

8. References

- Adams, P.J., Seinfeld, J.H., Koch, D.M., 1999. Global concentrations of tropospheric sulphate, nitrate, and ammonium aerosol simulated in a general circulation model. *Journal of Geophysical Research* 104, 13791-13823.
- Aires in ERA, 2001. A global strategy for atmospheric interdisciplinary research in the European research area. Air pollution research report No.76. European Commission.
- Alfaro, S.C., Gaudichet, A., Gomes, L., Maillé, M., 1998. Mineral aerosol production by wind erosion: Aerosol particles sizes and binding energies. *Geophysical Research Letters* 25, 991-994.
- Allegrini, I., Febo, A., Pasini, A., Schiarini, S., 1994. Monitoring of the nocturnal mixed layer by means of particulate radon progeny measurements. *Journal of Geophysical Research* 99, 18765-18777.
- Allen G., Sioutas, C., Koutrakis, P., Reiss, R., Lurmann, F.W., Roberts, P.T., Burton, R.M., 1997. Evaluation of the TEOM method for measurement of ambient particulate mass in urban areas. *Journal of the Air & Waste Management Association* 47, 682-689.
- Alpert, D.J., Hopke, P.K., 1980. A quantitative determination of sources in the Boston urban aerosol. *Atmospheric Environment* 14, 1137-1146.
- Annegarn, H.J., Braga Marcazzan, G.M., Cereda, E., Marchionni, M., Zucchiatti, A., 1992. Source profiles by unique ratios (SPUR) analysis: determination of source profiles from receptor- site streaker samples. *Atmospheric Environment* 26, 333-343.
- APEG, 1999. The Airborne Particle Expert Group. Source Apportionment of Particulate Matter in the United Kingdom. Zone 4/F15, Air and Environment Quality Division, Department of the Environment, Transport and the Regions, p 94.
- Arimoto, R., Ray, B.J., Lewis, N.F., Tomza, U., Duce, R.A., 1997. Mass-particle size distribution of atmospheric dust and dry deposition of dust to the remote ocean. *Journal of Geophysical Research* 102, 15867-15874.
- Avila, A., Queralt, I., Alarcón, M., 1997. Mineralogical composition of African dust delivered by red rains over north-eastern Spain. *Journal of Geophysical Research* 102, 21977-21996.
- Avila, A., Alarcón, M., Queralt, I., 1998. The chemical composition of dust transported in red rains-its contribution to the biochemical cycle of a holm oak forest in Catalonia (Spain). *Atmospheric Environment* 32, 2, 179-191.
- Avila, A., Puñuelas, J., 1999. Increasing trend of Saharan rains over northeast Spain and its ecological consequences. *The Science of Total Environment* 228, 153-156.
- Ayers, G.P., Keywood, M.D., Gras, J.L., 1999. TEOM vs. manual gravimetric methods for determination of PM2.5 aerosol mass concentrations. *Atmospheric Environment* 33, 3717- 3721.
- Baldasano, J.M., Cremades, L., Soriano, C., 1994. Circulatory of air pollutants over the Barcelona Geographical area in summertime. In Physico Chemical behaviour of Atmospheric Pollutants. Ed. G. Angletti and Restilli, pp.706-710, European Commission, Report EUR 15609/2 EN.
- Bates, T.S., Huebert, B.J., Gras, J.L., Griffiths, F.B., Durkee, P.A., 1998. The International Global Atmospheric Chemistry (IGAC) Project's First Aerosol Characterisation Experiment (ACE- 1). *Journal of Geophysical Research* 103, 16297-16318.
- Beloin, N.J., Hayniec, F.H., 1975. Soiling of building surfaces. *Journal of Air Pollution Control Association* 25, 393-403.
- Bergametti, G., Gomes, L., Coudé-Gaussen, G., Rognon, P., Le Coustumer, M.N., 1989a. African dust observed over Canary Islands: Source regions identification and transport pattern for some summer situation. *Journal of Geophysical Research* 94, 14855-14864.
- Bergametti, G., Dutot, A.L., Buat-Menard, P., Losno, R., Remoudaki, E., 1989b. Seasonal variability of the elemental composition of atmospheric aerosols particles over the northwestern Mediterranean. *Tellus* 41 B, 353-361.
