

Index

A

Accumulated population exposure index (APEI), 266
Accumulation mode, 312
Acidification, 32
ACTRIS, 303, 308, 315
Administrative deficiencies, 21
Aerodyne aerosol mass spectrometer (AMS), 169
Aerosol optical depth (AOD), 111, 269
Aerosols, 101, 219, 297
 number concentration, 297
 number size distribution, 297, 339
 secondary, 219, 260
Aethalometer model, 128
Agriculture, 213
Air exchange rate (AER), 330
AirMonTech, 289
Air quality, 3, 13, 31, 196
 assessment, 20
 directive, 3
 limit value, 3
 modelling, 261
 ozone, 56
 regulation, 277
Aitken mode, 110, 299, 312, 343
Aldrin, 77
Alternative fuels, 31
Ammonia (NH₃), 38, 172, 213, 262
 impact of regulation and climate change, 141
 inventories, 141
 models, 141

 spatial distribution, 141, 149
 temporal distribution, 141
 trends, 141
Ammonium nitrate, 210
Animal houses, ammonia, 143
Anthropogenic contribution, 240, 348
Anthropogenic factors, 5, 18
Arctic size distributions, 310
Asbestos, 182, 283, 348
Asia, air quality standards/monitoring, 282
Athens, 222
 Greece, 22
Atmospheric transport, long-range, 75

B

Back-trajectories, 195
 modelling, 201
Balkans, 219
Banana event, 345
Battery-electric vehicles, 47
Benzene, 284
Benzo[*a*]pyrene, 79, 82, 93, 284
Biodiesel, 46
Bioethanol, 46
Biofuel, 46
 nanoparticles, 340
 wood burning facilities, 213
Biomass fires, 102
Biomass-to-liquid procedures (BTL), 46
Black carbon (BC), 82, 108, 111, 123, 173, 287, 290, 333
Black Sea, 219

Brake wear/abrasion, 168, 211
 emissions, 182, 211, 348
 Britain, 308

C

Calcium, 209
 CALINE4, 265
 Carbon monoxide (CO), 37, 114, 281, 283, 285
 Catalytic converter, 34, 37
 CCN, 297, 299, 308, 315
 Chemical composition, 101, 195, 240
 Chemical transport models (CTMs), 195,
 201, 240
 Chlordane, 77
 Cloud droplet number concentration (CDNC),
 299
 CMAR, 347
 Cold condensation, 83
 Combustion, 26, 35, 209, 224, 243, 247,
 299, 343
 control, 36
 Convention on Long-Range Transboundary
 Air Pollution (CLRTAP), 33, 58, 155
 Criticality/noncriticality, 4

D

DDT, 77
 Decay, 327
 Deposition rate, 327
 Dieldrin, 77
 Diesel heavy-duty trucks, 45
 Diesel oxidation catalyst, 38
 Diesel particulate filter (DPF), 39
 Differential mobility particle sizer
 (DMPS), 302
 Dioxins, 77, 212
 Dispersion models, 200
 Domestic heating, 26, 212
 Dry deposition, 87
 Dust, airborne, 175, 195, 226
 Sahara, 208, 227

E

Eastern Mediterranean, 219
 Eco-driving, 47
 Elemental carbon (EC), 173, 333
 Emissions, 5, 12
 control, technology, 31, 36, 44
 future evolution, 48
 sources, 219

Endrin, 77
 Engine type, approval, 41
 Environmental Protection Agency (US-EPA),
 82, 179, 280, 288
 Europe, 75, 101
 air quality, 283
 northwestern, 240
 EUSAAR, 303, 317
 Eutrophication, 32, 58, 155, 278
 Exhaust emissions, 165, 168
 on-road, 40
 particles, 172
 Exhaust gas recirculation (EGR), 37
 Exposure, 259
 modelling, 263
 Exposure–response doses, 339

F

Fertiliser, 247
 ammonia, 142, 144
 Financial deficiencies, 21
 Finokalia, Crete, 222, 231, 311
 Fireplaces/stoves, 126
 Fires, 102
 Flame retardants, 77
 Fluoranthene, 82
 Forest fires, 104, 228
 Fuels, alternative, 45
 quality, 45
 Future developments, 277

