

## ΔΗΜΟΣΙΕΥΣΕΙΣ

### A. 'Αρθρα σε Διεθνή Περιοδικά με Κριτές

- A1.** D. A. Ratnam, S. Pavlou, A. G. Fredrickson, "Effects of attachment of bacteria to chemostat walls in a microbial predator-prey relationship", *Biotechnology and Bioengineering*, **24**(12), 2675-2694 (1982).
- A2.** S. Pavlou, A. G. Fredrickson, "Effects of the inability of suspension-feeding protozoa to collect all cell sizes of a bacterial population", *Biotechnology and Bioengineering*, **25**(7), 1747-1772 (1983).
- A3.** S. Pavlou, "Dynamics of a chemostat in which one microbial population feeds on another", *Biotechnology and Bioengineering*, **27**(11), 1525-1532 (1985).
- A4.** M. Stoukides, S. Pavlou, "Ethylene oxidation on silver catalysts: effect of ethylene oxide and of external transfer limitations", *Chemical Engineering Communications*, **44**(1-6), 53-74 (1986).
- A5.** A. Sambanis, S. Pavlou, A. G. Fredrickson, "Analysis of the dynamics of ciliate-bacterial interactions in a CSTR", *Chemical Engineering Science*, **41**(6), 1455-1469 (1986).
- A6.** A. Sambanis, S. Pavlou, A. G. Fredrickson, "Coexistence of bacteria and feeding ciliates: growth of bacteria on autochthonous substrates as a stabilizing factor for coexistence", *Biotechnology and Bioengineering*, **29**(6), 714-728 (1987).
- A7.** C. G. Vayenas, S. Pavlou, "Optimal catalyst distribution for selectivity maximization in pellets: parallel and consecutive reactions", *Chemical Engineering Science*, **42**(7), 1655-1666 (1987).
- A8.** S. Pavlou, "Dynamics of chemostat in which one microbial population grows on multiple complementary nutrients", *Biotechnology and Bioengineering*, **30**(3), 413-419 (1987).
- A9.** C. G. Vayenas, S. Pavlou, "Optimal catalyst activity distribution and generalized effectiveness factors in pellets: single reactions with arbitrary kinetics", *Chemical Engineering Science*, **42**(11), 2633-2645 (1987).
- A10.** C. G. Vayenas, S. Pavlou, "Optimal catalyst distribution for selectivity maximization in nonisothermal pellets: the case of parallel reactions", *Chemical Engineering Science*, **43**(10), 2729-2740 (1988).
- A11.** C. G. Vayenas, S. Pavlou, A. D. Pappas, "Optimal catalyst distribution for selectivity maximization in nonisothermal pellets: the case of consecutive reactions", *Chemical Engineering Science*, **44**(1), 133-145 (1989).
- A12.** G. N. Angelopoulos, S. Pavlou, D. C. Papamantellos, "Simplified model of the electro reduction furnace process for the production of ferronickel from laterite ores", *Erzmetall: Journal for Exploration, Mining and Metallurgy*, **42**(3), 107-113 (1989).

- A13.** S. Pavlou, A. G. Fredrickson, “Growth of microbial populations in non-minimal media: some considerations for modeling”, *Biotechnology and Bioengineering*, **34**(7), 971-989 (1989).
- A14.** S. Pavlou, I. G. Kevrekidis, G. Lyberatos, “On the coexistence of competing microbial species in a chemostat under cycling”, *Biotechnology and Bioengineering*, **35**(3), 224-232 (1990).
- A15.** S. Pavlou, C. G. Vayenas, “Optimal catalyst activity profile in pellets with shell-progressive poisoning: the case of fast linear kinetics”, *Chemical Engineering Science*, **45**(3), 695-703 (1990).
- A16.** S. Pavlou, C. G. Vayenas, “Optimal catalyst activity distribution in pellets for selectivity maximization in triangular nonisothermal reaction systems. Application to cases of light olefin epoxidation”, *Journal of Catalysis*, **122**(2), 389-405 (1990).
- A17.** E. Tsangaropoulou, S. Pavlou, “Effects of spatial heterogeneity on the dynamics of a microbial feeding interaction”, *Biotechnology and Bioengineering*, **35**(10), 1024-1033 (1990).
- A18.** S. Pavlou, I. G. Kevrekidis, “Microbial predation in a periodically operated chemostat: a global study of the interaction between natural and externally imposed frequencies”, *Mathematical Biosciences*, **108**(1), 1-55 (1992).
- A19.** V. Hatzimanikatis, G. Lyberatos, S. Pavlou, S. A. Svoronos, “A method for pulsed periodic optimization of chemical reaction systems”, *Chemical Engineering Science*, **48**(4), 789-797 (1993).
- A20.** S. Dikshitulu, B. C. Baltzis, G. A. Lewandowski, S. Pavlou, “Competition between two microbial populations in a sequencing fed-batch reactor: theory, experimental verification, and implications for waste treatment applications”, *Biotechnology and Bioengineering*, **42**(5), 643-656 (1993).
- A21.** P. Lenas, S. Pavlou, “Periodic, quasiperiodic and chaotic coexistence of two competing microbial populations in a periodically operated chemostat”, *Mathematical Biosciences*, **121**(1), 61-110 (1994).
- A22.** M. A. Taylor, S. Pavlou and I. G. Kevrekidis, “Microbial predation in coupled chemostats: a global study of two coupled nonlinear oscillators”, *Mathematical Biosciences*, **122**(1), 25-66 (1994).
- A23.** P. Lenas, S. Pavlou, “Coexistence of three competing microbial populations in a chemostat with periodically varying dilution rate”, *Mathematical Biosciences*, **129**(2), 111-142 (1995).
- A24.** S. Liakou, S. Pavlou, G. Lyberatos, “Ozonation of azo dyes”, *Water Science and Technology*, **35**(4), 279-286 (1997).

