
Author Index Volume 1 – 68

Author Index Volumes 1–50 see Volume 50

- Adam, W., Lazarus, M., Saha-Möller, C. R., Weichhold, O., Hoch, U. Häring, D., Schreier, Ü.*: Bio-transformations with Peroxidases. Vol. 63, p. 73
- Allan, J. V., Roberts, S. M., Williamson, N. M.*: Polyamino Acids as Man-Made Catalysts. Vol. 63, p. 125
- Al-Rubeai, M.*: Apoptosis and Cell Culture Technology. Vol. 59, p. 225
- Al-Rubeai, M.* see Singh, R. P.: Vol. 62, p. 167
- Alsberg, B. K.* see Shaw, A. D.: Vol. 66, p. 83
- Antranikian, G.* see Ladenstein, R.: Vol. 61, p. 37
- Antranikian, G.* see Müller, R.: Vol. 61, p. 155
- Archelas, A.* see Orru, R. V. A.: Vol. 63, p. 145
- Argyropoulos, D. S.*: Lignin. Vol. 57, p. 127
- Arnold, F. H., Moore, J. C.*: Optimizing Industrial Enzymes by Directed Evolution. Vol. 58, p. 1
- Akhtar, M., Blanchette, R. A., Kirk, T. K.*: Fungal Delignification and Biochemical Pulping of Wood. Vol. 57, p. 159
- Autuori, F., Farrace, M. G., Oliverio, S., Piredda, L., Piacentini, G.*: “Tissie” Transglutaminase and Apoptosis. Vol. 62, p. 129
- Azerad, R.*: Microbial Models for Drug Metabolism. Vol. 63, p. 169
- Bajpai, P., Bajpai, P. K.*: Realities and Trends in Emzymatic Prebleaching of Kraft Pulp. Vol. 56, p. 1
- Bajpai, P. Bajpai, P. K.*: Reduction of Organochlorine Compounds in Bleach Plant Effluents. Vol. 57, p. 213
- Bajpai, P. K.* see Bajpai, P.: Vol. 56, p. 1
- Bajpai, P. K.* see Bajpai, P.: Vol. 57, p. 213
- Bárzana, E.*: Gas Phase Biosensors. Vol. 53, p. 1
- Bazin, M. J.* see Markov, S. A.: Vol. 52, p. 59
- Bellgardt, K.-H.*: Process Models for Production of β -Lactam Antibiotics. Vol. 60, p. 153
- Berovic, M.* see Mitchell, D. A.: Vol. 68, 61
- Beyer, M.* see Seidel, G.: Vol. 66, p. 115
- Bhatia, P. K., Mukhopadhyay, A.*: Protein Glycosylation: Implications for in vivo Functions and Thereapeutic Applications. Vol. 64, p. 155
- Blanchette R. A.* see Akhtar, M.: Vol. 57, p. 159
- de Bont, J.A.M.* see van der Werf, M. J.: Vol. 55, p. 147
- Brainard, A. P.* see Ho, N. W. Y.: Vol. 65, p. 163
- Broadhurst, D.* see Shaw, A. D.: Vol. 66, p. 83
- Bruckheimer, E. M., Cho, S. H., Sarkiss, M., Herrmann, J., McDonell, T. J.*: The Bcl-2 Gene Family and Apoptosis. Vol 62, p. 75
- Buchert, J.* see Suurnäkki, A.: Vol. 57, p. 261
- Bungay, H. R.* see Mühlemann, H. M.: Vol. 65, p. 193
- Cao, N. J.* see Gong, C. S.: Vol. 65, p. 207
- Cao, N. J.* see Tsao, G. T.: Vol. 65, p. 243