G

Gasoline direct injection (GDI) engine, 37
 Gas–particle exchange, 84
 Gas-to-particle-phase partitioning, 75
 Global distillation, 83
 Gothenburg Protocol, 155
 GPS/GIS, 290, 323
 Grazing animals, ammonia, 147
 Greece, 219
 Green Public Procurement (GPP), 25
 GUAN, 303

H

Health effects, 259
 nanoparticles, 339
 Heavy metals, 168, 176, 200, 212, 283
 Hemispheric background, 55
 Heptachlor, 77
 Hexachlorobenzene (HCB), 76, 79

Hexachlorocyclohexanes (HCHs), 76, 78
Hot-spots, 195
Hydrotreated vegetable oil (HVO), 46

I

Individual exposure model (IEM), 265
Indoor air, 321
 quality, modelling, 324
Indoor/outdoor relationships, 328
Industry, 18, 212
 measures, 26
Infiltration, 321
 factor, 330
Integrated Pollution Prevention and Control (IPPC), 141, 156
Internal combustion engines (ICEs), 32, 47
Iodine oxides, 345
Ireland, 308

J

Japan, air quality standards, 283

K

Košice (industrial region), Slovakia, 22
Kraków, Poland, 22

L

Latitudinal fractionation, 83
Lean NO_x trap (LNT), 39
Lenschow approach, 195, 198
Levogluconan, 107
Lisbon, Portugal, 23, 268
London, United Kingdom, 23
Long-range transport, 75, 101
Long-term trends, 55

M

MACC, 6
Macrotracer approach (MTA), 129
Mann–Kendall test, 64, 67
Manufacturing processes, ammonia, 148
Manure storages, ammonia, 143
Marine aerosol, 199, 225
Mass, aerosols, 301
Mass closure/tracer-based approaches, 199
Mediterranean Basin, 219
Mercury, 284

Microelectromechanical systems (MEMS), 289
Milan, Italy, 23
Mineral dust (MD), 209, 242
Mineral fertiliser, ammonia, 144
Mirex, 77
Modal split, 20
Modelling, 259
MODIS, 108
Monosaccharide anhydrides (MAs), 107
Motor exhaust, 165
Mountain stations, 309
Multicomponent analysis, 289

N

Nanoparticles, 298, 340
 airborne, 343
 emerging (ENPs), 341
 engineered, 339
 regulatory measures, 356
 respiratory deposition doses, 355
 sources, 344
National Emission Ceiling Directive (NEC), 27, 141, 155
Natural contribution, 240
Natural sources, 5, 10, 17
NEC Directive. *See* National Emission Ceiling Directive (NEC)
Networks, measurements, 303
New European Driving Cycle (NEDC), 42
New powertrain technologies, 47
Nitrate, 333
 secondary aerosol, 210, 230
Nitric oxide (NO), 32, 36
NO₂, 3, 13, 167, 287
Nonexhaust emissions, 175
NO_x, 13, 31, 33, 165
 on-road, 40
 reduction, 41
 trap, 39
Nucleation, 110, 172, 262, 299, 305, 343
Number size distributions, 304

O

Off-road machinery, 25
Old vehicles, 223
On-board diagnostic (OBD) systems, 42
Operational street pollution model (OSPM), 264
Organic carbon (OC), 87, 123, 233, 242, 334

Organochlorines, 75
 Organohalogen compounds, 76, 78, 123
 Outdoor, 321
 Oxalate, biomass burning smokes, 107
 Ozone, 55
 photochemical formation, 55

