

Kostis G. Magoulas

Professor
School of Chemical Engineering
N.T.U.A.

CURRICULUM VITAE

Athens, 2010

Dr. Kostis G. Magoulas
Chemical Engineer - Economist
Professor

I. PERSONAL INFORMATION / CONTACT DETAILS

Date of Birth: 28-5-1960
Place of Birth: Amfissa, Greece
Address: School of Chemical Engineering
Thermodynamics and Transport Phenomena Laboratory (TTPL)
Department of Process Analysis & Plant Design
National Technical University of Athens
Athens 15780, Greece
Office No: 0.301
Telephone : +30 210 772 3152
Fax: +30 210 772 3155
E-mail: mag "at-sign" chemeng "dot" ntua "dot" gr
mag "at-sign" central "dot" ntua "dot" gr
Web Page:

II. EDUCATION

- Diploma in Chemical Engineering, NTUA (1983).
- Doctor in Chemical Engineering, NTUA. (1998)
- B.S. in Economics, University of Athens (1992)

Languages: English, French, German
Scholarships: National Scholarships Foundation (1982-1983)
Hellenic Refineries of Aspropyrgos (1984-1987)
NTUA (1987-1988)
Awards: Technical Chamber of Greece (1982-1983)

III. PROFESSIONAL EXPERIENCE

- a. 5/1990-7/1991: Post Doctoral Fellow, Thermodynamics and Transport Phenomena Laboratory (TTPL), NTUA
- b. 7/1991-11/1995: Lecturer, School of Chemical Engineering, NTUA
- c. 11/1995-7/2001: Assistant Professor, School of Chemical Engineering, NTUA
- d. 7/2001-7/2006: Associate Professor, School of Chemical Engineering, NTUA
- e. 7/2006- : Professor, School of Chemical Engineering, NTUA
- f. 4/2004-3/2009: President and CEO of Publishing Organization for Education Materials (OEDB)
- g. 4/2009-8/2009: President and CEO of Athens Trolleys SA (ILPAP)
- h. 8/2009-4/2010: President and CEO of Hellenic Railways SA (OSE)

IV. TEACHING

1. “*Applied Thermodynamics*”, 3rd Semester, School of Chemical Engineering, NTUA.
2. “*Chemical Engineering Thermodynamics*”, 4th Semester, School of Chemical Engineering, NTUA.
3. “*Advanced Physical Separation Operations*”, 7th Semester, School of Chemical Engineering, NTUA.

V. RESEARCH ACTIVITIES

1. Summary

- Research Projects: 21
- Publications in International Journals with Referees: 57
- Contributions in International Conferences: 54
- Citations (Scopus / ISI): > 630

2. Research Areas

a. Development of Equations of State for the prediction of Thermophysical Properties and Phase Equilibrium.

- **Cubic EoS.** Two new translated and modified EoS have been developed (t-mPR and t-vdW) and their predictive performance have been investigated over a wide range of non-polar systems and conditions.
- **LCVM model.** A predictive G^E /EoS models has been developed and its capabilities have been investigated against other bibliographic models. Its superiority has been proved especially for highly asymmetric systems.
- **UMR (Universal Mixing Rule) and UMR-PRU EoS.** UMR is a mixing rule for cubic equations of state (CEoS) applicable to all type of system asymmetries. For the cohesion parameter of the CEoS the mixing rule involves the Staverman-Guggenheim part of the combinatorial term and the residual term of the original UNIFAC Gibbs free energy expression. For the co-volume parameter of the CEoS the quadratic concentration dependent mixing rule is used with the combining rule for the cross parameter. The UMR is applied to the Peng-Robinson equation of state leading to what is referred to as the UMR-PRU model. Very satisfactory results are obtained using the existing interaction parameters of the Original UNIFAC model for fluid phase equilibrium predictions at low and high pressures for a wide range of system asymmetries including mixtures containing polymers.
- **CPA (Cubic Plus Association) EoS.** The equation combines the simplicity of a cubic equation of state (Soave-Redlich-Kwong or Peng-Robinson), which is used for the physical part and the theoretical background of the perturbation theory employed for the chemical (or association) part. The resulting EoS (Cubic Plus Association, CPA). Excellent description are obtained of both vapor pressures and saturated liquid volumes of pure associating compounds such as alcohols, phenols, glycols, acids and water. CPA has been also successfully applied to the correlation and prediction of phase equilibria (vapour-liquid, liquid-liquid, vapor-liquid-liquid) in a variety of systems where association is present as described in several publications.
- **The mS-UNIFAC.** This model is a modification of S-UNIFAC for systems containing sugars and sugar derivatives, such as sugar esters. Through the use of a better combinatorial term and new data, the model becomes more reliable than S-UNIFAC, providing satisfactory predictions for multicomponent systems involved in the enzymatic esterification reactions for the production of fatty acid sugar esters.

b. Experimental measurements in laboratory and pilot scale.