- Carnell, A. J.*: Stereoinversions Using Microbial Redox-Reactions. Vol. 63, p. 57
Cen, P., Xia, L.: Production of Cellulase by Solid-State Fermentation. Vol. 65, p. 69
Chang, H. N. see *Lee, S. Y.*: Vol. 52, p. 27
Cheetham, P. S. J.: Combining the Technical Push and the Business Pull for Natural Flavours. Vol. 55, p. 1
Cho, S. H. see *Bruckheimer, E. M.*: Vol. 62, p. 75
Chen, Z. see *Ho, N. W. Y.*: Vol. 65, p. 163–192
Christensen, B., Nielsen, J.: Metabolic Network Analysis – A Powerful Tool in Metabolic Engineering. Vol. 66, p. 209
Ciaramella, M. see *van der Oost, J.*: Vol. 61, p. 87
Contreras, B. see *Sablon, E.*: Vol. 68, p. 21
Cornet, J.-F., Dussap, C. G., Gros, J.-B.: Kinetics and Energetics of Photosynthetic Micro-Organisms in Photobioreactors. Vol. 59, p. 153
da Costa, M.S., Santos, H., Galinski, E.A.: An Overview of the Role and Diversity of Compatible Solutes in Bacteria and Archaea. Vol. 61, p. 117
Cotter, T. G. see *McKenna, S. L.*: Vol. 62, p. 1
Croteau, R. see *McCaskill, D.*: Vol. 55, p. 107
- Danielsson, B.* see *Xie, B.*: Vol. 64, p. 1
Darzynkiewicz, Z., Traganos, F.: Measurement of Apoptosis. Vol. 62, p. 33
Davey, H. M. see *Shaw, A. D.*: Vol. 66, p. 83
Dean, J. F. D., LaFayette, P. R., Eriksson, K.-E. L., Merkle, S. A.: Forest Tree Biotechnology. Vol. 57, p. 1
Dochain, D., Perrier, M.: Dynamical Modelling, Analysis, Monitoring and Control Design for Nonlinear Bioprocesses. Vol. 56, p. 147
Du, J. see *Gong, C. S.*: Vol. 65, p. 207–241
Du, J. see *Tsao, G. T.*: Vol. 65, p. 243–280
Dueser, M. see *Raghavarao, K. S. M. S.*: Vol. 68, p. 139
Dussap, C. G. see *Cornet J.-F.*: Vol. 59, p. 153
Dutta, N. N. see *Ghosh, A. C.*: Vol. 56, p. 111
- Eggeling, L., Sahm, H., de Graaf, A.A.*: Quantifying and Directing Metabolite Flux: Application to Amino Acid Overproduction. Vol. 54, p. 1
Ehrlich, H. L. see *Rusin, P.*: Vol. 52, p. 1
Elias, C. B., Joshi, J. B.: Role of Hydrodynamic Shear on Activity and Structure of Proteins. Vol. 59, p. 47
Elling, L.: Glycobiotechnology: Enzymes for the Synthesis of Nucleotide Sugars. Vol. 58, p. 89
Eriksson, K.-E. L. see *Kuhad, R. C.*: Vol. 57, p. 45
Eriksson, K.-E. L. see *Dean, J. F. D.*: Vol. 57, p. 1
- Faber, K.* see *Orru, R. V. A.*: Vol. 63, p. 145
Farrell, R. L., Hata, K., Wall, M. B.: Solving Pitch Problems in Pulp and Paper Processes. Vol. 57, p. 197
Farrace, M. G. see *Autuori, F.*: Vol. 62, p. 129
Fiechter, A. see *Ochsner, U. A.*: Vol. 53, p. 89
Foody, B. see *Tolan, J. S.*: Vol. 65, p. 41
Freitag, R., Hörvath, C.: Chromatography in the Downstream Processing of Biotechnological Products. Vol. 53, p. 17
Furstoss, R. see *Orru, R. V. A.*: Vol. 63, p. 145
- Galinski, E. A.* see *da Costa, M.S.*: Vol. 61, p. 117
Gatfield, I.L.: Biotechnological Production of Flavour-Active Lactones. Vol. 55, p. 221
Gemeiner, P. see *Stefuca, V.*: Vol. 64, p. 69
Gerlach, S. R. see *Schügerl, K.*: Vol. 60, p. 195

- Ghosh, A. C., Mathur, R. K., Dutta, N. N.*: Extraction and Purification of Cephalosporin Antibiotics. Vol. 56, p. 111
- Ghosh, P.* see Singh, A.: Vol. 51, p. 47
- Gilbert, R. J.* see Shaw, A. D.: Vol. 66, p. 83
- Gomes, J., Menawat, A. S.*: Fed-Batch Bioproduction of Spectinomycin. Vol. 59, p. 1
- Gong, C. S., Cao, N. J., Du, J., Tsao, G. T.*: Ethanol Production from Renewable Resources. Vol. 65, p. 207–241
- Gong, C. S.* see Tsao, G. T.: Vol. 65, p. 243
- Goodacre, R.* see Shaw, A. D.: Vol. 66, p. 83
- de Graaf, A.A.* see Eggeling, L.: Vol. 54, p. 1
- de Graaf, A.A.* see Weuster-Botz, D.: Vol. 54, p. 75
- de Graaf, A.A.* see Wiechert, W.: Vol. 54, p. 109
- Grabley, S., Thiericke, R.*: Bioactive Agents from Natural Sources: Trends in Discovery and Application. Vol. 64, p. 101
- Griengl, H.* see Johnson, D. V.: Vol. 63, p. 31
- Gros, J.-B.* see Larroche, C.: Vol. 55, p. 179
- Gros, J.-B.* see Cornet, J. F.: Vol. 59, p. 153
- Guenette M.* see Tolan, J. S.: Vol. 57, p. 289
- Gutman, A. L., Shapira, M.*: Synthetic Applications of Enzymatic Reactions in Organic Solvents. Vol. 52, p. 87
- Häring, D.* see Adam, E.: Vol. 63, p. 73
- Hall, D. O.* see Markov, S. A.: Vol. 52, p. 59
- Hall, P.* see Mosier, N. S.: Vol. 65, p. 23
- Harvey, N. L., Kumar, S.*: The Role of Caspases in Apoptosis. Vol. 62, p. 107
- Hasegawa, S., Shimizu, K.*: Noninferior Periodic Operation of Bioreactor Systems. Vol. 51, p. 91
- Hata, K.* see Farrell, R. L.: Vol. 57, p. 197
- Hembach, T.* see Ochsner, U. A.: Vol. 53, p. 89
- Henzler, H.-J.*: Particle Stress in Bioreactor. Vol. 67, p. 35
- Herrmann, J.* see Bruckheimer, E. M.: Vol. 62, p. 75
- Hill, D. C., Wrigley, S. K., Nisbet, L. J.*: Novel Screen Methodologies for Identification of New Microbial Metabolites with Pharmacological Activity. Vol. 59, p. 73
- Hiroto, M.* see Inada, Y.: Vol. 52, p. 129
- Ho, N. W. Y., Chen, Z., Brainard, A. P. Sedlak, M.*: Successful Design and Development of Genetically Engineering *Saccharomyces* Yeasts for Effective Cofermentation of Glucose and Xylose from Cellulosic Biomass to Fuel Ethanol. Vol. 65, p. 163
- Hoch, U.* see Adam, W.: Vol. 63, p. 73
- Hórvath, C.* see Freitag, R.: Vol. 53, p. 17
- Hummel, W.*: New Alcohol Dehydrogenases for the Synthesis of Chiral Compounds. Vol. 58, p.145
- Inada, Y., Matsushima, A., Hiroto, M., Nishimura, H., Kodera, Y.*: Chemical Modifications of Proteins with Polyethylen Glycols. Vol. 52, p. 129
- Iyer, P.* see Lee, Y. Y.: Vol. 65, p. 93–115
- Irwin, D. C.* see Wilson, D. B.: Vol. 65, p. 1
- Jeffries, T. W., Shi, N.-Q.*: Genetic Engineering for Improved Xylose Fermentation by Yeasts. Vol. 65, p. 117
- Johnson, E. A., Schroeder, W. A.*: Microbial Carotenoids. Vol. 53, p. 119
- Johnson, D. V., Griengl, H.*: Biocatalytic Applications of Hydroxynitrile. Vol. 63, p. 31
- Joshi, J. B.* see Elias, C. B.: Vol. 59, p. 47
- Johnsurd, S. C.*: Biotechnology for Solving Slime Problems in the Pulp and Paper Industry. Vol. 57, p. 311

