

PUBLICATIONS**A. Articles in Refereed Journals**

- 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 nitrification and denitrification 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. Stamatelatos, G. Lyberatos, C. Tsiligiannis, 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. Karanasios, 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. Karanasios, 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. Karanasios, 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. Karanasios, 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. Mukhtadirul Bari Chowdhury, C. S. Akrotos, D. V. Vayenas, S. Pavlou, “Olive mill waste composting: A review”, *International Biodeterioration and Biodegradation*, **85**, 108-119 (2013).
- A66.** A. K. Md. Mukhtadirul Bari Chowdhury, M. K. Michailides, C. S. Akrotos, A. G. Tekerlekopoulou, S. Pavlou, D. V. Vayenas, “Composting of three phase olive mill solid waste using different bulking agents”, *International Biodeterioration and Biodegradation*, **91**, 66-73 (2014).
- A67.** M.-Y. Sultana, C. S. Akrotos, S. Pavlou, D. V. Vayenas, “Chromium removal in constructed wetlands: A review”, *International Biodeterioration and Biodegradation*, **96**, 181-190 (2014).
- A68.** M. K. Michailides, A. G. Tekerlekopoulou, C. S. Akrotos, 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. Akrotos, D. V. Vayenas, S. Pavlou, “Constructed wetlands in the treatment of agro-industrial wastewater: A review”, *Hemijaska Industrija*, **69**(2), 127-142 (2015).
- A70.** I. A. Vasiliadou, A. K. Md. Mukhtadirul Bari Chowdhury, C. S. Akrotos, 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. Akrotos, 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. Akrotos, S. Pavlou, D. V. Vayenas, “Start-up of a free water surface constructed wetland for treating olive mill wastewater”, *Hemijaska Industrija*, **69**(5), 577-583 (2015).
- A73.** T. I. Tatoulis, S. Zapantiotis, Z. Frontistis, C. S. Akrotos, 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 Biodeterioration and Biodegradation*, **109**, 104-112 (2016).

Book Chapters and Articles in Conference Proceedings

B. International

- 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 (ICEST2007)*, 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. 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. 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. Akrotas, 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.

C. Greek

- C1.** S. Bebelis, S. Pavlou, C. G. Vayenas, "Optimization of distribution of the active component in porous catalysts", *Proceedings of the 10th Panhellenic Chemistry Conference (Applied Chemical Research and Technology)*, Vol. A, pp. 577-584, Patras, Greece, December 1985 (in greek).
- C3.** I. G. Kevrekidis, S. Pavlou, "A selection of non-linear problems in chemical engineering: reactions and transport phenomena", in *ORDER AND CHAOS in Non-Linear Systems, Vol. II, Proceedings of the 2nd School on Non-Linear Dynamical Systems* (Samos, July 1988), pp. 209-251, T. C. Bountis and S. Pnevmatikos, Eds. (G. A. Pnevmatikos Publishers, Athens, 1989) (in greek).
- C3.** P. Lenas, N. A. Thomopoulos, D. V. Vayenas, S. Pavlou, "Oscillations of two competing microbial populations in configurations of two interconnected chemostats", *Proceedings of the 1st Panhellenic Scientific Chemical Engineering Conference*, pp. 927-932, Patras, Greece, May 1997 (in greek).
- C4.** P. Lenas, N. A. Thomopoulos, D. V. Vayenas, S. Pavlou, "Coexistence of competing microbial populations in chemostat configurations", *Proceedings of the 5th Conference of Environmental Science and Technology*, Vol. A, pp. 522-529, Molyvos, Lesbos, September 1997 (in greek).
- C5.** D. V. Vayenas, N. A. Thomopoulos, S. Pavlou, "Chaotic dynamics of food chains and food webs in bioreactors", *Proceedings of the 2nd Panhellenic Scientific Chemical Engineering Conference*, pp. 617-620, Thessaloniki, Greece, May 1999 (in greek).
- C6.** S. Tsihclas, C. Paraskeva, S. Pavlou, A. C. Payatakes, "Relative permeabilities and stochastic behavior of pressures during steady-state two-phase flow of immiscible fluids in porous media", *Proceedings of the 3rd Panhellenic Scientific Chemical Engineering Conference*, pp. 769-772, Athens, May-June 2001 (in greek).
- C7.** D. V. Vayenas, G. Kapellos, I. Sgountzos, E. Michalopoulou, G. N. Constantinides, S. Pavlou, A. C. Payatakes, "Biofilm dynamics during biodegradation of organic pollutants in soil", *Proceedings of the 3rd Panhellenic Scientific Chemical Engineering Conference*, pp. 985-988, Athens, May-June 2001 (in greek).
- C8.** G. E. Kapellos, S. Pavlou, A. C. Payatakes, "Modeling of the dynamic behavior of biodegradation of organic compounds in 2-D porous media", *Proceedings of the 4th Panhellenic Scientific Chemical Engineering Conference*, pp. 997-1000, Patras, Greece, May 2003 (in greek).

