting.
25. 13th International Geological Congress, Chania, Greece, 5-8 Sept. 2013, oral presentation entitled: Relationship between phosphates mineralogy and mineral processing – The case of Greece.
26. **Invited speaker** in the 14th International Mineral Processing Symposium, 15-17 October 2014, Kusadasi, Turkey. Title of presentation: Separation of mineral fine particles.
27. **Invited speaker** in the 9th International Industrial Minerals Symposium, 14-15 May 2015, Izmir, Turkey. Title of presentation: Phosphate as an industrial mineral: applications, mineralogy and processing methods.
28. XVI Balkan Mineral Processing Congress, Belgrade, Serbia, 17-19 June 2015, poster presentation: Feldspar-containing rocks of Greece: Mineralogical characteristics and processing flow-sheets.
29. XVIII International Coal Preparation Congress, 28 June-01 July 2016, St. Petersburg, Russia, oral presentation entitled: Amenability of representative Greek lignite deposits to beneficiation. An overview.
30. XXVIII IMPC, 11-15 September 2016, Quebec City, Canada: a) oral presentation entitled: Magnetic separation of fine gangue minerals from magnesite as hydrophobic co-agglomerates, b) poster presentation entitled: Copper recovery from electric cable scrap by shaking tables.
31. **Invited speaker** in the International Solid Waste Association (ISWA) 2016, 19-21 September 2016, Novi Sad, Serbia, Title of presentation: Waste management from mineral processing operations: The case of phosphate rocks.

Participation in National Symposiums

1. Savvidis, S., Katsanos, E., Gavros, K., Haitidis, G., Vasiliadis, B., Goudoulas, K., Anastassakis, G., Pretz, Th., Gaydarziev, St.: ANA.DY.MA. – Recovery of valuable raw materials and energy through utilizing the unused mineral processing facilities in Western Macedonia. Symposium Archimedes, Florina (Western Macedonia, Greece), 29 November 2007.
2. Savvidis, S., Katsanos, E., Gavros, K., Haitidis, G., Vasiliadis, B., Goudoulas, K., Anastassakis, Pretz, Th., Gaydarziev, St.: Economic and Technical study on solid waste treatment facilities. Symposium Archimedes, Florina (Western Macedonia, Greece), 29 November 2007.
3. **Invited Lecture** in the Open University of Lokron Municipality (Fthiotis, Central Greece), Atalanti, 14 December 2012. Title: The alternative solid waste treatment concerns all of us.
4. **Invited Lecture** in the Technical Chamber of Greece Symposium “Colloquium on G.M.M. S.A. LARCO Ferronickel Co.”, 19 May 2015, Athens, Title: The contribution of G.M.M. S.A. LARCO on the development of Technology.

Scientific and Professional Affiliations

AFFILIATIONS

- International Advisory Committee (Country delegate) of International Mineral Processing Congress (IMPC)
- Balkan Mineral Processing Congress (BMPC) Scientific Committee Country delegate)
- Balkan Academy of Science on Mineral Technology (Full Member)
- International Organizing Committee of The International Coal Preparation Congresses – ICPC (Corresponding Member-Country delegate)
- Society of Mining Professors (SOMP)
- Society for Mining, Metallurgy and Exploration Inc. (SME) (2000-2010)
- International Solid Waste Association (I.S.W.A.) (2000-2010)
- Scientific Society of the Mineral Wealth Technologists of Greece
- Technical Chamber of Greece
- Association of Greek Mining Engineers and Metallurgists
- Hellenic Ceramic Society of Greece

MEMBER OF CONGRESS INTERNATIONAL ORGANIZING/ SCIENTIFIC COMMITTEES

1. TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, 16 – 20 June 2002, Lulea, Sweden
2. International Symposium on Bio-hydrometallurgy, September 2003, Athens, Greece
3. REWAS 2004, Global Symposium on Recycling, Waste Treatment and Clean Technology, 26 – 29 September 2004, Madrid, Spain
4. 1st International Conference on Engineering for Waste Treatment, Beneficial Use of Waste and By-products “WasteEng2005”, 16-18 May 2005, Albi, France
5. Chairman of the XII Balkan Mineral Processing Congress, 10-14 June 2007, Delphi, Greece
6. 2nd International Conference on Engineering for Waste Valorization “WasteEng2008”, 3-5 June 2008, Patras, Greece
7. REWAS 2008, Global Symposium on Recycling, Waste Treatment and Clean Technology, October 2008, Cancun, Mexico.
8. 3rd International Seminar ECOMINING – Europe in 21st Century “Let’s give Earth its balance back”, September 4-5, 2009 – Milos Island, Greece.
9. 13th International Geological Congress, Chania, Greece, 5-8 Sept. 2013.
10. 14th International Mineral Processing Symposium, 15-17 October 2014, Kusadasi.
11. 9th International Industrial Minerals Symposium, 14-15 May 2015, Izmir, Turkey.