- Kaderbhai, N.* see Shaw, A. D.: Vol. 66, p. 83
Kataoka, M. see Shimizu, S.: Vol. 58, p. 45
Kataoka, M. see Shimizu, S.: Vol. 63, p. 109
Kawai, F.: Breakdown of Plastics and Polymers by Microorganisms. Vol. 52, p. 151
Kell, D. B. see Shaw, A. D.: Vol. 66, p. 83
Kieran, P. M., Malone, D. M., MacLoughlin, P. F.: Effects of Hydrodynamic and Interfacial Forces on Plant Cell Suspension Systems. Vol. 67, p. 139
King, R.: Mathematical Modelling of the Morphology of *Streptomyces* Species. Vol. 60, p. 95
Kirk, T. K. see Akhtar, M.: Vol. 57, p. 159
Kobayashi, M. see Shimizu, S.: Vol. 58, p. 45
Kodera, F. see Inada, Y.: Vol. 52, p. 129
Krabben, P. Nielsen, J.: Modeling the Mycelium Morphology of *Penicillium* Species in Submerged Cultures. Vol. 60, p. 125
Krämer, R.: Analysis and Modeling of Substrate Uptake and Product Release by Prokaryotic and Eukaryotic Cells. Vol. 54, p. 31
Kretzmer G.: Influence of Stress on Adherent Cells. Vol. 67, p. 123
Krieger, N. see Mitchell, D. A.: Vol. 68, p. 61
Kuhad, R. C., Singh, A., Eriksson, K.-E. L.: Microorganisms and Enzymes Involved in the Degradation of Plant Cell Walls. Vol. 57, p. 45
Kuhad, R. Ch. see Singh, A.: Vol. 51, p. 47
Kumar, S. see Harvey, N. L.: Vol. 62, p. 107
- Ladenstein, R., Antranikian, G.*: Proteins from Hyperthermophiles: Stability and Enzymatic Catalysis Close to the Boiling Point of Water. Vol. 61, p. 37
Ladisch, C. M. see Mosier, N. S.: Vol. 65, p. 23
Ladisch, R. M. see Mosier, N. S.: Vol. 65, p. 23
Lammers, F., Scheper, T.: Thermal Biosensors in Biotechnology. Vol. 64, p. 35
Larroche, C., Gros, J.-B.: Special Transformation Processes Using Fungal Spores and Immobilized Cells. Vol. 55, p. 179
LaFayette, P. R. see Dean, J. F. D.: Vol. 57, p. 1
Lazarus, M. see Adam, W.: Vol. 63, p. 73
Leak, D. J. see van der Werf, M. J.: Vol. 55, p. 147
Lee, S. Y., Chang, H. N.: Production of Poly(hydroxyalkanoic Acid). Vol. 52, p. 27
Lee, Y. Y., Iyer, P., Torget, R. W.: Dilute-Acid Hydrolysis of Lignocellulosic Biomass. Vol. 65, p. 93
Lievens, L. C., van't Riet, K.: Convective Drying of Bacteria II. Factors Influencing Survival. Vol. 51, p. 71
- MacLoughlin, P. F.* see Kieran, P. M.: Vol. 67, p. 139
Malone, D. M. see Kieran, P. M.: Vol. 67, p. 139
Maloney, S. see Müller, R.: Vol. 61, p. 155
Mandenius, C.-F.: Electronic Noses for Bioreactor Monitoring. Vol. 66, p. 65
Markov, S. A., Bazin, M. J., Hall, D. O.: The Potential of Using Cyanobacteria in Photobioreactors for Hydrogen Production. Vol. 52, p. 59
Marteinsson, V. T. see Prieur, D.: Vol. 61, p. 23
Mathur, R. K. see Ghosh, A. C.: Vol. 56, p. 111
Matsushima, A. see Inada, Y.: Vol. 52, p. 129
McCaskill, D., Croteau, R.: Prospects for the Bioengineering of Isoprenoid Biosynthesis. Vol. 55, p. 107
McDonell, T. J. see Bruckheimer, E. M.: Vol. 62, p. 75
McGovern, A. see Shaw, A. D.: Vol. 66, p. 83
McGowan, A. J. see McKenna, S. L.: Vol. 62, p. 1
McKenna, S. L., McGowan, A. J., Cotter, T. G.: Molecular Mechanisms of Programmed Cell Death. Vol. 62, p. 1

