

# Short curriculum vitae – Professor K. Komnitsas

## 1. GENERAL INFORMATION

DATE	March 2013
NAME	<b>Konstantinos Komnitsas</b>
OCCUPATION	Dr. Metallurgical Engineer (PhD in Hydrometallurgy) Professor, Dep. Mineral Resources Engineering Technical University Crete, Greece
HOME ADDRESS	161, March 25 <sup>th</sup> str, PO Box 1014 73142 Kounoupidiana Chania, Crete, Greece tel: +30-28210-49098
WORK ADDRESS	Technical University Crete Dep. Mineral Resources Engineering 73100 Akrotiri Chania, Crete, Greece tel: +30-28210-37686 fax: +30-28210-69554 Email: <a href="mailto:komni@mred.tuc.gr">komni@mred.tuc.gr</a> Webpage: <a href="http://www.mred.tuc.gr/p013215_UK.htm">http://www.mred.tuc.gr/p013215_UK.htm</a>
NATIONALITY	Greek
DATE – BIRTH PLACE	March 18, 1961, Larissa, Greece
MARITAL STATUS	Married, 2 children
LANGUAGES	Greek (Mother tongue) English (Fluent) German (Good)
MEMBERSHIP	<ol style="list-style-type: none"><li>1. Technical Chamber of Greece</li><li>2. Greek Society of Mining and Metallurgical Engineers</li><li>3. Greek Society of Mineral Wealth Scientists</li><li>4. "Alexander S. Onassis" Foundation Scholars</li><li>5. National Technical University (NTUA) Graduates Union</li><li>6. ASTM Member (Environmental Forensics)</li><li>7. EWRA Member (European Water Resources Association)</li></ol>

## 2. EDUCATION

1988-1990:	<b>Post Doctoral Research</b> , University of Wales, Cardiff School of Engineering, Division of Materials and Minerals, U.K, with an EC grant
1984-1988:	<b>PhD</b> , Laboratory of Metallurgy, School of Mining and Metallurgical Engineering, National Technical University of Athens (NTUA)
1978-1983:	<b>Diploma in Engineering</b> School of Mining and Metallurgical Engineering, National Technical University of Athens
1973-1978:	<b>Secondary School</b> , Agia, Larissa, Greece

## 3. ACADEMIC CAREER DEVELOPMENT

10 Apr. '08 -	<b>Technical University Crete</b> , Dep. Mineral Resources Engineering, Professor
01 Oct. '07 -	<b>Greek Open University</b> , Professor, Postgraduate Program "Waste Management"
12 Feb. '03 – 10 Apr. '08	<b>Technical University Crete</b> , Dep. Mineral Resources Engineering, Associate Professor
Jan '93 – 11 Feb. '03:	<b>NTUA</b> , School of Mining and Metallurgical Engineering, Senior Research Scientist

- July - Dec. '90:                   **Research Associate**, University of Wales, Cardiff School of Engineering, Division of Materials and Minerals, U.K
- Dec.'88 - May '90:               **Post Doctoral Research Fellow**, University of Wales, Cardiff School of Engineering, Division of Materials and Minerals, U.K (European Commission Grant)

#### 4. ACTIVITIES

##### Grants

1. Nov. 2009. The Laboratory of "Management of Mining/Metallurgical Wastes and Rehabilitation of Contaminated Soils" was selected with fifteen other European laboratories by the European standardisation committ  CEN in the line of inter-laboratory evaluation, for the determination of neutralization potential of mining wastes as part of the implementation of the Directive on the management of wastes from the extractive industries, based on the validation of preliminary standard prEN 15875 (<http://www.cen.eu/cenorm/homepage.htm>).
2. Sep. 2003: Alexander S. Onassis Foundation. Grant for implementation of reaseach project after a competitive call
3. 3 May 2002: Abdi Ipekci prize as Editor-in-Chief of the *European Journal of Mineral Processing and Environmental Protection*
4. 01/12/88 - 31/05/90: European Commission (Directorate Biology - Division Biotechnology). Research grant. Research was carried out at Cardiff School of Engineering
5. 1984-1986: "Alexander S. Onassis Foundation", Grant for PhD studies

##### Editor – Member of journal Editorial Boards

1. Member of the Editorial Board of the journal *Environmental Forensics*, (since 1/2005), <http://www.environmentalforensics.org/journal.htm>
2. Member of the Editorial Board of the journal *Minerals Engineering*, <http://www.elsevier.nl/locate/issn/08926875> (since 04/2000)