- C9.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Theoretical and experimental study of the influence of biofilm growth on the permeability of pore networks”, *Proceedings of the 4th Panhellenic Scientific Chemical Engineering Conference*, pp. 1001-1004, Patras, Greece, May 2003 (in greek).
- C10.** I. N. Sgountzos, S. Pavlou, A. C. Payatakes “Study of the growth kinetics of the microorganism *Pseudomonas fluorescens* in cultures and porous materials”, *Proceedings of the 5th Panhellenic Scientific Chemical Engineering Conference*, pp. 233-236, Thessaloniki, Greece, May 2005 (in greek).
- C11.** G. E. Kapellos, T. S. Alexiou, S. Pavlou, A. C. Payatakes, “Hierarchical simulation of the dynamics of biodegradation of organic compounds in porous media: 1. From the cell to the pore”, *Proceedings of the 5th Panhellenic Scientific Chemical Engineering Conference*, pp. 825-828, Thessaloniki, Greece, May 2005 (in greek).
- C12.** A. Kavadia, D.V. Vayenas, S. Pavlou, G. Aggelis, “Dynamics of free-living nitrogen-fixing bacterial populations in antagonistic and predation conditions”, *Proceedings of the 5th Interdisciplinary Conference of the N.T.U.A. and of M.I.R.C. of the N.T.U.A. with subject “Education, Research, Technology. From Yesterday to Tomorrow”*, Metsovon, Greece, September 2007 (in greek).
- C13.** K. A. Karanasios, M. K. Michailidis, I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Hydrogenotrophic denitrification of potable water”, *Proceedings of the 7th Panhellenic Scientific Chemical Engineering Conference*, Patras, Greece, June 2009 (in greek).
- C14.** C. N. Economou, D. V. Vayenas, S. Pavlou, A. Makri, G. Aggelis, “Biotechnological production of oil from sweet sorghum by semi-solid state fermentation”, *Proceedings of the 7th Panhellenic Scientific Chemical Engineering Conference*, Patras, Greece, June 2009 (in greek).
- C15.** K. A. Karanasios, D. Kokkinidou, S. P. Makri, I. A. Vasiliadou, S. Pavlou, D. V. Vayenas, “Hydrogenotrophic denitrification of potable water”, *Proceedings of the 4th Environmental Conference of Macedonia*, Thessaloniki, March 2011.
- C16.** C. N. Economou, D. V. Vayenas, S. Pavlou, G. Aggelis, “Biotechnological production of oil from sweet sorghum extract”, *Proceedings of the 4th Environmental Conference of Macedonia*, Thessaloniki, March 2011.
- C17.** A. G. Tekerlekopoulou, M. Michailides, C. S. Akrotas, S. Pavlou, D. V. Vayenas, “Biological reduction of hexavalent chromium”, *Proceedings of the 1st Environmental Conference of Thessaly*, Skiathos, September 2012.
- C18.** I. A. Vasiliadou, A. K. Md. M. B. Chowdhury, C. S. Akrotas, A. G. Tekerlekopoulou, S. Pavlou, D. V. Vayenas, “Mathematical model development of olive mill solid waste composting process”, *Proceedings of the 10th Panhellenic Scientific Chemical Engineering Conference*, Patras, Greece, June 2015 (in greek).

- C19.** O. N. Tsolcha, A. G. Tekerlekopoulou, C. S. Akkratos, S. Bellou, G. Aggelis, S. Pavlou, D. V. Vayenas, “Study of microalgae use in dairy wastewater treatment with the simultaneous biofuel production”, *Proceedings of the 10th Panhellenic Scientific Chemical Engineering Conference*, Patras, Greece, June 2015 (in greek).

Presentations in Conferences without Proceedings

D. International

- D1.** 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.
- D2.** 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.
- D3.** 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.
- D4.** 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.
- D5.** 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.
- D6.** 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.
- D7.** 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.
- D8.** 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.
- D9.** 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.
- D10.** 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.

- D11.** 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.
- D12.** 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.
- D13.** 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.
- D14.** 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. Greek**
- E1.** S. Pavlou, P. Tsiakaras, X. E. Verykios, C. G. Vayenas, “Optimization of activity distribution in catalyst pellets”, *2nd Panhellenic Catalysis Symposium*, Patras, Greece, September 1989.
- E2.** D. V. Vayenas, E. Michalopoulou, G. N. Constantinides, S. Pavlou, A. C. Payatakes, “Biodegradation of organic pollutants in soil and in underground water”, *4th Conference of the Chemistry Department of the University of Ioannina: Basic and Applied Research in Chemistry*, Ioannina, May 2001.
- E3.** C. N. Economou, D. V. Vayenas, S. Pavlou, G. Aggelis, “Biotechnological production of oil from sweet sorghum using the oleaginous fungus *Mortierella isabellina* ATHUM 2935”, *3rd MIKROBIOKOSMOS Conference*, Thessaloniki, December 2010.
- E4.** A. Tekerlekopoulou, G. Tsiamis, S. Pavlou, K. Bourtzis, D. Vayenas, “Modelling of biological Cr(VI) reduction in suspended and attached growth reactors” (poster), *5th MIKROBIOKOSMOS Conference*, Athens, Greece, December 2012.
- F. Letter to the Editor**
- F1.** S. Pavlou, C. G. Vayenas and G. Dassios, “Comments on optimal catalyst activity profiles in pellets - VIII. General nonisothermal reacting systems with arbitrary kinetics” (letter), *Chemical Engineering Science*, **46**(12), 3327-3328 (1991).
- G. Book**
- G1.** G. Lyberatos, S. Pavlou, “Introduction to Biochemical Engineering”, Tziola Scientific Publications (2010) (in greek).