P

Paris, France, 23
 Particle number (PN), 41
 Particle number concentrations (PNCs), 173,
 299, 323, 339
 Particle number distributions (PNDs), 304, 343
 Particles, deposition, 343
 penetration, 321
 resuspension, 343
 salt, 343
 size, 321
 size distributions, 344
 ultrafine, 321, 339
 Particulate matter, 36, 101, 123, 219, 259
 exposure modelling, 266
 Pavement abrasion, 179
 Penetration, 321
 efficiency, 326
 factor, 330
 Pentachlorobenzene, 77
 Perfluorooctanesulfonic acid (PFOS), 77
 Periodic technical inspection (PTI), 42
 Persistent organic pollutants (POPs), 75, 82
 atmospheric deposition, 86
 historical trends, 88
 Personal protective equipment, 347
 PM_{2.5}, 108, 240
 PM₁₀, 3, 13, 108, 195, 240
 PMF, 195
 Pollution control, regional, 55
 Polybromodiphenyl ethers (PBDEs), 76
 Polychlorobiphenyls (PCBs), 76, 80
 Polychlorodibenzofurans, 7
 Polychlorodibenzo-*p*-dioxins, 77
 Polycyclic aromatic hydrocarbons (PAHs),
 75, 81, 123, 166, 283, 334
 Population, 11
 exposure, 16, 286
 Portable emission measurement systems
 (PEMS), 42
 Porto, 267
 Potassium, biomass burning smokes, 107,
 113, 129
 Public procurement, 25

R

Residential wood burning, 123
 Respiratory deposition doses, PNCs, 355
 Resuspension, 165
 Road dust, 219
 resuspension, 176, 227
 Roadside environments, PNCs, 353
 Road transport/traffic, 31, 165
 Road vehicles, nanoparticles, 348
 NO_x emissions, 35
 RUIPOH, 330

S

Sahara dust, 18, 87, 179, 208, 210, 219, 226,
 248, 253
 Scanning mobility particle sizer (SMPS), 302
 Sea salt, 111, 209, 243, 344
 Sea spray emissions, 199, 207, 247, 343
 Secondary aerosols, 210, 230
 Secondary inorganic aerosol (SIA), 242
 Secondary organic aerosol (SOA), 125, 166,
 207, 233, 269
 Secondary organic carbon (SOC), 233
 Selective catalytic reduction (SCR), 38
 Selective trapping, 83
 Sewage sludge, ammonia, 148
 Ships, 25
 emissions, 219, 229
 Site types, 285
 Smoke, aerosol, organic/elemental carbon, 108
 LRT, 104
 particles, 109
 Sodium, 209
 Sofia, Bulgaria, 24
 Soil erosion, 199
 Source apportionment, 202, 240
 modelling, 21
 Spain, 240
 Spatial increment, 197
 Statistical receptor models, 199
 Stibnite, 183
 Stuttgart, Germany, 24
 Sulfates, 210, 224, 229, 230, 242, 255, 289, 333
 Sulfur dioxide, 172, 196, 212, 229, 262
 Sulfuric acid, 172, 213, 246, 344
 nucleation, 344

T

TAN (total ammonia N), 142
 Technology trends, 277

- Terpenes, trees, 345
 - Thessaloniki, 222
 - Three-way catalytic converter, 37
 - Tire wear, 348
 - Toxaphene, 77
 - Traffic, 210
 - ammonia, 148
 - analysis, 20, 210
 - counterproductive community measures, 25
 - management, 48
 - measures, 24
 - primary/secondary emissions, 165
 - Transboundary pollution, 5, 10
 - Trans-European Transport Networks, 25
 - Transport, 31
 - Twomey effect, 291
- U**
- UK, air pollution, 279
 - Ultrafine particles, 340
 - aerosol (UFP), 214, 331
 - Urban air, 195
 - quality, monitoring, 277
 - Urban background, PNCs, 354
 - Urban increment, 12, 245
- Urea**, 38
- USA**, legislative monitoring requirements, 280
- V**
- Vehicles, approval, 41
 - emissions, 31
 - VOCs, 56, 124, 169, 173, 285
- W**
- Water-soluble organic carbon (WSOC), 108
 - Wear, 165
 - brake, 168, 182, 211, 348
 - emissions, 181
 - tires, 348
 - Wet deposition, 86
 - Wildfire, 101, 102
 - aerosol, chemical composition, 111
 - LRT, 103
 - Winds, 309, 343
 - erosion, 176, 207, 248
 - speed, 7, 9, 142, 205, 248, 345
 - Wood combustion, fine particulate matter, 125
 - residential, health effects, 116, 123
 - Wood fuel, 125