

CURRICULUM VITAE

Name : Despina Vamvuka
Date of Birth : 20th June, 1958
Place of Birth : Hania, Greece
Nationality : Greek
Social Status : Widow with two children
Address : Technical University of Crete
Department of Mineral Resources Engineering
Hania, 73100
Crete, Greece
Tel: 0821-37603
Fax: 0821-69554
Email: vamvuka@mred.tuc.gr

EDUCATION

Diploma (First Honours Degree, 10) in Chemical Engineering and MSc Degree in Organic Chemical Technology, Department of Chemical Engineering, University "Traian Vuia" of Timisoara, Rumania 1982

MSc Degree in Advanced Chemical Engineering, Department of Chemical Engineering, University of Manchester Institute of Science and Technology (UMIST), U.K. 1983
Title of MSc Thesis: " Devolatilization and Combustion Characteristics of Low Rank Coals".
Supervisor: Prof. E.T. Woodburn

Ph.D Degree in Chemical Engineering, Department of Chemical Engineering, UMIST, U.K. 1988
Title of Ph.D. Thesis: " Thermogravimetric Analysis Studies of Low Rank Coals and Modelling of Combustion and Gasification Processes in Entrained Systems".
Supervisor: Prof. E.T. Woodburn

PROFESSIONAL EXPERIENCE

Teaching Assistant and Special Demonstrator, Department of Chemical Engineering, UMIST, UK 1984-1988

Post Doctor 1989-1991
Institute of Chemical Engineering and High Temperature Chemical Processes, University of Patras, Greece

Accosiate Teaching Scientist 1991-1992

Lecturer 1993-1995
Department of Mineral Resources Engineering, Technical University of Crete, Greece

Visiting Researcher 1994
Department of Ferrous Metallurgy, RWTH Aachen, Germany.

Assistant Professor 1996-2004

Associate Professor 2005-2010

Professor 2011-Present
Department of Mineral Resources Engineering,
Technical University of Crete, Greece

Teaching Subjects to Undergraduate Students: Coal Beneficiation, Technologies for the Exploitation of Solid Fuels and Applied Fluid Mechanics.

Teaching Subjects to Postgraduate Students: Coal Beneficiation, Clean Coal Technologies, Reduction of Emissions from Power Plants, Techniques of Physical and Chemical Processes, Physicochemical Processes, Environmental Management in Mining Industry and in Energy Production, Biomass-Bioenergy-Environment, Environmental Control in Energy Production. Air Pollution.

Department of Mechanical Engineering, University of Western Macedonia 2017-Present
Teaching Subject to Postgraduate Students: Management and Exploitation Technologies of Energy Resources
Supervisor of 96 Diploma Thesis, 28 MSc Thesis and 2 PhD Thesis

ADMINISTRATIVE POSITIONS

Member of the General Assemblies of the Departments of Mineral Resources Engineering and Environmental Engineering 1993-Present

Director of the Laboratory of Solid Fuels Beneficiation and Technology of the Department of Mineral Resources Engineering 1993-Present

Member of the Senate of the Technical University of Crete 1997-1998
2005-2006

Member of the Committees of Undergraduate and Postgraduate Studies of the Department of Mineral Resources Engineering 1998-Present

Member of the Board of Directors of the Greek Combustion Institute 2001-2016

Member of the General Assembly for the Postgraduate Program “Environmental quality control and management” of the Departments of Mineral Resources Engineering and Environmental Engineering 2004-Present

Member of the Committees of Energy and Environment of the Greek Chamber of Technology (West Crete) 2007-Present

Coordinator of the Committee of Evaluation of the Department of Mineral Resources Engineering 2012-2021

Member of the Committee of Evaluation of the Department of Mineral Resources Engineering 2021-Present

Member (assoc.) of the Regional Council of Research and Innovation 2016-Present

Consultant Professor of Energy Sector of the School of Mineral Resources Engineering 2017-Present

Member of the Deanery Board of the School of Mineral Resources Engineering 2018-2024

Member of the Company of Property Development and Management of the Technical University of Crete 2018-2021

Director of the Committee of Postgraduate Studies of the Department of Mineral Resources Engineering 2021-2024

Associate Dean of the School of Mineral Resources
Engineering 2023-2024

PROFESSIONAL MEMBERSHIP

Member of the Greek Association of Chemical Engineers 1983-Present
Member of the Greek Chamber of Technology 1983-Present
Member of the Greek Combustion Institute 1996-Present
Member of the American Chemical Society 2000-2011

GRANTS-HONORS

Grants

Grant from UMIST, Great Britain 1983-1988
Grant from COMMET STRAND BC, European Community 1994
Top 2% of researchers worldwide according to Stanford-Scopus classification 2021-Present

Invited Lecturer

Invited Lecturer in Various Universities and Associations 1994-Present

Member of Organising Committees

Member of the Organising Committee for the International Conference
"Restoration and Protection of the Environment III", Hania, Greece. August 1996
Member of the Organising Committee for the 3rd International Conference
of the Greek Section of the Combustion Institute, Patras, Greece. November 2003
Chairman and Member of the Organising Committee for the 3rd European
Combustion Meeting, ECM April 2007

Member of Scientific Committees

Member of the Advisory Board of the Mediterranean Combustion
Symposium, Antalya, Turkey. June 1999.
Member of the Advisory Board of the 1st International Conference AMIREG
Hania, Greece June 2004
Member of the Advisory Board of the 2nd International Conference AMIREG
Hania, Greece September 2006
Member of the Environmental Committee of the Technical University of Crete 2007-Present
Member of the Biomass Committee of the Technological Biofuels Platform
for Thesalia 2007-Present
Member of the Hydrogen Production Committee of the Hellenic Platform
For Hydrogen and Fuel Cells 2007-Present
Member of the Advisory Board of the 3rd International Conference AMIREG
Athens, Greece September 2009
Member of the Scientific Committee "Regional Steering Committee of the
region of Chania" (Program Intelligent Energy Europe) 2010-Present

Associate Editor/Editorial Board

Member of the Editorial Board of the International Scientific Journal “International Journal of Energy and Environment” published by the International Energy and Environment Foundation	2009-Present
Member of the Editorial Board of the International Scientific Journal “Energy Science and Technology” published by the Canadian Research and Development Center of Sciences	2011-Present
Associate Editor and Member of the Editorial Board of the “Scientific World Journal” published by Hindawi Publishing Corporation	2012-Present
Associate Editor and Member of the Editorial Board of the “Journal of Fuels” published by Hindawi Publishing Corporation	2012-Present
Member of the Editorial Board of the “Frontiers in Bioenergy and Biofuels” published by Frontiers Switzerland	2013-Present
Associate Editor and Member of the Editorial Board of the “Journal of Energy” and “Natural Resources”, “Int. J. of Renewable and Sustainable Energy” published by Science PG, USA	2013-Present
Member of the Editorial Board of the “Korean J. of Chemical Engineering” published by Springer	2013-Present
Member of the Editorial Board of the “Heliyon” Published by Elsevier	2016-Present
Member of the Editorial Board of the “Recent Innovations in Chemical Engineering” published by Bentham Science	2017-Present
Member of the Editorial Board of the “Energy Conversion Research” published by Clausius Scientific Press	2018-Present
Member of the Editorial Board of the “Energy Research” published by Int. Technology and Science Publications	2018-Present
Member of the Editorial Board of the “J. of Agricultural and Soil Science” published by Iris Publications	2018-Present
Member of the Editorial Board of the “J. of Environmental Science and Engineering Technology” published by Savvy Science Publications	2019-Present
Member of the Editorial Board of the “Int. J. of Science and Engineering” published by IOJPH Publication House Australia	2019-Present
Associate Editor of the “J. of Chem. Engineer Research Updates” Published by Avanti Publishers	2020-Present
Associate Editor of the “Applied Sciences” published by MDPI, Switzerland	2021-Present
Member of the Editorial Board of the “Waste” published by MDPI, Switzerland	2022-Present
Member of the Editorial Board of the “Advances in Environmental and Engineering Research” published by Lidsen Publishing Inc., OH, USA	2022-Present
Member of the Editorial Board of the “Energy and Power Technology” published by Lidsen Publishing Inc., OH, USA	2024-Present
Associate Editor of the “Frontiers in Bioenergy and Biofuels” published by Frontiers Switzerland	2024-Present
Member of the Editorial Board of the “International Journal of Environmental Science and Development” published by IJESD	2024-Present
Member of the Editorial Board of the “Edelweiss Applied Science and Technology” published by EAST	2025-Present

Referee

Referee of 56 International Scientific Journals (above included) “Energy and Fuels”, “Industrial and Engineering Energy Research”, “Environmental Science and Technology”

published by the American Chemical Society, "Fuel Processing Technology", "J. of Analytical and Applied Pyrolysis", "Bioresource Technology", "Applied Energy", "Journal of Cleaner Production", "Renewable Energy", "Biomass and Bioenergy", "Energy Conversion and Management", "Waste Management", "Sustainable Energy Technologies", "Hazardous Materials" published by Elsevier, "J. of Material Cycles and Waste Management" published by Springer, "Energy, The International Journal", published by Pergamon, "Chemical Engineering Communications", "Combustion Science and Technology", published by Taylor & Francis, "The Canadian Journal of Chemical Engineering", published by the Canadian Society for Chemical Engineers, "J. of Zhejiang University Science", published by Zhejiang University Press, "J. of the Chinese Institute of Chemical Engineers", "Biobased Materials and Bioenergy" published by American Scientific Publishers, "J. of Molecular Science", published by MDPI, Switzerland, "Chinese J. of Oceanology and Limnology" published by Science Press and Springer, "Journal of Energy and Power" published by Professional Engineering Publishing, U.K., "BioResources" published by NC. State University, USA, "J. of Energy", "Natural Resources", "Int. J. of Renewable and Sustainable Energy" published by Science PG, "Korean J. of Chemical Engineering" published by Springer and "J. of Combustion" published by Hindawi Publishing Corporation, USA, "Energy Research" published by Int. Technology and Science Publications, "J. of Agricultural and Soil Science" published by Iris Publication J. of Environmental Science and Engineering Technology" published by Savvy Science Publications, "Int. J. of Science and Engineering" published by IOJPH Publication House Australia, "J. of Chem. Engineer. Research Updates" Published by Avanti Publishers, "Waste" published by MDPI, Switzerland, "Applied Sciences" published by MDPI, Switzerland, "J. of Energy and Power Technology" published by Lidsen Publishing Inc., OH, USA, "Geomatics and Environmental Engineering" published by AGH Poland, "Edelweiss Applied Science and Technology" published by EAST, "International Journal of Environmental Science and Development" published by IJESD	1998-Present
Referee of National Research Programmes	2001-Present
Referee of GSRT (General Secretariat of Research & Technology)	2004-Present
Referee of Italian Ministry of Education, University and Research (MIUR)	2012-Present
Referee of Russian Science Foundation	2014-Present