- BERG, Building Effects Review Group, 1989. The effects of acid deposition on buildings and building materials. UK Department of Environment.

- Braga Marcazzan, G.M., 1996. The effectiveness of PIXE approach to the study of urban and regional pollution in Northern Italy. Nuclear Instruments and Methods 109/110, 429 – 438.
- Calendario Meteorológico, 1998. Dirección General del Instituto Nacional de Meteorología, Ministerio de Medio Ambiente, Madrid, Spain.
- Caquineau, S., Gaudichet, A., Gomes, L., Magonthier, M.C., Chatener, B., 1998. Saharan dust: clay ratio as a relevant tracer to asses the origin of soil-derived aerosols. Geophysical Research Letters 25, 983-986.
- Carlson, T.N., Prospero, J.M., 1972. The large scale movement of Saharan air outbreaks over the northern equatorial Atlantic. Journal of Applied Meteorology 11, 283-297.
- Caruso, E., Braga Marcazzan, G.M., Redaelli, P., 1981. Pixe investigation of element concentration and particle size distribution in Milan atmospheric aerosol. Nuclear Instruments and Methods 181, 425 – 429.
- Charlson, R.J., Langner, J., Rodher, H., Loevy, C.B., Warren, S., 1991. Perturbation of Northern Hemisphere radiative balance by anthropogenic sulphate aerosol. Tellus 43A, 152-163.
- Charlson, R.J., Schwartz, S.E., Hales, J.M., Cees, R.D., Coakley, J.A., Hansen, J.E., Hofmann, D.J., 1992. Climate forcing by anthropogenic aerosols. Science 255, 423-430.
- Castro, L.M., 1997. Composição e origem dos poluentes particulados numa atmosfera costeira. PhD Thesis, University of Aveiro, Portugal (in Portuguese).
- Chen W.C, Wang C.S., Wei, C.C., 1997. An assessment of source contribution to ambiente aerosols in Central Taiwan. Journal of Air & Waste Management Association 47, 501-509.
- Chester, R., Sharples, E. J., Sanders, G.S., 1984. Saharan dust incursion over the Tyrrhenian Sea. Atmospheric Environment 18, 929-935.
- Chester, R., Nimmo, M., Alarcon, M., Saydam, C., Murphy, K.J.T., Sanders, G.S., Corcoran, P., 1993. Defining the chemical character of aerosols from the atmosphere in the Mediterranean sea and surrounding regions. Ocean Acta 16, 231-246.
- Chiapello, I., Bergametti, G., Gomes, L., Chatenet, B., Dulac, F., Pimienta, J., Santos Soares, E., 1995. An additional low layer of Sahelian and Saharan dust over the North-Eastern Tropical Atlantic. Geophysical Research Letters 22, 3191-3194.
- Chiapello, I., Bergametti, G., Chatenet, B., Bousquet, P., Dulac, F., Santos Soares, E., 1997. Origin of African dust transported over the northeastern tropical Atlantic. Journal of Geophysical Research 102, 13701-13709.
- Christoffersen, T.S., Hjorth, J., Horie, O., Jensen, N.R., Kotzias, D., Molander, L.L., Neeb, P., Ruppert, L., Winterhalter, R., Virkkula, A., Wirtz, K., Larsen, B., 1998. Cis-Pinic acid, a possible precursor for organic aerosol formation from ozonolysis of alpha-pinene. Atmospheric Environment 32, 16571661.
- Chow, J.C., Watson, J.G., Lowenthal, D.H., Countess, R.J., 1996. Sources and Chemistry of PM10 aerosol in Santa Barbara County, CA. Atmospheric Environment 30, 1489-1499.
- Chow, J.C., Watson, J.G., Edgerton, S.A., Vega, E., 2002. Chemical composition of PM2.5 and PM10 in Mexico City during winter 1997. The Science of The Total Environment 287, 3, 177-201.
- Colvile, R.N., Hutchinson, E.J., Mindell, J.S., Warren, R.F., 2001. The transport sector as a source of air pollution. Atmospheric Environment 35, 1537-1565.
- Conde-Gaussem, G., Rognon, P., Bergametti, G., Gomes, L., Strauss, B., Gros, J.M., Le Coustumer, M.N., 1987. Saharan dust over Fuerteventura Island (Canaries), Chemical and mineralogical characteristics, air mass trajectories and probable sources. Journal of Geophysical Research 92, 9753-9711.
