

REFERENCES

1. Adedayo, O., Javadpour, S., Taylor, C., Anderson, W.A. and Moo-Young, M. "Decolorization and detoxification of methyl red by aerobic bacteria from a wastewater treatment plant", *World J. Microbiol. Biot.*, Vol. 20, pp.545–550, 2004.
2. Agarwal, S.K. "Environmental Biotechnology", 1st Ed, APH Publishing Corporation, New Delhi, India, pp.267-289, 1998.
3. Alinsafi, A., Evenou, F. and Abdulkarim, E.M. "Treatment of textile industry wastewater by supported photocatalysis", *Dyes Pigm.*, Vol. 74, pp.439-445, 2007.
4. American Public Health Association (APHA). "Standard methods for the examination of water and wastewater", 20th ed., Washington D.C., 1998.
5. Anjali, P., Poonam, S. and Leela, I. "Bacterial decolourization and degradation of azo dyes", *Int. Biodet. Biodegr.*, Vol. 59, pp.73-84, 2007.
6. Arslan, I. "Treatability of a simulated disperse dye-bath by ferrous iron coagulation, ozonation, and ferrous iron-catalyzed ozonation", *J. Hazard. Mater.*, Vol. 85, pp.229-241, 2001.
7. Arslan-Alaton, I. "Degradation of a commercial textile biocide with advanced oxidation processes and ozone", *J. Environ. Manage.*, Vol. 82, pp.145-154, 2007.
8. Asad, S., Amoozegar, M.A., Pourbabae, A.A., Sarbolouki, M.N. and Dastqheib, S.M.M. "Decolorization of textile azo dyes by newly isolated halophilic and halotolerant bacteria", Vol. 98, pp.2082-2088, 2006.
9. Ashraf, S. S., Rauf, M. A. and Alhadrami, S. N. "Decolorization of Methyl Red using Fenton's reagent and the effect of various salts", *Dyes Pigments*, Vol. 69, pp.80-84, 2006.

10. Aulentaa, F., Bassanib, C., Ligthart, J., Majonea, M. and Tilche, A. "Calorimetry: a tool for assessing microbial activity under aerobic and anoxic conditions", *Water Res.*, Vol. 36, pp. 1297-1305, 2002.
11. Bafana, A., Chakrabarti, T. and Devi, S.S. "Azoreductase and dye detoxification activities of *Bacillus velezensis* strain AB", *Environ. Biotechnol.*, Vol. 77, pp.1139-1144, 2008a.
12. Bafana, A., Krishnamurthi, K., Devi, S.S. and Chakarbrati, T. "Biological decolourization of C.I. direct black 38 by *Enterococcus gallinarum*", *J. Hazard. Mater.*, Vol. 157, pp.187-193, 2008b.
13. Bailey, J. and Ollis, F. "Biochemical Engineering Fundamentals", McGraw-Hill, New York, NY, USA. pp.383-386, 1986.
14. Banat, I.M., Nigam, P., Singh, D. and Marchant, R. "Microbial decolorization of textile-dyecontaining effluents", *Bioresour. Technol.*, Vol. 58, pp.217-227, 1996.
15. Battley, E. "Energetics of Microbial Growth", Wiley, New York. 1987.
16. Battley, E.H. "The development of direct and indirect methods for the study of the thermodynamics of microbial growth", *Thermochim. Acta.*, Vol. 309, pp. 17-37, 1998.
17. Beaubien, A. and Jolicoeur, C. "Application of flow microcalorimetry to process control in biological treatment of industrial wastewater", *J. of Water Poll. Control Fed.*, Vol. 57, pp. 95-100, 1985.
18. Behnajady, M.A., Modirshahla, N. and Shokri, M. "Photodestruction of Acid Orange 7 AO7 in aqueous solutions by UV/H₂O₂: influence of operational parameters", *Chemosphere*, Vol. 55, pp.129-134, 2004.
19. Ben-Mansour, H., Mosrati, R. and Corroler, D. "In vitro mutagenicity of Acid Violet 7 and its degradation products by *Pseudomonas putida* mt-2: correlation with chemical structures", *Environ. Toxicol. Phamacol.*, Vol. 27, pp.231-236, 2009.
20. Beydilli, M.I., Pavlostathis, S.G. and Tincher, W.C. "Biological decolorization of the azo dye Reactive Red 2 under various oxidation-reduction conditions", *Wat. Environ Res.*, Vol. 72, pp.698-705, 2000.
21. Birou, B., Marison, I.W. and von Stockar, U. "Calorimetric investigation of aerobic fermentations", *Biotechnol. Bioeng.*, Vol. 30, No. 5, pp. 650-660, 1987.

22. Blumel, S., Contzen, M., Lutz, M., Stolz, A. and Knackmuss, H.J. "Isolation of a bacterial strain with the ability to utilize the sulfonated azo compound 4-carboxy 4 ϕ - sulfoazobenzene as the sole source of carbon and energy", *Appl. Environ. Microbiol.*, Vol. 64, pp.2315-2317, 1998.
23. Blumel, S., Knackmuss, H.J. and Stolz, A. "Molecular cloning and characterization of the gene coding for the aerobic azoreductase from *Xenophilus azovorans* KF46F", *Appl. Environ. Microbiol.*, Vol. 68, pp.3948-3955, 2002.
24. Blusztajn, J. K. "Choline a vital amine", *Science*, Vol. 281, pp.794-795, 1998.
25. Boethling, R.S., Elizabeth Sommer, and David DiFiore, "Designing Small Molecules for Biodegradability", *Chem. Rev.*, Vol. 107, pp.2207-2227, 2007.
26. Boon, N., Goris, J., de Vos, P., Verstraete, W. and Top, E.M. "Bioaugmentation of activated sludge by an indigenous 3-chloroaniline-degrading *Comamonas testosteroni* strain 12 gfp", *Appl. Environ. Microbiol.*, Vol. 66, pp.2906-2913, 2000.
27. Boopathy, R. "Factors limiting bioremediation technologies", *Bioresource Technol.*, Vol. 74, pp.63-67, 2000.
28. Brige, A., Motte, B., Borloo, J., Buyschaert, G., Devreese, B., Jozef, J. and Beeumen, V. "Bacterial decolorization of textile dyes is an extracellular process requiring a multicomponent electron transfer pathway", *Microbial Biotechnol.*, Vol. 1, pp.40-52, 2008.
29. Bromley-Challenor, K.C.A., Knapp, J.S. and Zhang, Z. "Decolorization of an azo dye by unacclimated activated sludge under anaerobic conditions", *Water Res.*, Vol. 34, pp.4410-4418, 2000.
30. Brosillon, S., Djelal, H., Merienne, N. and Amrane, A. "Innovative integrated process for the treatment of azo dyes: coupling of photocatalysis and biological treatment", *Desalination*, Vol. 222, pp.331-339, 2008.
31. Calvet, E. and Prat, H. "Recent progress in microcalorimetry Ed. And transl. H A Skinner", Pergamon Press, Oxford, 1963.

32. Carliell, C.M., Barclay, S.J. and Naidoo, N. "Anaerobic decolorisation of reactive dyes in conventional sewage treatment processes", *Wat SA*, Vol. 20, pp.341-344, 1994.
33. Castillo, L., El Khorassani, H., Trebuchon, P. and Thomas, O. "UV treatability test for chemical and petrochemical wastewater", *Wat. Sci. Tech.*, Vol.39, pp.17-23, 1999.
34. Catwright, R.A. "Historical and modern epidemiological studies on populations exposed to N-substituted aryl compounds", *Environ. Health Persp.*, Vol. 49, pp.13-19, 1983.
35. Chang, J.S., Chen, B.Y. and Lin, Y.C. "Stimulation of bacterial decolorization of an azo dye by extracellular metabolites from *Escherichia coli* strain NO3", *Bioresour. Technol.*, Vol. 91, pp.243-248, 2004.
36. Chang, J.S., Kuo, T.S., Chao, Y.P., Ho, J.Y. and Lin, P.J. "Azo dye decolorization with a mutant *Escherichia coli* strain", *Biotechnol. Lett.*, Vol. 22, pp.807-812, 2000.
37. Chen, B.Y., Chen, S.Y., Lin, M.Y. and Chang, J.S. "Exploring bioaugmentation strategies for azodye decolorization using a mixed consortium of *Pseudomonas luteola* and *Escherichia coli*", *Process Biochem.*, Vol. 41, pp.1574-1581, 2006.
38. Chen, H., Wang, R.F. and Cerriglia, C.E. "Molecular cloning, overexpression, purification, and characterization of an aerobic FMN-dependent azoreductase from *Enterococcus faecalis*", *Protein Exp. Purif.*, Vol. 34, pp.302-310, 2004.
39. Chen, K.C., Wu, J.Y., Liou, D.J. and Hwang, S.J. "Decolorization of textile dyes by newly isolated bacterial strains", *J. Biotechnol.*, Vol. 101, pp.57-68, 2003.
40. Chung, K.T. and Cerniglia, C.E. "Mutagenicity of azo dyes: structure-activity relationships", *Mut. Res.*, Vol. 277, pp.201-220, 1992.
41. Chunli, Z., Jiti, Z., Jing, W., Jing, W. and Baocheng, Q. "Isolation and characterization of a nitrobenzene degrading yeast strain from activated sludge", *J Hazard Mat*, Vol. 160, pp.194-199, 2008.
42. Cooney, C.L., Wang, D.I.C. and Mateles, R.I. "Measurement of heat evolution and correlation with oxygen consumption during microbial growth" *Biotechnol. Bioeng.*, Vol. 11, pp.269, 1968.

