

# **CURRICULUM VITAE**

**EPAMINONDAS C. VOUTSAS**

Dr. Chemical Engineer

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## **I. BIOGRAPHICAL DATA**

**SURNAME:** Voutsas  
**NAME:** Epaminondas  
**Web page:** <http://ttpl.chemeng.ntua.gr/staff/evoutsas.html>  
**DATE of BIRTH:** March 12, 1968  
**EDUCATION:** 1985-1991  
Diploma in Chemical Engineering, Aristotle University of Thessaloniki  
1993-1997  
Doctor in Chemical Engineering, National Technical University of Athens (NTUA)

**LANGUAGES:** Greek, English

**PROFESSIONAL EXPERIENCE:**

- i. 6/1997 – 12/2001 Post Doctoral Fellow, Laboratory of Thermodynamics and Transport Phenomena, School of Chemical Engineering, NTUA.
- ii. 1/2002 – 10/2004 Employee, NTUA
- iii. 10/2004 – 9/2009 Lecturer, School of Chemical Engineering, NTUA.
- iii. 10/2009 – today Assistant Professor, School of Chemical Engineering, NTUA.
- iv. 9/2014 – today Associate Professor, School of Chemical Engineering, NTUA.
- v. 10/2014 – July 2015 Associate Professor, Department of Energy and Process Engineering, Norwegian University of Science and Technology, NTNU, *sabbatical leave*.

**PROFESSIONAL SOCIETIES:** Member of Technical Chamber of Greece (TEE)  
Member of Hellenic Association of Chemical Engineers  
Member of the Working Party of the European Federation of Chemical Engineering entitled Thermodynamics and Transport Properties

**LISTED IN:** Marquis Who is Who in the World

**H-index:** 28 (Source: SCOPUS, October 2018).

**REVIEWER FOR:** AIChE J., Industrial & Engineering Chem. Res., Fluid Phase Equilibria, Chem. Eng. J., Chemosphere, J. Chemical and Engineering Data, Chemical Physics Letters, European Polymer Journal, The Canadian J. of Chemical Engineering, Chemical Engineering Communications, Chemical Engineering Research & Design, Fuel, Energy & Fuels, Thermochimica Acta, Journal of Environmental Management, The Journal of Physical Chemistry, Applied and Environmental Soil Science, Journal of Agricultural and Food Chemistry, Journal of Hazardous Materials, J. Supercritical Fluids, Geochimica et Cosmochimica Acta, The Journal of Chemical Thermodynamics, Process Safety & Env.

Protection, J. of Thermodynamics, Toxicological & Env. Chem., Sustainable Chemistry & Engineering, Chemical Engineering Science, International Journal of Refrigeration, Biofuels, Advances in Space Research, Science China Chemistry, Neural Computing and Applications, Separation and Purification Technology, Energy Conversion & Management, Asia-Pacific Journal of Chemical Engineering, Waste and Biomass Valorization, Journal of Molecular Physics, Journal of Solution Chemistry, Physics and Chemistry of Liquids, Chemical Eng. & Technology, J. of Greenhouse Gas Control, Innovative Food Science and Emerging Technologies, Data in Brief, Environment, Development and Sustainability.