The TTPL has developed an extensive infrastructure of laboratory equipments {*SFE Apparatus for solubility measurements, SFE Apparatus with optical cell, VLE Apparatus, LLE - SLE Apparatus, Membrane cell, BOD measurement apparatus, HPLC, GC*} and pilot scale units {*SFE Pilot Unit, Stripping column, Distillation column, Pilot unit for separation of polymer mixtures, Karr column (Liquid-liquid extraction), Pilot unit for membrane technology applications*}, which has been used for the measurement of:

- Low pressure VLE
- Solubility of solids in liquids
- Solubility of solids/liquids in supercritical CO₂
- Recovery of antioxidants and essential oils with SFE
- Separation of polymer mixtures
- Waste water purification and recycling with membranes, etc.

c. Design and Optimization of Separation Processes

The developed thermodynamic models and process simulators, along with the measured experimental data, have been used for the process analysis, design and optimization of separation processes, e.g.:

- Selective Dissolution/Precipitation unit for the recovery of pure polymers from polymer mixtures
- Integrated unit for the treatment of tannery wastewater for water reuse
- Waste water treatment unit and water recycling of dairy industry wastewaters with membrane technology (Ultrafiltration/Reverse Osmosis)
- SFE unit for the recovery of phenol from wastewaters
- Unit for recovery of near-anhydrous ethanol as gasoline additive from fermentation products
- SFE unit for the recovery of antioxidants and essential oils from natural products

3. Funded Research Projects

No	Title	Duration	Funded by	Position
21	<i>Addition of natural antioxidants for the production of Greek functional foods with new technologies</i>	24 months (1/2005-12/2006)	PYTHAGORAS II EPEAEK Greece	Investigator
20	<i>Investigation of the effect of hydrogen bonds on the solubility of organic compounds in systems of supercritical CO₂ with cosolvents</i>	36 months (11/2002-10/2005)	HERACLITUS EPEAEK Greece	Scientific Coordinator
19	<i>Study of concretes containing recycled LDPE as aggregate</i>	6 months (9/2003-1/2004)	ELKEDE Greece	Investigator
18	<i>Characterization of plastic mixtures recycled from municipal and industrial wastes</i>	6 months (7/2002-12/2002)	ELKEDE Greece	Investigator
17	<i>Preparation of polypropylene composites containing recycled paper fibers</i>	6 months (9/2003-1/2004)	ELKEDE Greece	Principal Investigator
16	<i>Preparation of polyethylene composites containing recycled paper fibers</i>	6 months (7/2002-12/2002)	ELKEDE Greece	Scientific Coordinator
15	<i>Development of a supercritical fluid extraction demonstration unit for the recovery of essential oils from natural products</i>	6 months (8/2002-1/2003)	PEPER / GSRT Greece	Scientific Coordinator
14	<i>Investigation of polymer recovery with supercritical fluids</i>	24 months (1/2000-12/2001)	ELKEDE Greece	Scientific Coordinator
13	<i>Biotechnological selective modification of Chios mastic gum and mastic oil</i>	18 months (1/2000-7/2001)	EPET-II / GSRT Greece	Investigator
12	<i>Developments and Applications in Supercritical Fluids in Agriculture and Fisheries (DASFAF)</i>	36 months (6/1998-6/2001)	FAIR-CT98-3464 EU	Scientific Coordinator
11	<i>Enzymatic Transformation of Natural Antioxidants for the Optimization of the of their Recovery Process from Industrial Wastes and the Improvement of their Properties</i>	32 months (9/1998-5/2001)	EPET-II / GSRT Greece	Principal Investigator
10	<i>Improved Lipase Synthesis of Sugar Esters by Combined Enzyme and Solvent Engineering</i>	24 months (1/1999-1/2001)	BIO4-CT98-0363 EU	Investigator
9	<i>Inventory and Evaluation of the Current Situation of Blast-Cleaning / Quoting Operations in Greece'</i>	30 months (4/97-10/99)	LIFE96/Env/GR/586 EU	Investigator
8	<i>Development of Systems for Management of Sand-Blast Cleaning Wastes</i>	24 months (4/97-4/99)	PAVE / GSRT Greece	Principal Investigator
7	<i>Water recycling at milk collection stations</i>	24 months (3/96-3/98)	LIFE EU	Principal Investigator
6	<i>Plastics – Integrated Technology</i>	48 months (1/95-12/98)	EPET-II / GSRT Greece	Principal Investigator
5	<i>Production of sugar-fatty acid esters from renewable agricultural resources</i>	36 months (1/95-12/97)	AIR3-CT94-2291 EU	Principal Investigator
4	<i>Development of the Supercritical Extraction Procedure and its Application to the Waste Water Treatment''</i>	24 months (1/94-12/95)	PENED/GSRT Greece	Principal Investigator
3	<i>Production of bioethanol from sweet sorghum</i>	24 months (1/92-12/93)	STRIDE/EU	Principal Investigator
2	<i>Measurement and thermodynamic modeling of supercritical fluid extraction</i>	24 months (08/90-08/92)	SCIENCE EU	Principal Investigator
1	<i>Coproduction of Pectin and Hesperidin</i>	12 months (10/87-09/88)	BIOHELLAS SA	Investigator