43. Coughlin, M.F., Kinkle, B.K. and Bishop, P.L. "Degradation of azo dyes containing amino naphthol by *Sphingomonas* sp. strain ICX", *J. Industr. Microbiol. Biot.*, Vol. 23, pp.341–346, 1999.
44. Dabert, P., Delgenes, J.P., Moletta, R. and Godon, J.J. "Contribution of molecular microbiology to the study in water pollution removal of microbial community dynamics", *Rev. Environ. Sci. Biot.*, Vol. 1, pp.39-49, 2002.
45. Damjanovic, M., Kharat, A.S., Eberhardt, A., Tomasz, A. and Vollmer, W. "The essential *tacF* gene is responsible for the choline-dependent growth phenotype of *Streptococcus pneumonia*", *J. Bacteriol.* Vol. 189, pp.7105-7111, 2007.
46. Data from NIST Standard Reference Database 69: NIST Chemistry <http://WebBook.nist.gov>
47. Dave, S.R. and Dave, R.H. "Isolation and characterization of *Bacillus thuringiensis* for Acid red 119 dye decolourization", *Bioresour. Technol.*, Vol. 100, pp.249-253, 2009.
48. De Rudder, K.E., Sohlenkamp, C. and Geiger, O. "Plant-exuded Choline is used for Rhizobial Membrane Lipid Biosynthesis by Phosphatidylcholine Synthase", *J. Biol. Chem.*, Vol. 274, No. 28 9, pp.20011–20016, 1999.
49. Deive, F.J., Rodriguez, A., Varela, A., Rodrigues, C., Leitao, M.C., Houbraken, J.A.M.P., Pereiro, A.B., Longo M. A., Sanroman, M.A., Samson, R.A., Rebelo, L.P.N. and Pereira, C.S. "Impact of ionic liquids on extreme microbial biotypes from soil", *Green Chem.*, Vol. 13, pp. 687, 2011.
50. Deng, D., Guo, J., Zeng, G. and Sun, G. "Decolorization of anthraquinone, triphenylmethane and azo dyes by a new isolated *Bacillus cereus* strain DC11", *Int. Biodeter. Biodegr.*, Vol. 62, pp.263-269, 2008.
51. Dermoun, Z., Boussand, R., Cotton, D. and Belaich, J.P. "A new batch calorimeter for aerobic growth studies", *Biotechnol. Bioeng.*, Vol. 27, pp. 996-1004, 1985.
52. Dhanve, R.S., Shedbalkar, U.U. and Jadhav, J.P. "Biodegradation of Diazo Reactive dye Navy Blue HE2R Reactive blue 172 by an isolated *Exiguobacterium* Sp.RD3", *Biotechnol. Bioproc. Eng.*, Vol. 13, pp.53-60, 2008.

53. Dreyer, S. and Kragl, U. "Ionic liquids for aqueous two-phase extraction and stabilization of enzymes", *Biotechnol. Bioeng.*, Vol. 996, pp.1416-1424, 2008.
54. Duboc, P., Cascao-Pereira, L.G. and von Stockar, U. "Identification and control oxidative metabolism in *Saccharomyces cerevisiae* during transient growth using calorimetric measurements", *Biotechnol. Bioeng.*, Vol. 57, pp.610-619, 1998.
55. Duboc, P., Marison, I. and von Stockar, U. "Quantitative calorimetry and biochemical engineering", *Handbook of Thermal Analysis and Calorimetry*, Kemp R. Editor, Elsevier: Amsterdam, pp. 267-367, 1999.
56. Dubrow, S.F., Boardman, G.D. and Michelsen, D.L. "Chemical pretreatment and aerobically/aerobically degradation of textile dye wastewater. In: Reife A, Freeman HS eds, *Environmental chemistry of dyes and pigments*. Wiley, New York, 1996.
57. Edward diaz. "Bacterial degradation of aromatic pollutants paradigm of metabolic versatility", *International microbiology*, Vol.7, pp.173-180,2004.
58. Ekici, P., Leupold, G. and Parlar, H. "Degradability of selected azo dye metabolites in activated sludge systems", *Chemosphere*, Vol. 44, pp.721-728, 2001.
59. El-Gohary, F.A., Badawy, M.I., El-Khateeb, M.A. and El-Kalliny, A.S. "Integrated treatment of olive mill wastewater OMW by the combination of Fenton's reaction and anaerobic treatment", *J. Hazard. Mater.*, Vol. 162, pp.1536-1541, 2009.
60. Elisangela, F., Andrea, Z. and Fabio, D.G. "Biodegradation of textile azo dyes by a facultative *Staphylococcus arlettae* strain VN-11 using a sequential microaerophilic/aerobic process", *Int. Biodeter. Biodegr.*, Vol. 63, pp.280-288, 2009.
61. Famili, I., Forster, J., Nielsen, J. and Palsson, O. "Saccharomyces cerevisiae phenotypes can be predicted by using constraint-based analysis of a genome e-scale reconstructed metabolic network", *Proc. Natl. Acad. Sci.*, Vol. 100, pp.13134-13139, 2003.
62. Fan, L., Zhu, S., Liu, D. and Ni, J. "Decolorization of 1-amino-4-bromoanthraquinone-2-sulfonic acid by a newly isolated strain of *Sphingomonas herbicidovorans*", *Int. Biodeter. Biodegr.*, Vol. 63, pp.88-92, 2009.

63. Feigel, B.J. and Knackmuss, H.J. "Bacterial catabolism of sulfanilic acid via catechol-4-sulfonic acid", *FEMS Microbiol. Lett.*, Vol. 55, pp.113-118, 1988.
64. Fewson, C.A. "Biodegradation of xenobiotics and other persistent compounds: the causes of recalcitrance", *Trends Biotechnol.*, Vol. 6, pp.148-153, 1988.
65. Fischer, E. and Sauer, U. "Metabolic flux profiling of *Escherichia coli* mutants in central carbon metabolism using GC-MS", *Eur. J. Biochem.*, Vol. 270, pp.880–891, 2003.
66. Forgacs, E., Cserhati, T. and Oros, G. "Removal of synthetic dyes from wastewaters: a review", *Environ. Int.*, Vol. 30, pp.953-971, 2004.
67. Franciscon, E., Zille, A. and Garboggini, F.F. "Microaerophilic-aerobic sequential decolourization/biodegradation of textile azo dyes by a facultative *Klebsiella* sp. Strain VN-31", *Process Biochem.*, Vol.44, pp.446-452, 2009.
68. Fu, L., Wen, X., Lu, Q. and Qian, Y. "Treatment of dyeing wastewater in two SBR systems", *Process Biochem.*, Vol. 36, pp.1111-1118, 2001.
69. Fuhrer, T., Fischer, E. and Sauer, U. "Experimental Identification and Quantification of Glucose Metabolism in Seven Bacterial Species", *J. Bacteriol.*, pp.1581–1590, 2005.
70. Fujita, K., Forsyth, M., MacFalane, D.R., Reid Robert, W. and Elliott Gloria, D. "Unexpected improvement in stability and utility of cytochrome c by solution in biocompatible ionic liquids", *Biotechnol. Bioeng.*, Vol. 94, pp.1209-1213, 2006.
71. Ganesh, R., Boardman, G.D. and Michelson, D. "Fate of azo dyes in sludges", *Water Res.*, Vol. 28, pp.1367-1376, 1994.
72. Gangu, S.A., Weatherley, L.R. and Scurto, A.M. "Whole-cell biocatalysis with ionic liquids", *Curr. Org. Chem.*, Vol. 1313, pp.1242-1258, 2009.
73. Ghodake, G., Jadhav, S., Dawkar, V. and Govindwar, S. "Biodegradation of diazo dye Direct brown MR by *Acinetobacter calcoaceticus* NCIM 2890", *Int. Biodeter. Biodegr.*, doi:10.1016/j.ibiod.2008.12.002, 2009.