##### Evaluator of Research Proposals

1. Mar. 2013. 2 proposals in environment/materials for reintegrating scientists, Ministry of Education and Science, Russian Federation
2. Feb. 2013. 6 proposals in materials/metallurgy for the National Centre for Research and Development, Poland
3. Jan. 2013. Technical revieww of an ongoing FP7 Collaborative project, Appointment letter CT-EX2002B000337-118
4. Nov. 2012. 10 proposals FP7-ENV2013, 6.3.2 (Eco-innovative demonstration projects) one and 2 stage, Appointment letter CT-EX2002B000337-117
5. Oct. 2012. Portugese Center of Research and Technology (FCT), remote
6. July 2012. National Centre of Research and Technology of Kazakhstan (remote)
7. July 2012. Bilateral proposals Greece-Slovak Republic (remote)
8. 11-15 June 2012. European Commission, Stage 2 proposal evaluation, call "NMP.2012.1.2-1 Nanotechnology solutions for in-situ soil and groundwater remediation", Appointment letter CT-EX2002B000337-116
9. 11 Feb. 2012. Basic research proposals, National Technical University of Athens
10. 1-4 Feb. 2012. Greek Ministry of Education, GSRT, Support of new SMEs in RTD activities
11. 24/11-8/12/11. European Commission, 10 proposals, stage 1 proposal evaluation, "NMP.2012.1.2-1 Nanotechnology solutions for in-situ soil and groundwater remediation", Appointment letter CT-EX2002B000337-115 (remote)
12. Sep. 2011. Science Foundation of Georgia (remote)
13. Sep. 2011. European Commission, Appointment letters CT-EX2002B000337-113 and 114
14. July 2011. Ministry of Education and Science, Russian Federation, proposals for reintegration of Russian scientists
15. 18-20 July 2011. Greek Ministry of Education, GSRT, 36 proposals for supporting research and innovation in SMEs
16. July 2011. Research proposals in materials, Czech Science Foundation (remote)
17. Nov. 2010. Research proposals, National Science Foundation, Arlington, VA, USA (remote)
18. Oct. 2010. Research proposals, Ministry of Education and Science, Russian Federation (remote)
19. Oct. 2010. Research proposals, Ministry of Science and Technological Development, Serbia (remote)

20. 25 Sep. 2010. Basic research proposals, National Technical University Athens
21. 1-3 Sep. 2010. Innovation proposals (32), General Secretariat of Research and Technology, Athens
22. July 2010. Basic research proposal, Czech Science Foundation (remote)
23. 23 Apr. 2010. Heraklitus proposals, Greek Ministry of Education, Athens
24. Mar. 2010. Materials research proposals (1) for the Cyprus Research Promotion Foundation (remote)
25. Mar. 2010. Cooperation proposals (3), General Secretariat of Research and Technology, Athens
26. 3 Feb. 2010. Student training proposals (3), Greek Ministry of Education, Athens
27. Nov. 2009. Environmental research proposals (2) for the Cyprus Research Promotion Foundation
28. 21-23 Sep. 2009 and 5 Jan. 2010. 31 Heraklitus proposals, Greek Ministry of Education, Athens
29. 8 May. 2009. Independent Expert of an ongoing FP6 IP, NMP3-CT-2005-011783 (Appointment Letter CT-EX2002B000337-111)
30. 3 Mar. 2009. Independent Expert of an ongoing FP6 IP, NMP3-CT-2004-500253 (Appointment Letter CT-EX2002B000337-110)
31. 30 June 2008. Environmental research proposals (2) for the Cyprus Research Promotion Foundation, Athens
32. 7 June 2008. Basic research proposals, National Technical University Athens, Greece
33. 6 Mar. 2008. Independent expert of an ongoing FP6 IP, NMP3-CT-2005-011783 (Appointment Letter CT-EX2002B000337-109)
34. 13 Sep. 2007. Environmental research proposals for the Cyprus Research Promotion Foundation, Athens
35. 7 July 2007. Basic research proposals, National Technical University Athens, Greece
36. Apr. 2007. Remote evaluation of SEE ERA- NET proposals through Extranet of European Commission
37. 9 Dec. 2006. Basic research proposals, National Technical University Athens, Greece
38. 28-29 Nov. 2006. Independent expert for a FP6 NoE project on new materials, NMP3-502243, Brussels, (Appointment Letter CT-EX2002B000337-108)
39. 10-13 Oct. 2006. Reviewer of completed INCO projects, Brussels.
40. 11 Sep. and 2 Oct. 2006. Environmental research proposals for the Cyprus Research Promotion Foundation
41. June-July 2006. INTAS research proposals (through EC Extranet)
42. 10-14 Apr. 2006. Proposals between Greek and Non-EU organizations, General Secretariat of Research and Technology, Greece
43. 3-20 Mar. 2006. Remote evaluation of European Commission Leonardo da Vinci proposals
44. 17 Nov. 2005. Independent expert for a FP6 NoE project on new materials, Brussels
45. 13-14 Oct. 2005. Proposals for DG International Cooperation (Call for Proposals "FP6-2004-INCO-MPC-3"), Brussels
46. 10-13 Oct. 2005. Proposals for DG Research (Call for Proposals "FP6-2004-NMP-TI-4"), Brussels
47. Aug. 2005. INTAS research proposals (through EC Extranet)
48. 19 July 2005. Environmental research proposals for the Cyprus Research Promotion Foundation, Athens, Greece
49. Apr.- May 2005. Proposals for the Regional Network of Technology Supply – RENTS of Crete, Tech. University Crete
50. 6-8 Apr. 2005. Reviewer of completed INCO proposals (Appointment Letter CT-EX2002B000337-102), Brussels
51. 5 Apr. 2005. Environmental research proposals for the Cyprus Research Promotion Foundation, Athens, Greece
52. Feb. 2005. Innovation proposals (CRINNO program), Tech. University Crete
53. 14-16 Dec. 2004. Educational proposals, Greek Ministry of Education
54. 22 Nov. 2004. Environmental research proposals for the Cyprus Research Promotion Foundation, Athens, Greece
55. Sep.-Oct. 2004. INTAS research proposals and innovation grants (through EC Extranet)
56. 15 Sep. 2004. Environmental Greek-French bilateral proposals (GSRT)
57. 13 Sep. 2004. Environmental Greek-Slovenia bilateral proposals (GSRT)
58. 29 Mar. 2004. 3 Environmental proposals for the Cyprus Research Promotion Foundation, Athens, Greece.
59. 22 Mar. 2004. 10 materials-environment Greece-Serbia and Montenegro bilateral co-operation proposals, General Secretariat of Research and Technology, Athens, Greece.