RESEARCH PROGRAMS

1. Principal Researcher
Development of Improved Hydrogenation Catalysts for Coal-derived Liquids.
Source of Funding: EC (Joule Programme) 1989-1990
2. Principal Researcher
Development of Partial Catalytic Oxidation of Methane for the Production
of C₂ Hydrocarbons.
Source of Funding: EC (Joule Programme) 1990-1991
3. Coordinator
Qualitative Upgradement of Carbonaceous Seams from Komanos Mine by
Selective Grinding.
Source of Funding: ELKE (Technical University of Crete). 1993-1994
4. Contractor
Study on Combustion of Pulverized Coal and Plastic Wastes under
conditions simulating Blast Furnace Injection.
Source of Funding: COMMET STRAND BC, EC. 1994

- | | | |
|-----|---|-----------|
| 5. | Contractor
Increase of the Local Potential for the Recycling of Used Oils
Source of Funding: GSRT (Programme EPET II) | 1995-1998 |
| 6. | Researcher
Rational Use of Energy in Agriculture - The Case of Olive Oil Residues
Source of Funding: 17th G.D. EC (Save Programme) | 1996-1998 |
| 7. | Coordinator
Revamping the Existing Undergraduate Curriculum of the Dept. of Mineral Resources Engineering and its Tentative Application.
Source of Funding: 2nd Support Framework of the European Union | 1997-2000 |
| 8. | Contractor
Combustion Behaviour of Clean Fuels in Power Generation
Source of Funding: EC (ENERGY Programme) | 2000-2003 |
| 9. | Researcher
Advanced Demineralization of Coal
Source of Funding: EC (ECSC Programme) | 2000-2004 |
| 10. | Contractor
Study on the Use of Greek Lignites as Absorbing Materials for Retention of Gaseous Emissions
Source of Funding: EC (EPAN Programme) | 2003-2006 |
| 11. | Contractor
Revamping the Undergraduate Curriculum of the Dept. of Mineral Resources Engineering
Source of Funding: Greek Ministry of Education (Programme EPEAEK) | 2003-2005 |
| 12. | Researcher
Bioenergy chains from perennial crops in S. Europe
Source of Funding: EC (ENK6-CT2001-00524) | 2001-2005 |
| 13. | Coordinator
"Nuclear" Energy from Peaches
Source of Funding: EC and Region of Crete (CRINNO Programme) | 2005-2006 |
| 14. | Contractor
Revamping the Undergraduate Curriculum of the Dept. of Mineral Resources Engineering
Source of Funding: Greek Ministry of Education (Programme EPEAEK) | 2006-2008 |
| 15. | Contractor
Prototype Unit for Biomass Combustion
Source of Funding: GSRT (Programme Regional Innovation Pole of Crete) | 2006-2008 |
| 16. | Researcher
Demonstration of large scale biomass co-firing and supply chain integration
Source of Funding: EC (FP7 DEBCO) | 2008-2011 |
| 17. | Contractor
Economic Modeling and Assessment of CCS (Carbon Capture and Sequestration) Implenetation in Europe
Source of Funding: GSRT (Programme FENCO-ERA.NET) | 2009-2010 |
| 18. | Contractor
Strategies to improve and protect soil quality from the disposal of olive oil mills' wastes in the Mediterranean region
Source of Funding: EC (LIFE07/ENV/GR/000280) | 2009-2012 |
| 19. | Contractor
Best practices for agricultural WASTEs (AW) treatment and REUSE in the Mediterranean countries
Source of Funding: EC (LIFE10/ENV/GR/594) | 2011-2015 |
| 20. | Contractor
Sustainable strategies for the improvement of seriously degraded agricultural areas: The example of Pistachia vera L. | |

21. Source of Funding: EC (LIFE11/ENV/GR/951) 2012-2016
Contractor
Development of an integrated methodology for the management, treatment and valorisation of hazardous waste (WasteVal)
22. Source of Funding: Greek Ministry of Education (Program Thalís) 2012-2016
Coordinator
Ανάλυση χημικής σύστασης και μικροδομής προσροφητών διοξειδίου του άνθρακα
Source of Funding: National Centre of Research and Technological Development
E.K.E.T.A. 2013
23. Researcher.
Optimization of Clean Fuels performance for low carbon emissions
Source of Funding: GSRT (Programme ARISTIA II No 4466) 2014-2016
24. Contractor
“BEWEXMIN-Bucket wheel excavators operating under difficult mining conditions including unmineable inclusions and geological structures with excessive mining resistance”
Source of Funding: EC (Programme RFCR-CT-2015-00003) 2015-2018.
25. Researcher
“Innovative technologies for climate change mitigation by Mediterranean agricultural sector”
Source of Funding: EC (Programme LIFE17 CCM/GR/000087) 2018-2022
26. Researcher
“DEcision system For Irrigation in Crete based on Innovative Technologies – DE.F.I.C.I.T, ΟΠΣ (MIS) 5028242”
Source of Funding: Επιχειρησιακό Πρόγραμμα Κρήτη 2014-2020, Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης (ΕΤΠΑ) 2019-2022
27. Coordinator
Κυκλική Οικονομία & Υδρογόνο: Παραγωγή Καυσίμου Υδρογόνου από Δημοτικά Απόβλητα
Source of Funding: EC and Region of Crete στο πλαίσιο του έργου «Δράσεις ακαδημαϊκής καινοτομίας στο πλαίσιο λειτουργίας του Παρατηρητηρίου Καινοτόμου Επιχειρηματικότητας της Περιφέρειας Κρήτης» 2024
28. Researcher
GrEnMine - Gravitational Energy storage in the post-Mine areas (Αποθήκευση ενέργειας σε βαρυτική μορφή σε χώρους πρώην ορυχείων) 2024-2027
Source of Funding: European Commission – Research Fund for Coal and Steel.
29. Researcher
Lithium distribution and occurrence in Greek coal fly ashes. Lithium recovery from coal ashes with leaching techniques (mineral/carboxylic acids and bioleaching). 2024-2026
Source of Funding: Sunlight Company

PUBLICATIONS (Citations 10304-11885 up to 2025)

Articles in International Scientific Journals

1. M. Koussathana, D. Vamvuka, H. Economou and X. Verykios, "Slurry-phase hydrogenation of aromatic compounds over supported noble metal catalysts", *Applied Catalysis*, **77** (2), 283-301 (1991).
2. M. Koussathana, D. Vamvuka, M. Tsapatsis and X. Verykios, "Hydrogenation of aromatic compounds over noble metals dispersed on doped titania carriers", *Applied Catalysis A: General*, **80**, 99-113 (1992).
3. D. Papageorgiou, D. Vamvuka, D. Boudouvas and X.E. Verykios,

- "Oxidative coupling of methane to C₂ hydrocarbons over titania-based catalysts", *Catalysis Today*, **13**, 391-400 (1992).
4. A.M. Efstathiou, D. Boudouvas, D. Vamvuka and X.E. Verykios, "Kinetics of methane oxidative coupling on Zn-doped titanium oxide", *Applied Catalysis A: General*, **92**, 1-15 (1992).
 5. A.M. Efstathiou, D. Boudouvas, D. Vamvuka and X.E. Verykios, "Kinetics of methane oxidative coupling on Li-doped titania catalysts", *Journal of Catalysis*, **140**, 1-15 (1993).
 6. M. Koussathana, D. Vamvuka and X. Verykios, "Naphthalene hydrogenation reactivity of Rh-Re and Ru-Re formulations dispersed on doped titania carriers", *Applied Catalysis A: General*, **95**, 211-220 (1993).
 7. M. Koussathana, D. Vamvuka and X. Verykios, "Improved hydrogenation catalysts for coal-derived liquids", *International Journal of Energy Research*, **18**, 243-250 (1994).
 8. D. Papageorgiou, D. Vamvuka and X.E. Verykios, "Oxidative coupling of methane to C₂ hydrocarbons over doped titania catalysts", *Studies in Surface Science and Catalysis*, **75**, 2269-2272 (1993).
 9. D. Vamvuka, P.R. Senior and E.T. Woodburn, "Modelling of an entrained flow coal gasifier. Development of the model and general predictions", *Fuel*, **74(10)**, 1452-1460 (1995).
 10. D. Vamvuka and E.T. Woodburn, "Modelling of an entrained flow coal gasifier. Effect of operating conditions on reactor's performance", *Fuel*, **74(10)**, 1461-1465 (1995).
 11. D. Vamvuka and E.T. Woodburn, "Effect of inorganic matter on the devolatilization and combustion of low rank coals", *Technika Chronika*, **15(1-2)**, 23-33 (1995).
 12. D. Vamvuka, E.T. Woodburn, P.R. Senior, C.M. Preston, R.H. Newman, "A long-term effect of n fertilization on the 13C CPMAS NMR of de-ashed soil humin in a second-growth Douglas-fir stand of coastal British Columbia", *Geoderma*, **68(4)** (1995).
 13. R.Y. Seng, L. Fumagalli, G. Berton, W. Chia-Ju, D. Vamvuka, G. Schwanekamp, H.W. Gudenau, H.E. Newsom, K.W.W. Sims, P.D. Noil, "The depletion of tungsten in the bulk silicate earth: Constraints on core formation", *Geochimica et Cosmochimica Acta*, **60(7)** (1996).
 14. R.Y. Seng, L. Fumagalli, G. Berton, W. Chia-Ju, D. Vamvuka, G. Schwanekamp, H.W. Gudenau, H.E. Newsom, K.W.W. Sims, P.D. Noil, "Analogy between electrical machines and heat transfer-irreversible heat engines", *Int. J. of Heat and Mass Transfer*, **39(17)** (1996).
 15. D. Vamvuka, G. Schwanekamp and H.W. Gudenau, "Combustion of pulverized coal with additives under conditions simulating blast furnace injection", *Fuel*, **75(9)**, 1145-1150 (1996).
 16. D. Vamvuka, "Study on the possibility of recovering lignites from refused innerburden", *Energy Exploration and Exploitation*, **14(5)**, 439-447 (1996).
 17. D. Vamvuka, "Thermogravimetric analysis of beneficiated low-rank coal in oxidative environment", *Mineral Wealth*, **106**, 21-28 (1998).
 18. D. Vamvuka and E.T. Woodburn, "A model of the combustion of a single small coal particle using kinetic parameters based on thermogravimetric analysis", *Int. J. of Energy Research*, **22**, 657-670 (1998).
 19. S. Drakonaki, D. Vamvuka, E. Diamantopoulos, E. Lahaniatis, "Leaching behaviour of lignite fly ash", *J. of Environmental Science and Health*, **A33(2)**, 237-248 (1998).
 20. D. Vamvuka, "Gasification of coal", *Energy Exploration and Exploitation*, **17(6)**, 515-581 (1999).
 21. D. Vamvuka,