74. Ghosh, D.K., Ghosh, S., Sadhukhan, P., Mandal, A. and Chaudhuri, J. "Purification of two azoreductases from *Escherichia coli* K12", *Ind. J. Exp. Biol.*, Vol. 31, pp.951-954, 1993.
75. Ghosh, D.K., Mandal, A. and Chaudhuri, J. "Purification and partial characterization of two azoreductases from *Shigella dysenteriae* type 1. FEMS", *Microbiol. Lett.*, Vol. 98, pp.229-234, 1992.
76. Gladden, L.B. "Lactate metabolism: a new paradigm for the third millennium", *J. Physiol.*, Vol. 5581, pp.5-30, 2004.
77. Gnaiger, E. "Physiological calorimetry: Heat flux, Metabolic flux, Entropy and Power", *Thermochim. Acta.*, Vol. 151, pp. 23-24, 1989.
78. Golab, V., Vinder, A. and Simonic, M. "Efficiency of the coagulation/flocculation method for the treatment of dye bath effluent", *Dyes Pigm.*, Vol. 67, pp.93-97, 2005.
79. Gopinath, K.P., Meera Sahib, H.A., Muthukumar, K. and Velan, M. "Improved biodegradation of congo red by using *Bacillus* sp.", *Bioresour. Technol.*, Vol. 100, pp.670-675, 2009.
80. Gorham, J. and McDonnell, E. "High-performance liquid chromatographic method for the separation and estimation of choline, glycinebetaine aldehyde and related compounds", *J. Chromatogr. A*, Vol. 350, pp.245-254, 1985.
81. Goszczynski, S., Paszczynski, A., Pasti-Grigsby, M.B., Crawford, R.L. and Crawford, D.L. "New pathway for degradation of sulfonated azo dyes by microbial peroxidases of *Phanerochaete chrysosporium* and *Streptomyces chromofuscus*", *J. Bacteriol.*, Vol. 176, pp.1339-1347, 1994.
82. Grob, B. and Riesen, R. "Reaction calorimetry for the development of chemical reactions", *Thermochim. Acta.*, Vol. 114 pp.83-90, 1987.
83. Guo, J., Fang, M.A., Jiang, K. and Cui, D. "Bioaugmentation combined with biofilm process in the treatment of petrochemical wastewater at low temperatures", *J. Wat. Resour. Protect.*, Vol. 1, pp.1-65, 2008a.
84. Guo, J., Zhou, J. and Wang, D. "The new incorporation bio-treatment technology of bromoamine acid and azo dyes wastewater under high salt conditions", *Biodegr.*, Vol. 19, pp.93-98, 2008b.

85. Guo, J., Zhou, J., Wang, D., Tian, C., Wang Ping, M. and Uddin, S. "A novel moderately halophilic bacterium for decolorizing azo dye under high salt condition", *Biodegr.*, Vol. 19, pp.15-19, 2008c.
86. Gustaffson, L. "And all that: ecology in a calorimeter!", *Thermochim. Acta*, Vol. 251, pp. 69-70, 1994.
87. Gustaffson, L. "Microbiological calorimetry", *Thermochim. Acta.*, Vol. 193, pp. 145-171, 1991.
88. Hao, J.J., Song, F.Q., Huang, F., Yang, C.L., Zhang, Z.J., Zheng, Y. and Tian, X.J. "Production of laccase by a newly deuteromycete fungus *Pestalotiopsis* sp. and its decolorization of azo dye", *J. Industr. Microbiol. Biot.*, Vol. 34, pp.233-240, 2007.
89. Harms, P., Kostov, Y. and Rao, G. "Bioprocess monitoring", *Current Opin. Biotech.*, Vol. 13, pp.124-127, 2002.
90. He, F., Hu, W. and Li, Y. "Biodegradation mechanisms and kinetics of azo dye 4BS by a microbial consortium", *Chemosphere*, Vol. 57, pp.293-301, 2004.
91. Higuera-Guisset, J., Rodriguez-Viejo, J., Chacon, M., Munoz, F.J., Vignes, N. and Mas, J. "Calorimetry of microbial growth using a thermopile based microreactor", *Thermochim. Acta*, Vol. 427, pp.187-191, 2005.
92. Hildenbrand, S., Schmahl, F.W., Wodarz, R., Kimmel, R. and Dartsch, P. C. "Azo dyes and carcinogenic aromatic amines in cell culture", *Int. Arch. Occu. Envr. Health*. Vol. 72, pp.52, 1999.
93. Hitz, H.R., Huber, W. and Reed, R.H. "The absorption of dyes on activated sludge", *J. Soc. Dyers Colorists*, Vol. 94, pp.71-76, 1978.
94. Ho, K.P. and Payne, W.J. "Assimilation efficiency and energy con-. tents of phototrophic bacteria", *Biotechnol. Bioeng.*, Vol. 21, pp. 787-802, 1979.
95. Hong, Y. G. and Gu, J. D. "Physiology and Biochemistry of reduction of azo compounds by *Shewanella* strains relevant to electron transport chain", *Appl. Microbiol. Biot.*, Vol. 88, pp.637-643, 2010.
96. Hong, Y., Xu, M. and Guo, J. "Respiration and growth of *Shewanella decolorationis* S12 with an azo compound as the sole electron acceptor", *Appl. Environ. Microbiol.*, Vol. 73, pp.64-72, 2007.

97. Horne, D.S. and Tomasz, A. "Possible Role of a Choline-Containing Teichoic Acid in the Maintenance of Normal Cell Shape and Physiology in *Streptococcus oralis*", *J. Bacteriol.*, Vol. 175, No. 6, pp.1717-1722, 1993.
98. Hu, T.L. "Kinetics of azoreductase and assessment of toxicity of metabolic products from azo dyes by *Pseudomonas luteola*", *Wat. Sci. Technol.*, Vol. 43, pp.261-269, 2001.
99. Isik, M. and Sponza, D.T. "Effect of oxygen on decolorization of azo dyes by *Escherichia coli* and *Pseudomonas sp.* and fate of aromatic amines", *Process Biochem.*, Vol. 38, pp.1183–1192, 2003.
100. Jin, R., Yang, H., Zhang, A., Wang, J. and Liu, G. "Bioaugmentation on decolorization of C.I. Direct Blue 71 by using genetically engineered strain *Escherichia coli* JM109 pGEX-AZR", *J. Hazard. Mater.*, Vol. 163, pp.1123-1128, 2009.
101. Jin, R., Zhou, J., Zhang, A. and Wang, J. "Bioaugmentation of the decolorization rate of acid red GR by genetically engineered microorganism *Escherichia coli* JM109 pGEX-AZR", *World J. Microbiol. Biotechnol.*, Vol. 24, pp.23-29, 2008.
102. Joesph, K., Karl, G. and Rubinstein, D. "Lactate and Pyruvate Metabolism and Reducing Equivalent Transfer in Ehrlich Ascites Tumor", *Cancer Res.*, Vol. 34, pp.872-877, 1974.
103. Joseph, K. and Nagendran, R. "Tanneries, In: *Essentials of environmental studies*", Pearson Education, Delhi, pp.445-450, 2004.
104. Joshi, T., Iyengar, L., Singh, K. and Garg, S. "Isolation, identification and application of novel bacterial consortium TJ-1 for the decolourization of structurally different azo dyes", *Bioresour. Technol.*, Vol. 99, pp.7115-7121, 2008.
105. Juliusz, P., Anna, S. and Ilona, M. "Choline derivative – Based Ionic liquid", *Chem. Eur. J.*, Vol. 13, pp.6817-6827, 2007.
106. Jun, Y. and Wenfeng, X. "Ammonia biofiltration and community analysis of ammonia-oxidizing bacteria in biofilters", *Bioresour. Technol.*, Vol. 100, pp.3869-3876, 2009.
107. Jungo, C., Marison, I.W. and von Stockar, U. "Mixed feeds of glycerol and methanol can improve the performance of *Pichia pastoris* cultures: A quantitative study based on concentration gradients in transient continuous cultures", *J. Biotechnol.*, Vol. 128, pp.824-837, 2007a.