60. 14-18 Mar. 2004. Leonardo da Vinci proposals (CONTRACT NUMBER –2004-99999-27), Brussels.
61. 3 Mar. 2004. 6 environmental Greece-Hungary bilateral co-operation proposals, General Secretariat of Research and Technology, Athens.
62. Sep. 2003. INTAS proposal (on-line evaluation through INTAS extranet)
63. 10 – 13 June 2003. FP6 WBC STREPs (Appointment Letter CT-EX2002B000337-101), Brussels.
64. June 2003. 16 research proposals, Greek Ministry of Education, Athens, Greece.
65. 31 Mar. – 5 Apr. 2003. FP6 NMP NoEs (stage 1), Appointment Letter FP6-2002-NPM-1-00042, Brussels.
66. 13 May 2002: 4 environmental research proposals for the Cyprus Research Promotion Foundation, Athens, Greece.
67. May 2002. Greek proposals for post-graduate research, Greek Ministry of Education, Greece.
68. 2-6 July 2001: FP5 proposals (Contract Letter IEA2-CT2001-0013), Brussels.
69. 6 Mar. 2001. 4 environmental research proposals for the Cyprus Research Promotion Foundation, Athens, Greece.
70. 17-19 May 2000: FP5 proposals (Contract Letter IEA2-CT2000-00003), Brussels.
71. 4-15 Oct. 1999: FP5 proposals (Contract Letter ERBIEA2CT995033), Brussels.
72. Mar. 1994. Greek research proposals, Greek Secretariat of Research and Technology.

#### **Conference co-chair**

1. ILR-SUD 2010 – Co-organiser, 2<sup>nd</sup> International Conference on Indicators for Land Rehabilitation and Sustainable Development, 18-19 Sep. 2010, Beijing, China, <http://www.iccta.cn/ilrsud/en/index.html>
2. Co-chair “3<sup>rd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology”, 7-9 Sep. 2009, Athens, Greece, <http://heliotopos.conferences.gr/amireq2009>
3. ILR-SUD 2008 – Co-organiser, 1<sup>st</sup> International Conference on Indicators for Land Rehabilitation and Sustainable Development, 20-21 Oct. 2008, Beijing, China, <http://www.ilr-sud.cn/cicta/ilr-sud/en/index.html>
4. Co-chair “2<sup>nd</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology”, 25-27 Sep. 2006, Chania, Crete, Greece, <http://heliotopos.conferences.gr/amireq2006>
5. Co-chair Geoenvironmental and Geotechnics Workshop, 12-14 Sep. 2005, Milos, Greece, <http://milos.conferences.gr/index.php?id=1751>
6. Co-chair of the “1<sup>st</sup> International Conference on Advances in Mineral Resources Management and Environmental Geotechnology”, 7-9 June 2004, Chania, Crete, Greece, <http://heliotopos.conferences.gr/amireq2004>

#### **Member in conference scientific committees**

1. International Mineral Processing Congress (IMPC) 2014, 20-24 Oct. 2014, Santiago, Chile, <http://www.impc2014.org/2014/>
2. 6<sup>th</sup> International Conference “Sustainable Development in the Minerals Industry (SDIMI 13)”, 30 June-2 July 2013, Milos, Greece, <http://sdimi2013.conferences.gr/sdimi2013-home.html>
3. 13<sup>th</sup> International Conference of the Geological Society of Greece, 5-8 Sep. 2013, Chania, <http://www.ege13.gr/>
4. International Symposium “Olive oil mill wastes and environmental protection”, 16-18 Oct. 2012, Chania, Crete, <http://www.prosodol.gr/Crete2012/?q=node/5>
5. 3<sup>rd</sup> International Symposium on Green Chemistry for Environment and Health, Skiathos, Oct. 3-5, 2012, <http://www.greenchem3.prd.uth.gr/>
6. 2<sup>nd</sup> International Symposium on Green Chemistry for Environment and Health, Mykonos, Sep. 27-29, 2010, <http://www.greenchem2.prd.uth.gr/organization.html>
7. INGESUB 2008. Member of the Scientific Committee, International Conference on Subsoil Research, Oviedo, Spain, 10-11 Nov. 2008.
8. Scientific Committee of International Workshop on Geoenvironment and Geotechnics, 8-9 Sep. 2008, Milos, Greece, <http://milos.conferences.gr/geoenv2008>
9. Scientific Committee of 3<sup>rd</sup> International Conference on Sustainable Development Indicators in the Mineral Industries (SDIMI), June 17-20, 2007, Milos, <http://milos.conferences.gr/sdimi2007>
10. Scientific Committee of *TMS Fall 2006 Extraction & Processing Meeting: Sohn International Symposium*, 27-31 Aug. 2006, San Diego, California. <http://www.tms.org/Meetings/Specialty/FallExt2006/FallExt2006-organizingcommittee.html>
11. Scientific Committee of *Mine Water Association Congress 2005 (IMWA '05)*, 5-8 Sep. 2005, Oviedo, Spain, <http://www.imwa.info/>

12. Scientific Committee of 5<sup>th</sup> Conference "Integrated Management of Water Resources organized by the Greek committee for management of water resources, Xanthi, Greece, 6-9 April 2005, <http://www.waterinfo.gr/>
13. Organizing Committee of 15<sup>th</sup> International Biohydrometallurgy Symposium, IBS, 14-19 Sep. 2003, Athens, <http://www.nereusgroup.gr/congress/ibs2003/>.
14. Scientific committee of International Workshop Sustainable Development Indicators in the Mineral Industries (SDIMI), 21-23 May 2003, Milos island, Greece, <http://www.heliotopos.net/conf/sdimi2003/index.htm>.