- “Environmental impacts of coal utilization on the ecosystem”, *Energy Exploration and Exploitation*, **17(6)**, 583-605 (1999).
22. D. Vamvuka,
"Chemical comminution as a method of fracturing and cleaning lignites", *J. of the Institute of Energy*, **74**, 29-37 (2001).
23. D. Vamvuka and V. Agridiotis,
"The effect of chemical reagents on lignite flotation", *International Journal of Mineral Processing*, **61**, 209-224 (2001).
24. D. Vamvuka, E. Mistakidou, S. Drakonaki, A. Foscolos and K. Kavouridis,
“Ash quality of a beneficiated lignite from Ptolemais basin, Northern Greece”, *Energy and Fuels*, **15**, 1181-1185 (2001).
25. E. Kastanaki, D. Vamvuka, P. Grammelis and E. Kakaras,
“Thermogravimetric studies of the behaviour of lignite/biomass blends during devolatilization”, *Fuel Processing Technology*, **77-78**, 159-166 (2002).
26. D. Vamvuka and T.D. Tsoutsos,
“Energy exploitation of agricultural residues in Crete”, *Energy Exploration and Exploitation*, **20(1)**, 113-121 (2002).
27. D. Vamvuka, E. Kastanaki, P. Grammelis and E. Kakaras,
“Pyrolysis characteristics and kinetics of biomass residuals mixtures with poor coal”, *Fuel*, **82**, 1949-1960 (2003).
28. D. Vamvuka, N. Pasadakis, P. Grammelis, E. Kastanaki and E. Kakaras,
“Kinetic modeling of coal/agricultural by-product blends”, *Energy and Fuels*, **17**, 549-558 (2003).
29. D. Vamvuka, E. Kastanaki and M. Lasithiotakis,
“Devolatilization and combustion kinetics of low-rank coal blends from dynamic measurements”, *Industrial and Engineering Chemistry Research*, **42**, 4732-4740 (2003).
30. D. Vamvuka, E. Kastanaki M. Lasithiotakis and C. Papanicolaou,
“Combustion behavior of xylite/lignite mixtures”, *Carbon*, **42(2)**, 351-359 (2004).
31. D. Vamvuka, C. Arvanitidis and D. Zahariadis,
“Flue gas desulfurization at high temperatures. A review”, *Environmental Engineering and Science*, **21(4)**, 525-547 (2004).
32. D. Vamvuka and D. Zografos,
“Predicting the behavior of ash from agricultural wastes during combustion”, *Fuel*, **83(14-15)**, 2051-2057 (2004).
33. D. Vamvuka, J. Hahladakis and D. Pentari,
“Leaching of toxic elements from lignite and agroresidue ashes in cultivated soils of Crete”, *Energy and Fuels*, **19**, 807-812 (2005).
34. D. Vamvuka, E. Troulinos and E. Kastanaki,
“The effect of mineral matter on the physical and chemical activation of low rank coal and biomass materials”, *Fuel*, **85**, 1763-1771 (2006).
35. D. Vamvuka and E. Kastanaki,
“A comparative reactivity and kinetic study on the combustion of coal/biomass char blends”, *Fuel*, **85(9)**, 1186-1193 (2006).
36. D. Vamvuka, D. Zografos and G. Alevizos,
“Control methods for mitigating biomass ash-related problems in fluidized beds”, *Bioresource Technology*, **99**, 3534-3544 (2008).
37. D. Vamvuka,
“Comparative fixed/fluidized bed experiments for the thermal behaviour and environmental impact of olive kernel ash”, *Renewable Energy*, **34**, 158-164 (2008).
38. D. Vamvuka, N. Salpigidou, E. Kastanaki and S. Sfakiotakis,
“Possibility of using paper sludge in co-firing applications”, *Fuel*, **88(4)**, 637-643 (2009).
39. M. Galetakis and D. Vamvuka,
“Lignite quality uncertainty estimation for the assessment of CO₂ emissions, *Energy and Fuels*, **23**, 2103-2110 (2009).
40. D. Vamvuka, M. Pitharoulis, G. Alevizos and E. Repouskou,

- “Ash effects during combustion of lignite/biomass blends in fluidized beds”, *Renewable Energy*, **34(12)**, 2662-2671 (2009).
41. D. Vamvuka and M. Galetakis,
“Carbon Dioxide Emissions from Coal-fired Power Plants in Greece in Relation to Mined Lignite Quality”, *Energy and Fuels*, **24**, 1396-1401 (2010).
 42. D. Vamvuka, V. Topouzi, S. Sfakiotakis,
“Evaluation of production yield and thermal processing of switchgrass as a bioenergy crop for the Mediterranean region”, *Fuel Processing Technology*, **91**, 988-996 (2010).
 43. D. Vamvuka, G. Bandelis,
“Evaluation of wood residues from Crete as alternative fuels”, *International Journal of Energy and Environment*, **1(4)**, 667-674 (2010).
 44. D. Vamvuka, E. Kakaras,
“Ash properties and environmental impact of various biomass and coal fuels and their blends”, *Fuel Processing Technology*, **92**, 570-581 (2011).
 45. D. Vamvuka, S. Sfakiotakis, T. Mourouzidis, G. Bandelis,
“Development of a biomass-fired combustion unit for residential heating”, *Combustion Science and Technology*, **183**, 764-778 (2011).
 46. D. Vamvuka,
“Bio-oil, solid and gaseous biofuels from biomass pyrolysis processes-an overview”, *International Journal of Energy Research*, **35(10)**, 835-862 (2011).
 47. D. Vamvuka, E. Karouki, S. Sfakiotakis, “Gasification of waste biomass chars by carbon dioxide via thermogravimetry. Part I. Effect of mineral matter.”, *Fuel*, **90**, 1120-1127 (2011).
 48. D. Vamvuka, S. Sfakiotakis, “Effects of heating rate and water leaching of perennial energy crops on pyrolysis characteristics and kinetics”, *Renewable Energy*, **36**, 2433-2439 (2011).
 49. Th. Damartzis, D. Vamvuka, S. Sfakiotakis, A. Zabaniotou, “Thermal degradation studies and kinetic modelling of cardoon (*Cynara cardunculus*) pyrolysis using thermogravimetric analysis”, *Bioresource Technology*, **102**, 6230-6238 (2011).
 50. D. Vamvuka, E. Karouki, S. Sfakiotakis, “Gasification of waste biomass chars by carbon dioxide via thermogravimetry-Effect of catalysts”, *Combustion Science and Technology*, **184**, 64-77 (2012).
 51. M. Galetakis, C. Roumpos, G. Alevizos, D. Vamvuka, “Production scheduling of a lignite mine under quality and reserves uncertainty”, *Reliability Engineering and System Safety*, **96**, 1611-1618 (2011).
 52. D. Vamvuka, S. Sfakiotakis,
“Combustion behaviour of biomass fuels and their blends with lignite”, *Thermochimica Acta*, **526**, 192-199 (2011).
 53. E. Karampinis, D. Vamvuka, S. Sfakiotakis, P. Grammelis, G. Itskos, E. Kakaras, “Fuel/ash characterization and thermogravimetric analysis of energy crops”, *Energy and Fuels*, **26**, 269-278 (2012).
 54. D. Vamvuka, S. Sfakiotakis, M. Kotronakis, “Combustion performance of orange tree residues and their blends in a fluidized bed”, *Renewable Energy*, **46**, 231-237 (2012).
 55. D. Vamvuka, S. Saxioni, “Investigation of slagging/fouling and environmental impact of ashes produced from co-combustion of urban wastes with lignite”, *Fresenius Environmental Bulletin*, **21 (11a)**, 3345-3351 (2012).
 56. D. Vamvuka, S. Sfakiotakis, K. Panopoulos, “An experimental study on the thermal valorisation of municipal and animal wastes”, *IJEE*, **4**, 191-198 (2012).
 57. D. Vamvuka, V. Tsamourgeli, M. Galetakis, “Study on catalytic combustion of biomass mixtures with poor coal”, *Combustion Science and Technology*, **186**, 68-82 (2014).
 58. D. Vamvuka, M. Trikouvertis, G. Alevizos, D. Pentari, “Evaluation of ashes of orange tree residues burned in a fluidized bed”, *Renewable Energy*, **72**, 336-343 (2014).
 59. D. Vamvuka, S. Sfakiotakis and S. Saxioni, “Evaluation of urban wastes as promising co-fuels for energy production- A TG-MS study”, *Fuel*, **147**, 170-183 (2015).
 60. D. Vamvuka, V. Tsamourgeli, D. Zaharaki, K. Komnitsas, “Evaluation of co-combustion of mediterranean biomass/ lignite blends”, *Energy Sources, Part A*, **38(14)**, 2079-2085 (2016).