- A25.** D. V. Vayenas, S. Pavlou, G. Lyberatos, “Development of a dynamic model describing nitritification and nitratification in trickling filters”, *Water Research*, **31**(5), 1135-1147 (1997).
- A26.** U. Zissi, G. Lyberatos, S. Pavlou, “Biodegradation of p-aminobenzene by *Bacillus subtilis* under aerobic conditions”, *Journal of Industrial Microbiology and Biotechnology*, **19**(1), 49-55 (1997).
- A27.** D. V. Vayenas, S. Pavlou, G. Lyberatos, “Transient modeling of trickling filters for biological ammonia removal”, *Environmental Modeling and Assessment*, **2**(3), 221-226 (1997).
- A28.** K. Stamatelatou, G. Lyberatos, C. Tsiliannis, S. Pavlou, P. Pullammanappallil, S. A. Svoronos, “Optimal and suboptimal control of anaerobic digesters”, *Environmental Modeling and Assessment*, **2**(4), 355-363 (1997).
- A29.** G. D. Manolis, R. P. Shaw, S. Pavlou, “A first order system solution for the vector wave equation in a restricted class of heterogeneous media”, *Journal of Sound and Vibration*, **209**(5), 723-752 (1998).
- A30.** P. Lenas, N. A. Thomopoulos, D. V. Vayenas, S. Pavlou, “Oscillations of two competing microbial populations in configurations of two interconnected chemostats”, *Mathematical Biosciences*, **148**(1), 43-63 (1998).
- A31.** N. A. Thomopoulos, D. V. Vayenas, S. Pavlou, “On the coexistence of three microbial populations competing for two complementary substrates in configurations of interconnected chemostats”, *Mathematical Biosciences*, **154**(2), 87-102 (1998).
- A32.** G. D. Manolis, R. P. Shaw, S. Pavlou, “Elastic waves in nonhomogeneous media under 2D conditions: I. Fundamental solutions”, *Soil Dynamics and Earthquake Engineering*, **18**(1), 19-30 (1999).
- A33.** G. D. Manolis, R. P. Shaw, S. Pavlou, “Elastic waves in nonhomogeneous media under 2D conditions: II. Numerical implementation”, *Soil Dynamics and Earthquake Engineering*, **18**(1), 31-46 (1999).
- A34.** S. Pavlou, “Computing operating diagrams of bioreactors”, *Journal of Biotechnology*, **71**(1-3), 7-16 (1999).
- A35.** D. V. Vayenas, S. Pavlou, “Coexistence of three microbial populations competing for three complementary nutrients in a chemostat”, *Mathematical Biosciences*, **161**(1-2), 1-13 (1999).
- A36.** G. D. Manolis, S. Pavlou, “Fundamental solutions for SH-waves in a continuum with large randomness”, *Engineering Analysis with Boundary Elements*, **23**(9), 721-736 (1999).
- A37.** D. V. Vayenas, S. Pavlou, “Chaotic dynamics of a food web in a chemostat”, *Mathematical Biosciences*, **162**(1-2), 69-84 (1999).