- Correggiari, A., Guerzoni, S., Lenaz, R., Quarantotto, G., Rampazzo, G., 1989. Dust deposition in the central Mediterranean (Tyrrhenian and Adriatic Seas): Relationships with marine sediments and riverine and input. Terra Nova 1, 549-558.
- Creighton, P.J., Lioy, P.J., Haynie, F.H., Lemmons, T.J., Miller, J.L., Gerhart, J., 1990. Soiling by atmospheric aerosols in an urban industrial area. Journal of the Air & Waste Management Association 40, 1285-1289.
- Crutzen, P.J., Andreae, O.M., 1990. Bio-mass burning in the tropics: impact on atmospheric chemistry and biogeochemical cycles. Science 250, 1669-1677.

- Dayan, U., Miller, J.M., 1989. Meteorological and climatological data from surface and upper air measurements for the assessment of atmospheric transport and deposition of pollutants in the Mediterranean Basin: A review. Map Technical Reports Series 30, 137 pp.
- Dayan, U., Heffler, J., Miller, J., Gutman, G., 1999. Dust intrusion event into the Mediterranean basin. *Journal of Applied Meteorology* 30, 1185-1199.
- Díaz, H., Miranda, H., 1997. Tasas de deposición de polvo atmosférico en un área semiárida del entorno Mediterraneo Occidental. *Estudios Geológicos* 53, 211-220.
- Dockery, D.W., Pope III, C.A., Xu, X., Spengler, J.D., Ware, J.H., Fay, M.E., Ferris Jr., B.G., Speizer, F.E., 1993.. An association between air pollution and mortality in six U.S. cities. *New England Journal of Medicine* 329, 1753-1759.
- Dockery, D., Pope, A., 1996. Epidemiology of acute health effects: Summary of time-serie studies. In: Particles in our air: concentration and health effects. Wilson R, Spengler JD (eds), Cambridge, MA, USA, Harvard University Press, pp 123-147.
- Donaldson, K., MacNee, W., 1999. The mechanism of lung injury caused by PM10. In Air pollution and health. Hester, R.E., Harrison, RM (Eds). Issue in Environmental Science and Technology. Royal Society of Chemistry
- Dubief, J., 1979. Review of the North African climate with special emphasis of the production of eolian dust in the Sahel zone and in the Sahara. In Saharan dust: mobilisation, transport deposition. Morales, C. (Ed). Scope 14. John Wiley & Sons.
- Duce, R.A., 1986. The impact of atmospheric nitrogen, phosphorus and iron deposition on the marine biological productivity. The role of air-sea exchange in geochemical cycles. (ed) P. Buat-Menard, p.549, D. Reidel Norwell., Mass.
- Duce, R.A., 1991. The atmospheric imput of trace species to the world ocean. Global Bio-geochemical cycles 5, 193-259.
- Dulac, F., Tanré, D., Bergametti, G., Buat-Ménard, P., Desbois, M., Sutton, D., 1992. Assessment of African airborne dust mass over the Western Mediterranean sea using meteosat data. *Journal of Geophysical Research* 97, 2489-2506.
- Draxler, R.R., 1994. Hybrid single-Particle Lagrangian Integrated Trajectories, Version 3.2, NOAA- ARL.
- Eastern, R.C., Peter, L.K., 1994. Binary homogeneous nucleation: temperature and relative humidity fluctuations, nonlinearity, and aspects of new particles production in the atmosphere. *Journal of Applied Meteorology* 775-784.
- Eldering, A., Cass, G.R., 1996. Source-oriented model for air pollutant effect on visibility. *Journal of Geophysical Research* 101, 19343-19369.
- Environment Canada, 1997. Federal smog management plan phase 2: Final Draft, Toronto, Canada, Environment Canada / Natural Resources 83 pp (Oct 1997).
- Esbert, R.M., Díaz-Pache, F., Grossi, C.M., Alonso, F.J., Ordaz, J., 2000. Atmospheric Environment 35, 441-452.
- EU Directive 1999/30/EC, 1999. Council Directive relating to limit values for sulphur dioxide, nitrogen dioxide and oxide of nitrogen, particulate matter and lead in ambient air. The Council of the European Union.