#### **National Representative activities**

1. Feb. 2007. Deputy national representative at the TAC committee for the Directive 2006/21/EC
2. Oct. 2006- Jan. 2009. National representative FP7 (2006-2013) for International Cooperation
3. 22-29 Nov. 2003. Member of Greek delegation in an official visit to China for strengthening Sino-Greek scientific cooperation (2 presentations in Beijing and Nanjing).
4. Nov. 2002 – May 2004. National representative of the horizontal configuration of the programme committee of the FP6 programme "Integrating and Strengthening the European Research area" (appr. 8 meetings per year).
5. Jan. 2002 – Mar. 2003. Participation as national expert in the FP6 committee for the establishment of rules of participation (model contract) of legal entities (8 meetings).

## **5. TUTORIALS**

### **Post-graduate courses**

#### ***Technical University Crete (TUC), Dep. Mineral Resources Eng.***

1. Sustainable development in the mining and metallurgical industry (2003-today)
2. Solid waste, effluents and soil decontamination and remediation technologies (2003-today)
3. Physico-chemical processes (2003-today)

#### ***Greek Open University***

4. Hazardous Waste Management (2007- today )

#### ***National Technical University of Athens (NTUA), School of Mining and Metallurgical Eng.***

5. Soil decontamination technologies (1998-2002)
6. Refractory materials (1986-1988)

### **Graduate courses**

#### ***Technical University Crete (TUC), Dep. Mineral Resources Eng.***

1. Pollution prevention and rehabilitation technologies (2000-today)
2. Metallurgical processes (2004-today)
3. Applied geostatistics (2001-2002)

#### ***National Technical University of Athens (NTUA), School of Mining and Metallurgical Eng.***

4. Off gases treatment technologies (2000-2002)
5. Metallurgy of non-ferrous metals (2000-2001)
6. Iron and Steel Metallurgy (2000-2002)

## **6. SCIENTIFIC PUBLICATIONS**

### ***Books – Chapter in Books***

1. Kavvadias, V., Doula, M., **Komnitsas, K.** (2011). Long term effects of olive mill wastes disposal on soil fertility and productivity. In: Hazardous Materials: Types, Risks and Control (Editors: Satinder Kaor Brar), 2011 Nova Science Publishers, Inc., ISBN: 978-1-61324-425-8.

2. Modis, K., **Komnitsas, K.** (2010). How Many Data Are Enough? Estimation of an Optimum Sampling Density in Mining and Environmental Applications, in *Mine Drainage and Related Problems* (ed. B.C. Robinson), Nova Publishers. ISBN: 978-1-61668-643-7
3. **Komnitsas, K.**, Zaharaki, D. (2009). Utilisation of low-calcium slags to improve the strength and durability of geopolymers (Chapter 16), in *Geopolymers: structure, processing, properties and industrial applications*, (eds. J. L. Provis & J.S.J. van Deventer), Woodhead Publishing Ltd, UK, ISBN 978 1 84569 449 4.
4. **Komnitsas, K.** Management of radioactive wastes (Chapter 5), Rehabilitation of soils contaminated from disposal of hazardous wastes (Chapter 6), Prevention of contamination at waste disposal sites (Chapter 7), Sampling and characterization of hazardous wastes (Chapter 8), Selection and cost estimation of integrated waste management technologies (Chapter 9), pp. 93-321, in *Hazardous Wastes*, Vol. 2, Greek Open University, 2003, ISBN: 960-538-372-1.
5. **Komnitsas, K.** Liquid effluents of the mining-metallurgical industry (Chapter 11, p.p. 177-234), in *Industrial Liquid Effluents*, vol. 2, Greek Open University, 2003, ISBN: 960-538-370-5.
6. **Komnitsas, K.** Demolition wastes (Chapter 8), Solid mining and metallurgical wastes (Chapter 9), pp. 181-214, in *Municipal and other non hazardous wastes*, vol. 1, Greek Open University, 2003, ISBN: 960-538-371-3.
7. **Komnitsas, K.**, N. Belavilas, I. Polyzos. Clean up and remediation of sites affected by mining and processing activities, Chapter 1, pp. 15-64, in *Biodimatic Planning of Cities and Buildings*, Vol. 2, Greek Open University, 2001, ISBN: 960-538-383-7.

#### **Diploma Thesis**

- **Komnitsas, K.:** Kinetic study of sulphuric acid laterite leaching in ambient conditions, NTUA, 1983 (in Greek).

#### **PhD thesis**

- **Komnitsas, K.:** Sulphuric acid pressure leaching of Greek laterites. Process simulation, NTUA, 1988 (in Greek-English summary).