4. Publications in International Journals with Referees

- 57 Katsoulotos G, Pappa G, Tarantili PA, Magoulas K., *Preparation and characterization of functionalized low density polyethylene matrix biocomposites*, Polymer Engineering and Science, pp 902-911 Vol 48 (5) 2008.
- 56 Louli V, Boukouvalas C, Voutsas E, Magoulas K, Tassios D, *Application of the UMR-PRU model to multicomponent systems: Prediction of the phase behavior of synthetic natural gas and oil systems*, Fluid Phase Equilibria, 261 (1-2): 351-358 Sp. Iss. 2007.
- 55 Bertakis E, Lemonis I, Katsoufis S, Voutsas E, Magoulas K, Tassios D, *Measurement and thermodynamic modeling of solid-liquid-gas equilibrium of some organic compounds in the presence of CO₂*, The Journal of Supercritical Fluids, 41 (2): 238-245, 2007.
- 54 Perakis CA, Voutsas EC, Magoulas KG, Tassios DP, *Thermodynamic modeling of the water plus acetic acid + CO₂ system: The importance of the number of association sites of water and of the nonassociation contribution for the CPA and SAFT-type models*, I&EC Research, 46 (3): 932-938, 2007.
- 53 Baroulaki I, Mergos JA, Pappa G, Tarantili PA, Economides D, Magoulas K, Dervos CT, *Performance of polyolefin composites containing recycled paper fibers*, Polymers for Adv Tech, 17 (11-12): 954-966, 2006.
- 52 Baroulaki I, Karakasi O, Pappa G, Tarantili PA, Economides D, Magoulas K., *Preparation and study of plastic compounds containing polyolefins and post used newspaper fibers*, Composites Part A- Applied Science and Manufacturing, 17 (11-12): 954-966, 2006.
- 51 Panteli E, Voutsas E, Magoulas K, Tassios D, *Prediction of vapor pressures and enthalpies of vaporization of organic compounds from the normal boiling point temperature*, Fluid Phase Equilibria, 248 (1): 70-77, 2006.
- 50 Perakis C, Voutsas E, Magoulas K, Tassios D., *Thermodynamic modeling of the vapor-liquid equilibrium of the water/ethanol/CO₂ system*, Fluid Phase Equilibria, 243 (1-2): 142-150, 2006.
- 49 Voutsas E, Louli V, Boukouvalas C, Magoulas K, Tassios D, *Thermodynamic property calculations with the universal mixing rule for EoS/G(E) models: Results with the Peng-Robinson EoS and a UNIFAC model*, Fluid Phase Equilibria, 241 (1-2): 216-228, 2006.
- 48 Voutsas EC, Pappa GD, Magoulas K, Tassios DP, *Vapor liquid equilibrium modeling of alkane systems with equations of state: "Simplicity versus complexity"*, Fluid Phase Equilibria, 240 (2): 127-139, 2006.
- 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, pp 1924-1927, Vol 240(2), 2005
- 46 Perakis C., Louli V., Magoulas K., *Supercritical Fluid Extraction of Black Pepper Oil*, J. of Food Eng., pp 1-11, Vol 171(1), 2005.
- 45 Pappa GD, Voutsas EC, Magoulas K., Tassios D., *Estimation of the Differential Molar Heat Capacities of Organic Compounds at their melting point*, I& EC Research, pp 3799-3806, Vol.44(10), 2005.
- 44 Voutsas E., Vavva C., Magoulas K., Tassios D., *Estimation of the Volatilization of Organic Compounds from Soil Surfaces*, Chemosphere, pp 751-758, Vol 58(6), 2005.