- McLoughlin, A. J.: Controlled Release of Immobilized Cells as a Strategy to Regulate Ecological Competence of Inocula. Vol. 51, p. 1
- Menachem, S. B. see Argyropoulos, D. S.: Vol. 57, p. 127
- Menawat, A. S. see Gomes J.: Vol. 59, p. 1
- Menge, M. see Mukerjee, J.: Vol. 68, p. 1
- Merkle, S. A. see Dean, J. F. D.: Vol. 57, p. 1
- Mitchell, D. A., Berovic, M., Krieger, N.: Biochemical Engineering Aspects of Solid State Bio-processing. Vol. 68, p. 61
- Moore, J. C. see Arnold, F. H.: Vol. 58, p. 1
- Mosier, N. S., Hall, P., Ladisch, C. M., Ladisch, M. R.: Reaction Kinetics, Molecular Action, and Mechanisms of Cellulolytic Proteins. Vol. 65, p. 23
- Moracci, M. see van der Oost, J.: Vol. 61, p. 87
- Mühlemann, H. M., Bungay, H. R.: Research Perspectives for Bioconversion of Scrap Paper. Vol. 65, p. 193
- Müller, R., Antranikian, G., Maloney, S., Sharp, R.: Thermophilic Degradation of Environmental Pollutants. Vol. 61, p. 155
- Mukherjee, J., Menge, M.: Progress and Prospects of Ergot Alkaloid Research. Vol. 68, p. 1
- Mukhopadhyay, A.: Inclusion Bodies and Purification of Proteins in Biologically Active Forms. Vol. 56, p. 61
- Mukhopadhyay, A. see Bhatia, P. K.: Vol. 64, p. 155
- Nielsen, J. see Christensen, B.: Vol. 66, p. 209
- Nielsen, J. see Krabben, P.: Vol. 60, p. 125
- Nisbet, L. J. see Hill, D. C.: Vol. 59, p. 73
- Nishimura, H. see Inada, Y.: Vol. 52, p. 123
- Ochsner, U. A., Hembach, T., Fiechter, A.: Produktion of Rhamnolipid Biosurfactants. Vol. 53, p. 89
- O'Connor, R.: Survival Factors and Apoptosis. Vol. 62, p. 137
- Ogawa, J. see Shimizu, S.: Vol. 58, p. 45
- Ohta, H.: Biocatalytic Asymmetric Decarboxylation. Vol. 63, p. 1
- van der Oost, J., Ciaramella, M., Moracci, M., Pisani, F. M., Rossi, M., de Vos, W. M.: Molecular Biology of Hyperthermophilic Archaea. Vol. 61, p. 87
- Oliverio, S. see Autuori, F.: Vol. 62, p. 129
- Orru, R. V. A., Archelas, A., Furstoss, R., Faber, K.: Epoxide Hydrolases and Their Synthetic Applications. Vol. 63, p. 145
- Paul, G. C., Thomas, C. R.: Characterisation of Mycelial Morphology Using Image Analysis. Vol. 60, p. 1
- Perrier, M. see Dochain, D.: Vol. 56, p. 147
- Piacentini, G. see Autuori, F.: Vol. 62, p. 129
- Piredda, L. see Autuori, F.: Vol. 62, p. 129
- Pisani, F. M. see van der Oost, J.: Vol. 61, p. 87
- Pohl, M.: Protein Design on Pyruvate Decarboxylase (PDC) by Site-Directed Mutagenesis. Vol. 58, p. 15
- Pons, M.-N., Vivier, H.: Beyond Filamentous Species. Vol. 60, p. 61
- Pons, M.-N., Vivier, H.: Biomass Quantification by Image Analysis. Vol. 66, p. 133
- Prieur, D., Marteinsson, V. T.: Prokaryotes Living Under Elevated Hydrostatic Pressure. Vol. 61, p. 23
- Pulz, O., Scheibenbogen, K.: Photobioreactors: Design and Performance with Respect to Light Energy Input. Vol. 59, p. 123
- Raghavarao, K. S. M. S., Dueser, M., Todd, P.: Multistage Magnetic and Electrophoretic Extraction of Cells, Particles and Macromolecules. Vol. 68, p. 139
- Ramanathan, K. see Xie, B.: Vol. 64, p. 1