- A38.** D. V. Vayenas, S. Pavlou, “Chaotic dynamics of a microbial system of coupled food chains”, *Ecological Modelling*, **136**(2-3), 285-295 (2001).
- A39.** D. V. Vayenas, E. Michalopoulou, G. N. Constantinides, S. Pavlou, A. C. Payatakes, “Visualization experiments of biodegradation in porous media and calculation of the biodegradation rate”, *Advances in Water Resources*, **25**(2), 203-219 (2002).
- A40.** G. D. Manolis, S. Pavlou, “A Green’s function for variable density elastodynamics under plane strain conditions using Hormander’s method”, *Computer Modeling in Engineering and Sciences*, **3**(3), 399-415 (2002).
- A41.** G. Aggelis, D. V. Vayenas, V. Tsagou, S. Pavlou, “Prey-predator dynamics with predator switching regulated by a catabolic repression control mode”, *Ecological Modelling*, **183**(4), 451-462 (2005).
- A42.** D. V. Vayenas, G. Aggelis, V. Tsagou, S. Pavlou, “Dynamics of a two-prey-one-predator system with predator switching regulated by a catabolic repression control-like mode”, *Ecological Modelling*, **186**(3), 345-357 (2005).
- A43.** S. Pavlou, “Microbial competition in bioreactors”, *Chemical Industry and Chemical Engineering Quarterly*, **12**(1), 71-81 (2006).
- A44.** I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “A kinetic study of hydrogenotrophic denitrification”, *Process Biochemistry*, **41**(6), 1401-1408 (2006).
- A45.** I. N. Sgountzos, C. A. Paraskeva, S. Pavlou, A. C. Payatakes, “Growth kinetics of *Pseudomonas fluorescens* in sand beds during biodegradation of phenol”, *Biochemical Engineering Journal*, **30**(2), 164-173 (2006).
- A46.** I. Vasiliadou, S. Siozios, I. T. Papadas, K. Bourtzis, S. Pavlou, D. V. Vayenas, “Kinetics of pure cultures of hydrogen-oxidizing denitrifying bacteria and modeling of the interactions among them in mixed cultures”, *Biotechnology and Bioengineering*, **95**(3), 513-525 (2006).
- A47.** A. Kavadia, D. V. Vayenas, S. Pavlou, G. Aggelis, “Dynamics of free-living nitrogen-fixing bacterial populations in antagonistic conditions”, *Ecological Modelling*, **200**(1-2), 243-253 (2007).
- A48.** M. Milivojevic, S. Pavlou, I. Pajic-Lijakovic, B. Bugarski, “Dependence of slip velocity on operating parameters of air-lift bioreactors”, *Chemical Engineering Journal*, **132**(1-3), 117-123 (2007).
- A49.** G. Tziotzios, G. Lyberatos, S. Pavlou, D. V. Vayenas, “Modelling of biological phenol removal in draw-fill reactors using suspended and attached growth olive pulp bacteria”, *International Biodeterioration and Biodegradation*, **61**(2), 142-150 (2008).
- A50.** A. Kavadia, D. V. Vayenas, S. Pavlou, G. Aggelis, “Dynamics of free-living nitrogen-fixing bacterial populations and nitrogen fixation in a two-prey-one-predator system”, *Ecological Modelling*, **218**(3-4), 323-338 (2008).

- A51.** A. Gaki, A. Theodorou, D. V. Vayenas, S. Pavlou, “Complex dynamics of microbial competition in the gradostat”, *Journal of Biotechnology*, **139**(1), 38-46 (2009).
- A52.** I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Dynamics of a chemostat with three competitive hydrogen oxidizing denitrifying microbial populations and their efficiency for denitrification”, *Ecological Modelling*, **220**(8), 1169-1180 (2009).
- A53.** I. A. Vasiliadou, K. A. Karanasiou, S. Pavlou, D. V. Vayenas, “Experimental and modelling study of drinking water hydrogenotrophic denitrification in packed-bed reactors”, *Journal of Hazardous Materials*, **165**(1-3), 812–824 (2009).
- A54.** I. A. Vasiliadou, K. A. Karanasiou, S. Pavlou, D. V. Vayenas, “Hydrogenotrophic denitrification of drinking water using packed-bed reactors”, *Desalination*, **248**(1-3), 859–868 (2009).
- A55.** C. N. Economou, A. Makri, G. Aggelis, S. Pavlou, D. V. Vayenas, “Semi-solid state fermentation of sweet sorghum for the biotechnological production of single cell oil” (short communication), *Bioresource Technology*, **101**(4), 1385-1388 (2010).
- A56.** K. A. Karanasiou, I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Hydrogenotrophic denitrification of potable water: A review”, *Journal of Hazardous Materials*, **180**(1-3), 20-37 (2010).
- A57.** C. N. Economou, G. Aggelis, S. Pavlou, D. V. Vayenas, “Modeling of single-cell oil production under nitrogen-limited and substrate inhibition conditions”, *Biotechnology and Bioengineering*, **108**(5), 1049-1055 (2011).
- A58.** C. N. Economou, I. A. Vasiliadou, G. Aggelis, S. Pavlou, D. V. Vayenas, “Modeling of oleaginous fungal biofilm developed on semi-solid media”, *Bioresource Technology*, **102**(20), 9697-9704 (2011).
- A59.** C. N. Economou, G. Aggelis, S. Pavlou, D. V. Vayenas, “Single cell oil production from rice hulls hydrolysate”, *Bioresource Technology*, **102**(20), 9737-9742 (2011).
- A60.** K. A. Karanasiou, M. K. Michailides, I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Potable water hydrogenotrophic denitrification in packed-bed bioreactors coupled with a solar-electrolysis hydrogen production system”, *Desalination and Water Treatment*, **33**(1-3), 86-96 (2011).
- A61.** A. Kavadia, D. V. Vayenas, S. Pavlou, G. Aggelis, “Dynamics of a free-living nitrogen-fixing bacteria population lacking of competitive advantage towards an antagonistic population”, *The Open Environmental Engineering Journal*, **4**, 190-198 (2011).
- A62.** M. Milivojevic, S. Pavlou, B. Bugarski, “Liquid velocity in a high-solids-loading three-phase external-loop airlift reactor”, *Journal of Chemical Technology and Biotechnology*, **87**(11), 1529-1540 (2012).