MEMBER OF SCIENTIFIC BOARDS

1. International Advisory Board of the XXII International Mineral Processing Congress, 28 September - 3 October 2003, Cape Town, South Africa
2. **Scientific Advisory Board of MiMeR (Minerals and Metals Recycling) Research Center at Lulea University of Technology, Sweden, 2002-4 (One of the 3 Members of the External-European Evaluators).**
3. International Advisory Board of the XXIII International Mineral Processing Congress, 3-8 September 2006, Istanbul, Turkey.
4. International Advisory Board of the XXIV International Mineral Processing Congress, 5-9 September 2010, Brisbane, Australia.
5. **National Representative of Greece in EU Coal and Steel Advisory Group (Steel Subgroup), 2008-2010.**

REVIEWER OF:

1. International Journal of Mineral Processing (Elsevier)
2. Minerals Engineering (Elsevier)
3. Journal of Colloid and Interface Science (Elsevier)
4. Colloids and Surface A (Elsevier)
5. Colloids and Surface B (Elsevier)
6. Environmental Science and Technology (The American Chemical Society)
7. Langmuir (The American Chemical Society)
8. Environmental Technology (Taylor & Francis)
9. Separation Science and Technology (Taylor & Francis)
10. Journal of Hazardous Materials (Elsevier)
11. Separation and Purification Technology (Elsevier)
12. Journal of the Taiwan Institute of Chemical Engineers (Elsevier)
13. Composites B (Elsevier)
14. Applied Clay Science (Elsevier)
15. Water and Environment Journal (Wiley)
16. Transactions of Nonferrous Metals Society of China (Elsevier)
17. International Journal of Mining Science and Technology (Elsevier)
18. Minerals and Metallurgical Processing Journal (Society for Mining, Metallurgy, and Exploration, Inc. - SME)
19. Mineral Processing and Extractive Metallurgy Review (Taylor & Francis)
20. Geochemical Journal (The Geochemical Society of Japan)
21. Journal of the Chinese Institute of Chemical Engineers
22. International Journal of Environment and Waste Management (Inderscience)
23. Industrial & Engineering Chemistry Research (The American Chemical Society)
24. The Open Mineral Processing Journal (Bentham OPEN)
25. Chemical Engineering Journal (Elsevier)
26. Adsorption Science and Technology Journal (Multi-Science Metapress)
27. Tenside, Surfactants, Detergents Journal (Hanser, Germany)
28. Materials Research Bulletin (Elsevier)
29. Physics and Chemistry of Minerals (Springer)
30. Environmental Engineering and Management Journal ("Gheorghe Asachi" Technical Univ. of Iasi, Romania)
31. Philippine Journal of Science (Philippine Science and Technology Information Institute – STII)
32. Mineral Wealth Journal (The Scientific Society of Mineral Wealth Technologists, Greece)

33. Numerous papers submitted in the following Congresses: IMPC 2003, International Symposium on Bio-hydrometallurgy 2003, REWAS 2004, WasteEng 2005, XII Balkan Mineral Processing Congress 2007, XIII Balkan Mineral Processing Congress 2009, IMPC 2010
34. Research Projects for the Greek Secretariat of Research and Technology (Greek Ministry of Development)
35. **Research Projects for The Georgia National Science Foundation (GNSF) and of the corresponding Serbian Research Organization**
36. Research projects submitted for funding in other Greek Universities

MEMBER OF EDITORIAL BOARDS-OTHER ACTIVITIES

- Editor of the quarterly journal “Mineral Wealth” published by the Scientific Society of Mineral Wealth Technologists of Greece (1994-2012).
- Editor of the Proceedings of the XII Balkan Mineral Processing Congress, Delphi, June 10-14, 2007.
- International Journal of Mineral Processing, published by Elsevier.
- Minerals and Metallurgical Processing Journal, published by the Society for Mining, Metallurgy, and, Exploration, Inc. (SME).
- Journal of Mining and Metallurgy, Section A: Mining, published by the University of Belgrade - Technical Faculty of Bor, Serbia.
- Journal of Ore Dressing, published by the Mineral Processing Society of Turkey.
- Journal of Mining and Geology, published by the Nigerian Mining and Geosciences Society.
- The Open Mineral Processing Journal, published by Bentham OPEN (2007-2010).
- Buletin Resurse Minerale, published by the Romanian National Institute for Metals and Radioactive Resources - ICPMRR.
- Technical Annals, published by the Technical Chamber of Greece.

ADMINISTRATIVE POSITIONS

During his service in NTUA he has successfully undertaken the following administrative positions:

- Deputy Dean of the School Mining Eng. and Metallurgy, NTUA (2016-18)
- Member of the Dean Committee of the School Mining Eng. and Metallurgy, NTUA (2016-18)
- Vice Chair of the NTUA Board of Undergraduate Studies (2015-today)
- NTUA Quality Assurance Board (2015-2019).
- Head of the Division “Metallurgy and Materials Technology” NTUA (2010-14)
- Deputy Head of the aforementioned Division (2008-2010)
- NTUA Donations and Property Board (2010-2014)
- Greek Organization of Academic Degrees Accreditation (2008-2015)
- Administration Board of NTUA (1995-96)
- NTUA Board of Undergraduate Studies (1996-2000)
- Economic administrator of the Section “Metallurgy and Materials Science” (1996-2003)

- Greek Central Examination Board (1996-8, 2003-4) for students' admission from foreign universities and Greek Technology Institutions
- 1996-2014 member of the Board of Directors of the Scientific Society of the Mineral Wealth Technologists of Greece
- 1998-2000, member of the Administrative Board of the Greek Association of Mining Engineers and Metallurgists