- van't Riet, K.* see Lievens, L. C.: Vol. 51, p. 71
- Roberts, S. M.* see Allan, J. V.: Vol. 63, p. 125
- Rogers, P. L., Shin, H. S., Wang, B.*: Biotransformation for L-Ephedrine Production. Vol. 56, p. 33
- Rossi, M.* see van der Oost, J.: Vol. 61, p. 87
- Roychoudhury, P. K., Srivastava, A., Sahai, V.*: Extractive Bioconversion of Lactic Acid. Vol. 53, p. 61
- Rowland, J. J.* see Shaw, A. D.: Vol. 66, p. 83
- Rusin, P., Ehrlich, H. L.*: Developments in Microbial Leaching – Mechanisms of Manganese Solubilization. Vol. 52, p. 1
- Russell, N. J.*: Molecular Adaptations in Psychrophilic Bacteria: Potential for Biotechnological Applications. Vol. 61, p. 1
- Sablon, E., Contreras, B., Vandamme, E.*: Antimicrobial Peptides of Lactic Acid Bacteria: Mode of Action, Genetics and Biosynthesis. Vol. 68, p. 21
- Sahai, V.* see Singh, A.: Vol. 51, p. 47
- Sahai, V.* see Roychoudhury, P. K.: Vol. 53, p. 61
- Saha-Möller, C. R.* see Adam, W.: Vol. 63, p. 73
- Sahm, H.* see Eggeling, L.: Vol. 54, p. 1
- Saleemuddin, M.*: Bioaffinity Based Immobilization of Enzymes. Vol. 64, p. 203
- Santos, H.* see da Costa, M. S.: Vol. 61, p. 117
- Sarkiss, M.* see Bruckheimer, E. M.: Vol. 62, p. 75
- Scheibenbogen, K.* see Pulz, O.: Vol. 59, p. 123
- Scheper, T.* see Lammers, F.: Vol. 64, p. 35
- Schreier, P.*: Enzymes and Flavour Biotechnology. Vol. 55, p. 51
- Schreier, P.* see Adam, W.: Vol. 63, p. 73
- Schroeder, W. A.* see Johnson, E. A.: Vol. 53, p. 119
- Schügerl, K.*: Recovery of Proteins and Microorganisms from Cultivation Media by Foam Flotation. Vol. 68, p. 191
- Schügerl, K., Gerlach, S. R., Siedenberg, D.*: Influence of the Process Parameters on the Morphology and Enzyme Production of *Aspergilli*. Vol. 60, p. 195
- Schügerl, K.* see Seidel, G.: Vol. 66, p. 115
- Schumann, W.*: Function and Regulation of Temperature-Inducible Bacterial Proteins on the Cellular Metabolism. Vol. 67, p. 1
- Schuster, K. C.*: Monitoring the Physiological Status in Bioprocesses on the Cellular Level. Vol. 66, p. 185
- Scouroumounis, G. K.* see Winterhalter, P.: Vol. 55, p. 73
- Scragg, A. H.*: The Production of Aromas by Plant Cell Cultures. Vol. 55, p. 239
- Sedlak, M.* see Ho, N. W. Y.: Vol. 65, p. 163
- Seidel, G., Tollnick, C., Beyer, M., Schügerl, K.*: On-line and Off-line Monitoring of the Production of Cephalosporin C by *Acremonium Chrysogenum*. Vol. 66, p. 115
- Shamlou, P. A.* see Yim, S. S.: Vol. 67, p. 83
- Shapira, M.* see Gutman, A. L.: Vol. 52, p. 87
- Sharp, R.* see Müller, R.: Vol. 61, p. 155
- Shaw, A. D., Winson, M. K., Woodward, A. M., McGovern, A., Davey, H. M., Kaderbhai, N., Broadhurst, D., Gilbert, R. J., Taylor, J., Timmins, E. M., Alsborg, B. K., Rowland, J. J., Goodacre, R., Kell, D. B.*: Rapid Analysis of High-Dimensional Bioprocesses Using Multivariate Spectroscopies and Advanced Chemometrics. Vol. 66, p. 83
- Shi, N.-Q.* see Jeffries, T. W.: Vol. 65, p. 117
- Shimizu, S., Ogawa, J., Kataoka, M., Kobayashi, M.*: Screening of Novel Microbial for the Enzymes Production of Biologically and Chemically Useful Compounds. Vol. 58, p. 45
- Shimizu, K.* see Hasegawa, S.: Vol. 51, p. 91
- Shimizu, S., Kataoka, M.*: Production of Chiral C3- and C4-Units by Microbial Enzymes. Vol. 63, p. 109
- Shin, H. S.* see Rogers, P. L.: Vol. 56, p. 33

- Siedenberg, D.* see Schügerl, K.: Vol. 60, p. 195
Singh, R. P., Al-Rubeai, M.: Apoptosis and Bioprocess Technology. Vol. 62, p. 167
Singh, A., Kuhad, R. Ch., Sahai, V., Ghosh, P.: Evaluation of Biomass. Vol. 51, p. 47
Singh, A. see Kuhad, R. C.: Vol. 57, p. 45
Sonnleitner, B.: New Concepts for Quantitative Bioprocess Research and Development. Vol. 54, p. 155
Sonnleitner, B.: Instrumentation of Biotechnological Processes. Vol. 66, p. 1
Stefuca, V., Gemeiner, P.: Investigation of Catalytic Properties of Immobilized Enzymes and Cells by Flow Microcalorimetry. Vol. 64, p. 69
Srivastava, A. see Roychoudhury, P. K.: Vol. 53, p. 61
Suurnäkki, A., Tenkanen, M., Buchert, J., Viikari, L.: Hemicellulases in the Bleaching of Chemical Pulp. Vol. 57, p. 261
- Taylor, J.* see Shaw, A. D.: Vol. 66, p. 83
Tenkanen, M. see Suurnäkki, A.: Vol. 57, p. 261
Thiericke, R. see Grabely, S.: Vol. 64, p. 101
Thömmes, J.: Fluidized Bed Adsorption as a Primary Recovery Step in Protein Purification. Vol. 58, p. 185
Thomas, C. R. see Paul, G. C.: Vol. 60, p. 1
Timmens, E. M. see Shaw, A. D.: Vol. 66, p. 83
Todd, P. see Raghavarao, K. S. M. S.: Vol. 68, p. 139
Tolan, J. S., Guenette, M.: Using Enzymes in Pulp Bleaching: Mill Applications. Vol. 57, p. 289
Tolan, J. S., Foody, B.: Cellulase from Submerged Fermentation. Vol. 65, p. 41
Tollnick, C. see Seidel, G.: Vol. 66, p. 115
Traganos, F. see Darzynkiewicz, Z.: Vol. 62, p. 33
Torget, R. W. see Lee, Y. Y.: Vol. 65, p. 93–115
Tsao, G. T., Cao, N. J. Du, J., Gong, C. S.: Production of Multifunctional Organic Acids from Renewable Resources. Vol. 65, p. 243
Tsao, G. T.: see Gong, C. S.: Vol. 65, p. 207
- Vandamme, E.* see Sablon, E.: Vol. 68, p. 21
Viikari, L. see Suurnäkki, A.: Vol. 57, p. 261
Vivier, H. see Pons, M.-N.: Vol. 60, p. 61
Vivier, H. see Pons, M.-N.: Vol. 66, p. 133
de Vos, W.M. see van der Oost, J.: Vol. 61, p. 87
- Wang, B.* see Rogers, P. L.: Vol. 56, p. 33
Wall, M. B. see Farrell, R. L.: Vol. 57, p. 197
Weichold, O. see Adam, W.: Vol. 63, p. 73
van der Werf, M. J., de Bont, J. A. M. Leak, D. J.: Opportunities in Microbial Biotransformation of Monoterpenes. Vol. 55, p. 147
Weuster-Botz, D., de Graaf, A.A.: Reaction Engineering Methods to Study Intracellular Metabolite Concentrations. Vol. 54, p. 75
Wiechert, W., de Graaf, A.A.: In Vivo Stationary Flux Analysis by ¹³C-Labeling Experiments. Vol. 54, p. 109
Wiesmann, U.: Biological Nitrogen Removal from Wastewater. Vol. 51, p. 113
Williamson, N. M. see Allan, J. V.: Vol. 63, p. 125
Wilson, D. B., Irwin, D. C.: Genetics and Properties of Cellulases. Vol. 65, p. 1
Winson, M. K. see Shaw, A. D.: Vol. 66, p. 83
Winterhalter, P., Skouroumounis, G. K.: Glycoconjugated Aroma Compounds: Occurrence, Role and Biotechnological Transformation. Vol. 55, p. 73
Woodward, A. M. see Shaw, A. D.: Vol. 66, p. 83
Wrigley, S. K. see Hill, D. C.: Vol. 59, p. 73

