

Index

- Achnanthes* 4, 8, 11, 14-18, 25, 26, 56, 83-89, 95, 101, 104-107, 110-112, 163, 215, 216, 238-240, 242, 243, 255-259, 261-263, 266, 274, 278, 282, 285, 290
- Actinopterygus* 238, 239
- adhesion 69, 76, 145, 153
- adhesion disc 68, 70-76
- adhesive 69, 75, 145
- adsorption-desorption reactions 129, 132
- Alaria* 185, 190, 214
- ammonium 115-117, 120-123, 161, 163, 165, 166, 170
- Amphiprora* 4, 8, 11, 14-18, 56, 82-87, 95, 98, 238, 239
- Amphora* 4, 8, 11, 14-18, 26, 41-52, 56, 59, 60, 62, 82-87, 95, 98, 101, 104-107, 109, 110, 112, 146-149, 151-153, 156, 215, 238, 239, 266, 282,
- anemones 183, 184
- animals 14, 16, 17
- Ankistrodesmus* 27
- antibiotic exudates 309
- anticorrosive 94
- anticorrosives, fouling of 231-244
- antifouling paints 1-18, 55-64, 79-112, 137, 145, 175, 183, 190, 213, 221
- Antithamnion* 185
- Aphanocapsa* 27
- arsenic 136
- arthropod 65, 75
- ascidians 8, 88, 90
- Ascophyllum* 221
- Asterionella* 25, 26
- attachment processes 65-77
- Audouinella* 185
- Aulacosira* 26, 41, 145, 249, 261, 263, 264, 266, 274, 276, 278, 280, 287-290, 291
- bacteria 41, 56, 79, 145, 249, 261, 263, 264, 266, 274, 276, 278, 280, 287-290, 292
- Balanus* 88, 89, 96, 307
- Bangia* 185
- barnacles 1, 2, 4, 8, 14-17, 218
- Biddulphia* 104, 111, 238, 239
- bioadhesion 146
- biocide resistance 18
- biofilms 247-249, 290, 292
- biotope 310
- biphasic granules 68, 70, 71, 75
- Blidingia* 11
- blue-green algae 119, 120, 216, 221, 222, 237
- Bonnemaisonia* 185
- boundary layer 60, 74
- bridging complexes 76
- bridging polymer 67, 71, 75
- bryozoans 88, 89, 96
- Bugula* 4

- C:N ratios 307, 308
 Ca^{2+} 43, 46, 50, 51
 calcareous scale 232
Callithamnion 4
Caloneis 26
Calothrix 120
Campylodiscus 237-240, 243, 244
 cathodic protection 213, 221, 222, 231, 235-239, 241
Caulobacterium 280
 CCCP 43, 50
 cell attachment 65-77
 cell permeability 60, 61
Ceramium 4, 8, 185
Chaetoceros 238, 239, 289
Chaetomorpha 14, 185, 186
Characium 74, 75
 chemosensing of glucose 42, 45
Chironomidae 307
Chlamydomonas 61, 75
Chlorella 176
 chlorinated rubber paint system 213
Clorda 74
Cladophora 4, 11, 83-88, 175-178, 185
Closterium 27
 coal-tar epoxy paints 213, 221, 231-233
Cocconeis 26, 104-107, 112, 215, 237, 238-240, 242, 243, 285
Colacium 65-77
 colonization 193-209
 community metabolism 301-310
 community photosynthesis 308
 community structure 254, 263, 274
 complexation-dissociation reactions 129, 133
 copper 145
 copper antifouling paints 1-18, 101-112
 copper bioavailability 129-138
 copper sulphate 175-178
 copper tolerance 176, 178
 copper toxicity 129-138
 copper/tributyltin anti-fouling paints 79-99
 copper/zinc anti-fouling paints 79-99
 corals 183, 184
 corrosion 187, 211-226
 corrosion fatigue 219, 224
Coscinodiscus 14
Cosmarium 27
 cuprous oxide 2, 55, 79, 80, 82, 95, 97-99
 cyanobacteria 4, 8, 11
 cycloheximide 43, 48, 50
Cyclotella 26
Cylindrotheca 237-240, 243, 244
Cymatopleura 26, 256
Cymbella 25, 26

 D-600 43, 50
 dark respiration 304-305
 dark fixation 309
 DCMU 43, 46
Delessaria 185
Denticula 26
 depth-influence on fouling 79-99
Derbesia 8
Desmarestia 185, 214
 I-DGA 56-62
 2-DGA 57-62
 diatom adhesion 41-52
 diatom community composition 243
 diatom slimes 2, 4, 11, 15, 16, 55-64, 101, 112, 145, 149, 154
Diatoma 26, 34, 197, 198
 differential aeration cells 217, 223
Diploneis 26, 105, 238, 239
 dissolved inorganic carbon 302, 303, 305, 309
 dissolved inorganic nitrogen 115-117, 121-123
 1-dodecylguanidine acetate 56
 2-dodecylguanidine acetate 56
 dodine 56
 drag 2
 drag-reducing molecules 146