#### **Refereed publications in journals**

1. Kontopoulos A., **K. Komnitsas.** Sulphuric acid pressure leaching of Greek laterites, *Mineral Wealth*, 45(1986), 81-90 (in Greek, English summary).
2. Kontopoulos A., N. Kouloubi, **K. Komnitsas.** Bauxite-alumina-aluminium industry. Greek and international perspectives, *Mineral Wealth*, 50, 1987, 1-18 (in Greek, English summary).
3. Kontopoulos, A., **K. Komnitsas.** Perspectives of the mixed sulphides industry, *Mineral Wealth*, 52, 1988, 23-35, (in Greek, English summary).
4. **Komnitsas K.**, F.D. Pooley. Mineralogical characteristics and treatment of refractory gold ores. *Minerals Engineering*, 2(4), 1989, 449-457, [http://dx.doi.org/10.1016/0892-6875\(89\)90080-0](http://dx.doi.org/10.1016/0892-6875(89)90080-0)
5. **Komnitsas K.**, F.D.Pooley. Bacterial oxidation of a refractory gold sulphide concentrate from Olympias, Greece, *Minerals Engineering*, 3(3/4), 1990, 295-306, [http://dx.doi.org/10.1016/0892-6875\(90\)90125-U](http://dx.doi.org/10.1016/0892-6875(90)90125-U)
6. **Komnitsas K.**, F.D.Pooley. Optimization of the bacterial oxidation of an arsenical gold sulphide concentrate from Olympias, Greece. *Minerals Engineering*, 4(12), 1991, 1297-1303, [http://dx.doi.org/10.1016/0892-6875\(91\)90173-S](http://dx.doi.org/10.1016/0892-6875(91)90173-S)
7. **Komnitsas K.**, Constructed wetlands: A general overview, *Mineral Wealth*, 92, 1994, 39-54.
8. **Komnitsas K.**, Amenability of overburden and tailings to biooxidation, *Mineral Wealth*, 93, 1994, 37-44.
9. **Komnitsas K.**, Aspects on bacterial leaching technology, *Mineral Wealth*, 96, 1995, 45-50.
10. Kontopoulos A., **K. Komnitsas**, A. Xenidis, N. Papassiopi. Environmental characterisation of the sulphidic tailings in Lavrion, *Minerals Engineering*, 8(10), 1995, 1209-1219, , [http://dx.doi.org/10.1016/0892-6875\(95\)00085-5](http://dx.doi.org/10.1016/0892-6875(95)00085-5)
11. **Komnitsas K.**, A. Xenidis, K. Adam. Oxidation of pyrite and arsenopyrite in sulphidic spoils in Lavrion, *Minerals Engineering*, 8(12), 1995, 1443-1454, [http://dx.doi.org/10.1016/0892-6875\(95\)00109-3](http://dx.doi.org/10.1016/0892-6875(95)00109-3)
12. **Komnitsas K.**, A. Kontopoulos, I. Lazar, M. Cambridge. Risk assessment and proposed remedial actions in coastal tailings disposal sites in Romania, *Minerals Engineering*, 11(12), 1998, 1179-1190, [http://dx.doi.org/10.1016/S0892-6875\(98\)00104-6](http://dx.doi.org/10.1016/S0892-6875(98)00104-6)
13. **Komnitsas K.**, I. Lazar, I.G. Petrisor. Application of a vegetative cover on phosphogypsum stacks, *Minerals Engineering*, 12 (2), 1999, 175-185, [http://dx.doi.org/10.1016/S0892-6875\(98\)00130-7](http://dx.doi.org/10.1016/S0892-6875(98)00130-7)
14. Groudev S., S.G. Batkova, **K. Komnitsas.** Treatment of waters polluted with radioactive elements and heavy metals by means of a laboratory passive system, *Minerals Engineering*, 12 (3), 1999, 261-270, [http://dx.doi.org/10.1016/S0892-6875\(99\)00004-7](http://dx.doi.org/10.1016/S0892-6875(99)00004-7)