61. P. Manara, D. Vamvuka, S. Sfakiotakis, C. Vanderghem, A. Richel, A. Zabaniotou, "Mediterranean agri-food processing wastes pyrolysis after pre-treatment and recovery of precursor materials: A TGA-based kinetic modeling study", *Food Research International*, **73**, 44-51 (2015).
62. Ch. Christodoulou, D. Grimakis, K.D. Panopoulos, D. Vamvuka, S. Karellas, E. Kakaras, "Circulating fluidized bed gasification of seed cakes residues after oil extraction and comparison with wood", *Fuel*, **132**, 71-81 (2014).
63. D. Vamvuka, S. Sfakiotakis, E. Pazara, K. Panopoulos, "Kinetic Modeling of Five Sustainable Energy Crops as Potential Sources of Bioenergy", *Energy Sources Part A*, **38(12)**, 1812-1818 (2016).
64. D. Vamvuka, S. Sfakiotakis, "Gasification Reactivity and Mass Spectrometric Analysis of Gases of Energy Crop Chars under CO₂ Atmosphere", *Energy and Fuels*, **29**, 3215-3223 (2015).
65. Kostas Komnitsas, Dimitra Zaharaki, Ioannis Pylotis, Despina Vamvuka, Georgios Bartzas, "Assessment of Pistachio Shell Biochar Quality and Its Potential for Adsorption of Heavy Metals", *Waste and Biomass Valorization*, **6**, 805-816 (2015).
66. S. Sfakiotakis, D. Vamvuka, "Development of a modified independent parallel reactions kinetic model and comparison with the distributed activation energy model for the pyrolysis of a wide variety of biomass fuels", *Bioresource Technology*, **197**, 434-442 (2015).
67. D. Vamvuka, M. Papas, M. Galetakis, S. Sfakiotakis, "Thermal valorization of an animal sludge for energy recovery via co-combustion with olive kernel in a fluidized bed unit: Optimization of emissions", *Energy and Fuels*, **30**, 5825-5834 (2016).
68. D. Vamvuka, M. Trikouvertis, D. Pentari, G. Alevizos, A. Stratakis, "Characterization and evaluation of fly and bottom ashes from combustion of residues from vineyards and processing industry", *J. of the Institute of Energy*, **90**, 574-587 (1017).
69. D. Vamvuka, G. Merkoulidi, M. Galetakis, "Investigation of the combustion performance of residues from vineyards and processing industry via fluidized bed experiments, factorial design and modelling", *Combustion Science and Technology*, **189 (5)**, 890-907 (2017).
70. D. Vamvuka, G. Kaniadakis, D. Pentari, G. Alevizos, Z. Papapolikarpou, "Comparison of ashes from fixed/fluidized bed combustion of swine sludge and olive by-products. Properties, environmental impact and potential uses", *Renewable Energy*, **112**, 74-83 (2017).
71. G. Bartzas, D. Vamvuka, K. Komnitsas, "Life cycle assessment of pistachio, almond and apple production", *Information Processing in Agriculture*, **4 (3)**, 188-198 (2017).
72. D. Vamvuka, M. Papas, N. Alloimonos, M. Kapenekaki, "Evaluation of Meat and Bone Meal as a secondary fuel with olive by-products in a fluidized bed unit. Performance and environmental impact of ashes", *Energy and Fuels*, **31**, 7214-7222 (2017).
73. D. Vamvuka, N. Alloimonos, "Combustion Behaviour of Olive Pruning/ Animal Manure Blends in a Fluidized Bed Combustor. Efficiency and Emissions.", *Heliyon*, **3(9)**, 1-16 (2017).
74. D. Vamvuka, S. Sfakiotakis, "Thermal Behaviour and Reactivity of Swine Sludge and Olive By-products during Co-pyrolysis and Co-combustion", *Waste and Biomass Valorization*, **10(5)**, 1433-1442 (2019).
75. S. Sfakiotakis, D. Vamvuka, "Thermal Decomposition Behavior, Characterization and Evaluation of Pyrolysis Products of Agricultural Wastes", *J. of the Institute of Energy*, **91**, 951-961 (2018).
76. D. Vamvuka, S. Sfakiotakis, O. Pantelaki, "Evaluation of gaseous and solid products from the pyrolysis of waste biomass blends for energetic and environmental applications", *Fuel*, **236**, 574-582 (2018).
77. D. Vamvuka, S. Dermitzakis, D. Pentari, S. Sfakiotakis, "Valorization of Meat and Bone Meal through Pyrolysis for Soil Amendment or Lead Adsorption from Wastewaters", *Food and Bioproducts Processing*, **109**, 148-157 (2018).
78. D. Vamvuka, S. Sfakiotakis, A. Mpoumpouris, "Slagging and fouling propencities of ashes from urban and industrial wastes", *Recent Innovations in Chemical Engineering*, **11(2)**, 145-158 (2018).

79. S. Sfakiotakis, D. Vamvuka, "Study of co-pyrolysis of olive kernel with waste biomass using TGA/DTG/MS, *Thermochimica Acta* **670**, 44-54 (2018).
80. D. Pentari, D. Vamvuka, "Cadmium removal from aqueous solutions using nano-iron doped lignite", *Earth and Environmental Science*, **221**, 012135 (2019).
81. Despina Vamvuka, Aggeliki Kreona, Aikaterini Mantza, Michael Galetakis, Anthi Vasileiou, "Use of selective grinding for upgrading quality of lignites from Greece and for reducing CO₂ emissions", *Int. J. of Coal Preparation and Utilization*, **42(5)**, 1449-1459 (2020). <https://doi.org/10.1080/19392699.2020.1724976>
82. D. Vamvuka, A. Stratakis, G. Alevizos, "Operational and Environmental Impact of Ashes Produced from Combustion of Vineyard Wastes and their Blends in Fixed and Fluidized Bed Units", *the World Journal of Agriculture and Soil Science*, **1(3)**, 1-9 (2018).
83. D. Vamvuka, D. Pentari, "Evaluation of Fluidized Bed Ashes from Animal Wastes. Properties, Environmental Impact and Valorization", *Journal Energy Research (ITS)*, **3**, 13-23 (2019).
84. D. Vamvuka, S. Alexandrakis, M. Galetakis, "Combustion Performance of a Bio-solid in Fluidized Bed. Factorial Modeling and Optimization of Emissions", *Journal Frontiers in Energy Research*, **7**, 1-10 (2019).
85. D. Vamvuka, S. Alexandrakis, I. Papagiannis, "Evaluation of Municipal Wastes as Secondary Fuels through Co-combustion with Woody Biomass in a Fluidized Bed Reactor", *Journal of the Energy Institute*, **93**, 272-280 (2020).
86. Athanasia Soutana, Michael Galetakis, Anthoula Vasiliou, Konstantinos Komnitsas, Despina Vamvuka, "Utilization of upgraded recycled concrete aggregates and recycled concrete fines in cement mortars", *Recent Progress in Materials*, **3(3)**, 1-14 (2021).
87. D. Vamvuka, D. Loukeris, E. Stamou, A. Vlasiadis, S. Sfakiotakis, G. Bandelis, "Development and performance of a multi-fuel residential boiler burning agricultural residues", *Journal Frontiers in Energy Research*, **8**, art. 136 (2020).
88. D. Vamvuka, E. Loukakou, C. Avgoustidis, A. Stratakis, F. Pavloudakis, S. Sfakiotakis, "Co-combustion characteristics of lignite/woody biomass blends. Reactivity and fusibility assessment", *Energy Sources Part A*, **45(2)**, 3916-3930 (2019). <https://doi.org/10.1080/15567036.2019.1668885>
89. D. Vamvuka, S. Alexandrakis, V. Papadakis, "Characterization, potential uses and soil leaching of urban waste/agricultural residue ash mixtures produced from fluidized bed combustion", *Int. J. of Science and Engineering*, **2(10)**, 1-18 (2019).
90. D. Vamvuka, S. Alexandrakis, "Gaseous and Solid Emissions from Combustion of a Bio-solid Waste in Fluidized Bed", *J. of Environmental Science and Engineering Technology*, **7**, 60-65 (2019).
91. D. Vamvuka, E. Loukakou, S. Sfakiotakis, E. Petrakis, "The impact of a combined pre-treatment on the combustion performance of various biomass wastes and their blends with lignite", *Thermochimica Acta*, **688**, 178599 (2020).
92. D. Vamvuka, D. Pentari, "Leaching of Heavy Metals through Soil/Fly Ashes of Waste Biomass Materials and Lignite", *Journal Energy Research (ITS)*, **3**, 39-48 (2020).
93. D. Vamvuka, K. Esser, K. Komnitsas, "Investigating the suitability of grape husks biochar, municipal solid wastes compost and mixtures of them for agricultural applications to Mediterranean soils", *Resources (MDPI)*, **9**, 1-14 (2020).
94. D. Vamvuka, C. Avgoustidis, A. Stratakis, G. Alevizos, "Assessment of Potential Impacts of Peach Kernels and Cardoon as Co-firing Fuels with Lignite through Experiments on Reactivity and Ash Behavior", *Recent Innovations in Chemical Engineering*, **13**, 353-365 (2021).
95. D. Vamvuka, S. Alexandrakis, G. Alevizos, A. Stratakis, "Recycling of waste materials for stabilizing ash from co-combustion of municipal solid wastes with an olive by-product: Soil leaching experiments", *Soil Systems*, **4(2)**, 34 (2020).
96. D. Vamvuka, K. Esser, "Experimental study on the effectiveness of an untreated animal sludge biochar to release/retain nutrients and heavy metals from soil amended with compost", *Materials International*, **2(2)**, 242-249 (2020).

