

**Adam MS (1997) Metabolic response of the halotolerant green alga *Dunaliella bardawil* to nitrogen:phosphorous ratios in batch culture. Folia Microbiol 42:357–360**

- Ahmad I, Hellebust A (1990) Regulation of chloroplast development by nitrogen source and growth conditions in a *Chlorella protothecoides* strain. *Plant Physiol* 94:944–949
- Apt KE, Behrens PW (1999) Commercial developments in microalgal biotechnology (review). *J Phycol* 35:215–226
- Baker JW, Grover JP, Brooks BW, Urena-Boeck F, Roelke DL, Errera R, Kiesling RL (2007) Growth and toxicity of *Prymnesium parvum* (Haptophyta) as a function of salinity, light, and temperature. *J Phycol* 43(2):219–227
- Banerjee A, Sharma R, Chisti Y, Banerjee UC (2002) *Botryococcus braunii*: a renewable source of hydrocarbons and other chemicals. *Crit Rev Biotechnol* 22(3):245–279
- Becker EW (1994) Microalgae: biotechnology and microbiology. Cambridge University Press, Cambridge, UK
- Ben-Amotz A, Tomabene TG (1985) Chemical profile of selected species of microalgae with emphasis on lipids. *J Phycol* 21:72–81
- Benemann JR, Weissman JC, Koopman BL, Oswald WJ (1977) Energy production by microbial photosynthesis. *Nature* 268:19–23
- Benider A, Tahiri M, Belkoura M, Dauta A (2001) Interacting effect of heliothermic factors on the growth rate of 3 *Scenedesmus* species. *Int J Lim* 37:257–266
- Beudeker RF, Tabita FR (1983) Control of photorespiration glycolate metabolism in an oxygen-resistant mutant of *Chlorella sorokiniana*. *J Bacteriol* 155:650–656
- Braud Y, Salmon J-M, Soyer-Gobillard M-O (1991) The complex cell cycle of the dinoflagellate protist *Cryptocodinium cohnii* as studied in vivo and by cytofluorimetry. *J Cell Sci* 100:675–682
- Bopp SK, Lettieri T (2007) Gene regulation in the marine diatom *Thalassiosira pseudonana* upon exposure to polycyclic aromatic hydrocarbons (PAHs). *Gene* 396:293–302
- Borowitzka MA (1992) Algal biotechnology products and processes—matching science and economics. *J Appl Phycol* 4:267–279
- Borowitzka MA (1997) Microalgae for aquaculture: opportunities and constraints. *J Appl Phycol* 9:393–401
- Burlew JS (1953) Algal culture, from laboratory to pilot plant. Carnegie Institute of Washington, Washington D.C.
- Butterwick C, Heaney SI, Talling JF (2005) Diversity in the influence of temperature on the growth rates of freshwater algae, and its ecological relevance. *Freshw Biol* 50:291–300
- Ceron Garcia MC, Fernandez Sevilla JM, Acién Fernandez FG, Molina Grima E, Garcia Camacho F (2000) Mixotrophic growth of *Phaeodactylum tricornutum* on glycerol: growth rate and fatty acid profile. *J Appl Phycol* 12:239–248
- Chelf P (1990) Environmental control of lipid and biomass production in two diatom species. *J Appl Phycol* 2:121–129
- Chen Y-C (2007) Immobilization of twelve benthic diatom species for long-term storage and as feed for post-larval abalone *Haliotis diversicolor*. *Aquaculture* 263(1–4):97–106
- Chisti Y (2007) Biodiesel from microalgae. *Biotechnol Adv* 25:294–306
- Chisti Y (2008) Biodiesel from microalgae beats bioethanol. *Trends Biotechnol* 26:126–131
- Coleman LW, Rosen BH, Schwartzbach SD (1988) Environmental control of carbohydrate and lipid synthesis in *Euglena*. *Plant Cell Physiol* 29:423–432
- Collyer DM, Fogg GE (1954) Studies on fat accumulation by algae. *J Exp Bot* 6:256–275
- Constantopoulos G, Bloch K (1967) Effect of light intensity on the lipid composition of *Euglena gracilis*. *J Biol Chem* 242:3538–3542
- Cook JR (1966) Adaptations to temperature in two closely related strains of *Euglena gracilis*. *Biol Bull* 131:83–93