**SCHOLARSHIPS:** Greek State Scholarship's Foundation (11/1993-11/1996).

## II. PUBLICATIONS

**A. IN INTERNATIONAL JOURNALS WITH REFEREES** (1906 citations, excluded self-citations.  
Source: SCOPUS, October 2018)

1. E.C. Voutsas, N. Spiliotis, N.S. Kalospiros, D.P. Tassios, "Prediction of Vapor-Liquid Equilibria at Low and High Pressures Using UNIFAC-based Models", *Ind. Eng. Chem. Res.*, 34 (1995) 681.
2. E.C. Voutsas, N. Kalospiros, D. P. Tassios, "A Combinatorial Activity Coefficient for Symmetric and Asymmetric Mixtures", *Fluid Phase Equil.*, 109 (1995) 1.
3. E.C. Voutsas, N.S. Kalospiros, C. Boukouvalas, D.P. Tassios, "The Performance of EoS/G<sup>E</sup> Models in the Prediction of Phase Equilibria in Asymmetric Systems", *Fluid Phase Equil.*, 116 (1996) 480.
4. E.C. Voutsas, D.P. Tassios, "Prediction of Infinite-Dilution Activity Coefficients in Binary Mixtures with UNIFAC. A Critical Evaluation", *Ind. Eng. Chem. Res.*, 35 (1996) 1438.
5. G.M. Kontogeorgis, E.C. Voutsas, D.P. Tassios, "A Molecular Simulation-Based Method for the Estimation of Activity Coefficients for Alkane Solutions", *Chem. Eng. Sci.*, 51 (1996) 3247.
6. G.M. Kontogeorgis, E.C. Voutsas, I.V. Yakoumis, D.P. Tassios, "An Equation of State for Associating Fluids", *Ind. Eng. Chem. Res.*, 35 (1996) 4310.
7. E.C. Voutsas, D.P. Tassios, "On the Extension of the p-FV and R-UNIFAC Models to Multicomponent Mixtures", *Fluid Phase Equil.*, 128 (1997) 271.
8. I.V. Yakoumis, G.M. Kontogeorgis, E.C. Voutsas, D.P. Tassios, "Vapor-Liquid Equilibria for Alcohol/Hydrocarbon Systems Using the CPA Equation of State", *Fluid Phase Equil.*, 130 (1997) 31.
9. E.C. Voutsas, G.M. Kontogeorgis, I.V. Yakoumis, D.P. Tassios, "Correlation of Liquid-Liquid Equilibria for Alcohol/Hydrocarbon Mixtures Using the CPA Equation of State", *Fluid Phase Equil.*, 132 (1997) 61.
10. E.C. Voutsas, D.P. Tassios, "Analysis of the UNIFAC-type Group-Contribution Models at the Highly Dilute Region. 1. Limitations of the Combinatorial and Residual Expressions", *Ind. Eng. Chem. Res.*, 36 (1997) 4965.
11. E.C. Voutsas, D.P. Tassios, "An Analysis of the UNIFAC-type Group-Contribution Models at the Highly Dilute Region. 2. Empirical Improvements with Application to Water/Hydrocarbon Mixtures", *Ind. Eng. Chem. Res.*, 36 (1997) 4973.
12. I. Hatzioannidis, E.C. Voutsas, E. Lois, D.P. Tassios, "Measurement and Prediction of Reid

- Vapor Pressure of Gasoline in the Presence of Additives", *J. Chem. Eng. Data*, 43 (1998) 386.
13. I.V. Yakoumis, G.M. Kontogeorgis, E.C. Voutsas, E.M. Hendriks, D.P. Tassios, "Prediction of Phase Equilibria in Binary Aqueous Systems Containing Alkanes, Cycloalkanes and Alkenes with the Cubic-plus-Association Equation of State", *Ind. Eng. Chem. Res.*, 37 (1998) 4175.
  14. E.C. Voutsas, I.V. Yakoumis and D.P. Tassios "Prediction of Phase Equilibria in Water/Alcohol/Alkane Systems", *Fluid Phase Equil.*, 158 (1999) 151.
  15. G.D. Pappa, E.C. Voutsas, D.P. Tassios, "Prediction of Activity Coefficients in Polymer and Copolymer Solutions using Simple Activity Coefficient Models", *Ind. Eng. Chem. Res.*, 38 (1999) 4975.
  16. E.C. Voutsas, G.C. Boulougouris, I.G. Economou, D.P. Tassios, "Water/ hydrocarbon Phase Equilibria Using the Thermodynamic Perturbation Theory" *Ind. Eng. Chem. Res.*, 39 (2000) 797.
  17. H. Stamatis, E.C. Voutsas, Ch. Delimitsou, F. N. Kolisis, D.P. Tassios, "Enzymatic Production of Alkyl Esters Through Lipase-Catalyzed Transesterification Reactions in Organic Solvents: Solvent Effects and Prediction Capabilities of Equilibrium Conversions" *Biocatalysis and Biotransformation*, 18 (2000) 259.
  18. N. Spiliotis, E.C. Voutsas, K. Magoulas, D.P. Tassios, "Recovery of Fructose Laurate Produced Through Enzymatic Esterification" *Separation & Purification Technology*, 19 (2000) 229.
  19. E.C. Voutsas, M.V. Flores, N. Spiliotis, G. Bell, P.J. Halling, D.P. Tassios, "Prediction of Critical Micelle Concentrations of Nonionic Surfactants in Aqueous and Nonaqueous Solvents with UNIFAC", *Ind. Eng. Chem. Res.*, 40 (2001) 2362.
  20. E.C. Voutsas, N. Spiliotis, D.P. Tassios, "Enzymatic Reactions in Non-Conventional Media: Prediction of Solvent Water Content for Optimum Water Activity", *Biocatalysis and Biotransformation*, 19 (2001) 99.
  21. E.C. Voutsas, E.A. Tritopoulou, K. Magoulas, D.P. Tassios, "Prediction Helps Analytical Experimental Work for Environmental Purposes", *Microchimica Acta*, 136 (2001), 193.
  22. E.C. Voutsas, C. Andreou, D. Theodorou, D.P. Tassios, "Prediction of Infinite Dilution Volatilities of Aroma Compounds in Water" *J. of Food Science*, 66 (2001) 447.
  23. M.V. Flores, E.C. Voutsas, N. Spiliotis, G.M. Eccleston, G. Bell, D.P. Tassios, P. J. Halling, "Critical Micelle Concentrations of Nonionic Surfactants in Organic Solvents: Approximate Prediction with UNIFAC", *J. Colloid. Interface Sci.*, 240 (2001) 277.
  24. G.C. Boulougouris, E.C. Voutsas, I.G. Economou, D.N. Theodorou, D.P. Tassios, "Henry's Constant Analysis for Water and Nonpolar Solvents from Experimental Data, Macroscopic Models, and Molecular Simulation", *J. Phys. Chem. B.*, 105 (2001) 7792.
  25. E.C. Voutsas, E.V. Abatzi, D.P. Tassios, "Application of the Equilibrium Partitioning Theory for the Prediction of the Bioaccumulation of Organic Pollutants in Aquatic Biota", *Fresenius Environ. Bulletin*, 10 (2001) 480.
  26. G. Pappa, E.C. Voutsas, D.P. Tassios, "Liquid-Liquid Phase Equilibrium in Polymer- Solvent Systems: Correlation and Prediction of the Polymer Molecular Weight and the Pressure Effect", *Ind. Eng. Chem. Res.*, 40 (2001) 4654.
  27. E.C. Voutsas, H. Stamatis, F.N. Kolisis, D. Tassios, "Solvent Effects on Equilibrium Position and Initial Rate of Lipase-Catalyzed Esterification Reactions in Organic Solvents: Experimental Results and Prediction Capabilities", *Biocatalysis and Biotransformation*, 20:2 (2002) 101.
  28. E. Retzekas, E. Voutsas, K. Magoulas, D. Tassios, "Prediction of Physical Properties of Hydrocarbons, Petroleum and Coal Liquid Fractions", *Ind. Eng. Chem. Res.*, 41 (2002) 1695.
  29. E. Voutsas, M. Lampadariou, K. Magoulas, D. Tassios, "Prediction of Vapor Pressures of Pure Compounds from Knowledge of the Normal Boiling Point Temperature", *Fluid Phase Equil.*, 198/1 (2002) 81.
  30. K. Katsikaris, E. Voutsas, G. Andronikos, S. Stamataki, K. Magoulas, "Recycling