- A63.** A. G. Tekerlekopoulou, M. Tsiflikiotou, L. Akritidou, A. Viennas, G. Tsiamis, S. Pavlou, K. Bourtzis, D. V. Vayenas, “Modelling of biological Cr(VI) removal in draw-fill reactors using microorganisms in suspended and attached growth systems”, *Water Research*, **47**(2), 623-636 (2013).
- A64.** A. G. Tekerlekopoulou, S. Pavlou, D. V. Vayenas, “Removal of ammonium, iron and manganese from potable water in biofiltration units: A review”, *Journal of Chemical Technology and Biotechnology*, **88**(5), 751-773 (2013).
- A65.** A. K. Md. M. B. Chowdhury, C. S. Akratos, D. V. Vayenas, S. Pavlou, “Olive mill waste composting: A review”, *International Biodegradation and Biodegradation*, **85**, 108-119 (2013).
- A66.** A. K. Md. M. B. Chowdhury, M. K. Michailides, C. S. Akratos, A. G. Tekerlekopoulou, S. Pavlou, D. V. Vayenas, “Composting of three phase olive mill solid waste using different bulking agents”, *International Biodegradation and Biodegradation*, **91**, 66-73 (2014).
- A67.** M.-Y. Sultana, C. S. Akratos, S. Pavlou, D. V. Vayenas, “Chromium removal in constructed wetlands: A review”, *International Biodegradation and Biodegradation*, **96**, 181-190 (2014).
- A68.** M. K. Michailides, A. G. Tekerlekopoulou, C. S. Akratos, S. Coles, S. Pavlou, D. V. Vayenas, “Molasses as an efficient low cost carbon source for biological Cr(VI) removal”, *Journal of Hazardous Materials*, **281**, 95-105 (2015).
- A69.** M.-Y. Sultana, C. S. Akratos, D. V. Vayenas, S. Pavlou, “Constructed wetlands in the treatment of agro-industrial wastewater: A review”, *Hemispa industrija*, **69**(2), 127-142 (2015).
- A70.** I. A. Vasiliadou, A. K. Md. Muktadirul Bari Chowdhury, C. S. Akratos, A. G. Tekerlekopoulou, S. Pavlou, D. V. Vayenas, “Mathematical modeling of olive mill waste composting process”, *Waste Management*, **43**, 61-71 (2015).
- A71.** T. I. Tatoulis, A. G. Tekerlekopoulou, C. S. Akratos, S. Pavlou, D. V. Vayenas, “Aerobic biological treatment of second cheese whey in suspended and attached growth reactors”, *Journal of Chemical Technology and Biotechnology*, **90**(11), 2040-2049 (2015).
- A72.** M. Michailides, T. Tatoulis, M.-Y. Sultana, A. Tekerlekopoulou, I. Konstantinou, C. S. Akratos, S. Pavlou, D. V. Vayenas, “Start-up of a free water surface constructed wetland for treating olive mill wastewater”, *Hemispa Industrija*, **69**(5), 577-583 (2015).
- A73.** T. I. Tatoulis, S. Zapantiotis, Z. Frontistis, C. S. Akratos, A. G. Tekerlekopoulou, S. Pavlou, D. Mantzavinos, D. V. Vayenas, “A hybrid system comprising an aerobic biological process and electrochemical oxidation for the treatment of black table olive processing wastewaters”, *International Biodegradation and Biodegradation*, **109**, 104-112 (2016).