108. Jungo, C., Marison, I.W. and von Stockar, U. "Regulation of alcohol oxidase of a recombinant *Pichia pastoris* Mut+ strain in transient continuous cultures", *J. Biotechnol.*, Vol. 130, pp.236-246, 2007b.
109. Jungo, C., Schenk, J., Pasquier, M., Marison, I.W. and von Stockar, U. "A quantitative analysis of the benefits of mixed feeds of sorbitol and methanol for the production of recombinant avidin with *Pichia pastoris*", *J. Biotechnol.*, Vol. 131, pp.57-66, 2007c.
110. Junnarkar, N., Murty, D.S., Bhatt, N.S. and Madamwar, D. "Decolorization of diazo dye Direct Red 81 by a novel bacterial consortium", *World J. Microbiol. Biot.*, Vol. 22, pp.163-168, 2006.
111. Kaar, J.L. "Impact of ionic liquid physical properties on lipase activity and stability", *J. Am. Chem. Soc.*, Vol. 125, pp.4125-4131, 2003.
112. Kalme, S., Jadhav, S., Jadhav, M. and Govindwar, S. "Textile dye degrading laccase from *Pseudomonas desmolyticum* NCIM 2112", *Enz. Microbial Technol.*, Vol. 44, pp.65-71, 2009.
113. Kalyani, D.C., Patil, P.S., Jadhav, J.P. and Govindwar, S.P. "Biodegradation of reactive textile dye Red BLI by an isolated bacterium *Pseudomonas* sp. SUK1", *Bioresour. Technol.*, Vol. 99, pp.4635-4841, 2008.
114. Kalyani, D.C., Telke, A.A., Dhanve, R.S. and Jadhav, J.P. "Ecofriendly biodegradation and detoxification of Reactive Red 2 textile dye by newly isolated *Pseudomonas* sp. SUK1.", *J. Hazard. Mater.*, Vol. 163, pp.735-742, 2009.
115. Kardi, F., Eker, S. and Uygur, A. "Biological treatment of synthetic wastewater containing 2, 4- dichlorophenolDCP in an activated sludge unit", *J. Environ. Manage*, Vol.76, pp.191-196, 2005.
116. Kelly, A. Reynolds. "Bioremediation: Using Microbes clean up Hazardous waste", *Water Conditioning & Purification Magazine*, Vol. 44, pp.9, 2002.
117. Kemp, R.B. "Calorimetric studies of heat flux in animal cells", *Thermochim. Acta.*, Vol. 193, pp.253-267, 1991.
118. Kemp, R.B. and Lorinczy, D. "Thermochemical studies of animal cell systems in vitro, The nature of biological systems as revealed by thermal methods", Chap 9, *Thermochim.acta*. Chap 9, Kluwer academic publishers, Netherlands, pp.215-249, 2004.

119. Khalid, A., Arshad, M. and Crowley, D.E. "Accelerated decolorization of structurally different azo dyes by newly isolated bacterial strains", *Appl. Microbiol. Biotechnol.*, Vol. 78, pp.361-369, 2008a.
120. Khalid, A., Arshad, M. and Crowley, D.E. "Biodegradation potential of pure and mixed bacterial cultures for removal of 4-nitroaniline from textile dye wastewater", *Water Res.*, Vol. 43, pp.1110-1116, 2009.
121. Khalid, A., Arshad, M. and Crowley, D.E. "Decolorization of azo dyes by *Shewanella* sp. under saline conditions", *Appl Microbiol Biotechnol*, Vol. 79, pp.1053-1059, 2008b.
122. Kharat, A.S., Denapaite, D., Gehre, F., Brückner, R., Vollmer, W., Hakenbeck, R. and Tomasz, A. "Different Pathways of Choline Metabolism in Two Choline-Independent Strains of *Streptococcus pneumoniae* and Their Impact on Virulence", *J. Bacteriol.*, Vol. 190, pp.5907-5914, 2008.
123. Khehra, M.S., Saini, H.S. and Sharma, D.K. "Decolorization of various azo dyes by bacterial consortia", *Dyes Pigm.*, Vol. 67, pp.55-61, 2005a.
124. Khehra, M.S., Saini, H.S. Sharma, D.K. Chadha, B.S. and Chimni, S.S. "Comparative studies on potential of consortium and constituent pure bacterial isolates to decolorize azo dyes", *Water Res.*, Vol. 39, pp.5135-5141, 2005b.
125. Kodam, K.M., Soojharoon, I., Lohande, P.D. and Gawai, K.R. "Microbial decolorization of reactive azo dyes under aerobic conditions", *World J. Microbiol. Biot.*, Vol. 21, pp.367-370, 2005.
126. Kolekar, Y.M., Pawar, S.P., Gawai, K.R., Lokhande, P.D., Shouche, Y.S. and Kodam, K.M. "Decolorization and degradation of Disperse Blue 79 and Acid Orange 10, by *Bacillus fusiformis* KMK5 isolated from the textile dye contaminated soil", *Bioresour. Technol.*, Vol. 99, pp.8999-9003, 2008.
127. Koller, W. and Jelinek, J.A. "Viable bacterial counts by agar droplet-technique", *Zentralbl. Bacteriol.* Vol. 235, pp.537-553, 1976.
128. Kragl, U., Eckstein, M. and Kaftzik, N. "Enzyme catalysis in ionic liquids", *Curr. Opin. Biotech.*, Vol. 13, pp.565-571, 2002.
129. Kubo, M., Hiroe, J., Murakami, M., Fukami, H. and Tachiki, T. "Treatment of hypersaline-containing wastewater with salt-tolerant microorganisms", *J. Biosci. Bioeng.*, Vol. 91, No. 2, pp. 222-224, 2001.

130. Kudlich, M., Hetheridge, M.J., Knackmuss, H.J. and Stolz, A. "Autoxidation reactions of different aromatic o-aminohydroxynaphthalenes that are formed during the anaerobic reduction of sulfonated azo dyes", *Environ. Sci. Technol.*, Vol. 33, pp.869-901, 1999.
131. Kulla, H.G. "Biodegradation of synthetic organic colorants. In: Leisinger T, Hutter R, Cook AM, Nuesch J eds. Microbial degradation of xenobiotics and recalcitrant compounds: FEMS Symposium no. 12. London, UK: compounds: FEMS Symposium no. 12. London, UK: X Swiss Society of Microbiology on behalf of the Federation of European Microbiological Societies, 1981.
132. Kumar, A., Bisht, B. S., Joshi, V. D. and Dhewa, T. "Review on Bioremediation of Polluted Environment: A Management Tool", *Int. J. Environ. Sci.*, Vol. 1, pp.1079-1093, 2011.
133. Kyoko, F., Macfarlane, D.R. and Maria, F. "Protein solubilising and stabilising ionic liquids", *Chem. Commun.*, pp.4804-4805, 2005.
134. Landfald, B. and Strom, A.R. "Choline-Glycine Betaine Pathway confers a high level of osmotic tolerance in *Escherichia coli*", *J. Bacteriol.*, Vol. 165, No. 3, pp.849-855, 1986.
135. Laszlo, J. A. "Removing acid dyes from textile wastewater using biomass for decolorization", *American Dyestuff Reporter*, Vol. 83, pp.17-21, 1994.
136. Ligthart, J. and Daverio, E. "Application of calorimetric measurements for biokinetic characterization of nitrifying population in activated sludge", *Water Res.*, Vol. 37, pp.2723-2731, 2003.
137. Lisa, A.T., Beassoni, P.R., Massimelli, M.J., Otero, L.H. and Doménech, C.E. "A Glance on *Pseudomonas aeruginosa* Phosphorylcholine Phosphatase, an Enzyme whose Synthesis Depends on the Presence of Choline in its Environment", *Communicating Current Research and Educational Topics and Trends in Applied Microbiology*, A. Méndez-Vilas Ed. pp.255-262, 2007.
138. Liu, G., Zhou, J. and Wang, J. "Acceleration of azo dye decolorization by using quinone reductase activity of azoreductase and quinone redox mediator", *Bioresour. Technol.*, Vol. 100, pp.2791-2795, 2009.
139. Liu, J.S., Marison, I.W. and Von Stockar, U. "Microbial growth by a net heat up-take: A calorimetric and thermodynamic study on acetotrophic methanogenesis by *Methanosarcina bakeri*.", *Biotechnol. Bioeng.*, Vol. 75, pp. 170-180, 2001.