97. D. Vamvuka, G. Papaioannou, S. Alexandrakis, A. Stratakis, "Control of the mobility of heavy metals in soil from disposal of bio-solid and olive by-product ashes using waste additives", *J. of Environmental Pollution*, **266**, 115136 (2020).
98. D. Vamvuka, G. Panagopoulos, S. Sfakiotakis, "Investigating potential co-firing of corn cobs with lignite for energy production. Thermal analysis and behaviour of ashes", *Journal of Coal Preparation and Utilization*, **42(8)**, 2493-2504 (2022).
99. D. Vamvuka, G. Panagopoulos, A. Stratakis, "Thermal Behavior and the Role of Minerals of Agricultural Waste/Lignite Blends on Combustion Performance and Slagging/Fouling Propensity", *Science and Technology* **4(8)**, 460-469 (2020).
100. D. Vamvuka, M. Deli, A. Stratakis, "Effect of mineral additives on fusion behaviour of agricultural residue ashes during combustion or co-combustion with lignite", *Journal of Energy and Power Technology*, jept.2104047, **4(3)**, 1-22, 2021.
101. D. Vamvuka, E. Machairas, S. Sfakiotakis, O. Pantelaki, "Physically Activated Agricultural Waste Biochars for Production of Pollutant Adsorbents", *J. of Chemical Engineering Research Updates*, **7**, 6-15 (2020).
102. D. Vamvuka, M. Diamantaki, S. Sfakiotakis, "Combustion performance and kinetic modelling of lignite blended with torrefied biomass of different origin", *J. of Green Energy*, **19 (11)**, 1221-1229 (2022) <http://doi.org/10.1080/15435075.2021.1987914>
103. D. Vamvuka, A. Teftiki, S. Sfakiotakis, "Increasing the reactivity of waste biochars during their co-gasification with carbon dioxide using catalysts and bio-oils", *Thermochimica Acta*, **704**, 179015 (2021).
104. D. Vamvuka, A. Teftiki, "Catalytic gasification of waste biomass blends with carbon dioxide", *Science and Technology*, **5(7)**, 1016-1021 (2021).
105. D. Vamvuka, A. Stratakis, "Recycling of Agricultural and Forest Wastes in Brick Manufacturing", *Journal Energy Research, (ITS)*, **6(1)**, 18-29 (2022).
106. D. Vamvuka, A. Raftogianni, "Evaluation of pig manure for environmental or agricultural applications through gasification and soil leaching experiments", *Applied Sciences*, **11**, 12011 (2021).
107. D. Vamvuka, A. Teftiki, S. Sfakiotakis, "Investigating the valorisation of refused derived fuel for energetic uses through its co-gasification with woody wastes", *World Journal of Environmental Biosciences*, **11(1)**, 37-44 (2022).
108. D. Vamvuka, E. Geladari, "Evaluating co-application of horse manure and biochar mixtures for amelioration of Mediterranean soils", *Science and Technology*, **6(1)**, 1089-1095 (2022).
109. D. Vamvuka, I. Chatzifitiadis, "Energy Recovery from Solid Waste Materials via a Two-step Gasification Process by Steam", *European Journal of Energy Research*, **2(2)**, 20-24 (2022).
110. D. Vamvuka, E. Afthentopoulos, S. Sfakiotakis, "H₂-rich gas production from steam gasification of a winery waste and its blends with industrial wastes. Effect of operating parameters on gas quality and efficiency.", *Renewable Energy*, **197**, 1224-1232 (2022).
111. D. Vamvuka, C. Loulashi, "Catalytic Co-gasification of Lignites with a Forest Residue under a Carbon Dioxide Stream", *Catalysis Research*, **2(3)**, 2203031 (2022).
112. D. Vamvuka, K. Esser, D. Marinakis, G. Kalantzakis, "Evaluation of Pyrolysis Products of Industrial Wastes as Potential Feedstocks for Bioenergy and Biofuels", *Advances in Environmental and Engineering Research*, **4 (1)**, 2301005 (2023)
113. D. Vamvuka, K. Esser, D. Marinakis, "Characterization of Pyrolysis Products of Forest Residues and Refused Derived Fuel and Evaluation of their Suitability as Bioenergy Sources", *Applied Sciences*, **13**, 13031482 (2023).
114. D. Vamvuka, P. Tzilivakos, E. Afthentopoulos, H. Chatzifotiadis, "Comparative study on the gasification performance of two energy crops by steam or carbon dioxide", *Bioresource Technology Reports*, **21**, 101320 (2023).
115. D. Vamvuka, D. Pentari, V. Stathopoulou, E. Sdokou, "Physically activated nut residues as strontium and manganese adsorbents from contaminated waters-Equilibrium and isotherm models", *J. of Multidisciplinary Engineering Science Studies*, **9(4)**, 1-9 (2023).
116. D. Vamvuka, S. Sfakiotakis, E. Patlaka, "A comparison between two kinetic models for the pyrolysis and gasification of woody wastes under a carbon dioxide atmosphere", *Bioresource Technology Reports*, **22**, 101487 (2023).

117. D. Vamvuka, J. Elmazaj, M. Berkis “Enhanced H₂ gas production from steam gasification of a winery waste through CO₂ capture by waste concrete fines and use of alkali catalysts”, *Renewable Energy*, **219**, 119428 (2023)
118. D. Vamvuka, P. Tsilivakos, “Energy recovery from municipal solid waste through its co-gasification by steam or carbon dioxide with olive by-products”, *Energies*, **17 (2)**, **304**, 17020304 (2024).
119. D. Vamvuka, G. Tsagris, C. Loulashi, “Co-gasification of low quality lignite with woody wastes using greenhouse gas CO₂. A TG-MS study”, *Sustainability*, Special Issue "Sustainable Mining and Processing of Mineral Resources", **15**, 9818 (2023).
120. D. Vamvuka, C. Loulashi, “Co-processing of Lignite with Corn Residues for Energy or Syngas Production. Thermochemical Behavior and Kinetic Modeling”, *European Journal of Energy Research*, **3(2)** 28-34 (2023).
121. D. Vamvuka, K. Stergiou, E. Sdoukou, A. Stratakis, “Magnesium or bentonite modified almond kernel biochar for phosphate adsorption from contaminated water solutions”, *J. of Environmental Chemical Engineering*, **12**, 111907 (2024).
122. D. Vamvuka, E. Loupasis, E. Chamilaki, E. Sdoukou, “Adsorption of ammonium from wastewaters by an almond kernel derived biochar modified by potassium hydroxide or dolomite and activated by steam”, *Environmental Advances*, **15**, 100465 (2024).
123. D. Vamvuka, K. Zacheila, “Gasification performance of barley straw waste blended with lignite for syngas production under steam or carbon dioxide atmosphere”, *J. of Applied Sciences*, **14**, 665-680 (2024).
124. D. Vamvuka, S. Panagiotidou, A. Orfanoudaki, M. Galetakis, “Sustainable management of forest and building wastes for hydrogen-rich syngas from catalytic steam gasification with minimum CO₂ emissions”, *Sustainable Chemical Engineering*, **5**, 384-398 (2024).
125. D. Vamvuka, S. Panagiotidou, A. Orfanoudaki, “Hydrogen-rich syngas from steam gasification of waste biomass materials through CO₂ capture and use of catalysts”, *European Journal of Applied Sciences*, **12(3)**, 233-246 (2024).
126. D. Vamvuka, S. Panagiotidou, A. Orfanoudaki, “Use of building wastes and red mud as CO₂ sorbent and catalyst for the production of hydrogen-rich gas through steam gasification of biochar waste materials”, *J. of Academia Green Energy*, **1**, 1-11 (2024).
127. D. Vamvuka, K. Zacheila, “Valorization of a high-sulfur petroleum coke for energy and fuels through its co-processing with a forest waste, using concrete wastes for Sulphur and carbon dioxide capture under mild conditions”, *Thermochimica Acta*, **739**, 179811 (2024).
128. D. Vamvuka, E. Sdoukou, A. Stratakis, D. Pentari, “Enhanced adsorption of arsenate from contaminated waters by a magnesium, zinc or calcium modified biochar”, *J. of Carbon Research*, **10 (61)**, 1-15 (2024).
129. D. Vamvuka, E. Sdoukou, A. Stratakis, “Simultaneous removal of strontium, manganese, lead and arsenate from wastewaters using a green and low cost adsorbent derived from nut residues”, *J. of Applied Sciences*, **14**, 10199 (2024).
130. D. Vamvuka, S. Sfakiotakis, E. Patlaka, “Experimental study and kinetic modelling of agro-industrial wastes for conversion to fuel gas via the Boudouard reaction”, *J. of Energy and Power Technology*, **7(1)**, 1-15 (2025).
131. D. Vamvuka, N. Papanagiotou, A. Ntounta-Marek, “Valorization of Municipal Solid Wastes and paper mill sludge through their steam co-gasification for the production of energy carriers rich in H₂ and lean in greenhouse gas emissions”, *Sustainable Chemical Engineering*, **6(1)**, 99-111 (2025).
132. D. Vamvuka, S. Sfakiotakis, M. Galetakis, “Catalytic Co-Gasification of Refuse Derived Fuel and Industrial Waste Biomass under Steam using a Novel Waste Material as CO₂ Sorbent”, *International Journal of Innovative Science, Engineering and Technology*, **12(2)**, 4-15 (2025).
133. D. Vamvuka, G. Asiminas, A. Stratakis, D. Pentari, “Co-adsorption of ammonium, phosphate, strontium and arsenate from contaminated water by a low cost biochar. Performance and mechanisms”, *Int. J. of Environmental Science and Development*, **16(3)**, 164-173 (2025).
134. D. Vamvuka, G. Asiminas, E. Sdoukou, E. Chamilaki, “Simultaneous adsorption of ammonium, phosphate and arsenate from wastewater by walnut husk modified with dolomite and activated with nitrogen/steam”, *Applied Science Periodicals*, **3(2)**, 69-83 (2025).