- Ferrous-Nickel Slag in Blast Cleaning”, *Waste Management and Research*, 20/3 (2002) 269.
31. P. Tsavas, S. Polydorou, E. Voutsas, K. Magoulas, K. Naraghi and P.J. Halling “Sucrose Solubility in Mixtures of Water, Alcohol, Ester and Acid”, *J. Chem. Eng. Data*, 47/3 (2002) 513.
  32. P. Tsavas, S. Polydorou, I. Fafli, E. Voutsas, D.P. Tassios, M.V. Flores, K. Naraghi, P.J. Halling, F. Chamouleau, M. Ghoul, J.-M. Engasser, M. Ferrer, F. Plou, “Solubility of Glucose in Mixtures Containing t-Pentanol, Dimethyl Sulfoxide, Acids, Esters and Water”, *J. Chem. Eng. Data*, 47/4 (2002) 807.
  33. E. Voutsas, K. Magoulas, D. Tassios, “Prediction of the Bioaccumulation of Persistent Organic Pollutants in Aquatic Food Webs”, *Chemosphere*, 48/7 (2002) 645.
  34. A. Mountouris, E. Voutsas, D. Tassios, “Bioconcentration of Heavy Metals in Aquatic Environments: The Importance of Bioavailability”, *Marine Pollution Bulletin*, 44/10 (2002) 1134.
  35. E. Voutsas, P. Tsavas, K. Magoulas, D. Tassios, M. Ferrer, F. Plou, A. Ballesteros, “Solubility Measurements of Fatty Acid Glucose and Sucrose Esters in 2-Methyl-2-Butanol and Mixtures of 2-Methyl-2-Butanol with Dimethyl Sulfoxide”, *J. Chem. Eng. Data*, 47 (2002) 1517.
  36. P. Coutsikos, E. Voutsas, K. Magoulas, D. Tassios, “Prediction of Vapor Pressures of Solid Organic Compounds with a Group-Contribution Method”, *Fluid Phase Equil.*, 207 (2003) 263.
  37. E. Tritopoulou, G. Pappa, E. Voutsas, I. Economou, D.P. Tassios, “Modeling of Liquid-Liquid Equilibria in Aqueous Solutions of Poly(Ethylene Glycol) with a UNIFAC-Based Model”, *Ind. Eng. Chem. Res.*, 42 (2003) 5399.
  38. V. Louli, G. Folas, E. Voutsas, K. Magoulas, “Extraction of Parsley Seed Oil by Supercritical CO<sub>2</sub>”, *J. Supercritical Fluids*, 30 (2004) 163.
  39. E. Voutsas, G. Pappa, C. Boukouvalas, K. Magoulas, D. Tassios, “Miscibility in Binary Polymer Blends: Correlation and Prediction”, *Ind. Eng. Chem. Res.*, 43/5 (2004) 1312.
  40. A. Vrachnos, E. Voutsas, K. Magoulas, A. Lygeros, “Thermodynamics of Acid Gas-MDEA-Water Systems” *Ind. Eng. Chem. Res.*, 43 (2004) 2798.
  41. E. Voutsas, A. Vrachnos, K. Magoulas, “Measurement and Thermodynamic Modeling of the Phase Equilibrium of Aqueous N-Methyldiethanolamine Solutions” *Fluid Phase Equil.*, 224 (2004) 191.
  42. E. Voutsas, K. Magoulas, D. Tassios, “A Universal Mixing Rule for Cubic Equations of State Applicable to Symmetric and Asymmetric Systems: Results with the Peng-Robinson Equation of State” *Ind. Eng. Chem. Res.*, 43 (2004) 6238.
  43. P. Tsavas, E. Voutsas, K. Magoulas, D. Tassios, “Phase Equilibrium Calculations in Aqueous and Nonaqueous Mixtures of Sugars and Sugar Derivatives with a Group-Contribution Model” *Ind. Eng. Chem. Res.*, 43 (2004) 8391.
  44. E. Voutsas, Ch. Vavva, K. Magoulas, D. Tassios, “Estimation of the volatilization of organic compounds from soil surfaces” *Chemosphere*, 58 (2005) 751.
  45. S. Pouloupoulos, E. Voutsas, H. Grigoropoulou, C. Philippopoulos, “Stripping as a Pretreatment Process of Industrial Oily Wastewater “ *J. Hazardous Materials B*, 117 (2005) 135.
  46. G. Pappa, E. Voutsas, K. Magoulas, D. Tassios, “Estimation of the Differential Molar Heat Capacities of Organic Compounds at their Melting Point”, *Ind. Eng. Chem. Res.*, 44/10 (2005) 3799.
  47. G. Leontarakis, P. Tsavas, E. Voutsas, K. Magoulas, D. Tassios, “Experimental and Predicted Results of Anomeric Equilibrium of Glucose in Alcohols”, *J. Chem. Eng. Data*, 50/6 (2005) 1924.
  48. E. Voutsas, G. Pappa, K. Magoulas, D. Tassios, “Vapor Liquid Equilibrium Modeling of Alkane Systems with Equations of State: Simplicity versus Complexity”, *Fluid Phase Equil.*, 240 (2006) 127.
  49. A. Mountouris, E. Voutsas, D. Tassios “Solid Waste Plasma Gasification: Equilibrium