- 43 Katsikaris K., Boukouvalas C., Magoulas K., *Simulation of Ultrafiltration Process and Application to Pilot Tests, Desalination*, pp 1-11, Vol 171(1), 2005.
- 42 Tsavas P., Voutsas E., Magoulas K., Tassios D., *Phase equilibrium calculations in aqueous and nonaqueous mixtures of sugars and sugar derivatives with a group-contribution model*, I&EC Research, pp 8391-8399, Vol.43(26), 2004.
- 41 Voutsas E., Vrachnos A, Magoulas K., *Measurement and Thermodynamic Modelling of the Phase Equilibrium of Aqueous N-Methyl-diethanolamine Solutions*, Fluid Phase Equilibria, pp 193-197, Vol 224 (2), 2004.
- 40 Voutsas E, Magoulas K, Tassios D., *Universal mixing rule for cubic equations of state applicable to symmetric and asymmetric systems: Results with the Peng-Robinson equation of state*, I&EC Research, pp 6238-6246, Vol.43(19), 2004.
- 39 Vrachnos A, Voutsas E., Magoulas K., A. Lygeros, *Thermodynamics of Acid Gas-MDEA-Water Systems*, I&EC Research, pp 2798-2804, Vol.43(11), 2004.
- 38 Voutsas E., Pappa G., Boukouvalas C., Magoulas K. and Tassios D., *Miscibility in Binary Polymer Blends: Correlation and Prediction*, I&EC Research, pp1312-1321, Vol.43(5), 2004.
- 37 Louli V., Folas G., Voutsas E., Magoulas K., *Extraction of parsley seed oil by supercritical CO₂*, The Journal of Supercritical Fluids, pp 163-174, Vol 30(2), 2004.
- 36 Louli V., Ragoussis N., Magoulas K., *Recovery of phenolic antioxidants from wine industry by-products*, Bioresource Technology, pp 201-208, Vol 92(2), 2004.
- 35 Coutsikos P., Voutsas E., Magoulas K., Tassios D., *Prediction of vapor pressures of solids with a group contribution method*, Fluid Phase Equilibria, pp 263-281, Vol 207(1), 2003.
- 34 Coutsikos P., Kontogeorgis G., Magoulas K., *Prediction of solid-gas equilibria with the Peng-Robinson equation of state*, The Journal of Supercritical Fluids, pp197-212, Vol 25(3), 2003.
- 33 Voutsas E., Tsavas P., Magoulas K., Tassios D., M. Ferrer, F. Plou, A. Ballesteros, *Solubility measurements of fatty acid glucose and sucrose esters in t-pentanol and mixtures of t-pentanol with dimethyl sulfoxide*, Journal of Chemical & Engineering Data, pp 1517-1520, Vol 47(6), 2002.
- 32 Naraghi K., Halling P., Tsavas P., Polydorou S., Voutsas E., Magoulas K., *Sucrose solubility in mixtures of water, alcohol, ester and acid*, Journal of Chemical & Engineering Data, pp 513-517, Vol 47(3), 2002.
- 31 Voutsas E., Magoulas K., Tassios D., *Prediction of the bioaccumulation of persistent organic pollutants in aquatic food webs*, Chemosphere, pp 645-651, Vol.48(7), 2002.
- 30 Voutsas E., Lampadariou M., Magoulas K.G., Tassios D., *Prediction of vapor pressures of pure compounds from knowledge of the normal boiling point temperature*, Fluid Phase Equilibria, pp 81-93, Vol 198, 2002.
- 29 Katsikaris K., Voutsas E., Magoulas K., Andronikos G., Stamataki S., *Recycling ferrous-nickel slag in blast cleaning*, Waste Management & Research, pp 269-278, Vol 20(3), 2002.
- 28 Retzekas E., Voutsas E., Magoulas K., Tassios D., *Prediction of physical properties of hydrocarbons, petroleum and coal liquid fractions*, I&EC Research, pp 1695-1702, Vol.41(6), 2002.