135. D. Pentari, P. Makri, P. Xanthopoulos, D. Vamvuka, "Investigation on Li recovery from Greek coal ash under a circular economy framework-An experimental study", *Separations*, **12**, 251-262 (2025).
136. D. Vamvuka, S. Sfakiotakis, K. Zaheila, G. Karagiorgis, N. Pontikas, "Mitigation of carbon footprint and cleaner energy sources by co-utilization of lignite with waste wood", *Int. J. of Innovative Science, Engineering and Technology*, **12(10)**, 1-14 (2025).
137. D. Vamvuka, S. Sfakiotakis, K. Kyriakidis, I. Papakyriakopoulos, "Production of H₂-rich syngas and CO₂ capture from the steam gasification of human and animal-derived biosolids: Comparison with a valorization study for soil amendment", *Edelweiss Applied Science and Technology*, **10 (1)**, 370-388 (2025).
138. D. Vamvuka, K. Kyriakidis, S. Karvounis, A. Stratakis, "Evaluation of waste materials to capture CO₂ emissions, enhancing the yield of H₂ from the gasification of urban wastes", *Int. J. of Environmental Science and Development*, **17(2)**, 185-192 (2026).
139. D. Vamvuka, S. Karvounis, G. Xiroudakis, "Evaluation of olive stone for syngas production-integrated with CO₂ capture by waste materials-and for amelioration of agricultural soil", *Int. J. of Sustainable Energy and Environment*, **15 (1)**, 1-14 (2026).
140. E. Sdoukou, D. Vamvuka, "Removal of Toxic Heavy Metals Pb²⁺ and As⁵⁺ from Wastewaters by a Waste Nut Material", *Environmental and Earth Science Proc.*, 1-8 (2026).
141. D. Vamvuka, S. Karvounis, K. Kyriakidis, "Valorization of waste bio-solids through co-combustion: Primary and secondary measures to reduce emissions.", *Thermochimica Acta*, **762**, 180379 (2026).

Conference Proceedings

142. D. Vamvuka and E.T. Woodburn, "Thermogravimetric analysis studies on low rank coal", *Proceedings of the International Meeting on the Exploitation of Low Calorific Value Solid Fuels*, Ptolemais, Greece, September 1985.
143. M. Koussathana, D. Vamvuka and X. Verykios, "Improved hydrogenation catalysts for coal-derived liquids", *Proceedings of EEC Contractors' Meeting on Advanced Transport Fuels*, Palermo, Italy, October 1990.
144. D. Papageorgiou, D. Vamvuka, D. Boudouvas and X. Verykios, "Oxidative coupling of methane to C₂ hydrocarbons over titania-based catalysts", *Proceedings of EEC Contractors' Meeting on Catalytic Conversion of Methane*, Villeurbanne, France, May 1991.
145. S. Drakonaki, D. Vamvuka, E. Diamantopoulos and M. Lahaniatis, "Leaching behaviour of lignite fly ash", *Proceedings of the 8th International Symposium of Environmental Pollution and its Impact on Life in the Mediterranean Region*, Rhodes, Greece, October 1995, p.192.
146. D. Vamvuka and D. Douvris, "Deminerallization of coal for reducing pollutant emissions", *Proceedings of the 3rd International Conference on the Protection and Restoration of the Environment*, Hania, Greece, August 1996, p.658-664.
147. D. Vamvuka and I. Tsamopoulos, "Lignite fragmentation method with simultaneously selective removal of inorganic matter", *Proceedings of the 1st Hellenic Chemical Engineering Scientific Conference*, Patras, May 1997, p. 689-694.
148. D. Vamvuka, E.T. Woodburn and G. Stavrakakis, "Combustion model of a fine coal particle", *Proceedings of the 1st Meeting of the Greek Section of the Combustion Institute*, Athens, 28-29 Nov., 1997, p.259-265.
149. E. Kakaras, P. Vourliotis, P. Grammelis and D. Vamvuka, "Fossil fuels combined combustion with biomass in a fluidized bed combustor", *Proceedings of the Mediterranean Combustion Symposium*, Antalya, Turkey, 20-25 June, 1999, p.941-953.
150. D. Vamvuka, P. Grammelis, "Combustion of coal and wastes under blast furnace conditions", *Proceedings of the 2nd Meeting of the Greek Section of the Combustion Institute*, Thessaloniki, 26-27 Nov., 1999, p.S3/19-25.
151. Δ. Βάμβουκα και Α. Καραλή, "Θραύση και εμπλουτισμός λιγνίτη με χημικά μέσα", *Πρακτικά 3^{ου} Συνεδρίου Ορυκτού Πλούτου, Τεχνικό Επιμελητήριο Ελλάδος, Αθήνα, 2000, σ. 567-576.*

152. D. Vamvuka, E. Mistakidou, S. Drakonaki, A. Foscolos and E. Kakaras, "On the quality of ash of a beneficiated lignite", Proceedings of the Open Meeting on Combustion, 23rd Event of the Italian Section of the Combustion Institute, Lacco Ameno, 22-25 May, 2000, p.III.6-9.
153. D. Vamvuka, T. Sdrolas, M. Christou and T.D. Tsoutsos, "CHP systems in Crete using biomass residues", Proceedings of the First World Conference on Biomass for Energy and Industry, Sevilla, Spain, 5-9 June, 2000, Vol. II, p. 991-994.
154. A. Dimopoulou, V. Gekas, D. Vamvuka and P. Vourliotis, «Air pollutant emissions from the power plant of Atherinolakos at Crete», Proceedings of the 5th Conference on Protection and Restoration of the Environment, Thassos Island, 3-6 July, 2000, p.961-966.
155. E. Kastanaki, D. Vamvuka, P. Grammelis and E. Kakaras, "Thermogravimetric studies of the behaviour of lignite/biomass blends during devolatilization", Proceedings of the 4th International Symposium on Coal Structure 2002, Structure and Reactivity of Carbonaceous Materials, Gliwice, Poland, 7-10 July 2002, Fuel Processing Technology, Vol.77-78, p.159-166.
156. D. Vamvuka, E. Kastanaki, P. Grammelis and E. Kakaras, "Pyrolysis characteristics and kinetics of biomass residuals by thermogravimetry", Proceedings of the 4th U.K. Conference on Coal Research and its Applications, Imperial Colledge, London, 16-18 September 2002, paper 4.5.
157. Δ. Βάμβουκα, Δ. Ζωγράφος, "Μελέτη της επίδρασης της ανόργανης ύλης στην καύση αγροτικών υπολειμμάτων από καλλιέργειες της Κρήτης σε συνθήκες ρευστοποιημένης κλίνης", Πρακτικά 4ου Πανελληνίου Επιστημονικού Συνεδρίου Χημικής Μηχανικής, Πάτρα, Εκδόσεις Τζιόλα, 2003, σ.605-608.
158. E. Kastanaki, P. Grammelis, D. Vamvuka and E. Kakaras, "A comparison of the combustion reactivity of biomass, hard coal and lignite chars", Proceedings of the European Combustion Meeting under the auspices of the Federation of the European Sections, Orléans, 25-28 October 2003, p.1-5, paper 059.
159. D. Vamvuka, E. Kastanaki, E. Kakaras and P. Grammelis, "Combustion reactivity and ash related properties of coal-wood mixtures", 3rd Meeting of the Greek Section of the Combustion Institute, University of Patras, 7-8 Nov., 2003, p.1-8, paper 2.7.
160. D. Vamvuka, M. Galetakis, F. Pavloudakis and K. Kavouridis, "Methods of upgrading and controlling the quality of lignite mined from West Macedonia Lignite Centre", Proceedings of the 1st International Conference AMIREG 2004, Chania, 7-9 June 2004, p.375-382.
161. I. Papamichael and D. Vamvuka, "Pyrolysis oil produced from biomass as a biofuel for combustion", Proceedings of the Joint Meeting of the Greek and Italian Sections of the Combustion Institute, Corfu, 17-19 June, 2004, p.1-6, paper 5.5.
162. E. Kastanaki, P. Salatino, O. Senneca and D. Vamvuka, "Thermogravimetric study of thermal and oxidative processes of a low rank Greek coal", Proceedings of the Joint Meeting of the Greek and Italian Sections of the Combustion Institute, Corfu, 17-19 June, 2004, p.1-6, paper p68.
163. P. Grammelis, E. Kakaras, G. Skodras and D. Vamvuka, "A methodological tool of biomass combustion modeling", Proceedings of the European Combustion Meeting, Louvain-la-Neuve, Belgium, 3-6 April, 2005, paper 049.
164. Δ. Δήμου, Δ. Βάμβουκα, Ν. Πασαδάκης και Γ. Ρωμανός, "Προσρόφιση αερίων ρύπων σε ενεργοποιημένους Ελληνικούς λιγνίτες", Πρακτικά 5ου Πανελληνίου Συνεδρίου Χημικής Μηχανικής, Θεσσαλονίκη, 26-28 Μαΐου, 2005, σ. 381-384.
165. D. Vamvuka and E. Mistakidou, "Predicting the effect of inorganic constituents of wood residues on boiler slagging/fouling and ash disposal", Proceedings of the 14th European Biomass Conference and Exhibition, Paris, 17-21 October, 2005, p.1328-1331.
166. Μ. Τζινευράκης, Ι. Τζαβάρα, Θ. Τσούτσος, Δ. Βάμβουκα και Κ. Ξιφάρας, "Ενεργειακό δυναμικό της βιομάζας στην Κρήτη", 8^ο Συνέδριο για τις Ήπιες Μορφές Ενέργειας, Θεσσαλονίκη, 29-31 Μαρτίου, 2006.
167. Κ. Kavouridis, D. Vamvuka, M. Galetakis, "The effect of lignite quality on CO₂ emissions and cost of power production from Western Macedonia power plants", Proceedings of the 2nd International Conference AMIREG 2006, Chania, September 2006, p. 45-50.