- Model Development and Exergy Analysis", *Energy Conversion & Management*, 47 (2006) 1723.
50. E. Voutsas, V. Louli, C. Boukouvalas, K. Magoulas, D. Tassios, "Thermodynamic Property Calculations with the Universal Mixing Rule for EoS/G<sup>E</sup> Models: Results with the Peng-Robinson EoS and a UNIFAC Model", *Fluid Phase Equil.*, 241 (2006) 216.
  51. Ch. Perakis, E. Voutsas, K. Magoulas, D. Tassios, "Thermodynamic Modeling of the Vapor-Liquid-Equilibrium of the Water/Ethanol/CO<sub>2</sub> System", *Fluid Phase Equil.*, 243 (2006) 142.
  52. G. Pappa, Ch. Anastasi, E. Voutsas, "Measurement and Thermodynamic Modeling of the Phase Equilibrium of Aqueous 2-amino-2-methyl-1-propanol Solutions", *Fluid Phase Equil.*, 243(2006) 193.
  53. E. Panteli, E. Voutsas, K. Magoulas, D. Tassios, "Prediction of Vapor Pressures and Enthalpies of Vaporization of Organic Compounds from the Normal Boiling Point Temperature", *Fluid Phase Equil.*, 248 (2006) 70.
  54. A. Vrachnos, G. Kontogeorgis, E. Voutsas, "Thermodynamic Modeling of Acidic Gas Solubility in Aqueous Solutions of MEA, MDEA and MEA-MDEA Blends" *Ind. Eng. Chem. Res.*, 45 (2006) 5148.
  55. F. Varanda, M. J. Pratas de Melo, A. Caco, R. Dohrn, F. Makrydaki, E. Voutsas, D. Tassios, I. Marrucho, "Solubility of Antibiotics in Different Solvents. 1. Hydrochloride Forms of Tetracycline, Moxifloxacin, and Ciprofloxacin", *Ind. Eng. Chem. Res.*, 45 (2006) 6368.
  56. R. Dohrn, E. Bertakis, O. Behrend, E. Voutsas, D. Tassios, "Melting Point Depression by Using Supercritical CO<sub>2</sub> for a Novel Melt Dispersion Micronization Process", *J. of Molecular Liquids*, 131-132 (2007) 53.
  57. E. Bertakis, I. Lemonis, S. Katsoufis, E. Voutsas, R. Dohrn, K. Magoulas, D. Tassios, "Measurement and Thermodynamic Modeling of Solid-Liquid-Gas Equilibrium of Some organic Compounds in the Presence of CO<sub>2</sub>", *J. Supercritical Fluids*, 41/2 (2007) 238.
  58. Ch. Perakis, E. Voutsas, K. Magoulas, D. Tassios, "Thermodynamic Modeling of the Water + Acetic Acid + CO<sub>2</sub> System: The Importance of the Number of Association Sites of Water and of the Nonassociation Contribution for the CPA and SAFT-Type Models", *Ind. Eng. Chem. Res.*, 46/3 (2007) 932.
  59. E. Voutsas, Ch. Perakis, G. Pappa, D. Tassios, "An Evaluation of the Performance of the Cubic-Plus-Association Equation of State in Mixtures of non-Polar, Polar and Associating Compounds: Towards a Single Model for non-Polymeric Systems", *Fluid Phase Equil.*, 261/1-2 (2007) 343.
  60. V. Louli, Ch. Boukouvalas, E. Voutsas, K. Magoulas, D. Tassios, "Application of the UMR-PRU Model to Multicomponent Systems: Prediction of the Phase Behavior of Synthetic Natural Gas and Oil Systems", *Fluid Phase Equil.*, 261/1-2 (2007) 351.
  61. A. Mountouris, E. Voutsas, D. Tassios, "Plasma Gasification of Sewage Sludge: Process Development and Energy Optimization", *Energy Conversion & Management*, 49/8 (2008) 2264.
  62. E.K. Panteli, E.K. Voutsas, "Solubilities of Cinnamic Acid Esters in Ionic Liquids", *J. Chem. Eng. Data*, 54/3 (2009) 812.
  63. G. Pappa, C. Perakis, I. Tsimpanogiannis, E. Voutsas, "Thermodynamic Modeling of the vapor-liquid equilibrium of the CO<sub>2</sub>/H<sub>2</sub>O mixture", *Fluid Phase Equil.*, 284/1 (2009) 56.
  64. E. Alevizou, G. Pappa, E. Voutsas, "Prediction of phase equilibrium in mixtures containing ionic liquids using UNIFAC", *Fluid Phase Equil.*, 284/2 (2009) 99.
  65. E. Panteli, P. Saratsioti, H. Stamatis, E. Voutsas, "Solubilities of Cinnamic Acid Esters in Organic Solvents", *J. Chem. Eng. Data*, 55 (2010) 745.
  66. E. Panteli, E. Voutsas, "Solubilities of Cinnamic Acid Esters in Binary Mixtures of Ionic Liquids and Organic Solvents", *Fluid Phase Equilibria* 295 (2010) 201.
  67. C. Perakis, V. Louli, E. Voutsas, K. Magoulas "Supercritical CO<sub>2</sub> Extraction of Dittany Oil: Experiments and Modelling", *J. Supercrit. Fluids*, 55 (2010) 573-578.
  68. E. Voutsas, C. Pamouksis, D. Argyris, G. Pappa "Measurements and thermodynamic