- Ectocarpus* 1, 4, 6, 11, 14, 15, 17, 56, 76, 82-89, 94-96, 149, 153, 175, 178, 185, 186, 190, 194
- effects on adhesion of, D-600 43
- effects on adhesion of, Ca^{2+} 43
- effects on adhesion of, CCCP 43
- effects on adhesion of, CH 43
- effects on adhesion of, DCMU 43
- EGTA 47, 50
- Electra* 307
- encroachment 22, 24, 25, 33, 35
- energy transfer inhibitor 62
- Enteromorpha* 1, 4, 8, 11, 14, 15, 17, 62, 74, 75, 82-89, 94, 95, 153, 154, 185, 186, 188, 189, 214, 215, 217, 219, 221
- epibiont 65
- epibiosis 65
- epilithic 24, 31, 34, 45
- epilithic community 22
- epiphyton 301, 306-308
- Epithemia* 285
- Equisetum* 309
- Erythrotrichia* 185
- eulittoral 116, 118-120, 122-124
- eulittoral periphyton 121
- Eunotia* 258, 262, 268, 282, 290
- eutrophication 159, 170, 172
- fluoropolymers 146
- fouling of anticorrosives 231-244
- fouling of navigation buoys 179-190
- fouling of offshore structures 179-190
- fouling - effects on corrosion 211-226
- Fragilaria* 22, 25, 26, 28, 31, 34, 197, 198, 202, 257, 262, 284
- Fucus* 301-310
- Gammarus* 307
- Gelidium* 185
- Giffordia* 4, 88, 96, 185
- Glenodinium* 27
- glycoprotein 51, 75, 145
- Golgi apparatus 51
- Gomphoneis* 26, 115, 118, 120, 121, 123, 162, 163
- Gomphonema* 27, 198, 202, 255-259, 261-263, 266, 268, 272, 278, 280, 288-290
- Grammatophora* 104-106
- grazing 248-249, 255, 278, 282, 285-287
- ground water 161, 163, 167-171
- growth rates 193-209
- guanidinododecane acetate 61
- 2-guanidinododecane phosphate 61
- helophytes 309
- herbivores 301, 307, 309, 310
- heteromorphy 282, 284
- Hormidium* 178
- hydrodynamic loading 187, 213, 214, 219
- hydrogen embrittlement 218, 224
- Hydroides* 4, 14, 15
- hydroids 89, 183, 184
- Hypoglossum* 185
- Idotea* 307, 310
- immigration 193, 209
- immobilization of copper 16
- impingement 22, 23, 28, 31, 33, 34
- in-service ships 18
- iron 137
- Jaera* 307
- Jassa* 4, 8, 11
- kelp 186, 190, 219
- Laminaria* 88, 89, 185, 186, 190, 214

- LC-50 values 16, 57
 leaching rate 15, 16, 98
Licmophora 83-89, 96, 238, 239
 life forms 274, 282, 284, 289-292
Lomentaria 185
 low energy surface 146-156
Lymnaea 307
Lyngbya 27
- macroalgae 2, 17
Macrocystis 123
 macrofouling 16
 manganese 134, 137
Melosira 14, 83-89, 110, 238-240, 242, 243,
Meridion 256, 257, 261, 266, 268, 280, 282,
 284
Merismopedia 27
 microalgae 22
 microalgal fouling of *Fucus* 301-310
 microbenthos 306, 308
 microcommunities 249, 272, 274, 286, 288,
 291
 microtubules 51
 model 194, 198, 201, 206-209
 modelling 193-209
 moisture cured silicone elastomers 146-156
Mougeotia 27
 muciferous bodies 75, 76
 mucilage 75, 254, 263, 264, 266, 268, 274,
 278, 280, 282, 284, 287, 289
 mucocysts 68, 70, 71, 75, 76
 mussel 88, 96, 183, 184, 214
Mytilus 186
- Navicula* 8, 14, 15, 17, 18, 27, 46, 56, 83-89,
 96, 101, 104-107, 109, 110, 112, 197, 198,
 202, 215, 237-240, 242-244, 255-259, 261-
 263, 268, 272, 282, 285
Neomysis 307
 nitrate 115-117, 120-123,
 nitrogen 115-117, 120-123, 162, 163, 165-
 168, 170, 171
 nitrogen fixation 117, 119-121
Nitzschia 11, 17, 18, 27, 46, 83-87, 89, 90,
 105, 215, 238-240, 243, 255-259, 261-263,
 266, 280, 285, 287, 288
 non-biocidal antifouling systems 146-156
 non-stick surfaces 146-156
Nostoc 120
 nutrient loading 159, 163, 165, 166, 168, 170,
 171
- Obelia* 4
Oedogonium 178, 264, 276
 offshore fouling communities 179-190
 oligotrophic 115, 159
Oocystis 27
 organotin 79, 95, 135, 137
 organotin antifouling paints 101-112
 organotin varnish 1-18
Oscillatoria 28, 220
 oxidation-reduction reactions 129, 135
- P.Q. 305, 309
Palmaria 185
Paralia 101, 237-240, 242, 243
Pediastrum 28
 pellicular pores 68-71
Percursaria 8
 periphyton 22, 24, 34-36, 115-120, 122, 123,
 135, 159-161, 163-167, 171, 172, 248, 250,
 255-259, 261, 263, 264, 266, 268, 271, 272,
 274, 276, 278, 280, 284-286, 288, 289, 292
 pH concentration cells 217
Phacotus 28
Phacus 28
 phenyl- methyl silicone fluid 146-156
Phormidium 28
 phosphorus 162, 163, 165, 166, 168, 170,
 171