- Coombs J, Darley WM, Holm-Hansen O, Volcani BE (1967) Studies on the biochemistry and fine structure of silica shell formation in diatoms. Chemical composition of *Navicula pelliculosa* during silicon-starvation synchrony. *Plant Physiol* 42:1601–1606
- De la Pena MR (2007) Cell growth and nutritive value of the tropical benthic diatom, *Amphora* sp., at varying levels of nutrients and light intensity, and different culture locations. *J Appl Phycol* 19:647–655
- Dempster TA, Sommerfeld MR (1998) Effects of environmental conditions on growth and lipid accumulation in *Nitzschia communis* (Bacillariophyceae). *J Phycol* 34:712–721
- Exley C, Tollervey A, Gray G, Roberts S, Birchall JD (1993) Silicon, aluminium and the biological availability of phosphorous in algae. *Proc R Soc Lond B* 253(1336):93–99
- Ferguson RL, Collier A, Meeter DA (1976) Growth response of *Thalassiosira pseudonana* Hasle and Hemdal clone 3H to illumination, temperature and nitrogen source. *Chesap Sci* 17(3):148–158
- Fisher T, Minnaard J, Dubinsky Z (1996) Photoacclimation in the marine alga *Nannochloropsis* sp. (Eustigmatophyte): a kinetic study. *J Plankton Res* 18:1797–1818
- Gatenby CM, Orcutt DM, Kreger DA, Parker BC, Jones VA, Neves RJ (2003) Biochemical composition of three algal species proposed as food for captive freshwater mussels. *J Appl Phycol* 15:1–11
- Goksan T, Zekeriyaoglu A, Ak I (2007) The growth of *Spirulina platensis* in different culture systems under greenhouse condition. *Turk J Biol* 31:47–52
- Goldman JC, Peavey DG (1979) Steady-state growth and chemical composition of the marine Chlorophyte *Dunaliella tertiolecta* in nitrogen limited continuous cultures. *Appl Environ Microb* 38:894–901
- Greque de Morais M, Vieira Costa JA (2007) Biofixation of carbon dioxide by *Spirulina* sp. and *Scenedesmus obliquus* cultivated in a three-stage serial tubular photobioreactor. *J Biotechnol* 129:439–445
- Grobelaar JU (2000) Physiological and technological considerations for optimising mass algal cultures. *J Appl Phycol* 12:201–206
- Harrington KJ (1986) Chemical and physical properties of vegetable oil esters and their effect on diesel fuel performance. *Biomass* 9:1–17
- Haury JF, Spiller H (1981) Fructose uptake and influence on growth of and nitrogen fixation by *Anabaena variabilis*. *J Bacteriol* 147:227–235
- Hu G, Gao K (2003) Optimisation of growth and fatty acid composition of a unicellular marine picoplankton, *Nannochloropsis* sp., with enriched carbon sources. *Biotech Lett* 25:421–425
- Ilman AM, Scragg AH, Shales SW (2000) Increase in *Chlorella* strains calorific values when grown in low nitrogen medium. *Enzyme Microb Tech* 27:631–635
- Ishida Y, Hiragushi N, Kitaguchi H, Mitsutani A, Nagai S, Yoshimura M (2000) A highly CO<sub>2</sub>-tolerant diatom, *Thalassiosira weissflogii* H1, enriched from coastal sea, and its fatty acid composition. *Fish Sci* 66:655–659
- Janssen M, Slenders P, Tramper J, Mur LR, Wijffels RH (2001) Photosynthetic efficiency of *Dunaliella tertiolecta* under short light/dark cycles. *Enzyme Microb Tech* 29:298–305
- Johansen J, Lemke P, Nagle N, Chelf P, Roessler P, Galloway R, Toon S (1987) Addendum to microalga culture collection 1986–1987. Report prepared by the SERI Microalgal Technology Research Group, Golden, Colorado. Report number SERI/SP-232-3079a, dated December 1987
- Lee Y-K (2001) Microalgal mass culture systems and methods: their limitations and potential. *J Appl Phycol* 13:307–315
- Lee ETY, Bazin MJ (1991) Environmental factors influencing photosynthetic efficiency of the micro red alga *Porphyridium cruentum* (Agardh) Nägeli in light-limited cultures. *New Phytol* 118:513–519