- modeling of the ethanol–water system with emphasis to the azeotropic region", *Fluid Phase Equil.*, 308 (2011) 135.
69. G. Pappa, V. Louli, K. Dedousi, E. Voutsas "Phase Equilibria of Mixtures Containing CO<sub>2</sub> and Organic Acids Using the UMR-PRU Model", *J. Supercritical Fluids*, 58 (2011) 321-329.
  70. V. Louli, G. Pappa, Ch. Boukouvalas, S. Skouras, E. Solbraa, K.O. Christensen, E. Voutsas, " Measurement and Prediction of Dew Point Curves of Natural Gas Mixtures", *Fluid Phase Equil.*, 334 (2012) 1.
  71. I. Lemonis, D. Tsimogiannis, V. Louli, E. Voutsas, V. Oreopoulou, K. Magoulas "Extraction of Dittany (*Origanum dictamnus*) using supercritical CO<sub>2</sub> and liquid solvent", *J. Supercritical Fluids*, 76 (2013) 48.
  72. E. Alevizou, E. Voutsas " Solubilities of p-coumaric and caffeic acid in ionic liquids and organic solvents", *J. Chem. Thermodynamics*, 62 (2013) 69.
  73. A. Tzani, A. Douka, A. Papadopoulos, E. Pavlatou, E. Voutsas, A. Detsi "Synthesis of biscoumarins using recyclable and biodegradable task-specific ionic liquids", *Sustainable Chemistry & Engineering*, 1/9 (2013) 1180.
  74. E. Alevizou, E. Voutsas "Evaluation of COSMO-RS model in binary and ternary mixtures of natural antioxidants, ionic liquids and organic solvents", *Fluid Phase Equil.*, 369 (2014) 55.
  75. Ch. Tsanas, A. Tzani, A. Papadopoulos, A. Detsi, E. Voutsas, "Ionic liquids as entrainers for the separation of the ethanol/water system", *Fluid Phase Equil.*, 379 (2014) 148.
  76. S. Voulgaris, A. Papadopoulou, E. Alevizou, H. Stamatis, E. Voutsas, "Measurement and prediction of solvent effect on enzymatic esterification reactions", *Fluid Phase Equil.*, 398 (2015) 51.
  77. N. Gjineci, E. Boli, A. Tzani, A. Detsi, E. Voutsas, "Separation of the ethanol/water azeotropic mixture using ionic liquids and deep eutectic solvents", *Fluid Phase Equil.*, 424 (2016) 1.
  78. E. Skylogianni, N. Novak, V. Louli, G. Pappa, Ch. Boukouvalas, S. Skouras, E. Solbraa, E. Voutsas, "Measurement and Prediction of Dew Points of Six Natural Gas Mixtures", *Fluid Phase Equil.*, 424 (2016) 8.
  79. M. Wlazło, E. Alevizou, E. Voutsas, U. Domanska, "Prediction of ionic liquids phase equilibrium with the COSMO-RS model", *Fluid Phase Equil.*, 424 (2016) 16.
  80. E. Nikolaivits, G.-F. Norra, E. Voutsas, E. Topakas, "Cutinase from *Fusarium oxysporum* catalyzes the acylation of tyrosol in an aqueous medium: optimization and thermodynamic study of the reaction", *J. Mol. Cat. B: Enzymatic*, 129 (2016) 29.
  81. A. Tzani, M. Elmaloglou, Ch. Kyriazis, D. Aravopoulou, I. Kleidas, A. Papadopoulos, E. Ioannou, A. Kyritsis, E. Voutsas, A. Detsi, "Synthesis and Structure-Properties Relationship Studies of Biodegradable Hydroxylammonium-based Protic Ionic Liquids", *Journal of Molecular Liquids*, 224 (2016) 366.
  82. E. Petropoulou, G. Pappa, E. Voutsas, "Modelling of phase equilibrium of natural gas mixtures containing associating compounds", *Fluid Phase Equil.*, 433 (2017) 135.
  83. Ch. Vavva, E. Voutsas, K. Magoulas, "Process development for chemical stabilization of fly ash from municipal solid waste incineration", *Chem. Eng. Res. & Design*, 1 25 (2017) 57–71.
  84. A. Chatzikonstantinou, G.-F. Norra, H. Stamatis, E. Voutsas, "Prediction of Solvent Effect on Enzyme Enantioselectivity", *Fluid Phase Equil.*, 450 (2017) 126-132.
  85. E. Boli, E. Dimou, E. Voutsas, "Separation of the Isopropanol-Water Azeotropic Mixture using Ionic Liquids", *Fluid Phase Equil.*, 456 (2018) 77-83.
  86. N. Novak, V. Louli, S. Skouras E. Voutsas, "Prediction of dew points and liquid dropouts of gas condensate mixtures", *Fluid Phase Equil.*, 457 (2018) 62-73.
  87. E. Petropoulou, E. Voutsas, S.F. Westman, A. Austegard, H.G.J. Stang, S.W. Løvseth, "Vapor - liquid equilibrium of the carbon dioxide/methane mixture at three isotherms", *Fluid Phase Equil.*, 462 (2018) 44.