- photoactivation reactions 129, 136
 photorespiration 309
 photosynthetic quotient 305, 309
 phytoplankton 306-308
Pilayella 185
Pinnularia 263
 pitting corrosion 217, 223, 225
 platinum cured silicone elastomers 146-156
Pleurosigma 238, 239, 242, 243
Plumaria 185
 pollution 16, 135
 polymer 68, 70-72, 75, 76
 polyox 146
 polysaccharides 75, 76, 145
 polysaccharide-protein complexes 75, 76
Polysiphonia 4, 8, 11, 88, 154, 185, 186, 188, 190, 214
Porphyra 185, 221
Porphyridium 221
 precipitation-dissolution reactions 129-131
 primary film 231
 primary producers 307
 primary production 304, 305
 productivity 159, 161, 162, 165, 166, 171
 protein 76
Pseudocharacium 75
Pseudomonas 220
- R.Q. 305
 radial flow chamber 153
 raft tests 1-18, 79-99, 101-112, 146-156
 recolonization 22-24, 33, 35, 36
 reproduction rates 193, 194, 204, 207
 reservoir 22-24, 34-36
 respiratory quotient 305
 Reynolds number 74
Rhizosolenia 238, 239
Rhodomela 185
Rhodotorula 134
Rhoicosphenia 27, 259
- Saccharomyces* 60
 sacrificial anodes 231-233
Scenedesmus 28, 176
Scytosiphon 14, 186
 seasonal fouling variation 79-99
 secretion channels 68
 sediments 250, 254, 259, 261, 264, 266, 268, 272, 274, 276, 278, 280, 287-290
 sediment trap 25, 26-34, 36
 selective community development 241-244
Selenastrum 132, 133
 selenate 136
 selenite 136
 SEM 250, 252, 257, 259, 263, 264, 271, 272, 274, 276, 278, 287-290
 serpulids 88, 89, 96
 ships 'in-service' 94
 silane-based coatings 153
 silicone elastomers 146-156
 silicone RTV polymers 146-156
 slime 56, 101, 145
 slime-forming organisms 55
 soil erosion 250, 290, 292
 SPC anti-fouling paints 1-18, 55-62, 79-99
 specific growth rate 175-178
Spirobis 14, 15, 89
Spirogyra 28
 sponges 88, 90, 96
Spongomorpha 185
Spongonema 185
 Sr^{2+} 46
 stalks 67-69, 71-76
Staurostrum 28
Stauroneis 4, 11, 14, 15, 17, 18, 56, 82-87, 95, 96, 101, 263
Stephanodiscus 26
Stigeoclonium 28, 178
 streams 193, 194, 196, 197, 202, 204, 250, 255, 257, 258, 261, 262, 264, 268, 271, 272, 280, 282, 285, 287, 288, 290, 291
 sublittoral 119-121, 123

substratum preference 243, 244
 sulphate reducing bacteria 187, 215, 218, 220, 221, 223, 225,
 sulphur oxidising bacteria 187, 220
Surirella 27, 257, 258, 262, 264, 268, 276, 282
Synedra 27, 34, 101, 104-107, 111, 112, 163, 197, 198, 255, 257, 258, 261, 263, 268, 274, 276, 282, 284, 288
 synergism 55-64

Tabellaria 88, 89
Thalassiosira 137
Theodoxus 307
Thiobacilli 220
 tin bioavailability 129-138
 tin toxicity 129-138
Tolypothrix 120
Trachelomonas 28
 tributyltin 1, 2, 55, 62, 80, 82, 94-97, 99
 tributyltin oxide 55-60
 tributyltin varnish 1-18
 triorganotin 1, 55, 56, 62, 79, 145
 triphenyltin chloride 62
Tropidoneis 46

Trypanoma 75
 tubeworms 183, 184
Tubularia 4, 8, 88, 89, 94
 tunicamycin 43.47, 48, 51
 turbulence 31, 32, 35, 36
Ulothrix 4, 8, 11, 14, 28, 62, 82-88, 94, 95, 154, 186
Ulva 4, 11, 75, 88, 89, 154, 185, 186, 188, 214, 221

Vaucheria 185
 vinyl-matrix paint 97
Vorticella 4, 14

water movement 118, 119, 123, 124
 wave action 23, 31, 35

zinc bioavailability 129-138
 zinc oxide 79, 80, 82, 94-99
 zinc toxicity 129-13
 zinc/tributyltin anti-fouling paints 79-99
Zygnema 122