140. Lu, X., Yang, B., Chen, J. and Sun, R. "Treatment of wastewater containing azo dye reactive brilliant red X-3B using sequential ozonation and upflow biological aerated filter process", *J. Hazard. Mater.*, Vol. 161, pp.241-245, 2009.
141. Lucas, M.S., Amaral, C., Sampaio, A., Peres, J.A. and Dias, A.A. "Biodegradation of the diazo dye Reactive Black 5 by a wild isolate of *Candida oleophila*", *Enzyme Microbial Technol.*, Vol. 39, pp.51-55, 2006.
142. Lv, X., Xu, Y., Lv, K. and Zhang, G. "Photo-assisted decolorization of anionic and cationic dyes over iron,III.-loaded resin in the presence of hydrogen peroxide", *J. Photochem. Photobiol. A Chem.*, Vol. 173, pp.121-127, 2005.
143. Mabrouk, M.E.M. and Yousef, H.Y. "Decolorization of Fast Red by *Bacillus subtilis* HM", *J. Appl. Sci. Res.*, Vol. 4, pp.262-268, 2008.
144. Makinen, P.M., Theno, T.J., Ferguson, J.F., Ongerth, J.E. and Puhakka, J.A. "Chlorophenol toxicity removal and monitoring in aerobic treatment: recovery from process upsets", *Environ. Sci. Technol.*, Vol. 27, pp.1434-1439, 1993.
145. Manu, B. and Chauhari, S. "Decolorization of indigo and azo dyes in semicontinuous reactors with long hydraulic retention time", *Process Biochem.*, Vol. 38, pp.1213-1221, 2003.
146. Marison, I., Linder, M. and Schenker, B. "High-sensitive heat-flow calorimetry", *Thermochim. Acta.*, Vol. 310 pp. 43-46, 1998b.
147. Marison, I., Liu, J.S., Ampuero, S., Von Stockar, U. and Schenker, B. "Biological reaction calorimetry: Development of high sensitivity bio-calorimeters", *Thermochim. Acta*, Vol.309, pp. 157-173, 1998a.
148. Marison, I.W. and von Stockar, U. "A novel bench-scale calorimeter for biological process development work", *Thermochim. Acta.*, Vol. 85, pp. 493-496, 1985.
149. Martins, M.A., Cardoso, M.H., Queiroz, M.J., Ramalho, M.T. and Campos, A.M.O. "Biodegradation of azo dyes by the yeast *Candida zeylanoides* in batch aerated cultures", *Chemosphere*, Vol. 38, pp.2455-2460, 1999.
150. Martyn J. E. and Seddon, K.R. "Ionic liquids. Green solvents for the future", *Pure Appl. Chem.*, Vol. 72, pp.1391-1398, 2000.

151. Matsumoto, M., Mochiduki, K., Fukunishi, K. and Kondo, K. "Extraction of organic acids using imidazolium-based ionic liquids and their toxicity to *Lactobacillus rhamnosus*", *Sep. Purif. Technol.*, Vol. 40, No.1, pp.97-101, 2004.
152. Mavrovouniotis, M.L. "Identification of localized and distributed bottlenecks in metabolic pathways", *ISMB* Vol. 93, pp. 273-283, 1993.
153. McClure, N.C., Fry, J.C. and Weightman, A.J. "Survival and catabolic activity of natural and genetically engineered bacteria in laboratory-scale activated sludge unit", *Appl. Environ. Microbiol.*, Vol. 57, pp.366-373, 1991.
154. Meck, W.H. and Williams, C.L. "Metabolic imprintin of choline by its availability during gestation: implications for memory and attentional processing across the lifespan", *Neurosci. Biobehave. Rev.*, Vol. 274, pp.385-399, 2003.
155. Michaels, G.B. and Lewis, D.L. "Microbial transformation rates of azo and triphenylmethane dyes", *Environ. Toxicol. Chem.*, Vol. 5, pp.161-166, 1986.
156. Miller, G.L. "Use of dinitrosalicylic acid reagent for determination of reducing sugar", *Anal. Chem.*, Vol. 31, pp.426-428, 1959.
157. Miller, J.A. and Miller, E.C. "Some historical aspects of N-aryl carcinogens and their metabolic activation", *Environ. Health Persp.*, Vol. 49, pp.3-12, 1983.
158. Monk, P. and Wadso, I. "A flow micro reaction calorimeter", *Acta Chem. Scand*, Vol. 22, pp. 1842-1852, 1968.
159. Moosvi, S., Kher, X. and Madamwar, D. "Isolation, characterization and decolorization of textile dyes by a mixed bacterial consortium JW-2", *Dyes Pigm.*, Vol. 74, pp.723-729, 2007.
160. Moustafa, M.E. "Synthesis and structural and biological activity studies on some lanthanide chelates with O- and N-containing ligands", *Spectr. Lett.*, Vol. 38, pp.23-34, 2005.
161. Neill, O., Lopez, A., Esteves, S., Hawkes, F.R., Hawkes, D.L. and Wilox, S. "Azo dye degradation in an anerobic – aerobic treatment system operating on simulated textile effluent", *Appl. Microbial. Biotechnol.*, Vol. 53, pp.249-254, 2006.

162. Niebisch, C.H., Malinowski, A.K., Schadeck, R., Mitchell, D. A., Cordeiro, V.K. and Paba, J. "Decolorization and biodegradation of reactive blue 220 textile dye by *Lentinus crinitus* extracellular extract", *J. Hazard. Mater.*, Vol. 180, pp.316-322, 2010.
163. Nigam, P., Banat, IM., Singh, D. and Marchant, R. "Microbial process for the decolorization of textile effluent containing azo, diazo and reactive dyes", *Process Biochem.*, Vol. 31, pp.435-442, 1996.
164. Nilsson, A.I., Kugelberg, E., Berg, O.G. and Andersson, D.I. "Adaptation of *Salmonella typhimurium* to mice", *Genetics*, Vol. 1683, pp.1119-1130, 2004.
165. Niu, S.Q., Fukushima, J., Jiang, Y., Ishikawa, Y., Ueda, T. and Matsumoto, S. Analysis of bacterial community structure in the natural circulation system wastewater bioreactor by using a 16S rRNA gene clone library", *Microbiol. Immunol.*, Vol. 50, pp.937-950, 2006.
166. Novemeber, E.J. and Van Impe, J.F. "Evaluation of on-line viable biomass measurements during fermentations of *Candida utilis*", *Bioproc. Eng.*, Vol. 23, pp.473-477, 2000.
167. O'Neill, C., Hawks, F.R. and Hawks, D.L. "Colour in textile effluents-sources, measurement, discharge consents and simulation: a review", *J. Chem. Technol. Biot.*, Vol. 74, pp.1009-1018, 1999.
168. Okeke, C.C., Giblin, T. and Frankenberger, W. T. "Reduction of perchlorate and nitrate by salt tolerant bacteria", *Environ. Pollut. J.*, Vol. 118, pp. 357-363, 2002.
169. Ong, S.A., Toorisaka, E., Hirata, M. and Hano, T. "Decolorization behavior of azo dye with various co-substrate dosages under granular activated carbon-biofilm configured packed column operation", *ARPJ. Engin. Appl. Sci.*, Vol.1, pp.29-34, 2006.
170. Oxspring, D.A., McMullan, G., Smyth, W.F. and Marchant, R. "Decolorization and metabolism of the reactive textile dye Remazol-Black-B by an immobilized microbial consortium", *Biotechnol Lett.*, Vol. 18, pp.527-530, 1996.
171. Ozdemir, G., Pazarbasi, B., Kocyigit, A., Omeroglu, E.E., Yasa, I. and Karaboz, I. "Decolorization of Acid Black 210 by *Vibrio harveyi* TEMS1 a newly isolated bioluminescent bacterium from Izmir Bay Turkey", *World J. Microbiol. Biot.*, Vol. 24, pp.1375-1381, 2008.