- Li Y, Horsman M, Wang B, Wu N, Lan CQ (2008) Effects of nitrogen sources on cell growth and lipid accumulation of green alga

- Neochloris oleoabundans*. Appl Microbiol Biotechnol 81:629–636
- Liu Z-Y, Wang G-C, Zhou B-C (2008) Effect of iron on growth and lipid accumulation in *Chlorella vulgaris*. Bioresour Technol 99:4717–4722
- Lu C, Rao K, Hall D, Vonshak A (2001) Production of eicosapentaenoic acid (EPA) in *Monodus subterraneus* grown in a helical tubular photobioreactor as affected by cell density and light intensity. J Appl Phycol 13:517–522
- Ma F, Hanna A (1999) Biodiesel production: a review. Bioresour Technol 70:1–15
- Maddux WS, Jones RF (1964) Some interactions of temperature, light intensity and nutrient concentration during the continuous culture of *Nitzschia closterium* and *Tetraselmis* sp. Limnol Oceanogr 9:79–86
- Mansour MP, Frampton DMF, Nichols PD, Volkman JK (2005) Lipid and fatty acid yield of nine stationary-phase microalgae: applications and unusual C24–C28 polyunsaturated fatty acids. J Appl Phycol 17:287–300
- Matsukawa R, Hotta M, Masuda Y, Chihara M, Karube I (2000) Antioxidants from carbon dioxide fixing *Chlorella sorokiniana*. J Appl Phycol 12:263–267
- McGinnis KM, Dempster TA, Sommerfield MR (1997) Characterization of the growth and lipid content of the diatom *Chaetoceros muelleri*. J Appl Phycol 9:19–24
- McKnight D (1981) Chemical and biological processes controlling the response of a freshwater ecosystem to copper stress: a field study of the CuSO<sub>4</sub> treatment of Mill Pond reservoir, Burlington, Massachusetts. Limnol Oceanogr 26:518–531
- Moheimani NR (2005) The culture of coccolithophorid algae for carbon dioxide bioremediation. PhD Thesis, Murdoch University, Perth, Australia
- Moheimani NR, Borowitzka MA (2006) The long-term culture of the coccolithophore *Pleurochrysis carterae* (Haptophyta) in outdoor raceway ponds. J Appl Phycol 18:703–712
- Molina Grima E, Robles Medina A, Gimenez Gimenez A, Sanchez Perez JA, Garcia Camacho F, Garcia Sanchez JL (1994) Comparison between extraction of lipids and fatty acids from microalgal biomass. J Am Oil Chem Soc 71:955–959
- Moore JW (1975) Seasonal changes in the proximate and fatty acid composition of some naturally grown freshwater Chlorophytes. J Phycol 11:205–211
- Mourete G, Lubiain LM, Odriozola JM (1990) Total fatty acid composition as a taxonomic index of some marine microalgae used as food in marine aquaculture. Hydrobiologia 203:148–154
- Nagle N, Lemke P (1990) Production of methyl ester fuel from microalgae. Appl Biochem Biotech 24–25:355–361
- Ostgaard K, Jensen A (1982) Diurnal and circadian rhythms in the turbidity of growing *Skeletonema costatum* cultures. Mar Biol 66:261–268
- Parrish CC, Wangersky PJ (1987) Particulate and dissolved lipid classes in cultures of *Phaeodactylum tricornutum* grown in cage culture turbidostats with a range of nitrogen supply rates. Mar Ecol-Prog Ser 35:119–128
- Patil V, Kallqvist T, Olsen E, Vogt G, Gislerod HR (2007) Fatty acid composition of 12 microalgae for possible use in aquaculture feed. Aquacult Int 15:1–9
- Piorreck M, Baasch K-L, Pohl P (1984) Biomass production, total protein, chlorophylls, lipids and fatty acids of freshwater green and blue-green algae under different nitrogen regimes. Phytotranschemistry 23:207–216
- Price LL, Yin K, Harrison PJ (1998) Influence of continuous light and L:D cycles on the growth and chemical composition of Prymnesiophyceae including Coccolithophores. J Exp Mar Biol Ecol 223:223–234