Xia, L. see Cen, P.: Vol. 65, p. 69

Xie, B., Ramanathan, K., Danielsson, B.: Principles of Enzyme Thermistor Systems: Applications to Biomedical and Other Measurements. Vol. 64, p. 1

Yim, S. S., Shamlou, P. A.: The Engineering Effects of Fluids Flow and Freely Suspended Biological Macro-Materials and Macromolecules. Vol. 67, p. 83

Subject Index

- Acetic acid 22
Acetobacter peroxidans 227
Acromonium coenophialum 12, 13
Activation-inhibition kinetics 15
Advanced separator (ADSEP) 144, 150, 152, 158, 159, 164
Aeration 14
-, forced 106
Affinity partitioning 171
Aggregation 194
Aging process 16
Agitation 14
Airlift tower loop 206
Alkaloid production 14, 15
Alkaloid spectra 15
Alkaloid synthesis 16
4-Alkyl indoles 6
Amino acids 4, 10, 12, 17
Amperometric detection 17
Amylase 217
Analytical methods 16
Animal cells 211
Antibiotic production 200
Antifoam agents (AFA) 194, 198, 200
Antihypertensive 9
Antineoplastic 9
Antiviral 9
Aqueous two-phase extraction (ATPE) 171
Aspergillus niger 205
Aspergillus oryzae 10, 68
Assimilation 15
Asymmetric center 3
Asymmetric synthesis 7
Avrami relationship 198
- Bacillus subtilis* 72
Bacteriocins 22, 23
-, biosynthesis 38
-, immunity/resistance 36
- maturation 47
- precursors 42
Banana meal 77
Batch fermentation 16
- Beds, gas solid-fluidized 112
-, stirred aerated 114
-, unmixed 103, 106
Bifidobacteria 22
Bioconversion 2, 10
Biomass concentration 17
Bioreactor operation 100
Bioreactors, mixed aerated 117
-, rocking drum 116
-, screw 110
-, Zymotis-type 108
Biosynthesis 2, 7, 11, 12, 14, 17
Biotechnology 17
Biotin 14
Bordetella pertussis 33
Bovine serum albumin (BSA) 17, 196
BSA 195-197, 202, 212, 216-219
- foams 195
Bubble coalescence 201
Bubble column 201
Bubble velocity 206
- Caffeine 16
Candida boidinii 203
Candida boidinii 227
Candida intermedia+s 227
Candida utilis 73
Capillary electrophoresis (CE) 1, 16, 18
Capillary zone electrophoresis 16, 164
Carbon limitation 15
Carbon source 15
Casein 196, 212, 216, 217
Cassava 77
Cation-olefin cycloaddition 7
Cell division 15
Cell lysis 199
Cell morphology 15
Cell recovery factor R 220
Cellular cytoplasm 16
Chaetomium cellulolyticum 72, 201
Chanoclavine 3, 6, 10
Chanoclavine cyclase 13
Chemical complementarity 17