88. A. Papadopoulou, A. Tzani, A. Polydera, P. Katapodis, E. Voutsas, A. Detsi, H. Stamatis, "Green biotransformations catalyzed by enzyme-inorganic hybrid nanoflowers in environmentally friendly ionic solvents", *Env. Sci. & Pollution Res.*, 25/27, (2018) 26707-26714.
89. E. Petropoulou, E. Voutsas, "Thermodynamic modelling and simulation of natural gas dehydration using triethylene glycol with the UMR-PRU model", *Ind. Eng. Chem. Res.*, 57/25 (2018) 8584–8604.
90. I. Ikolaidis, V. S. Samoili, E. Voutsas, I. Economou, "Equation of state modeling of solid-liquid-gas equilibrium of asymmetric binary mixtures of methane with n-alkanes", *Ind. Eng. Chem. Res.*, 57/25 (2018) 8566–8583.
91. V. Koulocheris, V. Louli, E. Panteli, S. Skouras, E. Voutsas, "Modelling of elemental mercury solubility in natural gas components", *Fuel*, 233 (2018) 558-564.
92. A. Plakia, G. Pappa, E. Voutsas, "Modeling of CO<sub>2</sub> solubility in aqueous alkanolamine solutions with an extended UMR-PRU model", *Fluid Phase Equil.*, 478 (2018) 134-144.
93. E. Boli, M. Savvidou, D. Logothetis, V. Louli, G. Pappa, E. Voutsas, F. Kolisis, K. Magoulas, "Magnetic harvesting of *Nannochloropsis oceanica* microalgae cultivations", *Separ. Sci. Technol.*, **accepted**.