168. D. Vamvuka, E. Mavrou, G. Bandelis, T. Tsoutsos and I. Papamichael, "Biomass cogeneration in Europe: Economical, technical and environmental evaluation", Proceedings of the 3rd European Combustion Meeting, Hania, Greece, 11-13 April, 2007, paper 12.11.
169. D. Vamvuka, V. Topouzi, A. Stratakis, M. Christou, E. Alexopoulou and C. Panoutsou, "Giant reed as a fuel for heat and electricity applications in Greece" Proceedings of the 15th European Biomass Conference and Exhibition, Berlin, 7-11 May, 2007, p. 777-780.
170. Th. Kalpakas, D. Vamvuka, G. Bandelis, S. Sfakiotakis and Th. Mourouzidis, "An innovative combustion unit for the energy exploitation of agricultural wastes in Greece", Proceedings of the 12th Conference on Environment and Mineral Processing and Exhibition, Ostrava, June 2008, p.225-231.
171. C. Panoutsou, D. Vamvuka and T. Tsoutsos, "Socio-economic impacts of biomass CHP in the island of Crete", Proceedings of the 16th European Biomass Conference and Exhibition, Valencia, 2-6 June, 2008.
172. K. Panopoulos and D. Vamvuka, "Experimental evaluation of thermochemical use of two promising biomass fuels", Proceedings of the 4th European Combustion Meeting, Vienna, Austria, 14-17 April, 2009, P810290.
173. D. Vamvuka, V. Topouzi, S. Sfakiotakis, D. Pentari and M. Christou, "Production yield and combustion characteristics of Cardoon grown as a potential feedstock for energy applications in Greece", Proceedings of the 17th European Biomass Conference and Exhibition, Hamburg, 29 June-3 July, 2009, p. 1269-1272.
174. M. Galetakis, D. Vamvuka, C. Roumpos and F. Pavloudakis, "Prediction of annual CO₂ emissions of lignite mined from the South Field Mine, Greece", Proceedings of the 3rd International Conference AMIREG 2009, Athens, 7-9 September, 2009, p.119-124.
175. D. Vamvuka, S. Sfakiotakis, "Ash disposal impacts from co-firing lignite and agricultural prunings in Crete", Proceedings of the International Symposium on Green Chemistry for Environment and Health, Mykonos, 27-29 September, 2010, p. 1-6.
176. D. Vamvuka, N. El Chatib, S. Sfakiotakis, "Measurements of ignition point and combustion characteristics of biomass fuels and their blends with lignite", Proceedings of the 5rd European Combustion Meeting, London, England, 28-30 June, 2011, p. 1-6.
177. D. Vamvuka, K. Panopoulos, "Experimental evaluation of thermochemical use of poultry wastes", Proceedings of the 5th European Combustion Meeting, London, England, 28-30 June, 2011, p. 1-4.
178. D. Vamvuka, S. Sfakiotakis, G. Alevizos, M. Galetakis, "Evaluating olive tree prunings as a secondary fuel in fluidized bed combustion-Emissions and ash effects", International Nordic Bioenergy Conference, Finland, 5-9 September, 2011, p. 227-234.
179. D. Vamvuka, S. Saxioni, "Investigation of slagging/fouling and environmental impact of ashes produced from co-combustion of urban wastes with lignite", 16th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, Ioannina, 24-27 September, 2011.
180. S. Techniti, K. Anastasiadou, D. Vamvuka, E. Gidaracos, "Investigating the recycling of agricultural biomass wastes in construction materials", Proceedings of the 4th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, October, 2012, p. 493.
181. D. Vamvuka, "Thermogravimetric study for the gasification of urban wastes", Dibanet Smart CHP Network, Salonica, 1-2 November, 2012.
182. K. Komnitsas, D. Zaharaki, D. Vamvuka, "Factors affecting quality of compost produced from agricultural waste: assessment of risk", Proceedings of the Istanbul International Solid Waste, Water and Wastewater Congress, Istanbul, Turkey, May 2013, p. 1315-1324.
183. C. Christodoulou, D. Grimakis, K. Marinakis, K. Tsiotas, I. Papamichail, K. Panopoulos, D. Vamvuka, S. Karellas, E. Kakaras, "Circulating fluidized bed gasification of 1st and 2nd generation biofuel seed cakes after oil extraction", Proceedings of the 21st European Biomass Conference and Exhibition, Copenhagen, Denmark, June 2013.
184. D. Vamvuka, M. Galetakis, C. Roumpos, "Coal quality control techniques and selective grinding as means to reduce CO₂ emissions", Proceedings of the 6th International Conference on Sustainable Development in the Minerals Industry, Milos, Greece, July 2013, p. 532-537.

185. D. Vamvuka, V. Tsamourgeli, D. Zaharaki, K. Komnitsas, "Investigation of co-combustion of Mediterranean biomass fuels with lignites", Proceedings of the 17th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, Istanbul, September 2013, 09-p02.
186. D. Pentari, D. Vamvuka, "Investigation of the environmental impact of Ptolemais lignite and olive tree residues fly ashes upon recycling to soil", Proceedings of the 6th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, October, 2014.
187. K. Komnitsas, D. Zaharaki, I. Pyliotis, D. Vamvuka, G. Bartzas, "Assessment of pistachio shell biochar quality and its potential for adsorption of heavy metals", Proceedings of the 2nd Int. Conference on Sustainable Solid Waste Materials, Athens, June 2014.
188. Chr. Tsekos, D. Vamvuka, S. Sfakiotakis, Chr. Mihailof, A. Lemonidou, K. Panopoulos, D. Pentari, "Kinetic Modeling for the Pyrolysis of Biomass Fuels derived from Oil Crops", Proceedings of the 7th European Combustion Meeting, Budapest, Hungary, April, 2015, P1-57, p. 1-4.
189. D. Vamvuka, "Bioenergy options for cleaner environment-biomass", 3rd International Geo-Cultural Symposium "Samaria", Chania – Crete, May 2016.
190. K. Komnitsas, G. Bartzas, D. Zaharaki, D. Vamvuka, "Comparative life cycle assessment of three water-intensive tree cropping systems", Proceedings of the 13th Int. Conference on Protection and Restoration of the Environment, Mykonos, July 2016.
191. D. Vamvuka, M. Trikouvertis, D. Pentari, K. Komnitsas, "Vineyard wastes as a promising fuel for large scale combustion units", Proceedings of the 5th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, September, 2016.
192. D. Vamvuka, S. Sfakiotakis, S. Spyridakis, K. Panopoulos, "Thermal behaviour and properties of pyrolysis and combustion products of an industrial swine waste", Proceedings of the 8th European Combustion Meeting, Dubrovnik, Croatia, April, 2016.
193. D. Vamvuka, D. Pentari, "Characterization of Ash Materials from Fluidized Bed Combustion of Agricultural Wastes. Effect on System Performance, Environmental Impact and Valorization", ISD-ENSMAD-23107-4842, Madrid, October 2017.
194. S. Sfakiotakis, D. Vamvuka, M. Kosmadaki, "Combustion characteristics and thermal behaviour of agricultural/urban waste blends as potential feedstocks for energy production", Proceedings of the 6th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, September, 2018.
195. Despina Vamvuka, Aggeliki Kreona, Aikaterini Mantza, Michael Galetakis, "Technological and environmental upgrading of lignite from Amynteon and Ahlada deposits, in Northern Greece, via selective grinding", Proceedings ISCSM2018, Salonica, September 2018.
196. D. Pentari, D. Vamvuka, "Cadmium removal from aqueous solutions using Nano-iron doped lignite", Proceedings WMESS 2018, Prague, September 2018.
197. S. Alexandrakis, D. Vamvuka, V. Papadakis, K. Komnitsas, "Thermal valorization of sewage sludge through combustion in a fluidized bed unit", Proceedings 7th International Conference on Sustainable Solid Waste Management, Heraklio, June 2019.
198. D. Vamvuka, D. Pentari, "Environmental impact of heavy metals released from deposition of lignite and waste material ashes", Proceedings Goldschmidt2019 Conference, Barcelona, August 2019.
199. D. Vamvuka, K. Esser, A. Teftiki, "Evaluation of Biochar, Bio-oil and Gas from the Pyrolysis of Sunflower and Industrial Waste Mixtures for Energetic Uses", 3rd Hellenic Conference on Biofuels and Alternative Fuels, Plastira Lake, Greece, May 2020.
200. D. Vamvuka, Z. Papapolikarpou, K. Komnitsas, "Environmental impact of fly ashes produced from co-firing of industrial swine wastes in a fluidized bed unit", Proceedings Sixth International Symposium on Green Chemistry, Sustainable Development and Circular Economy, Thessaloniki, Greece, September 2020.
201. D. Vamvuka, G. Panagopoulos, "Co-combustion of forest residues with lignite for energy production. Thermal behavior and slagging/fouling propensity", Proceedings 12th National Conference on Mild Energy Sources, Thessaloniki, Greece, April 2021.