- 27 Pappa G., Boukouvalas C., Giannaris. C., Ntaras, N., Zografos, V., Magoulas K., Lygeros A., Tassios D., *The selective dissolution/precipitation technique for polymer recycling: A pilot plant application.*, Resources, Conservation and Recycling, pp 33-44, Vol.34(1), 2001.
- 26 Voutsas E., Tritopoulou E., Magoulas K., Tassios D., *Prediction helps analytical experimental work for environmental purposes*, Mikrochimika Acta, pp 193-197, Vol(136), 2001.
- 25 Kikic I., Boukouvalas C., Magoulas K. and Tassios D., *Comparison of the performance of the LCVm model (an EoS/G^E model) and the PHCT EoS (the Perturbed Hard Chain Theory Equation of State) in the prediction of the vapor-liquid equilibria of binary systems containing light gases*, The Journal of Supercritical Fluids, pp 123-132, Vol (19), 2001.
- 24 Boukouvalas C., Louli V., Magoulas K., *Bench-scale application of supercritical fluid extraction for the removal of phenol from aqueous solution*, Separation Science and Technology, pp 2279-2291, Vol 36(10), 2001.
- 23 Papamichail I., Louli V., Magoulas K., *Supercritical fluid extraction of celery seed oil*, The Journal of Supercritical Fluids, pp 213-226, Vol 18(3), 2000.
- 22 Stamataki S., Magoulas K., *Prediction of phase equilibria and volumetric behavior of fluids with high concentration of hydrogen sulphide*, Oil & Gas Science and Technology (Revue de l' Istitute Francais du Petrol), pp511-522, Vol 55(5), 2000.
- 21 Spiliotis N., Voutsas E., Magoulas K., Tassios D. *Recovery of fructose laurate produced through enzymatic esterification*, Separation and Purification Technology, pp 229-236, Vol 19(3), 2000.
- 20 Voros N.G., Fountoukidis E., Magoulas K.G., Maroulis Z.B., Papadimitriou J., *A combined UF/RO wastewater cleaning system: Design, operation and economic assessment*, The International Desalination & Water Reuse, pp 26-31, Vol 9(3), 1999.
- 19 Stamataki S., Magoulas K., Boukouvalas Ch., Tassios D., *Correlation and prediction of phase equilibria and volumetric behaviour of hyperbaric fluids*, Revue de l' Istitute Francais du Petrol, pp 59-70, Vol 53(1), 1998.
- 18 Boukouvalas C., Magoulas K., Tassios D., *Application of supercritical fluid extraction in industrial waste treatment: Thermodynamic modeling and design*, Separation Science and Technology, pp 387-410, Vol.33(3), 1998.
- 17 Boukouvalas C., Magoulas K., Stamataki, S., Tassios D., *Prediction of vapor-liquid equilibria with LCVm Model: Systems containing light gases with medium and high molecular weight compounds*, I&EC Research, pp5454-5460, Vol.36(12), 1997.
- 16 Coutsikos Ph., Magoulas K., Tassios D., *Solubilities of p-Quinone and 9,10-Anthraquinone in supercritical CO₂*, Journal of Chemical & Engineering Data, pp 463-466, Vol 42(9), 1997.
- 15 Coutsikos Ph., Magoulas K., Tassios D., Cortesi A., Kikic I., *Correlation and prediction of infinite dilution partial molar volumes of organic solutes in SC CO₂ using the Peng-Robinson and PHCT equations of state and the LCVm EOS/G^E model*, The Journal of Supercritical Fluids, pp 21-35, Vol.11, 1997.
- 14 Stamataki S., Magoulas K., Tassios D., *Prediction of phase behavior and physico-chemical properties of HT-HP reservoir fluids*, Society of Petroleum Engineers, SPE No 37294, 1996.
- 13 Cortesi A., Kikic I., Spicka B., Magoulas K., Tassios D., *Determination of partial molar volumes at infinite dilution of alcohols and terpenes in supercritical carbon dioxide*, The Journal of Supercritical Fluids, pp 141-145, Vol 9, 1996.
- 12 Kordas A., Magoulas K., Stamataki S., Tassios D., *Methane-hydrocarbon interaction parameters correlation for the Peng–Robinson and the t-mPR Equation of State*, Fluid Phase Equilibria, pp 33-44, Vol 112, 1995.
- 11 Coutsikos P., Magoulas K., Tassios D., *Solubilities of phenols in supercritical CO₂*, Journal of Chemical & Engineering Data, pp 953-958, Vol 40(4), 1995.
- 10 Boukouvalas C., Markoulaki E., Magoulas K., Tassios D., *Recovery of near-anhydrous ethanol as gasoline additive from fermentation products*, Separation Science and Technology, pp 2315-2335, Vol.30(11), 1995.
- 9 Spiliotis, N., Magoulas K., Tassios D., *Prediction of the solubility of aromatic hydrocarbons in supercritical CO₂ with EoS/G^E models*, Fluid Phase Equilibria, pp 121-141, Vol. 102, 1994.
- 8 Peridis S., Magoulas K., Tassios D. , *Sensitivity of distillation column design to uncertainties in the vapor-liquid equilibrium information*, Separation Science and Technology, pp 1753-1767, Vol.28(9), 1993.
- 7 Voulgaris M., Stamatakis S., Magoulas K., Tassios D., *Prediction of physical properties for non-polar compounds, petroleum and coal liquid fractions* , Fluid Phase Equilibria, pp 73-106, Vol. 64, 1991.
- 6 Magoulas K., Tassios D., *Thermophysical properties of n-Alkanes from C₁ to C₂₀ and their prediction for higher ones*, Fluid Phase Equilibria, pp 119-140, Vol. 56, 1990.
- 5 Magoulas K., Marinos-Kouris D., Lygeros A., *Actual blending linear programming model is developed*, Oil and Gas Journal, pp 44-48, Vol. 86(29), 1988.
- 4 Magoulas K., Marinos-Kouris D., Lygeros A., *Instructions are given for building gasoline-blending LP*, Oil and Gas Journal, pp 32-37, Vol. 86(27), 1988.
- 3 Lygeros A.I., Magoulas K.G., *Column flooding and entrainment*, Hydrocarbon Processing, pp 43-44, Vol. 65(12), 1986.
- 2 Lygeros A.I., Magoulas K.G., *Method sizes equipment and optimizes cost*, Oil and Gas Journal, pp 129-132, Vol. 83(36), 1985.
- 1 Lygeros A.I., Magoulas K.G., *Method quickly optimizes process design*, Oil and Gas Journal, pp 55-60, Vol. 83(34), 1985.