- European Commission, 2001. Guidance to Member States on PM10 monitoring and intercomparisons of the reference method. EC Woking Group on PM. Air Quality Steering Group, D.G. Environment. Final report February 2001. 68 pp.
- Fenger, J., 1999. Urban air quality. *Atmospheric Environment* 33, 4877-4900.
- Fernandez, A.J., Ternero, M., Barragán, F.J., Jiménez, J.C., 2000. An approach to characterisation of sources of urban airborne particles through heavy metal speciation. *Chemosphere* 2, 123-136.
- Fernandez, A.J., Rodríguez, M.T., De la Rosa, F.J.B. Sánchez, J.C., 2001. Size distribution of metals in urban aerosols in Seville (Spain). *Atmospheric Environment* 35, 2595-2601.
- Firket, J., 1936. Fog alone the Meuse Valley. *Trans. Faraday Society* 32, 1192-1197.
- Font, I., 1956. El tiempo atmosférico en las islas Canarias. Ed. Servicio Nacional de Meteorología, 127 pp.
- Gaffney, J.S., Marley, N.A., Cunningham, M.M., Martello, D.V., Anderson, N.J., 2002. Using Natural ^{210}Pb and its Daughters (^{210}Bi and ^{210}Po) to Estimate Aerosol Residence Times. Proceedings of the NETL Conference "PM2.5 and Electric Power Generation:

- Recent Findings and Implications," Pittsburgh, PA, April 9-10, 2002. Available in <http://www.netl.doe.gov/publications/proceedings/02/PM25/>
- Gangoiti, G., Millán, M. M., Salvador, R., Mantilla, E., 2001. Long-range transport and re-circulation of pollutants in the western Mediterranean during the project Regional Cycles of Air Pollution in the West-Central Mediterranean Area. *Atmospheric Environment* 35, 6267-6276.
- Glaccum, W.F., Prospero, J.M., 1980. Saharan aerosols over the tropical North Atlantic Mineralogy. *Marine Geology* 37, 295-321.
- Gertler A. W., Lowenthal, D. A., Coulombe, W.G., 1995. PM10 source apportionment in Bullhead City, Arizona. *Journal of Air & Waste Management Association* 45, 75-82.
- Gillies, J.A., Nickling, W.G., McTainsh, G.H., 1996. Dust concentrations and particle size characteristics of an intense dust haze event: Inland Delta Region, Mali, West Africa. *Atmospheric Environment* 30, 1081-1090.
- Gordon, 1988. G.E. Receptor models. *Environmental Science and Technology* 22, 1132-1142.
- Guerzoni, S., Lenaz, R., Quarantotto, G., Rampazzo, G., Correggiari, A., 1989. Trace metal composition of airborne particles over the Mediterranean sea. *Giornale di Geologia* 51, 117-130.
- Guerzoni, S., Molinaroli, E., Chester, R., 1997. Saharan dust inputs to the western Mediterranean sea: depositional pattern, geochemistry and sedimentological implications. *Deep-Sea Research II* 44, 631-654.
- Graham, W.F., Duce, R.A., 1979. Atmospheric pathways of the phosphorus cycle. *Geochemical Cosmo Acta* 43, 1195-1208.
- Grini, A., G. Myhre, J.K. Sundet, I.S.A. Isaksen, 2002. Modelling the annual cycle of sea salt in the global 3-D model OSLO CTM 2, Concentrations, fluxes and radiative impact. *Journal of Climate* 15, 1717-1730.
- Hamonou , E., Chazette, P. Balis, D. Dulac, F. Schneider, X. Galani, E. Ancellet, G. Papayannis, A. , 1999. Characterisation of the vertical structure of Saharan dust export to the Mediterranean basin. *Journal of Geophysical Research* 104 22257-22270.
- Hansen, J.E., Sato, M., Lacis, A., Ruedy, R., Tegen, I., Matthews, D., 1998. Climate forcing in the industrial era. *Proc. Natl. Acad. Sci. U.S.A.* 95, 12, 753-12, 758.
- Harrison, D., Hunter, M.C., Lewis, A.C., Seakins, P.W., Nunes, T.V. Pio, C.A., 2001. Isoprene and monoterpene emission from the coniferous species *Abies Borisii-regis* - implications for regional air chemistry in Greece. *Atmospheric Environment* 35, 4687-4698.