## B. IN BOOKS

1. **E. Voutsas**, Ph. Coutsikos, G. Kontogeorgis  
*Equations of State with emphasis on Excess Gibbs Energy Mixing Rules*  
In: Gani, R., Kontogeorgis, G. (Eds.): Computer Aided Property Estimation  
Elsevier Science, **2004**.
2. **E. Voutsas**  
*Estimation of the Volatilization of Organic Chemicals from Soil*  
In T. Letcher (Eds.): "Thermodynamics, Solubility and Environmental Issues"  
Elsevier Science, **2007**.
3. **E. Voutsas**  
*Supercritical Fluid Extraction*  
In Th. Varzakas, C. Tzia (Eds.): "Handbook Of Food Processing And Engineering, Vol. 1. Food Engineering Fundamentals",  
CRC Press, Boca Raton, Florida, USA, 2014.
4. **E. Voutsas**, N. Novak, V. Louli, G. Pappa, E. Petropoulou, C. Boukouvalas, E. Panteli, E. Skouras  
*Thermodynamic modelling of natural gas and gas condensate mixtures"*  
In Natural Gas Processing from Midstream to Downstream, Wiley (*in press*)
5. J.-N. Jaubert, R. Privat, **E. Voutsas**  
*Phase Behavior of Natural Gas Systems*  
In Handbook of Natural Gas Transmission & Processing, 4th Edition (*in press*).

## III. CONTRIBUTIONS IN INTERNATIONAL CONFERENCES (*over 100 contributions*)



## IV. TEACHING

1. "Applied Thermodynamics", 3<sup>rd</sup> Semester, School of Chemical Engineering, NTUA.
2. "Chemical Engineering Thermodynamics", 4<sup>th</sup> Semester, School of Chemical Engineering, NTUA.
3. "Advanced Physical Separation Processes", 7<sup>th</sup> Semester, School of Chemical Engineering, NTUA.
4. "Elements of Mechanical Equipment", 7<sup>th</sup> Semester, School of Chemical Engineering, NTUA.
5. "Rational and Sustainable Energy Management", 7<sup>th</sup> Semester, School of Chemical Engineering, NTUA.
6. "Energy Conservation in Industry", Post-Graduate Program: *Energy Production and Management*, School of Electrical and Computer Engineering, NTUA.

## V. SPONSORED PROJECTS

### **“Modelling mercury adsorption in natural gas pipelines”**

*Financial Support:* Equinor S.A., Norway.

Duration: July 2018 – September 2018.

Project Coordinator

### **“Modelling of phase and chemical equilibrium in natural gas mixtures containing mercury”**

*Financial Support:* STATOIL S.A., Norway.

Duration: September 2017 – August 2020.

Project Coordinator

### **“Thermodynamic modelling of reservoir fluids in the presence of impurities”**

*Financial Support:* STATOIL S.A., Norway.

Duration: September 2016 – December 2017.

Project Coordinator

### **“Gas Processing and LNG Technologies”**

*Financial Support:* STATOIL S.A., Norway.

Duration: August 2015 – June 2017.

Project Coordinator

### **“Sustainable Use Of Marine Microalgae For The Production Of Biofuels And High-Added Value Biochemicals”**

*Financial Support:* Greek General Secretariat for Research & Technology.

Duration: March 2013 – May 2015.

Researcher

### **“Gas Processing and LNG Technologies”**

*Financial Support:* STATOIL S.A., Norway.

Duration: May 2013 – May 2015.

Project Coordinator

**“CO2TRACCS: CO<sub>2</sub> Transportation Risk Assessment for Carbon Capture and Storage”**

*Financial Support:* Black Sea ERA.NET Project, DLR-JCS (FP7)

Duration: December 2011 – January 2014.

Researcher

**“Further development of the UMR-PRU model/Technical support DLL-file”**

*Financial Support:* STATOIL S.A., Norway.

Duration: May 2011 – June 2013.

Project Coordinator

**“Simulator development / Process design with the UMR-PRU model”**

*Financial Support:* STATOIL S.A., Norway.

Duration: May 2011 – December 2012.

Project Coordinator

**“Prediction of phase equilibrium in hydrocarbon mixtures (Phase 2)”**

*Financial Support:* STATOIL S.A., Norway.

Duration: February 2010 – September 2010.

Project Coordinator

**“Experimental study of the stabilization of fly ash produced from the municipal solid waste incinerators with electricity production”**

*Financial Support:* INTRAKAT S.A.

Duration: February 2010 – February 2011.

Project Coordinator

**“Experimental study and thermodynamic modelling of phase equilibrium in mixtures of antioxidants and ionic liquids”,**

*Financial Support:* Program PEVE, NTUA.

Duration: December 2009 – December 2011.

Project Coordinator

**“Master and business plan for the management of the municipal solid waste of the 2<sup>nd</sup> management section of Viotia, Greece”**

*Financial Support:* DEPODATH, S.A., Thiva, Viotia.