5. Contributions in International Conferences

- 54 V. Louli, Ch. Perakis, P. Katsis, E. Voutsas, K. Magoulas, *Extraction of Dittany Oil with Supercritical CO₂*, 24th European Seminar on Applied Thermodynamics, Santiago de Compostela. Spain, June27-July 1, 2009.
- 53 M. Psychogiou, G. Pappa, K. Magoulas, E. Voutsas *Experimental Measurements of Aqueous Piperazine Solutios and Thermodynamic Modelling of the VLE of Acid Gas-MDEA-PZ-Water Mixtures*, 23rd European Seminar on Applied Thermodynamics. Cannes, France, May 29- 1 June, 2008.
- 52 K. Nasopoulos, V. Vagga, C. Boukouvalas C., E. Voutsas, K. Magoulas, D. Tassios, *Experimental Measurements and Thermodynamic Modelling of the ethanol-water mixture aiming at the recovery of near anhydrous bioethanol using low pressure distillation*, 23rd European Seminar on Applied Thermodynamics., Cannes, France, May 29- 1 June, 2008.

- 51 V. Louli, E. Dedoussi, S. Stamataki, E. Voutsas, K. Magoulas, *Thermodynamic Modeling of Phase Equilibrium of CO₂-Organic Acid Systems Using the UMR-PRU Model*, 23rd European Seminar on Applied Thermodynamics. Cannes, France, May 29- 1 June, 2008.
- 50 I. Lemonis, V. Louli, E. Voutsas, V. Oreopoulou, K. Magoulas, *Supercritical CO₂ Extraction of Dittany (Origanum Dictamnus) Oil: Study of the Process Parameters and the Extracts' Antioxidant Activity*, 11th International Conference PPEPPD 2007. Hersonissos, Crete, Greece, May 20-25, 2007.
- 49 V. Louli, C. Boukouvalas, E. Voutsas, S. Stamataki, 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*, 11th International Conference PPEPPD 2007. Hersonissos, Crete, Greece, May 20-25, 2007.
- 48 Bertakis E, Lemonis I, Katsoufis S, Voutsas E, Dorn R., Magoulas K., Tassios D., *Measurement and Thermodynamic Modelling of Solid-Liquid-Gas Equilibrium of Organic Solutes in CO₂*, 22nd European Seminar on Applied Thermodynamics. Elsinore, Denmark, 28 June-1 July 2006.
- 47 Voutsas E., Botis N., Louli V., Boukouvalas C., Pappa G., Magoulas K, Tassios D., *Thermodynamic Property Calculations with the Universal Mixing Rule for EoS/G(E) Models*, 22nd European Seminar on Applied Thermodynamics. Elsinore, Denmark, 28 June-1 July 2006.
- 46 E. Panteli, M. Dardavila, E. Voutsas, H. Stamatis, K. Magoulas, *Measurement and Thermodynamic Modelling of Solubilities of Antioxidants in Organic Solvents*, 22nd European Seminar on Applied Thermodynamics. Elsinore, Denmark, 28 June-1 July 2006.
- 45 E. Panteli, C. Boukouvalas, E. Voutsas, K. Magoulas, D. Tassios, *Prediction of Vapor Pressures of Pure Compounds from Knowledge of the Normal Boiling Point Temperature*, 21st European Seminar on Applied Thermodynamics. Jurata, Poland, June 1-5, 2005.
- 44 C. Perakis, V. Louli, E. Voutsas, K. Magoulas, D. Tassios, *Modelling of the Water/Ethanol/ Carbon Dioxide System with the Cubic Plus Association (CPA) Equation of State*, 21st European Seminar on Applied Thermodynamics. Jurata, Poland, June 1-5, 2005.
- 43 G. Katsoulotos, G. Pappa, P.A. Tarantili, K. Magoulas, A.G. Andreopoulos, *Modified polyethylene as a matrix for paper fiber reinforced composites*, 1st South East European Congress of Chemical Engineering (SEECChE 1). Serbia and Montenegro, September 25-28, 2005.
- 42 I. Baroulaki, G. Pappa, P.A. Tarantili, D. Economides, K. Magoulas, *Performance of polyolefin composites containing recycled paper fibers*, 8th International Symposium Polymers for Advanced Technologies. Budapest, Hungary, 13-16 September 2005.