15. Hallett C., **K. Komnitsas**, S. Groudev. Mining wastes at Vromos Bay, *Mining Environmental Management*, 7(3), 1999, 10-12.
16. Paspaliaris I., N. Papassiopi, A. Xenidis, **K. Komnitsas**. Remediation of land contaminated by mining and metallurgical activities in Lavrion area, *Mining and Metallurgical Annals*, v. 1-2, 1999, 31-54.
17. Peppas A., **K. Komnitsas**, I. Chalikia. Use of organic covers for acid mine drainage control, *Minerals Engineering*, 13 (5), 2000, 563-574, [http://dx.doi.org/10.1016/S0892-6875\(00\)00036-4](http://dx.doi.org/10.1016/S0892-6875(00)00036-4)
18. Tabouris S., D. Kolitsa, A. Xenidis, **K. Komnitsas**. Environmental impact assessment of sulphidic spoils in Lavrion, *Mineral Wealth*, 114 (2000), 19-32 (in Greek, English summary).
19. **Komnitsas K.** Methodology for the assessment of pollutants risk at industrial and hazardous waste disposal sites (in Greek), *Mining and Metallurgical Annals*, v. 10 (1), 2000, (in Greek, English summary).
20. **Komnitsas K.**, A. Xenidis, S. Tabouris. Composite cover for the prevention of acid mine drainage, *Mining Environmental Management*, v.8 (6), 2000, 14-17.
21. **Komnitsas K.**, A. Peppas, I. Chalikia. Prediction of the life expectancy of organic covers, *Minerals Engineering*, 13(14-15), 2000, 1589-1601, [http://dx.doi.org/10.1016/S0892-6875\(00\)00142-4](http://dx.doi.org/10.1016/S0892-6875(00)00142-4)
22. Groudev S.N., I.I. Spasova, P.S. Georgiev, **K. Komnitsas**. Bioremediation of soil contaminated with radioactive elements, *Hydrometallurgy*, 59, 2001, 311-318.
23. **Komnitsas K.**, I. Petrisor. Environmental Characterization and risk assessment of Somova waste dumps, *Mineral Wealth*, 118, 2001, 53-60.
24. **Komnitsas K.**, I. Paspaliaris, M. Zilberchmidt, S. Groudev. Environmental impacts at coal waste disposal sites. Efficiency of desulphurization technologies, *Global Nest*, 3(2), 2001, 135-142.
25. Petrisor I., **K. Komnitsas**, I. Lazar, A. Voicu, S. Dobrota, M. Stefanescu. Biosorption of heavy metals from leachates generated at mine waste disposal sites, *The Journal of European Mineral Processing and Environmental Protection*, 2(3), 2002, 158-167.
26. Xenidis, A., N. Papassiopi, **K. Komnitsas**. Carbonate rich mine tailings in Lavrion: Risk assessment and proposed rehabilitation schemes, *Advances in Environmental Research*, vol. 7 (2), 2003, 207-222, [http://dx.doi.org/10.1016/S1093-0191\(02\)00017-5](http://dx.doi.org/10.1016/S1093-0191(02)00017-5)
27. **Komnitsas K.**, A. Xenidis. Acid Mine Drainage – Generation, Impacts and Control in mixed sulphide mines and disposal sites, *Tech. Chron. Sci. J*, v. 1/2, 2001, 19-36 (in Greek, English summary).
28. **Komnitsas K.**, D. Kolitsa, I. Paspaliaris, Use of reactive materials for the clean up of acidic leachates generated from mine waste dumps, *Tech. Chron. Sci. J*, 1/2, 2002, 17-25.
29. Zilberchmidt M., M. Shpirt, **K. Komnitsas**, I. Paspaliaris. Thermal processing of sulfur containing coal wastes, accepted for presentation, *Minerals Engineering*, 17, 2004, 175-182, <http://dx.doi.org/10.1016/j.mineng.2003.10.026>
30. **Komnitsas K.**, G. Bartzas, I. Paspaliaris. Efficiency of limestone and red mud barriers: laboratory column studies, *Minerals Engineering*, 17, 2004, 183-194, <http://dx.doi.org/10.1016/j.mineng.2003.11.006>
31. **Komnitsas K.**, G. Bartzas, I. Paspaliaris, Treatment of inorganic contaminants using fly ash barriers: laboratory column studies, *Global Nest*, 2004, 1, 81-89.
32. Petrisor I., S. Dobrota, **K. Komnitsas**, I. Lazar, C. M. Kuperberg, M. Serban. Artificial inoculation - Perspectives in tailings phytostabilization, *International Journal of Phytoremediation*, 6(1), 2004, 1-15, <http://dx.doi.org/10.1080/16226510490439918>
33. Bartzas, G., **K. Komnitsas**, I. Paspaliaris (2006). Laboratory evaluation of Fe<sup>0</sup> barriers to treat acidic leachates, *Minerals Engineering*, 19(5), 505-514, <http://dx.doi.org/10.1016/j.mineng.2005.09.032>
34. **Komnitsas, K.**, G. Bartzas, I. Paspaliaris (2006). Inorganic contaminant fate assessment in zero-valent iron treatment walls, *Environmental Forensics*, 7, 207-217, <http://dx.doi.org/10.1080/15275920600840479>
35. **Komnitsas, K.**, G. Bartzas, I. Paspaliaris (2006). Modeling of reaction front progress in fly ash permeable reactive barriers, *Environmental Forensics*, 7, 219-231, <http://dx.doi.org/10.1080/15275920600840552>
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4. **Komnitsas, K.** (2011). Potential of geopolymer technology towards green buildings and sustainable cities, 2011 International Conference on Green Buildings and Sustainable Cities, Bologna, 14-16 Sep. 2011.

### **Refereed publications in International Conferences**

1. Kontopoulos A., **K. Komnitsas**. Sulphuric acid pressure leaching of low-grade Greek laterites. *Proceedings of the 1st International Symposium on Hydrometallurgy*, (Zheng Yulian, Xu Jiazhong eds.), Pergamon Press, Oxford 1988, 140-144, 12-15 Oct. 1988, Beijing, China.
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86. Katsimicha, D., Pentari, D., **Komnitsas, K.** (2013). Effect of grinding on the sorption potential of a Greek natural zeolite for the removal of heavy metals from solutions, 13<sup>th</sup> International Congress of the Geological Society of Greece, 5-8/9/2013, Chania, Crete, <http://www.ege13.gr/>

## 8. IMPLEMENTATION OF RESEARCH PROJECTS

### Completed

1. *Jan.-Oct.'85*: Leaching and flotation of magnesite ores, funded by FIMISCO S.A., Greece, principal researcher, supervised by late Prof. A. Kontopoulos (NTUA).
2. *Oct.'85-Feb.'87*: Present status and development prospects of the Greek metallurgical industry during 1985-1995, funded by the Greek General Secretariat of Research and Technology (GSRT), member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
3. *Oct.'86-Aug.'88*: Development of an industrial method for sulphuric laterites leaching, funded by the GSRT, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
4. *Sep.'87-Aug.'88*: Recovery of magnesium from flotation tailings, funded by ELEVME, Greece, principal researcher, supervised by late Prof. A. Kontopoulos (NTUA).