172. Ozturk, A. and Abdullah, M.I. "Toxicological effect of indole and its azo dye derivatives on some microorganisms under aerobic conditions", *Sci. Total Environ.*, Vol. 358, pp.137-142, 2001.
173. Padayachee, P., Ismail, A. and Bux, F. "Elucidation of the microbial community structure within a laboratory-scale activated sludge process using molecular techniques", *Wat SA*, Vol. 32, pp.679-686, 2006.
174. Padmavathy, S., Sandhya, S., Swaminathan, K., Subrahmanyam, Y.V., Chakrabarti, T. and Kaul, S.N. "Aerobic Decolorization of Reactive Azo Dyes in Presence of Various Cosubstrates", *Chem. Biochem. Eng.*, Vol. 17, No. 2, pp.147-151, 2003.
175. Pagga, U. and Brown, D. "The degradation of dyestuffs: part II. behaviour of dyestuffs in aerobic biodegradation tests", *Chemosphere*, Vol. 15, pp.479-491, 1986.
176. Pagga, U. and Taeger, K. "Development of a method for adsorption of dyestuffs on activated sludge", *Water Res.*, Vol. 28, pp.1051-1057, 1994.
177. Pandey, A., Singh, P. and Iyengar, L. "Bacterial decolourisation and degradation of azo dyes", *Int. Biodeter. Biodegr.*, Vol. 59, pp.73-84, 2007.
178. Pazdzior, K., Klepacz-Smołka, A., Ledakowicz, S., Sojka-Ledakowicz, J., Mrozinska, Z. and Zylła, R. "Integration of nanofiltration and biological degradation of textile wastewater containing azo dye", *Chemosphere*, Vol. 75, pp.250-255, 2009.
179. Pearce, C.I., Christie, R. and Boothman, C. "Reactive azo dye reduction by *Shewanella* strain J18 143", *Biotechnol. Bioengin.*, Vol. 95, pp.692-703, 2006.
180. Pearce, C.I., Lloyd, J.R. and Guthrie, J.T. "The removal of colour from textile wastewater using whole bacterial cells: a review", *Dyes Pigm.*, Vol. 58, pp.179-196, 2003.
181. Pernak, J., Sobaszekiewicz, K. and Mirska, I. "Anti-microbial activities of ionic liquids", *Green Chem.*, Vol. 5, pp.52-56, 2003.
182. Petkovic, M., Ferguson, J.L., Gunaratne Nimal, H.Q., Ferreira, R., Maria, C.L., Seddon, R., Luis Paulo, N. and Rebelo Pereira, C.S. "Novel biocompatible cholinium-based ionic liquids-toxicity and biodegradability", *Green Chem.*, Vol. 124, pp.643-649, 2010.

183. Pignatello, J. J., Oliveros, E. and Mackay, A. "Advanced Oxidation Processes for Organic Contaminant Destruction Based on the Fenton Reaction and Related Chemistry", *Critical Reviews in Environmental Science and Technology*, Vol. 36, pp.1-84, 2006.
184. Pinheiro, H.M., Touraud, E. and Thomas, O. "Aromatic amines from azo dye reduction: status review with emphasis on direct UV spectrophotometric detection in textile industry wastewaters", *Dyes Pigm.*, Vol.61, pp.121-139, 2004.
185. Pourbabee, A.A., Malekzadeh, F., Sarbolouki, M.N. and Najafi, F. "Aerobic Decolorization and Detoxification of a Disperse Dye in Textile Effluent by a New isolate of Bacillus", *Biotechnology and Bioengineering*, Vol. 93, p.4, 2006.
186. Qu, Y., Zhou, J. and Wang, J. "Bioaugmentation of bromoamine acid degradation with *Sphingomonas xenophaga* QYY and DNA fingerprint analysis of augmented systems", *Biodegr.*, Vol. 17, pp.83-91, 2006.
187. Qu, Y., Zhou, J., Wang, J., Xiang, F. and Xing, L. "Microbial community dynamics in bioaugmented sequencing batch reactors for bromoamine acid removal", *Microbiol Lett.*, Vol. 246, pp.143-149, 2005.
188. Rafii, F. and Cerniglia, C.E. "Comparison of the azoreductase and nitroreductase from *Clostridium perfringens*", *Appl. Environ. Microbiol.*, Vol. 59, pp.1731-1734, 1993.
189. Rafii, F. and Cerniglia, C.E. "Reduction of azo dyes and nitroaromatic compounds by bacterial enzymes from the human intestinal tract", *Environ. Health Persp.*, Vol. 103, pp.17-19, 1995.
190. Rafii, F., Franklin, W. and Cerniglia, C.E. "Azoreductase activity of anaerobic bacteria isolated from human intestinal microflora", *Appl. Env. Microbiol.*, Vol. 56, pp.2146-2151, 1990.
191. Rafii, F., Smith, D.B., Benson, R.W. and Cerniglia, C.E. "Immunological homology among azoreductases from *Clostridium* and *Eubacterium* strains isolated from human intestinal microflora", *J. Basic Microbiol.*, Vol. 32, pp.99-105, 1992.
192. Rajaguru, P., Kalaiselvi, K., Palanivel, M. and Subburam, V. "Biodegradation of azo dyes in a sequential anaerobic-aerobic system", *Appl. Microbiol. Biot.*, Vol. 54, pp.268-273, 2000.

193. Ramadori, R., Rozzi, A. and Tandoi, V. "An automated system for monitoring the kinetics of biological oxidation of ammonia", Technical Note, Water Res., Vol. 14, pp. 1555-1557, 1980.
194. Ranke, J., Stolte, S., Stormann, R., Arning, J. and Jastorff, B. "Design of Sustainable Chemical Products - The Example of Ionic Liquids", Chem. Rev., Vol. 107, pp.2183-2206, 2007.
195. Redl, B. and Tiefenbrunner, F. "Determination of hydrolytic activities in wastewater by microcalorimetry", Water Res., Vol. 15, pp. 87-90, 1980.
196. Renstrom, B., Nellis, S.H. and Liedtke, A.J. "Metabolic oxidation of pyruvate during early myocardial reperfusion", Circ. Res., Vol. 66, pp.282-288, 1990.
197. Rittman, B.E. and Whitman, R. "Bioaugmentation: a coming of age", Biotechnology, Vol. 1, pp.2-16, 1994.
198. Riu, J., Schönsee, I. and Barceló, D. "Determination of sulfonated azo dyes in groundwater and industrial effluent by automated solid-phase extraction followed by capillary electrophoresis/ mass spectrometry", J. Mass Spectrometer, Vol. 33, pp.653-663,1998.
199. Robinson, J.A. and Tiedj, J.M. "Nonlinear estimation of Monod growth kinetic parameters from a single substrate depletion curve", Appl. Environ. Microbiol., Vol. 45, pp.1453-1458, 1983.
200. Robert, K.M., Daryl, K.G., Peter, M. and Victor, W.D. "Harper Illustrated biochemistry" Lange Medical Books/McGraw-Hill, Twenty sixth edition, NY, USA.2003.
201. Roosen, C., Müller, P. and Greiner, L. "Ionic liquids in biotechnology: applications and perspectives for biotransformations", Appl. Microbiol. Biot., Vol. 81, pp.607-614, 2008.
202. Sandler, S.I. and Orbey, H. "On the thermodynamics of microbial growth processes", Biotechnol. Bioeng., Vol. 38, pp. 697-718, 1991.
203. Sar, P. and D'Souza, S.F. "Biosorptive Uranium uptake by Pseudomonas strain: Characterization and Equilibrium studies", J. Chem. Technol. Biot., Vol. 76, pp.1286-1294, 2001.

204. Saratale, R.G., Saratale, G.D., Kalyani, D.C., Chang, J.S. and Govindawar, S.P. "Enhanced decolorization of textile azo dye Scarlet R by using developed microbial consortium-GR", *Bioresour. Technol.*, Vol. 100, pp.2493-2500, 2009.
205. Sarayu, K. and Sandhya, S. "Aerobic pathway for Remazol orange by *Pseudomonas aeruginosa*", *App. Biochem. Biot.*, Vol. 160, No. 4, pp.1241-1253, 2010.
206. Sarkar, K.T. "Text book on Theory and Practice of Leather Manufacture", the Author, ED, Chapter IV, 1997.
207. Satish, K., Gajanan, G. and Sanjay, G. "RED HE7B degradation using desulfonation by *Pseudomonas demolyticum* NCIM 2112", *Int. Biodet. Biodegr.*, Vol. 60, pp.327-333, 2007.
208. Saupe, A. "High rate biodegradation of 3- and 4-nitroaniline", *Chemosphere*, Vol. 39, pp.2325-2346, 1999.
209. Saxe, J.P., Lubenow, B.L., Chiu, P.C., Huang, C.P. and Cha, D.K. "Enhanced biodegradation of azo dyes using an integrated elemental iron-activated sludge system effects of physical-chemical parameters", *Wat. Environ. Res.*, Vol. 78, pp.26-30, 2006.
210. Schisler, D.A., Khan, N.I., Boehm, M.J., Lipps, P.E., Slininger, P.J. and Zhang, S. "Selection and evaluation of the potential of choline-metabolizing microbial strains to reduce *Fusarium* head blight", *Biol. Control*, Vol. 39, pp.497-506, 2006.
211. Schneiders, M., Grosshor, U. and Busch, C. "Biocalorimetry - Supported analysis of fermentation process", *Appl. Microbiol. Biot.*, Vol. 43, pp. 431-439, 1995.
212. Seesuriyachan, P. Takenaka, S. and Kuntiya, A. "Metabolism of azo dyes by *Lactobacillus casei* TISTR 1500 and effects of various factors on decolorization", *Water Res.*, Vol. 41, pp.985-992, 2007.
213. Selvam, K., Swaminathan, K. and Keo-Sang, C. "Microbial decolorization of azo dyes and dye industry effluent by *Fomes lividus*", *World J. Microbiol. Biotechnol.*, Vol. 19, pp.591-593, 2003.
214. Senan, R. C. and Abraham, T. E. "Bioremediation of textile azo dyes by aerobic bacterial consortium, Biodegradation", Vol. 15, pp.275-280, 2004.