- 41 S. Gavela, C. Karakosta, C. Nydriotis, V. Kasselouri-Rigopoulou, S. Koliass, P.A. Tarantili, K. Magoulas, D. Tassios and A. Andreopoulos, *A Study of Concretes containing thermoplastic wastes as aggregates*, International Conference on the Use of Recycled materials in building and structures. Barcelona, Spain, 9-11 November 2004.
- 40 E. Voutsas, G. Pappa, C. Boukouvalas, K. Magoulas, D. Tassios, *Correlation and Prediction of Miscibility in Polymer Blends*, 20th European Seminar on Applied Thermodynamics. Lahnstein, Germany, 9-12 October, 2003.
- 39 A. Mountouris, E. Voutsas, K. Magoulas, D. Tassios, P. Carabin, P. Tsantrizos, M. Vardavoulias, *Plasma Gasification of Sewage Sludge: Equilibrium Modeling and Exergy Analysis*, 20th European Seminar on Applied Thermodynamics. Lahnstein, Germany, 9-12 October, 2003.
- 38 C. Perakis, V. Louli and K. Magoulas, *Supercritical CO₂ Extraction of Black Peper Oil*, 20th European Seminar on Applied Thermodynamics. Lahnstein, Germany, 9-12 October, 2003.
- 37 A. Mountouris, E. Voutsas, K. Magoulas, M. Vardavoulias, and D. Tassios, *Plasma waste treatment: process design and energy optimization*, 8th International Conference on Environmental Science and Technology. Lemnos, Greece, 8-10 Sept, 2003.
- 36 V. Louli and K. Magoulas, *Solubility of Antioxidants in Supercritical Carbon Dioxide*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 35 E. Karabinis, E. Voyatzis, S. Stamataki and K. Magoulas, *Evaluation of Prediction Methods for Critical Properties and Acentric Factor of Coal Liquids and Petroleum Fractions*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 34 Ph. Coutsikos, E. Voutsas, K. Magoulas and D. Tassios, *Prediction of Vapor Pressures of Solids with a Group Contribution Method*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 33 P. Tsavas, E. Voutsas, K. Magoulas and D. Tassios, *Phase Equilibrium in Mixtures Containing Sugars and Sugar Derivatives*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 32 K. Kaloudi, S. Serafeim, E. Voutsas, K. Magoulas and D. Tassios, *Recycling of Polymers Contained in Urban Solid Waste: Preliminary Results*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 31 I. Obetzanov, S. Stamataki and K. Magoulas, *Fluid Characterization and Production Performance of Gas Condensate Reservoirs. An Engineering Consideration*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 30 K. Katsikaris, D. Tzoura and K. Magoulas, *Application of Integrated Treatment Processes on Tannery Wastewater for Water Reuse*. 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 29 Ch. Boukouvalas, G. Pappa, E. Voutsas, K. Magoulas and D. Tassios, *Prediction of the Molecular Weight Effect in Polymer Blend Miscibility with UNIFAC and EoS*, 19th European Seminar on Applied Thermodynamics, Santorini, Greece, 6-10 September, 2002.
- 28 C. Perakis, D. Stroumpoulis, K. Magoulas, V. Lygerou and D. Tassios, *The Use of Biomass for the Production of Biofuels: The Energy Ratio*, 19th European Seminar on Applied Thermodynamics. Santorini, Greece, 6-10 September, 2002.
- 27 Katsikaris K., Voutsas E., Stamataki S., Magoulas K., *Development of recycling process for used ferrous-nickel slag as abrasive material in sandblasting operations*, 7th International Conference on Environmental Science and Technology. Syros, Greece, 3-6 Sept, 2001.
- 26 Boukouvalas C., Louli V., Magoulas K., *The application of the Supercritical Fluid Extraction in the removal of pollutants from wastewater: the case of phenol*, 7th International Conference on Environmental Science and Technology. Syros, Greece, 3-6 Sept, 2001.