5. *Jan.-Aug. '88*: Strength of iron ores at low temperatures, funded by Parnassos Bauxites S.A, Greece, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
6. *May-Dec. '90*: Bacterial leaching of zinc flotation tailings, funded by HZL, India, principal researcher, supervised by Prof. F.D. Pooley (University of Wales, College Cardiff, U.K).
7. *May-Dec. '90*: Recovery of metals from flotation tailings, funded by SOMINCOR Portugal, principal researcher, supervised by Prof. F.D. Pooley (University of Wales, College Cardiff, U.K).
8. *Jan. '93-June '95*: Optimization of bacterial leaching for the treatment of refractory arseniferous gold ores, funded by EC, Contract No MA2M-CT90-0055, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
9. *Jan. '93-Feb. '94*: Modern technologies for the production of secondary lead from used batteries, funded by GSRT, Contract No 90 BE 63, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
10. *Aug. '93-Jan. '96*: Bioremediation of sites affected by acid mine drainage by accelerated bioleaching of mine wastes, funded by EC, Contract No EV5V-CT93-0248, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
11. *Nov. '93-Oct. '95*: Kinetic study of pressure laterite leaching and determination of precipitated compounds, funded by GSRT, PAVE program, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
12. *Sep. '92-Aug. '97*: Environmental management in the mining and metallurgical industry, 2 consecutive TEMPUS projects, Contract Nos, JEP-03657-92 και JEP-03657-BG95, funded by Tempus Office, member of a team, supervised by late Prof. A. Kontopoulos (NTUA).
13. *Apr.-June '95*: Remediation actions at Lavrion Technological Park (ex lead smelter), Greece, funded by NTUA, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
14. *July '95-Feb. '96*:Lavrion slags toxicity – potential use for the extension of Lavrion harbour, funded by Alfa Techniki S.A, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
15. *Nov. '95-Apr. '96*: Environmental Assessment at Lavrion Technological Park, funded by Greek Structural Fund, member of a research team, supervised by Prof. K. Kassios (NTUA).
16. *Dec. '95- Nov. '96*: Rehabilitation of a tailings dam at Lavrion Technological Park, funded Greek Structural Fund, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
17. *Feb. '97-July'99*: Pollution at Black Sea coastal areas due to mining activities. Pilot scale rehabilitation actions, funded by EC, Contract No IC15-CT96-0114, member of a research team, supervised by late Prof. A. Kontopoulos (NTUA).
18. *Apr. '97-June'99*: Prevention of acide mine drainage generation at Lavrion by wet-dry covers, funded by GSRT, PENED program, Contract No 95 ED 917, member of a research team, supervised by late Prof. A. Kontopoulos – Prof. I. Halikia (NTUA).
19. *June '97-May '98*: Risk assessment at lignite mines, funded by the Greek Power Corporation (DEH), member of a research team, supervised by Prof. K. Kassios (NTUA).
20. *Sep. '98-Aug.2000*: Study and application of remediation technologies for mitigation of pollution emanating from uranium wastes in Romania, funded by GSRT, Greek-Romania bilateral cooperation program, principal researcher, supervised by Prof. I. Halikia (NTUA).
21. *Jan. '98-Dec. '99*: Pollution prevention and rehabilitation techniques at mining areas, funded by the Greek Ministry of labour, ADAPT program, member of a research team, supervised by Prof. K. Kassios (NTUA).
22. *Oct. '99-Mar. '01*: Oprimized system for waste management at a lead smelter, funded by GSRT, program EPET II, principal researcher, supervised by Prof. I. Paspaliaris (NTUA).
23. *Oct.99-Dec. 2000*: Integrated soil rehabilitation at Lavrion Technological Park, funded by Greek Structural Fund, member of a research team, supervised by Prof. P. Neou (NTUA).
24. *Sep. '00-Dec. '03*: Environmental management of hazardous mining wastes and effluents (Enviman), funded by EC, Copernicus II project, Contract No ICA2-CT-2000-10010, principal researcher, supervised by Prof. I. Paspaliaris (NTUA).
25. *Mar.'00–Feb.'03*. Life cycle assessment of mining and metallurgical projects (Licymin). Funded by EC, Growth Program, Contract No G1RD-CT2000-00162, member of a research team, supervised by Prof. I. Paspaliaris (NTUA).
26. *Oct. 2003- May 2005*. Prevention of groundwater pollution from effluents produced by mining and metallurgical activities with the use of permeable reactive barriers, Funded by: "Alexander S. Onassis" Foundation, Scientific Coordinator TUC.
27. *Aug '04–Jul. '07*. Integrated treatment of industrial wastes towards prevention of regional water resources contamination (INTREAT), INCO C.1 Environment STREP, funded by the EC, budget TUC 170,000 €, scientific co-ordinator TUC, Webpage: <http://www.labmet.ntua.gr/intreat/>