- Chiral selectors 17
Claviceps fusiformis 14
Claviceps paspali 14
Claviceps purpurea 1, 2, 11–15
 Clavicipitic acid 7
 Clavine alkaloids 1, 3, 5, 14, 15
 Clavines 14
 Clomiphene 14
Clostridium acetobutylicum 227
 CO₂ production rate (CPR) 205, 208
 Coagulation 195
 Coalescence index m_{corr} 201
 Coalescence promoting 203
 Cobalt catalysed cocyclization 7
 Collector 223
 Colloid gas aphrons 219
 Colony forming units (CFU) 205, 208
 Combinatorial chemistry 17
 Conformation change 197
 Conidial concentration 14
 Contamination, process organism 98
 Control 15
 Control techniques, advanced 121
 Copper catalyst 9
 Corn meal 77
 Counter current distribution, model 178
 Craig extraction 178
 Critical micelle concentration (CMC) 196
 Cultivation temperature 14
 Culture age 15
 Culture fluorescence intensity 17
 Cycloaddition 6
 [3+2]Cycloaddition reaction 6
 γ -Cyclodextrin 16
 Cyclol ergot alkaloids (CEA) 4
- Dehydrogenation of indolines 6
 Denaturation of proteins 194
 Desmophen 201, 202
 Diels-Alder-Reaction 6
 Differential pulse voltametric behavior 17
 Diffusion, intraparticle 92
 Dihydrolysergic acid 8
 4-(γ - γ -Dimethylallyl)tryptophan (DMAT)
 7
 Directed biosynthesis 1, 2, 10, 12
 Dissolved oxygen 14
 DMAT synthase 12, 13
 Dopamine 2, 7, 8
 Dopaminergic 9
 Drainage rate 197
 Drums, stirred/rotating 110
- Electroextraction, macromolecules 174, 175
 Electrokinetic demixing 175
 Electrokinetic potential 228
 Electroosmotic flow 176
 Electrophilic aromatic substitution 13
 Electrophilic substitution 8
 Electrophoresis 157
 Electrophoretic counter current distribution
 (ECCD) 165
 Electrophoretic extraction 157
 – –, model 165, 166
 Electrophoretic mobility 166, 176, 227
 Electrophoretic separator (ELECSEP) 144,
 160
 Electrostatic repulsion 228
 Elimination-addition 6
 Enamide photocyclization 5
 Enantioselective enzymatic transformation
 7
Endomycopsis fibuligera 72
 Enrichment 226, 227
 Enrichment factor E 220
 Environmental effects 88
 Enzyme production 200
 Enzymology 1, 12, 13
 Ergolenes 3
 Ergoline 3–9
 Ergonovine 15
 Ergopeptam 3, 5
 Ergopeptine 3, 4, 13
 Ergot 2
 Ergot alkaloid glycosides 10
 Ergot alkaloids 1–3, 7–10, 16
 Ergot peptide alkaloids 17
 Ergotamine 4, 11, 13–16
 Ergovaline 16, 17
Escherichia coli 198, 201–209, 227
 Eukaryotic cloning system 12
Euphorbia calyptrata 10
 Extracellular lipids 223
 Extracellular phosphate 15
 Extraction of macromolecules 170
 Extractive bioconversion 172
 Extractive fermentation 172
- Fatty acid 228
 Fed batch fermentation 14
 Fermentation 16
 –, solid-state 67
 –, submerged liquid 67
 Fermentation medium 15
 Fermentation technology 13
 Fermentative production 13
 Film cohesion 195
 Film elasticity 195
 Flow cytometry 227
 Flow injection analysis (FIA) 16–18

- Fluorescence spectroscopy, two-dimensional
1, 16–18
- Foam breakers 200
- Foam capacity 195
- Foam flotation 212, 218
- Foam index 199
- Foam stability 195–197
- Foamer 223
- Foaminess 195–198, 202, 214, 223
- Folic acid 14
- Friedel-Crafts acylation 7
- Friedel-Crafts cyclization 8
- Fructoside 10
- Fungal spores 125
- Fungi, filamentous 71
- β*-Galactosidase 10
- β*-Galactoside 10
- Gas holdup 203
- Gemini surfactants 10
- Gene expression 206
- Giberella fujikoroii* 13
- Grasshof number (Gr) 169
- Growth 15, 16
- Hansenula polymorpha* 198, 201, 202,
220–227
- Hansenula polymorpha* (CBS 4732) 221
- Heat transfer, electrokinetic process 168,
169
- Heck reaction 6
- Helveticin 24
- Hemoglobin 217
- High gradient magnetic separation (HGMS)
145–147, 182
- High performance capillary zone electro-
phoresis (HPCZE) 16
- Hofmeister series 196
- Hybridization analysis 12
- Hybridoma cells 199
- Hydrate ion complex 195
- Hydration complex of the protein 197
- Hydrocarbon 14
- Hydrogen peroxide 14, 22
- Hydrophobic 228
- Hydrophobic interaction 228
- Hydrophobicity 227, 229
- Hydroxy organic acids 17
- Immunological methods 17
- Impregnation 15
- Industrial fermentation 16
- Inorganic phosphate 15
- Integrated fermentation-separation 15
- Intracellular phosphate 15
- Intraparticle diffusion 92
- Isoelectric points (IEP) 196, 216
- Isoergolenes 3
- Isoprenoid biosynthesis 13
- Isothermal approach 86
- Joule heating 163
- Karyotype analyses 12
- Kinetic parameters 15
- Klebsiella pneumoniae* 227
- Lactam ergot alkaloids (LEA) 5
- Lactic acid bacteria 21
- Lactobacilli 22
- Lactobacillus johnsonii* 31
- Lactocin S 30
- Lactococcus 25
- Lactococcon DR 30
- Lactococcon G 35
- Lactococcus lactis* 27, 31
- Lantibiotics 23, 27
- Leaching solution 126
- Leader peptide 45
- Leuconostoc gelidum* 31
- Lewis acid condensation 6
- Life function 16
- Limiting substrate 15
- Liquid chromatography 17
- Listeria-active peptides 24
- Low gravity research 147, 172
- Lysergic acid 4, 7, 13, 17
– – derivatives 1, 3, 5
- Lysergine 7
- D-Lysergyl peptide synthetase 13
- D-Lysergyl peptide 13
- Lysozyme 212, 216–218
- Macroscale phenomena 79, 97
- Magnetic extraction 144
– –, macromolecules 173, 174
– –, model 153, 154
- Magnetic properties 145
- Magnetic separation methods 145
- Magnetic separator (MAGSEP) 144, 149,
150, 152
- Mass transfer coefficient 206
- Mathematical models 1, 13, 15, 17
- Mechanical foam breaker 212
- Membrane affecting agents 13
- Membrane-active peptides, secondary
structures 26
- Mesentericin Y105 34
- Metabolic control theory 16
- Metabolic flux analysis 16, 17