202. D. Vamvuka, A. Teftiki, "Exploitation of Refused Derived Fuel for energetic uses via gasification and recycling of CO₂ streams", Proceedings 8th Int. Conference on Sustainable Solid Waste Management, Thessaloniki, Greece, June 2021.
203. D. Vamvuka, K. Esser, S. Sfakiotakis, "A parametric study on the co-combustion of agricultural waste chips in a residential boiler", Proceedings Conference Goldschmidt 2021, Lyon, July 2021.
204. D. Vamvuka, A. Teftiki, S. Dermitzakis, D. Pentari, "Potential of olive tree residues to adsorb lead from contaminated waters", Proceedings 8th International Conference on Environmental Management, Engineering, Planning and Economics, Thessaloniki, Greece, July 2021.
205. S. Sfakiotakis, D. Vamvuka, "Evaluation of properties of biochars produced from pyrolysis of urban wastes for agricultural applications", Proceedings of the 7th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, July, 2021.
206. D. Vamvuka, A. Stratakis, C. Volani, "Use of agricultural residues as additives for upgrading of bricks", Proceedings of the 7th Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, July, 2021.
207. D. Vamvuka, E. Machairas, D. Pentari, "Experimental study on conversion of nut residues into added value products for pollutants adsorption", Proceedings of TechConnect Europe Innovation Conference & Expo, Malmö Sweden, November, 2021.
208. D. Pentari, D. Vamvouka, A. Stratakis, E. Vlachaki, M. Fazaki, "Contents and mode of occurrence of lithium in Greek coal fly ash", Proceedings of TechConnect Europe Innovation Conference & Expo, Malmö Sweden, November, 2021.
209. D. Vamvuka, K. Zacheila, "Exploitation of demolition wood through thermochemical conversion processes", 9th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2022) and SECOTOX Conference, Mykonos, June 2022.
210. D. Vamvuka, K. Zacheila, "Evaluation of urban and industrial wastes for energetic uses through gasification with carbon dioxide streams. A TG-MS study", Sustainable Solutions at Times of Transition (SuST)", International Symposium and Workshop 2022, Nisiros, July 2022.
211. D. Vamvuka, E. Afthentopoulos, I. Chatzifotiadis, "Experimental study on the gasification of industrial wastes with steam or carbon dioxide for syngas production", Sustainable Solutions at Times of Transition (SuST)", International Symposium and Workshop 2022, Nisiros, July 2022.
212. D. Vamvuka, P. Karagiannaki, "Evaluation of the Suitability of Agricultural- and Industrial-based Biochars for Soil Amendment", 1st Int. Conference on Sustainable Chemical and Environmental Engineering, Rethymno, September 2022.
213. D. Vamvuka, D. Pentari, "Production of hydrogen and carbon monoxide fuel gas from pine needles", Int. Conference on Mechanical, Materials and Renewable Energy, Strasbourg, September 2022.
214. D. Vamvuka, D. Pentari, V. Stathopoulou, E. Loupasis, K. Stergiou, C. Loulashi, "Activated Agricultural Residues Biochars as Adsorbents of Strontium from Aqueous Solutions", 10th Int. Conference on Environmental Management, Engineering, Planning and Economics and Secotox Conference, Skiathos island, Greece, June 2023.
215. D. Vamvuka, D. Pentari, C. Loulashi, "Co-gasification of Lignite with Industrial Wastes for Fuel Gas Production", Int. Conference on Energy and Environment Research (ICEER-23), Seville, Spain, August 2023.
216. D. Vamvuka, D. Pentari, "Leaching of Lithium from Coal Fly Ash using carboxylic acids", Int. Conference on Energy and Environment Research (ICEER-23), Seville, Spain, August 2023.
217. D. Vamvuka, K. Zacheila, S. Panagiotidou, A. Orfanoudaki, "H₂-rich syngas from co-gasification of forest residue with lignite under steam", 11th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2024) and SECOTOX Conference, Lefkada, June 2024.

218. D. Vamvuka, E. Sdoukou, D. Pentari, X. Tzortzaki, G. Asiminas, “Simultaneous adsorption of ammonium and phosphate from contaminated water solutions by a nut residue biochar”, 11th International Conference on Sustainable Solid Waste Management, Rhodes, June 2024.
219. D. Vamvuka*, D. Pentari, M. Berkis, S. Panagiotidou, “Production of Biofuels Rich in Hydrogen using Waste Materials as Energy Sources or Beneficial Additives”, 2nd Global Meeting on Applied Science, Engineering and Technology, Dubai, September 2024.
220. Despina Pentari, Despina Vamvuka, Despina Keravnopoulou, Emmanouela Partsalaki, “Leaching of critical elements from coal fly ash using carboxylic acids”, 2nd Global Meeting on Applied Science, Engineering and Technology, Dubai, September 2024.
221. D. Vamvuka, S. Panagiotidou, A. Orfanoudaki, K. Zacheila, “Syngas production rich in hydrogen from steam gasification of agro-industrial wastes, integrated with carbon dioxide capture by concrete wastes and use of potassium and red mud catalysts”, GEST-2024, London, November 2024.
222. S. Panagiotidou, D. Vamvuka, “Towards Circular Hydrogen Production: Pine Sawdust and Industrial Waste Materials for Sustainable Energy Generation”, 1st International Conference of the Hellenic Society for Circular Economy (HSCE), Chania, September 2024.
223. D. Pentari, P. Makri, D. Vamvuka, “Lithium in Greek lignite fly ashes: contents and leaching experiments”, Global Congress on Nanotechnology and Materials Science, London, May 2025.
224. D. Vamvuka, D. Pentari, A. Orfanoudaki, “Exploring the Generation of Hydrogen-rich Gaseous Fuels from Forest Waste using Waste Concrete Fines and Red Mud Additives”, Global Congress on Nanotechnology and Materials Science, London, May 2025.
225. D. Vamvuka, S. Sfakiotakis, L. Xylouris, “Co-combustion of lignite with winery wastes. Thermochemical behavior and modeling”, Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, May 2025.
226. D. Vamvuka, S. Sfakiotakis, E. Geladari, “Feasibility of an untreated pig manure/agricultural waste biochar for amelioration of a Mediterranean type soil”, Int. Conference on Hazardous and Industrial Waste Management, Chania-Crete, May 2025.
227. S. Sfakiotakis, G. Triantafyllou, D. Vamvuka, G. Xristidis, “Thermal decomposition kinetics of various calcites using multivariate kinetic analysis”, 4th Int Conference on Responsible Consumption and Production, Eureka-Pro, Chania-Crete, September 2025.
228. D. Vamvuka, S. Karvounis, K. Kyriakidis, I. Papakyriakopoulos and A. Stratakis, “Hydrogen-Rich Gas Production from the Steam Gasification of Olive By-products with Minimum Carbon Dioxide Emissions”, 4th Int. Conference on Sustainable and Environmental Engineering, Salonica, September 2025.
229. D. Vamvuka, I. Papakyriakopoulos, K. Kyriakidis, S. Sfakiotakis, D. Pentari, “Valorization of a bio-solid for the production of a H₂-rich gas through CO₂ capture by a waste material and for soil amelioration”, 13th International Conference on Sustainable Solid Waste Management, Kos, June 2026.
230. E. Sdoukou, D. Vamvuka, “Removal of Toxic Heavy Metals Pb²⁺ and As⁵⁺ from Wastewaters by a Waste Nut Material”, 6th EWAS International Conference, Thessaloniki, May 2026.
231. D. Pentari, D. Vamvouka, D. Katsimicha, P. Makri, “Sustainable Extraction of Lithium from Coal Fly Ash using carboxylic acids”, 41st International Conference on Environmental Geochemistry and Health – SEG2026, Lubliana Slovenia, July 2026.
232. D. Vamvuka, E. Iliopoulou, D. Pentari, “Reduction of Heavy Metals from Sewage Sludge Ash Disposal using Waste Material as Stabilizer”, 5th International Conference on Sustainable and Environmental Engineering, Rethymno, September 2026.

Articles in Scientific Journals

233. D. Vamvuka, “Transportation fuels. Perspectives of using biofuels and their economics”, *Oikopolis*, 32, 41-43 (2008).

Workshops

234. D. Vamvuka, "Energy exploitation of biomass. The case of Crete.", Meeting on "Biomass pellets. Perspectives for Greek market development", Hania, Greece, April, 2005.
235. D. Vamvuka, "Bioenergy market in Greece", Meeting on "Network for innovation and dissemination of energy technology", Hania, Greece, December, 2006.
236. D. Vamvuka, "Bioenergy options for cleaner environment", International Meeting on "Renewable Energy Resources", Hania, Greece, September, 2009.

Books

237. D Vamvuka, «Clean Use of Coals. Low-Rank Coal Technologies», ION Publishing Co., 2001, p.594.
238. D. Vamvuka, "Biomass, Bioenergy and the Environment", Tziolas publications, 2009, p702.
239. D. Vamvuka, "Overview of solid fuels combustion technologies", Handbook of Combustion, Volume 4, Wiley-vch-books, 2010, p. 31-84.
240. D. Vamvuka and G. Kottas, "Qualitative upgradement of lignite from the Ptolemais Mine by physical methods", Honor Volume to the memory of Prof. Kavouridis, 2010, p. 209-216.
241. D. Vamvuka, A. Raftogianni, "Evaluation of pig manure for environmental or agricultural applications through gasification and soil leaching experiments", Prime Archives in Applied Sciences, Hyderabad, VideLeaf., 2022.
242. Despina Vamvuka, Elena Sdoukou, Antonios Stratakis and Despina Pentari, "Enhanced Adsorption of Arsenate from Contaminated Waters by Magnesium-, Zinc- or Calcium-Modified Biochar—Modeling and Mechanisms", in "Carbon-Based Materials Applied in Water and Wastewater Treatment", Ed. A. Tolkou, [https://www.mdpi.com/journal/carbon/special issues/VDS786TDGA](https://www.mdpi.com/journal/carbon/special%20issues/VDS786TDGA).

Student Publications

1. D. Vamvuka, "Coal Beneficiation", Undergraduate Course.
2. D. Vamvuka, "New Technologies for the Exploitation of Solid Fuels", Undergraduate Course.
3. D. Vamvuka, "Applied Fluid Mechanics", Undergraduate Course.
4. D. Vamvuka, "Coal Beneficiation", Postgraduate Course.
5. D. Vamvuka, "Clean Coal Technologies", Postgraduate Course.
6. D. Vamvuka, "Reduction of Emissions from Coal Power Plants", Postgraduate Course.
7. D. Vamvuka, "Biomass-Bioenergy-Environment", Postgraduate Course.
8. D. Vamvuka, "Environmental Control in Energy Production. Air Pollution", Postgraduate Course.
9. D. Vamvuka, "Management and Exploitation Technologies of Energy Resources", Postgraduate Course
10. D. Vamvuka, "Biofuels-Thermochemical Processes", Postgraduate Course. in English.
11. D. Vamvuka, "Environmental Control in Energy Production", Postgraduate Course. in English.