## **Κεφάλαια Βιβλίων και Άρθρα σε Πρακτικά Συνεδρίων**

### **B. Διεθνή**

- B1.** T. Bacaros, S. Bebelis, S. Pavlou, C. G. Vayenas, “Optimal catalyst distribution in pellets with shell progressive poisoning: the case of linear kinetics”, in *Catalyst Deactivation*, pp. 459-468, B. Delmon and G. F. Froment, Eds. (Elsevier Science Publishers, Amsterdam, 1987).
- B2.** P. Lenas, S. Pavlou, “Chaotic response of a periodically forced system of two competing microbial species”, in *Chaotic Dynamics: Theory and Practice, NATO ASI Series, Series B: Physics*, vol. 298, pp. 283-295, T. C. Bountis, Ed. (Plenum Press, New York, 1992).
- B3.** D. V. Vayenas, E. Michalopoulou, P. Dromazou, G. Sioulas, G. N. Constantinides, S. Pavlou, A. C. Payatakes, “Visualization experiments of intrinsic biodegradation and calculation of biodegradation rates”, *Proceedings of the 1st European Conference on Pesticides and Related Organic Micropollutants in the Environment*, pp. 177-180 Ioannina, October 2000.
- B4.** D. V. Vayenas, G. Kapellos, I. Sgountzos, E. Michalopoulou, G. N. Constantinides, S. Pavlou, A. C. Payatakes, “Biofilm dynamics during biodegradation of pollutants in porous media”, *Proceedings of the 26th General Assembly of the European Geophysical Society*, Nice, France, March 2001.
- B5.** D. V. Vayenas, G. Kapellos, I. Sgountzos, E. Michalopoulou, G. N. Constantinides, S. Pavlou, A. C. Payatakes, “Biofilm dynamics in soil”, *Proceedings of the 1st European Bioremediation Conference*, pp. 389-392, Chania, Crete, July 2001.
- B6.** G. D. Manolis, S. Pavlou, “Computation of elastic waves in materials with variable density”, *Proceedings of the 4th GRACM Congress on Computational Mechanics*, Patras, June 2002.
- B7.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Hierarchical modeling approach for the prediction of effective hydraulic permeability and diffusion coefficient in biofilms”, *Proceedings of the International Conference Biofilms 2004: Structure and Activity of Biofilms*, p. 255-260, Las Vegas, Nevada, U.S.A., 2004.
- B8.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Hierarchical simulation of biofilm dynamics during the biodegradation of organic pollutants in porous media”, *Proceedings of the 3rd European Bioremediation Conference*, Chania, Greece, July 2005.
- B9.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Hierarchical simulation of the spatiotemporal evolution of heterogeneous biofilms and their impact on the flow pattern and mass transport in 3-D porous media”, *Proceedings of the 16th International Conference, Computational Methods in Water Resources*, Copenhagen, Denmark, June 2006.

- B10.** M. Milivojevic, S. Pavlou, V. Nedovic, B. Bugarski, “Analysis of hydrodynamic parameters of air lift bioreactors with immobilized cells”, *Proceedings of the 14th International Workshop on Bioencapsulation & COST 865 Meeting*, Lausanne, Switzerland, October 2006.
- B11.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Hierarchical simulation of biofilm growth dynamics in porous media”, *Proceedings of the 3rd International Conference on Environmental Science and Technology (ICEST2007)*, pp. 497-502, Houston, Texas, U.S.A., August 2007.
- B12.** G. Tziotzios, G. Lyberatos, S. Pavlou, D. V. Vayenas, “Modelling of biological phenol removal in draw-fill reactors using suspended and attached growth olive pulp bacteria”, *Proceedings of the 10th International Conference on Environmental Science and Technology (CEST2007)*, pp. A1481-A1488, Kos, Greece, September 2007.
- B13.** K. A. Karanasios, M. K. Michailidis, I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Potable water denitrification”, *Proceedings of the 2nd International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 09) & SECOTOX Conference*, pp. 667-673, Mykonos, Greece, June 2009.
- B14.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Effect of biofilm formation on particle transport and deposition in porous media” *Proceedings of the 18th International Conference, Computational Methods in Water Resources*, Barcelona, Spain, June 2010.
- B15.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, “Hierarchical hybrid simulation of biofilm growth dynamics in 3D porous media”, *Computational Methods for Coupled Problems in Science and Engineering IV (COUPLED PROBLEMS 2011)*, pp. 710-720, M. Papadrakakis, E. Oñate and B. Schrefler, Eds. (International Center for Numerical Methods in Engineering (CIMNE), Barcelona, 2011).
- B16.** T. S. Alexiou, G. E. Kapellos, S. Pavlou, “Computational study of the interaction between a Newtonian fluid and a cellular biological medium in a straight vessel”, *Computational Methods for Coupled Problems in Science and Engineering IV (COUPLED PROBLEMS 2011)*, pp. 1120-1127, M. Papadrakakis, E. Oñate and B. Schrefler, Eds. (International Center for Numerical Methods in Engineering (CIMNE), Barcelona, 2011).
- B17.** M. Michailides, A. Tekerlekopoulou, C. Akratos, S. Pavlou, D. Vayenas, “A kinetic study of biological Cr(VI) reduction in draw-fill reactors”, *Proceedings of Protection and Restoration of the Environment XI*, pp. 529-538, Thessaloniki, Greece, July 2012.
- B18.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, “Chapter 8. Fluid-biofilm interactions in porous media”, in *Heat Transfer and Fluid Flow in Biological Processes*, Chapter 8, pp. 207-238, S.M. Becker and A.V. Kuznetsov, Eds. (Elsevier Science Publishers, Amsterdam, 2015).

- B19.** M. K. Michailides, T. I. Tatoulis, A. G. Tekerlekopoulou, C. S. Akratos, S. Pavlou, D. V. Vayenas, "Second cheese whey as an efficient low-cost carbon source for biological hexavalent chromium removal", *Proceedings of Novel Methods for Integrated Exploitation of Agricultural by-Products*, Thessaloniki, Greece, November 2015.