215. Senthil kumar, S., Schuler, M., Hama, A., Hughes, K.M. and Marison, I.W. "Biocalorimetry as a process analytical technology process analyser; robust in-line monitoring and control of aerobic fed-batch cultures of crab tree-negative yeast cells", *J. Therm. Anal. Calorim.*, Vol. 104, pp. 75-85, 2011.
216. Senthilkumar, S., Surianarayanan, M. and Sushleela, R. "Biocalorimetric studies of the metabolic activity of *Pseudomonas aeruginosa* aerobically grown in glucose limited complex growth medium", *Biosci. Biotech. Bioch.*, Vol. 72, pp.936-942, 2008a.
217. Senthilkumar, S., Surianarayanan, M. and Swaminathan, G. "Biocalorimetric and respirometric studies on biological treatment of tannery saline wastewater", *Appl. Microbiol. Biot.*, Vol. 78, pp.249-255, 2008b.
218. Senthilkumar, S., Surianaryanan, M. and Madhu, B. "Biocalorimetric and respirometric studies on metabolic activity of aerobically grown batch culture of *Pseudomonas aeruginosa*", *Biotechnol. Bioproc. Eng.*, Vol. 12, pp.340-347, 2007.
219. Shan, H., Li, Z., Li, M., Ren, G. and Fang, Y. "Improved activity and stability of *Pseudomonas capaci* lipase in a novel biocompatible ionic liquid, 1-isobutyl-3-methylimidazolium hexafluorophosphate", *J. Chem. Technol. Biot.*, Vol. 836, pp.886-891, 2008.
220. Shanley, E.S. and Melhem, G.A. "A review of ASTM CHETAH 7.0 hazard evaluation criteria", 1995.
221. Shaul, G.M., Holdsworth, T.J., Dempsey, C.R. and Dostal, K.A. "Fate of water-soluble azo dyes in the activated sludge process", *Chemosphere*, Vol. 22, pp.107-119, 1991.
222. Shuler, M.L. and Kargi, F. "Text book on Bioprocess Engineering Basic concepts", Second edition, Pearson education, Delhi; India, 2004.
223. Silveira, E., Marques, P.P. and Silva, S.S. "Selection of *Pseudomonas* for industrial textile dyes decolourization", *Int. Biodeter. Biodegr.*, Vol. 63, pp.230-235, 2009.
224. Singh, V. "On-line measurement of oxygen uptake in cell culture using the dynamic method", *Biotechnol. Bioeng.*, Vol. 52, pp.443-448, 1996.

225. Smith, L.T., Pocard, J.A., Bernard, T. and Rudulier, D. "Osmotic Control of Glycine Betaine Biosynthesis and Degradation in *Rhizobium meliloti*", *J. Bacteriol.*, pp.3142-3149, 1988.
226. Sperandio, M. and Paul, E. "Determination of carbon dioxide evolution rate using on-line gas analysis during dynamic biodegradation experiments", *Biotechnol. Bioeng.*, Vol. 53, pp. 243-252, 1997.
227. Srinivasan, S. V., Rema, T., Chitra, K., Sri Balakameswari, K., Suthanthararajan, R., Uma Maheswari, B., Ravindranath, E. and Rajamani, S. "Decolourisation of leather dye by ozonation", *Desalination*, Vol. 235, pp.88-92, 2009.
228. Stockar, U. "Biothermodynamics of live cells: a tool for biotechnology and biochemical engineering", *J. Non-Equilib. Thermodyn.*, Vol. 35, pp.415-475, 2010.
229. Stolz, A. "Basic and applied aspects in the microbial degradation of azo dyes", *Appl. Microbiol. Biot.*, Vol. 56, pp. 201, 2001.
230. Supaka, N., Juntongjin, K., Damronglerd, S., Delia, M. and Strehaiano, P. "Microbial decolorization of reactive azo dyes in a sequential anaerobic-aerobic system", *chem. eng. J.*, Vol. 99, pp.169-176, 2004.
231. Surianarayanan, M. and Senthilkumar, S. "Bioenergetics studies on aerobic growth of *pseudomonas aeroginasa* in a single substrate media", *J. Chem. Technol. Biotechnol.*, Vol. 84, pp.1234-1239, 2009.
232. Surianarayanan, M., Balaji, D., Senthilkumar, S. and Asit Baran, M. "Batch kinetics on Growth of salt tolerant *Pseudomonas aeroginasa* Secreting in a biocalorimeter", *Biotechnol. Bioproc. Eng.*, Vol.15, pp.670-675, 2010.
233. Surianarayanan, M., Senthil Kumar, S. and Mandal, A.B. Chapter in the book "Heat Flux: Processes, Measurement Techniques and Applications", Nova Science Publishers Inc., USA, Editor: Prof Cirimele, G. et al., ISBN 978-1-61470-887-2, 2011.
234. Suzuki, T., Timofei, S. and Kurunczi, L. "Correlation of aerobic biodegradability of sulfonated azo dyes with the chemical structure", *Chemosphere*, Vol. 45, pp.1-9, 2001.
235. Takayama, K., Takahashi, N., Sakurai, T., Tsujimoto, K. and Yoshimura, T "Development of an electrochemical and microbial degradation system for textile wastewater", *Denki Kagakkai Gijutsu*, Vol. 13, pp.63-70, 2006.

236. Tang, C.Y., Criddle, Q.S., Fu, C.S. and Leckie, J.O. "Effect of flux transmembrane pressure and membrane properties on fouling and rejection of reverse osmosis and nanofiltration membranes treating perfluorooctane sulfonate containing waste water", *J. Environ. Sci. Technol.*, Vol. 41, pp.2008-2014, 2007.
237. Tomasz, A. "Biological consequences of the replacement of choline by ethanolamine in the cell wall of *Pneumococcus*: choline formation, loss of transformability, and loss of autolysis", *Proc. Natl. Acad. Sci., USA*, Vol. 59, pp.86-93, 1968.
238. Tomasz, A., Zanati, E. and Ziegler, R. "DNA Uptake during Genetic Transformation and the Growing Zone of the Cell Envelope", *Proc. Nat. Acad. Sci., USA*. Vol. 68, No. 8, pp.1848-1852, 1971.
239. Vaidya, A.A. and Datye, K.V. "Environmental pollution during chemical processing of synthetic fibers", *Colourage*, Vol. 14, pp.3-10, 1982.
240. Vajnhandl, S. and Marechal, A. M.Le. "Case study of the sonochemical decolouration of textile azo dye Reactive Black 5", *Environ. Biot.*, pp.329-335, 2007.
241. Valli N.G. and Suseela R. "Degradation of a tannery and textile dye, Navitan fast blue s5r by *Pseudomonas aeruginosa*", *World J. Microbiol. Biotechnol.*, Vol. 19, pp.609-614, 2003.
242. Valli N.G. and Suseela R. "Mechanism of navitan fast blue S5R degradation by *Pseudomonas aeruginosa*", *Chemosphere.*, Vol.57, pp.165-169, 2004.
243. Van Kleeff, B. H. A., Kuenen, J. G., Honderd, G. and Heijnen, J. J. "Using heat-flow measurements for the feed control of a fed batch fermentation of *Saccharomyces cerevisiae*", *Thermochim. Acta* , Vol. 309, pp.175-180, 1998.
244. Van Limbergen, H.V., Top, E.M. and Verstrate, W. "Bioaugmentation in activated sludge: current features and future perspectives", *Appl. Microbiol. Biot.*, Vol. 50, pp.16-23, 1998.
245. Vijayaraghavan R., Izgorodin, A., Ganesh, V., Surianarayanan, M. and MacFarlane, D. R. "Long term structural and chemical stability of DNA in hydrated ionic liquids", *Angew. Chem. Int. Ed.*, Vol. 49, pp.1631-1633, 2010a.