- Pulz O (2001) Photobioreactors: production systems for phototrophic microorganisms. Appl Microbiol Biotechnol 57:287–293
- Pulz O, Gross W (2004) Valuable products from biotechnology of microalgae. Appl Microbiol Biotechnol 65:635–648
- Qiang H, Guterman H, Richmond A (1996) Physiological characteristics of *Spirulina platensis* (Cyanobacteria) cultured at ultrahigh cell densities. J Phycol 32:1066–1073
- Reitan KI, Rainuzzo JR, Olsen Y (1994) Effect of nutrient limitation on fatty acid and lipid content of marine microalgae. J Phycol 30:972–979
- Renaud SM, Parry DL, Luoing-Van Thinh (1994) Microalgae for use in tropical aquaculture I: Gross chemical and fatty acid composition of twelve species of microalgae from the Northern Territory, Australia. J Appl Phycol 6:337–345
- Richardson B, Orcutt DM, Shwartzner A, Martinez AL, Wickline HE (1969) Effects of nitrogen limitation on the growth and composition of unicellular algae in continuous culture. Appl Microbiol 18:245–250
- Rodolfi L, Zittelli GC, Bassi N, Padovani G, Biondi N, Bonini G, Tredici MR (2008) Microalgae for oil: strain selection, induction of lipid synthesis and outdoor mass cultivation in a low-cost photobioreactor. Biotechnol Bioeng 102(1):100–112
- Roessler PG (1990) Environmental control of glycerolipid metabolism in microalgae: commercial implications and future research directions. J Phycol 26:393–399
- Sheehan J, Dunahay T, Benemann J, Roessler P (1998) A look back at the U.S. Department of Energy's Aquatic Species Program: Biodiesel from Algae. Close-Out report. National Renewable Energy Lab, Department of Energy, Golden, Colorado, U.S.A. Report number NREL/TP-580-24190, dated July 1998
- Shehata TE, Kempner ES (1977) Growth and cell volume of *Euglena gracilis* in different media. Appl Environ Microbiol 33:374–377
- Shifrin NS, Chisholm SW (1981) Phytoplankton lipids: interspecific differences and effects of nitrate, silicate and light-dark cycles. J Phycol 17:374–384
- Siron R, Giusti G, Berland B (1989) Changes in the fatty acid composition of *Phaeodactylum tricornutum* and *Dunaliella tertiolecta* during growth and under phosphorous deficiency. Mar Ecol-Prog Ser 55:95–100
- Sorokin C, Krauss RW (1961) Effects of temperature and illuminance on *Chlorella* growth uncoupled from cell division. Plant Physiol 37:37–42
- Spoehr HA, Milner HW (1949) The chemical composition of *Chlorella*, effect of environmental conditions. Plant Physiol 24:120–149
- Suen Y, Hubbard JS, Holzer G, Tornabene TG (1987) Total lipid production of the green alga *Nannochloropsis* sp. QII under different nitrogen regimes. J Phycol 23:289–296
- Taguchi S, Hirata JA, Laws EA (1987) Silicate deficiency and lipid synthesis of marine diatoms. J Phycol 23:260–267
- Tomaselli L, Boldrini G, Margheri MC (1997) Physiological behaviour of *Arthrosira* (*Spirulina*) maxima during acclimation to changes in irradiance. J Appl Phycol 9:37–43
- Tsukahara K, Sawayama S (2005) Liquid fuel production using microalgae. J Jpn Pet Inst 48(5):251–259
- Ugwu CH, Aoyagi H, Uchiyama H (2007) Influence of irradiance, dissolved oxygen concentration and temperature on the growth of *Chlorella sorokiniana*. Photosynthetica 45:309–311
- Vieira Costa JA, Colla LM, Filho PD, Kabake K, Weber A (2002) Modelling of *Spirulina platensis* growth in fresh water using response surface methodology. World J Microb Biotechnol 18:603–607
- Xu H, Miao X, Wu Q (2006) Biodiesel production from heterotrophic microalgal oil. Bioresour Technol 97:841–846
- Zeiler KG, Heacock DA, Toon ST, Brown LM (1995) Proceedings of the 1995 meeting of the Phycological Society of America, Breckenridge, 6–10 August 1995. J Phycol (suppl 31):9