- 25 Stamataki S., Magoulas K., *Characterization of heavy undefined fractions*, 2001 International Symposium on Oilfield Chemistry. Houston, Texas, U.S.A., 13-16 Feb, 2001.
- 24 Tsavas P., Fafli I., Polydorou S., Voutsas E., Magoulas K., Tassios D., *Phase equilibrium in mixtures containing sugars and sugaresters: Experimental measurements and correlation/prediction*, 18th European Seminar on Applied Thermodynamics. Kutna Hora, Czech Republic, 8-11 June, 2000.
- 23 Louli V., Folas G., Stamataki S., Magoulas K., *Application of SCFE to the recovery of antioxidants from red grape marc*, 18th European Seminar on Applied Thermodynamics. Kutna Hora, Czech Republic, 8-11 June, 2000.
- 22 Stamataki S., Magoulas K., *Analysis and evaluation of constant volume depletion data inconsistency*, 18th European Seminar on Applied Thermodynamics. Kutna Hora, Czech Republic, 8-11 June, 2000.
- 21 E.C. Voutsas, V. Louli, Ch. Boukouvalas, K. Magoulas, and D.P. Tassios, *Applications of Supercritical Fluids*, CERC-3 Workshop, Chemical Reactions under Extreme Conditions. Arcachon, France, 14-17 May, 2000.
- 20 Voros N., Magoulas K., Maroulis Z., Papadimitriou J., *Innovative pilot project for water recycling from wastewater of milk collection stations*, 6th Conference on Environmental Science and Technology. Samos, Greece, 30 Aug-2 Sept, 1999.
- 19 Voutsas E., Magoulas K., Tassios D., *Prediction helps analytical experimental work for environmental purposes*, International Conference Instrumental Methods of Analysis. Modern Trends and Applications. Chalkidiki, Greece, 19-22 Sept, 1999.
- 18 Spiliotis N., Nikiforiadis F., Voutsas E., Magoulas K., Tassios D., *A UNIFAC model for sugars and sugar esters with application to sugar ester recovery*, 17th European Seminar on Applied Thermodynamics. Vilamoura, Portugal, 13-16 May, 1999.
- 17 Folas G., Papamichail I., Louli V., Boukouvalas C., Magoulas K., *Supercritical CO₂ extraction of celery and parsley seed oil*, 17th European Seminar on Applied Thermodynamics. Vilamoura, Portugal, 13-16 May, 1999.
- 16 C. Boukouvalas, V. Louli, K. Magoulas, *Removal of phenol from aqueous solutions with supercritical fluid extraction*, 17th European Seminar on Applied Thermodynamics. Vilamoura, Portugal, 13-16 May, 1999.
- 15 Pappa G., Magoulas K., Lygeros A., Tassios D., Pappaspyrides K., *Polymer recycling through a selective dissolution process. A pilot plant application*, 17th European Seminar on Applied Thermodynamics. Vilamoura, Portugal, 13-16 May, 1999.
- 14 Magoulas K., *Modeling and applications of supercritical fluid extraction*, DASFAF Workshop. Valencia, Spain, 14-15 October 1998.
- 13 Stamataki S., Magoulas K., Boukouvalas Ch., Tassios D., *Correlation and prediction of phase equilibria and volumetric behaviour of hyperbaric fluids*, 16th European Seminar on Applied Thermodynamics. Pont-a-Mousson, France, 19-22 June, 1997.
- 12 Tassios D., Magoulas K., Boukouvalas Ch., E. Voutsas, *Thermodynamic modeling in high pressure systems*, COST Chemistry Action D6, Workshop on Chemistry and Biochemistry under Extreme Conditions. Santorini, Greece, 1-3 June, 1997.
- 11 Coutsikos P., Magoulas K., Tassios D., *Determination of solubilities of organic solids in supercritical fluids*, 15th European Seminar on Applied Thermodynamics. Liverpool, GB, 12-15 June, 1996.
- 10 Griniari A., Stamataki S., Magoulas K., Tassios D., *A modification of Peng-Robinson cubic equation of state for accurate extrapolation to low temperatures and high acentric factor values*, 15th European Seminar on Applied Thermodynamics. Liverpool, GB, 12-15 June, 1996.
- 9 Stamataki S., Magoulas K. and Tassios D., *Phase equilibria and volumetric behavior of reservoir fluids with high concentration of hydrogen sulphide*, 15th European Seminar on Applied Thermodynamics. Liverpool, GB, 12-15 June, 1996.
- 8 Boukouvalas C., Markoulaki E., Magoulas K., Tassios D., *Recovery of near-anhydrous ethanol as gasoline additive from fermentation products*, 14th European Seminar on Applied Thermodynamics. Athens, Greece, 9-12 June, 1994.
- 7 Spiliotis N., Magoulas K., Tassios D., *Prediction of solubility of aromatic hydrocarbons in supercritical CO₂ with EoS/G^E models*, 14th European Seminar on Applied Thermodynamics. Athens, Greece, 9-12 June, 1994.
- 6 Magoulas K., Stamataki S., Tassios D., *Characterization of heavy compounds and undefined fractions. Application to phase equilibrium calculations*, 13th European Seminar on Applied Thermodynamics. Carry-Le-Rouet, France, 9-12 June, 1993.
- 5 Magoulas K., Tassios D., *Supercritical fluids: An introduction to the theory and their applications*, Proceedings Advanced Workshops in Biotechnology: Biocatalysis in Non-conventional Media. NTUA, Athens 19-30 October, 1992.
- 4 Magoulas K., Stamataki S., Tassios D. *Capabilities of cubic EoS in the prediction of multicomponent phase equilibria of synthetic mixtures*, 12th European Seminar on Applied Thermodynamics. Berlin, 29-30 April, 1991.
- 3 Magoulas K., Tassios D. *Thermophysical properties on n-Alkanes from C₁ to C₂₀ and their prediction for higher ones*, 5th International IUPAC Workshop on Vapor-Liquid Equilibria in 1-Alkanols and n-Alkanes Mixtures. Gradisca d'Isonzo, Italy, 7-8 Sept. 1989.
- 2 Spyropoulos C., Magoulas K., Tassios D., *Thermophysical properties of n-Alkanes and 1-Alkanols*, 4th International IUPAC Workshop on Vapor-Liquid Equilibria in 1-Alkanols and n-Alkanes Mixtures. Salonica, Greece, 24-26 October, 1988.
- 1 Magoulas K.G., Lygeros A.I., *Modelling and design of a naphtha stabilize*, Int AMSE Conference, Modelling and Simulation. Athens, June 27-29, 1984.

6. Chapters in Books

1. V. Louli, C. Boukouvalas and K. Magoulas, *Extractive Applications in Agro-food Sector*, (Chapter 16, p 213-328), State of the Art Book on Supercritical Fluids, AINIA, 2004

VI. REVIEWER/ EVALUATOR

a. Journals:

- Fluid Phase Equilibria
- Industrial & Engineering Chemistry Research
- Separation Science and Technology
- European Polymer Journal
- Journal of Chemical and Engineering Data
- Chemical Engineering Research and Design, Trans IchemE, Part A

b. Projects Evaluator for:

- General Secretary of Research and Technology of Greece
- Institute for Research Promotion of Cyprus
- Academy of Finland