246. Vijayaraghavan, R., Thompson, B.C., MacFarlane, D.R., Kumar, R., Surianarayanan, M., Aishwarya, S. and Sehgal, P.K. "Biocompatibility of choline salts as cross linking agents for collagen based biomaterials", *Chem Commun.*, Vol. 46, pp.294-296, 2010b.
247. Vijaykumar, M.H., Vaishampayan, P.A., Shouche, Y.S. and Karegoudar, T.B. "Decolourization of naphthalene-containing sulfonated azo dyes by *Kerstersia* sp. strain VKY1", *Enz. Microbial. Technol.*, Vol. 40, pp.204-211, 2007.
248. Vijayaraghavan, R., Vedaraman, N., Surianarayanan, M. and MacFarlane, D. R. "Extraction and recovery of azo dyes into an ionic liquid", *Talanta*, Vol. 69, pp.1059-1062, 2006.
249. Vlyssides, A.G., Barampouti, E.M. and Mai, S. "Wastewater characteristics from Greek wineries and distilleries", *Wat. Sci.Technol.*, Vol. 51, No. 1, pp. 53-60, 2005.
250. Voisard, D., Pugeaud, P., Kumar, A. R., Jenny, K., Jayaraman, K., Marison, I. W. and Von Stockar, U. "Development of a large-scale biocalorimeter to monitor and control bioprocesses", *Biotechnol. Bioeng.*, Vol. 2, pp.125-138, 2002.
251. Von Stockar, U. and Birou, B. "The heat generated by yeast cultures with a mixed metabolism in the transition between respiration and fermentation", *Biot. Bioeng.*, Vol. 34, pp. 86-101, 1989b.
252. Von Stockar, U. and Liu, J.S. "Does microbial life always feed on negative entropy? Thermodynamic analysis of microbial growth", *Biochimica et Biophysica Acta* , Vol. 1412, pp. 191-211, 1999.
253. Von Stockar, U. and Marison, I.W. "Large-scale calorimetry and biotechnology", *Thermochim. Acta.*, Vol. 193, pp. 215, 1991.
254. Von Stockar, U. and Marison, I.W. "The use of calorimetry in biotechnology", *Advances in Biochem. Eng. Biot.*, Vol. 40, pp.93-136, 1989.
255. Von Stockar, U., Gustafsson, L. and Marison, I.W. "Thermodynamic Considerations in Constructing Energy Balances for Cellular Growth", *Biochimica et Biophysica Acta*, Vol. 1183, pp. 221-240, 1993.
256. Von Stockar, U., Luuk, A.M. and Van der Wielen. "Thermodynamics in Biochemical Engineering", *J. Biotechnol.*, Vol. 59, pp.25-37, 1997b.

257. Von Stockar, U., Maskow, T., Liu, J., Marison, I.W. and Patino, R. "Thermodynamics of microbial growth and metabolism: an analysis of the current situation", *J. Biotechnol.*, Vol. 121, pp. 517-533, 2006.
258. Von Stockar, U., Duboc, P., Menoud, L. and Marison, I.W. "On-line calorimetry as a technique for process monitoring and control in biotechnology", *Thermochim. Acta*, Vol. 300, pp. 225-236, 1997a.
259. Wadso, I. "Biocalorimetry. Trends in Biotechnology", Vol. 4, pp. 45-51, 1986.
260. Wadso, I. "Isothermal Biocalorimetry", *Thermochim. Acta.*, Vol. 88, pp. 35-48, 1985.
261. Wadso, I. "Isothermal microcalorimetry in applied biology", *Thermochim. Acta.*, Vol. 394, pp. 305-311, 2002.
262. Wadso, I. "Neither calorimeters nor calorimetrists are what they used to be", *Thermochim. Acta.*, Vol. 300, pp. 1-5, 1997.
263. Wagner, M., Loy, A., Noguera, R. and Purkhold, U. "Microbial community composition and function in wastewater treatment plants", *Antonie van Leeuwenhoek Int. J. Gen. Mol. Microbiol.*, Vol. 81, pp.665-680, 2002.
264. Wakelin, S.A., Colloff, M.J. and Kookana, R.S. "Assessing the effect of wastewater treatment plant effluent on microbial function and community structure in the sediment of a freshwater stream with variable seasonal flow", *Appl. Environ. Microbiol.*, Vol. 74, pp.2659-2668, 2008.
265. Walker, R. and Ryan, A.J. "Some molecular parameters influencing rate of reduction of azo compounds by intestinal microflora", *Xenobiotica*, Vol. 4-5, pp.483-486, 1971.
266. Wang, A., Qu, J., Liu, H. and Ge, J. "Degradation of azo dye Acid Red 14 in aqueous solution by electrokinetic and electrooxidation process", *Chemosphere*, Vol. 55, pp.1189-1196, 2004.
267. Wang, H. Su, J.Q. and Zheng, X.W. "Bacterial decolourization and degradation of the reactive dye reactive red 180 by *Citrobacter* sp. CK3", *Int. Biodeter. Biodegr.*, Vol. 63, pp.395-399, 2009.

268. Wang, X., Cheng, X., Sun, D. and Hong, Q. "Biodecolorization and partial mineralization of Reactive black 5 by a strain of *Rhodospseudomonas palustris*", *J. Environ. Sci.*, Vol. 20, pp.1218-1225, 2008.
269. Weisburger, J.H. "Comments on the history and importance of aromatic and heterocyclic amines in public health", *Mut. Res.*, Vol. 506-507, pp.9-20, 2002.
270. Welch, G. R. "Bioenergetics and the cellular microenvironment", *Pure and Appl. Chem.*, Vol. 65, No. 9, pp.1907-1914, 1993.
271. Westrick, J. A., Szlag, D. C., Southwell, B. J. and Sinclair, J. "A review of cyanobacteria and cyanotoxins removal/inactivation in drinking water treatment", *Anal. Bioanal. Chem.*, Vol. 397, pp.1705- 1714, 2010.
272. Wilkes, J.S. "A short history of ionic liquids—from molten salts to neoteric solvents", *Green Chem.*, Vol. 4, pp.73-80, 2002.
273. Winkelmann, M., Huttli, R. and Wolf, G. "Application of batch-calorimetry for the investigation of microbial activity", *Thermochim. Acta.*, Vol. 415, pp. 75-82, 2004.
274. Worch, E., Grischek, T., Bomick, H. and Eppinger, P. "Laboratory tests for simulating attenuation processes of aromatic amines in riverbank filtration", *J. Hydrol.*, Vol. 266, pp.259-268, 2002.
275. Xu, M., Guo, J. and Cen, Y. "*Shewanella decolorationis* sp. nov., a dye-decolorizing bacterium isolated from activated sludge of a wastewater treatment plant", *Int. J. Syst. Evol. Microbiol.*, Vol. 55, pp.363-368, 2005.
276. Xu, M., Guo, J. and Sun, G. "Biodegradation of textile azo dye by *Shewanella decolorationis* S12 under microaerophilic conditions", *Appl. Microbiol. Biot.*, Vol. 76, pp.719-726, 2007.
277. Xueheng, Z., Ian, R. and Hardin, "HPLC and Spectrometric analysis of biodegradation of azo dyes by *Pleurotus ostreatus*, *Dyes and pigments*, Vol. 73, pp.322-325, 2007.
278. Yu, Z.T. and Mohn, W.W. "Bacterial diversity and community structure in an aerated lagoon revealed by ribosomal intergenic spacer analyses and 16S ribosomal DNA sequencing", *Appl. Environ. Microbiol.*, Vol. 67, pp.1565-1574, 2001.

279. Zentgraf, B. "Bench-scale calorimetry in biotechnology", *Thermochim. Acta*, Vol. 193, pp. 243-251, 1991.
280. Zimmermann, T., Gasser, F., Kulla, H. and Leisinger, T. "Comparison of two bacterial azoreductases acquired during adaptation to growth on azo dyes", *Arch. Microbiol.*, Vol. 138, pp.37-43, 1984.
281. Zimmermann, T., Kulla, H. and Leisinger, T. "Properties of purified orange II-azoreductase, the enzyme initiating azo dye degradation by *Pseudomonas* KF46", *Eur. J. Biochem.*, Vol. 129, pp.197-203, 1982.
282. Zolinger, H. "Color chemistry", 2nd edn. VCH, New York, 1991.