## Γ. Πανελλήνια

- Γ1.** Σ. Μπεμπέλης, Σ. Παύλου, Κ. Βαγενάς, "Αριστοποίηση της κατανομής της ενεργού φάσης σε πορώδεις καταλύτες", *Πρακτικά 10ου Πανελλήνιου Συνεδρίου Χημείας (Εφαρμοσμένη Χημική Έρευνα και Τεχνολογία)*, Τόμος Α', σελ. 577-584, Πάτρα, Δεκέμβριος 1985.
- Γ2.** I. Γ. Κεβρεκίδης, Σ. Παύλου, "Μία επιλογή μη γραμμικών προβλημάτων από την χημική μηχανική: αντιδράσεις και φαινόμενα μεταφοράς", στο *ΤΑΞΗ ΚΑΙ ΧΑΟΣ στα Μη Γραμμικά Δυναμικά Συστήματα, Τόμος II, Πρακτικά του 2ου Σχολείου Μη Γραμμικών Συστημάτων* (Σάμος, Ιούλιος 1988), σελ. 209-251, Επιστ. Εκδότες: Α. Μπούντης και Σ. Πνευματικός (Εκδόσεις Γ. Α. Πνευματικός, Αθήνα, 1989).
- Γ3.** Π. Λένας, N. Θωμόπουλος, Δ. Βαγενάς, Σ. Παύλου, "Ταλαντώσεις δύο ανταγωνιζόμενων μικροβιακών πληθυσμών σε διατάξεις δύο συζευγμένων χημοστατών", *Πρακτικά 1ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 927-932, Πάτρα, Μάιος 1997.
- Γ4.** Π. Λένας, N. A. Θωμόπουλος, Δ. B. Βαγενάς, Σ. Παύλου, "Συνύπαρξη ανταγωνιζόμενων μικροβιακών πληθυσμών σε διατάξεις χημοστατών", *Πρακτικά 5ου Συνεδρίου Περιβαλλοντικής Επιστήμης και Τεχνολογίας*, Τόμος Α, σελ. 522-529, Μόλυβος Λέσβου, Σεπτέμβριος 1997.
- Γ5.** Δ. B. Βαγενάς, N. A. Θωμόπουλος, Σ. Παύλου, "Χαοτική δυναμική τροφικών αλυσίδων και τροφικών δικτύων σε βιοαντιδραστήρες", *Πρακτικά 2ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 617-620, Θεσσαλονίκη, Μάιος 1999.
- Γ6.** Σ. Τσίχλας, X. Παρασκευά, Σ. Παύλου, A. X. Παγιατάκης, "Σχετικές διαπερατότητες και στοχαστική συμπεριφορά των πιέσεων κατά την διάρκεια της μόνιμης κατάστασης στη διφασική ροή μη αναμίξιμων ρευστών σε πορώδη μέσα", *Πρακτικά 3ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 769-772, Αθήνα, Μάιος-Ιούνιος 2001.
- Γ7.** Δ. Βαγενάς, Γ. Καπέλλος, I. Σγούντζος, E. Μιχαλοπούλου, Γ. Κωνσταντινίδης, Σ. Παύλου, A. X. Παγιατάκης, "Δυναμική συμπεριφορά βιοϋμένων κατά τη βιοαποδόμηση οργανικών ρύπων στο υπέδαφος", *Πρακτικά 3ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 985-988, Αθήνα, Μάιος-Ιούνιος 2001.
- Γ8.** Γ. E. Καπέλλος, Σ. Παύλου, A. X. Παγιατάκης, "Μοντελοποίηση της δυναμικής συμπεριφοράς της βιοαποδόμησης οργανικών ενώσεων σε διδιάστατα πορώδη μέσα", *Πρακτικά 4ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 997-1000, Πάτρα, Μάιος 2003.