- Metal affinity partitioning 172
Micellar electrokinetic capillary chromatography (MECC) 16
Michael addition 8
Microbial growth 89
Microbial life space 16
Microbial life 16
Microscale model 96
Microscale phenomena 79, 81
Mixed cells (electrophoretic extraction), model 167
Modified foaminess 214
Molecular biology 1, 12
Molecular imprinting chromatographic analysis 18
Monoclonal antibody (MAB) 211
MPF 44
Multistage counter current distribution 177, 179
Multistage electrophoretic extraction 158, 159
Multistage magnetic method 148, 149
Mycelial growth 91
Mycelium, washed 11
- Natural inhibitors 22
Natural Killer (NK) activity 10
Neurohumoral mediators 2
Neurospora crassa 13
Neurotransmitter 9
Nisin 25, 27
Nitrogen limitation 15
Nitrogen source 15
Nitrene-olefin 6
Non linear regression 15
Noradrenaline 2,8
Nucleotide 17
Nusselt number (Nu) 169
Nystatin 14
- O/C atomic ratio 228
Ohmic heating 157, 163
On-line modeling 15
On-line monitoring 17
Optimal control curves 15
Optimal strategy 15
Organic separator (ORSEP) 177
Organic synthesis 2
Organoleptic properties 22
OTR 200, 203, 205, 206, 210
Oxidative biotransformation 10
Oxidative electrode reaction 17
Oxygen 14
Oxygen transfer 14, 94
Oxygen transfer rate (OTR) 200, 203, 206, 210
- Oxygen uptake rate (OUR) 203
Oxygen vectors 1, 13
- PAAGE, native 222
Palladium catalyst 6, 9
Parasitic cultivation 2
Particle destruction 95
Particle size 77
Paspalic acid 4
Pasteurella haemolytica 33
Pediocin PA-1 34
Pediococcus acidilactici 31
Penicillium camemberti 68
Penicillium caseicolum 68
Penicillium chrysogenum 198, 202, 203
Penicillium herqueii 199
Penicillium roqueforti 68
Pepsin 217, 218
Peptide alkaloid, semisynthetic 9
Peptide synthetase genes 13
Peptides, antimicrobial 21
Peptones 14
Perfluorocarbons 14
Peroxidase 10
Pharmacophore moiety 2, 9
Pilot equipment 224
Pilot-scale 74
Plantaricin A 34
Plasmid stability 210
Plateau border 218, 219
Pluronic 14
Poly(ethylene oxide) NP-10 (PEO) 196
Polysaccharide 228
Prandtl number (Pr) 169
Pretreatments, physical 76
Process organism 98
Productivity 17
Proline 13
Protein enrichment (E) 214
Protein flotation 212
Protein recovery (R) 214
Protein separation (S) 214
Protein structure 107
Pyrolysis mass spectrophotometry 18
- Rayleigh number (Ra) 157, 169
Real time 17
- - assessment 17
Receptors 2, 7, 17
Recombinant protein 205
Recovery 226
-, proteins 212
Redox state 16
Reductive amination 8
Reductive photocyclization 5

- Reformatsky reaction 7
Regioselective oxidation 6
Rehydrated yeast 226
Relativistic theory 16
Respiration rate 203
Respiratory quotient 206
Reverse micellar extraction (RME) 173
Rhodococcus erythropolis 227
Riboflavin 14, 17
N- β -Riboside 9
Rice 77
Rice bran 77
Rotating drums 110
- Saccharomyces carlsbergensis* 229
Saccharomyces cerevisiae 72, 199, 201, 220, 224–227
Sakacin A 34
Scale-up, electrophoretic extraction 181
–, magnetic extraction 181
Schwanniomyces castelli 72
Screw bioreactors 110
SDS-PAAGE 222
Selective lithiation 6
Sensor 17
Separation 227
Separation factor S 220
Serotonin 2, 7, 8
Setoclavine 7
Shear sensitivity 211
Simulation 15
Software program 17
Solid state fermentation 13, 14
Soybean peptones 14
Specific alkaloid production rate 15
Specific glucose uptake rate (GUR) 205
Specific interfacial area 201, 206
Specific monoclonal antibody 17
Sphaceloma manihaticola 13
Spoilage retardation 22
SSF, ecological aspects 130
Stereoselective total synthesis 6
Steric complementarity 17
Steroid biotransformation 200
Streptomyces aureofaciens 10
Streptomyces clavuligerus 219
Streptomyces griseus 219
Streptomyces pilosus 219
Structure activity relationships 1, 8
Structure breaker 216
Structure maker 215
Submerged cultivation 2, 198
Submerged fermentation 15
Substraction spectra 17
Substrate bed 98
Substrate sterilization 78
Substrates, natural solid 76
Sucrose-nisin gene cluster 28
4-(Sulfonyl-methyl)indole 6
Surface charge 228, 229
Surface denaturation 194
Surface elasticity 200
Surface tension 195–202, 205
Surface viscosity 197–202
Surfactants 14
Sweet potato residue 77
Synthons 1, 2, 11, 12
- Tandem radical cyclization 8
1,3,4,5-Tetrahydrobenzo[cd]indoles 1
Thiobacillus ferrooxidans 219
Total chemical synthesis 2
Transformation 15
Transformation system 12
Triadimefon 14
Trichoderma reesei 72, 73
Trypsin 217, 218
Tryptophan 1, 7, 8, 17
Turbidity temperature 196, 197
Tweens 14
- Ultrasound Doppler velocimeter (UDV) 203
Ultrasound technique 204
Upstream processing 75
- Vascular 5HT₂ receptor 8
Vicarious nucleophilic substitution (VNS) 8
Vitamins 14
Volumetric mass transfer coefficient 201, 203
- Waste disposal 124
Water activities 71, 88
Wheat bran 77
- X-ray photoelectron spectroscopy (XPS) 227
- Yeast 219, 220, 225
Yield coefficient $Y_{X/Glu}$ 205
- Zero-order kinetics 15
Zymotis-type bioreactor 108