Duration: August 2009 – November 2009.

Project Coordinator

**“Gas processing and Liquefied Natural Gas Technologies”**

*Financial Support:* STATOIL S.A., Norway.

Duration: July 2009 – December 2009.

Project Coordinator

**“Environmental management of the fly ash produced from the municipal solid waste incinerators with electricity production”**

*Financial Support:* INTRAKAT S.A.

Duration: December 2008 – December 2009.

Project Coordinator

**“Measurement and Thermodynamic Modelling of Phase Equilibria in Mixtures**

**Containing Ionic Liquids”**

*Financial Support:* Greek General Secretariat for Research and Technology.

Duration: January 2006 – June 2008.

Project Coordinator

**“Development of a Simulator for the Prediction of Acid Dew Point of Flue Gases”**

*Financial Support:* Greek Public Power Corporation S.A. (Project Coordinator)

Duration: May 2005 – November 2006.

Project Coordinator

**“Enzymatic Transformation of Natural Antioxidants for the Optimization of the of their Recovery Process from Industrial Wastes and the Improvement of their Properties”**

*Financial Support:* Program EPET II, Greek General Secretariat for Research & Technology

Duration: January 1999 – May 2001.

Researcher

**“Developments and Applications in Supercritical Fluids in Agriculture and Fisheries.**

*Financial Support:* FAIR-CT98-3464, EU

Duration: June 1998 – June 2001.

Researcher

**“Thermodynamic Modeling of Phase Equilibrium of Polymer Mixtures through Molecular Simulation, Macroscopic Models and Experimental Measurements”,**

*Financial Support:* Program PENED99 (99ED143), Greek General Secretariat for Research and Technology.

Duration: October 1999 – September 2001.

Researcher

**“Improved Lipase Synthesis of Sugar Esters by Combined Enzyme and Solvent Engineering”**

*Financial Support:* BIO4-CT98-0363, EU

Duration: January 1999 – January 2001.

Researcher

**“Development of Systems for Management of Sand-Blast Cleaning Wastes”,**

*Financial Support:* Program PAVE, Greek General Secretariat for Research and Technology.

*Budget:* 35000 €

Duration: August 1997 – June 2000.

Researcher

**“Inventory and Evaluation of the Current Situation of Blast-Cleaning / Quoting Operations in Greece”**

*Financial Support:* LIFE96/Env/GR/586, EU.

Duration: May 1997 – May 1999.

Researcher

**“Production of Sugar/Fatty Acid Esters from Renewable Agricultural Resources: An Integrated Optimization of Enzymatic - Purification Processes and of Surfactive Properties”,**

*Financial Support:* AIR3-CT94-2291, EU.

Duration: September 1994 – September 1997.

Researcher

#### **“Phase Equilibria in Associating Fluids”**

*Financial Support:* Shell, Amsterdam.

Duration: September 1995 – September 1996.

Researcher

#### **“Development of the Supercritical Extraction Procedure and its Application to the Waste Water Treatment”**

*Financial Support:* Program PENED, Greek General Secretariat for Research & Technology.

Duration: September 1993 – September 1995.

Researcher

## **VI. COMMITTEES**

- ✓ 19<sup>th</sup> European Seminar on Applied Thermodynamics, Santorini Island, Greece, September 6-10, 2002.
- ✓ 19<sup>th</sup> European Conference on Thermophysical Properties, Thessaloniki, Greece, August 28 - September 1, 2011.
- ✓ Member of the Working Party of the European Federation of Chemical Engineering, entitled “Thermodynamics and Transport Properties”.
- ✓ 28<sup>th</sup> European Seminar on Applied Thermodynamics, Athens, Greece, June 11-14, 2015, **Chairman**.

## **VII. Invited talks**

- ✓ **E.Voutsas**, "A Universal Mixing Rule for Cubic Equations of State Applicable to Symmetric and Asymmetric Systems", The University of Oklahoma, School of Chemical, Biological and Materials Engineering, April 25, 2005.
- ✓ **E.Voutsas**, "Modeling of Phase Equilibrium: Basic Tools, New Advances and Applications", Department of Chemical and Food Engineering, School of Engineering, University of Salerno, April 19, 2007.
- ✓ **E.Voutsas**, "Phase equilibrium in natural gas mixtures", 25<sup>th</sup> European Seminar on Applied Thermodynamics, Saint Petersburg, Russia, June 24-27, **2011**.
- ✓ **E.Voutsas**, "Plasma Gasification Assisted Processes", Sustainable Waste Management: A Workshop on Principles and Practice. Organized by The Earth Engineering Center (EEC) of Columbia University in collaboration with WTERT-Greece/SYNERGIA and AIT Athens Information Technology, Athens, Greece, June 18-22, 2012.
- ✓ **E.Voutsas**, “Phase Equilibrium Calculations with Equations of State”, Palermo, Italy, March 23, 2018.