28. Sep '04 – Aug '06. Integrated industrial solid waste management in Albania (INSWAM – AL), INCO C.1 Environment, SSA, funded by the EC, budget TUC 70,000 €, scientific co-ordinator TUC, Webpage: <http://www.mred.tuc.gr/projects/inswab/index.htm>
29. Mar.'04 - Aug.'06. Innovative technologies for the management of hazardous mining wastes towards prevention of groundwater contamination, funded by the Greek Ministry of Education, PYTHAGORAS program, budget 50,000 €, scientific coordinator TUC.
30. Sep. '05 – Aug. '07. Management and remediation of hazardous industrial wastes in the Western Balkan Countries (INDUWASTE). INCO C.1 Environment, SSA, funded by the EC, budget TUC 40,000 €, webpage: <http://www.ibes.be/induwaste/>, scientific coordinator TUC
31. Apr. '06 – Dec. '06. Risk assessment study at the Somika plant, Katanga province, Kongo, Contrat No 48/Copirep/SE/03/2006, funded by COPIREP, budget TUC 30,000 €, consultancy (coordinator IBES, BE).
32. Jan. '06 – Dec. '07. Strategic plan for prevention of regional water resources contamination from mining and metallurgical activities in Western Balkan Area (PREWARC), INCO C.1 Environment, SSA, funded by the EC, budget TUC 25,000 €, scientific co-ordinator TUC, webpage: <http://www.labmet.ntua.gr/prewarc/index.htm>
33. Jan. '06 – Dec. '07. Integrated system for the rehabilitation of contaminated areas in waste disposal sites with the use of innovative technologies, Bilateral Sino-Greek cooperation project, funded by the Greek General Secretariat of Research and Technology, budget TUC 11,150 €, scientific co-ordinator TUC, <http://www.mred.tuc.gr/projects/GR-China/index.htm>
34. Oct. '06. - Sep. '07. Elucidation of inorganic polymers synthesis mechanisms, funded by the Research Committee of Technical University Crete, basic research project, scientific coordinator.
35. June '06 – May '08. Optimization of the permeable reactive barriers performance for the decontamination of leachates and groundwater, bilateral Greek-Canada cooperation project, funded by the Greek General Secretariat of Research and Technology, budget TUC 40,000 €, scientific co-ordinator TUC, <http://www.mred.tuc.gr/p042.htm>
36. Oct. '07 – Sep. '08. Elucidation of manganese removal mechanisms from metallurgical process solutions and leachates generated at waste disposal sites, funded by the Research Committee of Technical University Crete, basic research project, scientific coordinator, <http://www.mred.tuc.gr/projects/GeoImmob/GeoImmob.html>
37. Jan. 08 – Dec. 10: Consultancy services for the development of an ISO 14001 Environmental Management System at LARCO S.A, funded by Speed Ltd, consultancy
38. Oct. '08 – Sep. '10. Elucidation of heavy metal immobilisation mechanisms in inorganic polymers synthesized from electric arc ferronickel slag funded by the Research Committee of Technical University Crete, basic research project, scientific coordinator.
39. Jan. 2009 – Dec. 2012. Strategies to improve and protect soil quality from the disposal of olive oil mills' wastes in the Mediterranean region, Life+ project (PROSODOL), funded by the European Commission, Budget TUC 312.493 €, scientific coordinator, <http://www.prosodol.gr/>
40. July 2011-July 2012. Strategic study for the development of good practices towards the improvement of working environment in Greek Enterprises, participants: Technical University Crete, Eco- Efficiency Consulting and Engineering Ltd, Athanassakis – Bogris Co., Funded by STEGI of Hellenic Federation of Enterprises, Budget TUC: 45.000 €.

### **Running**

41. July 2011-June 2013. Treatment of Acid Mine Drainage Using Permeable Reactive Barriers (In-Situ Treatment) and Anaerobic Baffled Reactors (Ex-Situ Treatment), bilateral cooperation Greece-Turkey, cooperation with Harran University, funding by General Secretariat of Research and Technology, scientific coordinator TUC, <http://www.tuc.gr/treatamd.html>
42. September 2011-August 2015. Best practices for agricultural WASTES (AW) treatment and REUSE in the Mediterranean countries, LIFE+ Environment Policy and Governance 2010, Participants: TUC, Centro de Edafologia y Biologia Aplicada del Segura, Consejo Superior de Investigaciones Cientificas (CEBAS-CSIC) (Spain), Regional Center for Agricultural Experimentation and Assistance (CERSAA) (Italy), Chemical Laboratory of the Chamber of Commerce of Savona (Laboratorio Chimico CCIAA) (Italy), SIGNOSIS SPRL. (SIGNOSIS), (Belgium), funded by EC, Total project budget 1.384.799 €, TUC budget: 277.088 €, TUC coordinator, [www.wastereuse.eu](http://www.wastereuse.eu)
43. Jan. 2012 – June 2015. Development of an integrated methodology for the management, treatment and valorisation of hazardous waste (WasteVal), Thalís project. Partners: Laboratory of Metallurgy (NTUA), Laboratory of Electron Microscopy, Department of Physics (AUTH), General and Inorganic Chemical Technology, Department of Chemistry (AUTH), Research Unit of Mining / Metallurgical Waste Management and Rehabilitation of Contaminated Soils (TUC), Budget: 521.000€, funded by the Greek Ministry of Education
44. Jan. 2013 – June 2015. Recycling of quarry dust and construction and demolition wastes for the production of novel ecological building elements, Cooperation Project, Participants: Research unit of Quality Control-Health and

Safety in Minerals Industry (TUC, coordinator), Research unit of Management of mining / metallurgical wastes and rehabilitation of contaminated soils (MWSR), Technobeton S.A, Finobeton S.A, funded funded by General Secretariat of Research and Technology, Project budget: 504.250 €, MWSR TUC budget: 102.500 €

45. Jan. 2013- June 2015. Development of Mathematical Predictive Model coupled with Neural Network smoothing algorithms to Optimize Operating Conditions and Improve Energy Efficiency of Rotary Kiln and Electric Arc Furnaces in Ferronickel Production Plants (MANNFENI), Cooperation Project, Participants: NTUA (Lab. of Metallurgy, coordinator), TUC, LARCO (FeNi plant), ELKEME, TEC, funded by General Secretariat of Research and Technology, Project budget: 821.421 €, TUC budget: 69.100 €
46. Oct. 2012 – Sep. 2016. Sustainable strategies for the improvement of seriously degraded agricultural areas: The example of Pistachia vera L. LIFE+ Environment Policy and Governance 2011, Participants: TUC, Hellenic Agricultural Organization "ELGO-DEMETER"-Soil Science Institute of Athens (coordinator), Institute of Mediterranean Studies Foundation for Research and Technology, funded by EC, Total project budget 1.026.509 €, TUC budget: 175.233 €

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