- Γ9.** Γ. Ε. Καπέλλος, Τ. Σ. Αλεξίου, Σ. Παύλου, Α. Χ. Παγιατάκης, “Θεωρητική και πειραματική μελέτη της επιδρασης της ανάπτυξης βιοφίλμ στη διαπερατότητα δικτύων πόρων”, *Πρακτικά 4ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, σελ. 1001-1004, Πάτρα, Μάιος 2003.
- Γ10.** Ι. Ν. Σγούντζος, Σ. Παύλου, Α. Χ. Παγιατάκης, “Μελέτη της κινητικής ανάπτυξης του μικροοργανισμού *Pseudomonas fluorescens* σε υγρές καλλιέργειες και πορώδη υλικά”, *Πρακτικά 5ου Πανελλήνιου Επιστημονικού Συνέδριου Χημικής Μηχανικής*, σελ. 233-236, Θεσσαλονίκη, Μάιος 2005.
- Γ11.** Γ. Ε. Καπέλλος, Τ. Σ. Αλεξίου, Σ. Παύλου, Α. Χ. Παγιατάκης, “Ιεραρχική προσομοίωση της δυναμικής συμπεριφοράς της βιοαποδόμησης οργανικών ενώσεων σε πορώδη μέσα: 1. Από το κύτταρο στον πόρο”, *Πρακτικά 5ου Πανελλήνιου Επιστημονικού Συνέδριου Χημικής Μηχανικής*, σελ. 825-828, Θεσσαλονίκη, Μάιος 2005.
- Γ12.** Α. Καβαδία, Δ. Βαγενάς, Σ. Παύλου, Γ. Αγγελής, “Δυναμική ελεύθερα διαβιούντων αζωτοδεσμευτικών πληθυσμών σε συνθήκες ανταγωνισμού και θήρευσης”, *Πρακτικά 5ου Διεπιστημονικού Διαπανεπιστημιακού Συνεδρίου του Ε.Μ.Π. και του ΜΕ.Κ.Δ.Ε. του Ε.Μ.Π. με θέμα “Παιδεία Έρευνα Τεχνολογία. Από το χθες στο αύριο”*, Μέτσοβο, Σεπτέμβριος 2007.
- Γ13.** Κ. Α. Καρανάσιος, Μ. Κ. Μιχαηλίδης, Ι. Α. Βασιλειάδου, Δ. Β. Βαγενάς, Σ. Παύλου, “Υδρογονοτροφική απονιτροποίηση πόσιμου νερού”, *Πρακτικά 7ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, Πάτρα, Ιούνιος 2009.
- Γ14.** Χ. Ν. Οικονόμου, Δ. Β. Βαγενάς, Σ. Παύλου, Α. Μακρή, Γ. Αγγελής, “Βιοτεχνολογική παραγωγή ελαίου από γλυκό σόργο με ζύμωση ημι-στερεής κατάστασης”, *Πρακτικά 7ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, Πάτρα, Ιούνιος 2009.
- Γ15.** Κ. Α. Καρανάσιος, Δ. Κοκκινίδου, Σ. Π. Μακρή, Ι. Α. Βασιλειάδου, Σ. Παύλου, Δ. Β. Βαγενάς, “Υδρογονοτροφική απονιτροποίηση πόσιμου νερού”, *Πρακτικά 4ου Περιβαλλοντικού Συνεδρίου Μακεδονίας*, Θεσσαλονίκη, Μάρτιος 2011.
- Γ16.** Χ. Ν. Οικονόμου, Γ. Αγγελής, Σ. Παύλου, Δ. Β. Βαγενάς, “Βιοτεχνολογική παραγωγή ελαίου από εκχύλισμα γλυκού σόργου”, *Πρακτικά 4ου Περιβαλλοντικού Συνεδρίου Μακεδονίας*, Θεσσαλονίκη, Μάρτιος 2011.
- Γ17.** Α. Γ. Τεκερλεκοπούλου, Μ. Κ. Μιχαηλίδης, Χ. Σ. Ακράτος, Σ. Παύλου, Δ. Β. Βαγενάς, “Βιολογική αναγωγή εξασθενούς χρωμίου”, *Πρακτικά 1ου Περιβαλλοντικού Συνεδρίου Θεσσαλίας*, Σκιάθος, Σεπτέμβριος 2012.
- Γ18.** Ι. Α. Βασιλειάδου, Α. Κ. Md. M. B. Chowdhury, Χ. Σ. Ακράτος, Α. Γ. Τεκερλεκοπούλου, Σ. Παύλου, Δ. Β. Βαγενάς, “Ανάπτυξη μαθηματικού μοντέλου της διεργασίας κομποστοποίησης στερεών αποβλήτων ελαιοτριβείου”, *Πρακτικά 10ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, Πάτρα, Ιούνιος 2015.
- Γ19.** Ο. Ν. Τσολχά, Α. Γ. Τεκερλεκοπούλου, Χ. Σ. Ακράτος, Σ. Μπέλλου, Γ. Αγγελής, Σ. Παύλου, Δ. Β. Βαγενάς, “Μελέτη της χρήσης μικροφυκών στην επεξεργασία

υγρών αποβλήτων τυροκομείου με ταυτόχρονη παραγωγή βιοκαυσίμων”, *Πρακτικά 10ου Πανελλήνιου Επιστημονικού Συνεδρίου Χημικής Μηχανικής*, Πάτρα, Ιούνιος 2015.

### **Παρουσιάσεις σε Συνέδρια χωρίς Πρακτικά**

#### **Δ. Διεθνή**

- Δ1.** S. Pavlou, A. G. Fredrickson, “A time- and state-discrete distributed model for microbial predation”, *182nd National ACS Meeting*, New York, U.S.A., August 1981.
- Δ2.** S. Pavlou, A. G. Fredrickson, “Coexistence of suspension-feeding protozoa and bacteria: a model”, *3rd International Symposium on Microbial Ecology*, East Lansing, Michigan, U.S.A., August 1983.
- Δ3.** S. Pavlou, M. Stoukides, “Effect of transport phenomena on the selectivity of silver catalysts during ethylene oxidation”, *ACS Spring National Meeting*, St. Louis, Missouri, U.S.A., April 1984.
- Δ4.** A. G. Fredrickson, S. Pavlou, “Studies of microbial and cell growth rate limited by two or more nutrients”, *Mini Symposium on Bioprocessing and Biotechnology*, St. Paul, Minnesota, U.S.A., December 1987.
- Δ5.** A. G. Fredrickson, S. Pavlou, “Modeling growth limited by more than one nutrient: some thoughts on how to approach the task”, *Engineering Foundation Conference on Cell Culture Engineering*, Palm Coast, Florida, U.S.A., January-February 1988.
- Δ6.** C. G. Vayenas, S. Pavlou, “Optimal catalyst distribution for selectivity maximization in pellets”, *AICHE Annual Meeting*, Paper No. 72d, Washington, D.C., U.S.A., November-December 1988.
- Δ7.** A. G. Fredrickson, S. Pavlou, “Growth of microbial populations in non-minimal media”, *AICHE Annual Meeting*, Paper No. 158a, Washington, D.C., U.S.A., November-December 1988.
- Δ8.** P. Tsiakaras, C. G. Vayenas, S. Pavlou, X. E. Verykios, “Optimization, preparation and performance of non-uniformly activated catalyst pellets” (poster), *4th World Congress of Chemical Engineering*, Karlsruhe, Germany, June 1991.
- Δ9.** S. Pavlou, P. Lenas, “Periodic, quasiperiodic and chaotic coexistence of two competing microbial species in a CSTR with periodically varying inputs”, *AICHE Annual Meeting*, Paper No. 93d, Los Angeles, California, U.S.A., November 1991.
- Δ10.** P. Lenas, S. Pavlou, “Coexistence of three competing microbial populations in a CSTR with periodically varying flow rate”, *AICHE Annual Meeting*, Paper No. 91j, San Francisco, California, U.S.A., November 1994.

- Δ11.** S. Pavlou, N. A. Thomopoulos, D. V. Vayenas, "Chaotic dynamics of a four-trophic-level food chain in a CSTR", *AICHE Annual Meeting*, Paper No. 247g, Miami Beach, Florida, U.S.A., November 1998.
- Δ12.** D. V. Vayenas, G. Kapellos, I. Sgountzos, G. N. Constantinides, S. Pavlou and A. C. Payatakes (2001) "Biodegradation of organic compounds and biofilm dynamics in porous media", *2nd CCMS/NATO Workshop on Management of Industrial Toxic Wastes and Substrates: Bioremediation of Polluted Ecosystems*, Matera, Italy, December 2001.
- Δ13.** M. Milivojevic, S. Pavlou, V. Nedovic, C. Georgiou, B. Bugarski, "Analysis of hydrodynamic parameters of two and three phase air lift bioreactors for food bioprocesses", *5th International Congress on Food Technology*, Thessaloniki, Greece, March 2007.
- Δ14.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A.C. Payatakes, "Hierarchical simulation of biofilm growth dynamics in 3-D porous media: constant flow rate versus constant head" (poster), *17th International Conference on Computational Methods in Water Resources*, San Francisco, U.S.A., July 2008.

#### **E. Πανελλήνια**

- E1.** S. Pavlou, P. Tsakaras, X. E. Verykios, C. G. Vayenas, "Optimization of activity distribution in catalyst pellets", *2nd Panhellenic Catalysis Symposium*, Patras, Greece, September 1989.
- E2.** Δ. Β. Βαγενάς, Ε. Μιχαλοπούλου, Γ. Ν. Κωνσταντινίδης, Σ. Παύλου, Α. Χ. Παγιατάκης, "Βιοαποικοδόμηση οργανικών ρύπων στο έδαφος και τον υδροφόρο ορίζοντα", *4ο Συνέδριο Τμήματος Χημείας Πανεπιστημίου Ιωαννίνων: Βασική και Εφαρμοσμένη Χημική Έρευνα*, Ιωάννινα, Μάιος 2001.
- E3.** X. N. Oikonomou, Γ. Αγγελής, Σ. Παύλου, Δ. Β. Βαγενάς, "Βιοτεχνολογική παραγωγή ελαίου από γλυκό σόργο με τη χρήση του ελαιογόνου μύκητα *Mortierella isabellina* ATHUM 2935", *3ο Συνέδριο της Επιστημονικής Εταιρείας MIKROBIOKOΣΜΟΣ*, Θεσσαλονίκη, Δεκέμβριος 2010.
- E4.** A. Τεκερλεκοπούλου, Γ. Τσιάμης, Σ. Παύλου, K. Μπούρτζης, Δ. Βαγενάς, "Ανάπτυξη μαθηματικού μοντέλου για τη βιολογική αναγωγή Cr(VI) σε αντιδραστήρες αιωρούμενης ανάπτυξης και σταθερής κλίνης" (poster), *5ο Συνέδριο της Επιστημονικής Εταιρείας MIKROBIOKOΣΜΟΣ*, Αθήνα, Δεκέμβριος 2012.

#### **Z. Επιστολή στον Εκδότη**

- Z1.** S. Pavlou, C. G. Vayenas, G. Dassios, "Comments on optimal catalyst activity profiles in pellets - VIII. General nonisothermal reacting systems with arbitrary kinetics" (letter), *Chem. Eng. Sci.*, **46**(12), 3327-3328 (1991).

#### **H. Βιβλίο**

- H1.** Γ. Λυμπεράτος, Σ. Παύλου, “Εισαγωγή στη Βιοχημική Μηχανική”, Επιστημονικές Εκδόσεις Τζιόλα (2010).