- Harrison R.M., Pio, C.A., 1983. Size differentiated composition of inorganic aerosol of both marine and polluted continental origin. *Atmospheric Environment* 17, 1733-1738.
- Harrison, R.M., Kito, A.M.N., 1990. Field intercomparison of filter pack and denuder sampling methods for reactive gaseous and particulate pollutants. *Atmospheric Environment* 24, 2633-2640.
- Harrison R.M., Msibi, M.I., Kitto, A.M.N., Yamulki, S., 1994. Atmospheric chemical transformations of nitrogen compounds measured in the North Sea experiment, September 1991. *Atmospheric Environment* 28, 1593-1599.
- Harrison, R.M., 1996. Pollution, causes, effects and control. Harrison, R.M. (Ed.). Royal Society of Chemistry, London.
- Harrison, R.M., Smith, D.J.T., Luhana, L., 1996. Sources apportionment of atmospheric polycyclic aromatic hydrocarbons collected from an urban location in Birmingham, U.K. *Environmental Science and Technology* 30, 825-832.
- Harrison, R.M., Smith, D.J.T., Pio, C.A., Castro, L.M., 1997a. Comparative receptor modelling study of airborne particulate pollutants in Birmingham (United Kingdom), Coimbra (Portugal) and Lahore (Pakistan). *Atmospheric Environment* 31, 3309-3321.
- Harrison, R.M., Deacon, A.R., Jones, M.R. Appleby, R.S., 1997b. Sources and processes affecting concentrations of PM10 and PM2.5 particulate matter in Birmingham (U.K.). *Atmospheric Environment* 31, 4103-4117.
- Harrison, R.M., Jones, M.R., Collins, G., 1999a. Measurements of the physical properties of particles in the urban atmosphere. *Atmospheric Environment* 33, 309-321.

- Harrison, R.M., Shi J.P., Jones, M., 1999b. Continuous measurements of the aerosol physical properties in the urban atmosphere. *Atmospheric Environment* 33, 1037-1047.
- Harrison, R.M. Yin, J., Mark, D., Stedman, J., Appleby, R.S., Booker, J., Moorcroft, S., 2001. Studies of the coarse particle (2.5-10 μ m) component in UK urban atmospheres. *Atmospheric Environment* 35, 3667-3679.
- Henry, R., Charles, W.L., Hopke, P.K., Williamson, H.J., 1984. Review of receptor model fundaments. *Atmospheric Environment* 18, 1507-1515.
- Heinrichs, H., Brumsack, H.J., 1996. Source Attribution of Urban Particulates Using Receptor Models. V.M. Goldschmidt Conference. March 31 – April 4, 1996. Heidelberg, Germany. *Journal of Conference Abstract*, Vol I, 245.
- Heintzenberg, J., 1989. Fine particles in the global troposphere. A review. *Tellus* 41B, 149-160.
- Herman, J.R., P.K. Bhartia, O. Torres, C. Hsu, C. Seftor, E. Celarier, 1997. Global distribution of UV-absorbing aerosols from Nimbus7/TOMS data. *Journal of Geophysical Research* 102, 16911-16922.
- Hidy, G.M., 1994. Atmospheric sulphur and nitrogen oxides. Academy press, Chicago, CA.
- Hoek, G., Forsberg, B., Borowska, M., Hlawiczka, S., Vasković, E., Welinder, H., Branis, M., Benes, I., Kotesovec, F., Hagen, L.O., Cyrys, J., Jantunen, M., Roemer, W., Brunekreef, B., 1997. Wintertime PM10 and Black Smoke concentrations across Europe: results from the PEACE study. *Atmospheric Environment* 31, 3609–3622.
- Hoffmann, T., 2001. Organic aerosols: Origin, Composition and Influence on Tropospheric Processes. Proceeding from the EUROTAC-2 Symposium 2000. Spring-Verlag Berlin, Heidelberg.
- Hopke, P., 1991. Receptor modelling for air quality management. Data handling in science and technology, Vol.7. Elsevier.
- Hopke, P., 1985. Receptor modeling in Environmental Chemistry. John Wiley & Sons.
- Hoppel, W.A., Frick, G.M., Fitzgerald, J.W., Larson, R.E., 1994. Marine boundary layer measurements of new particle formation and the effects of non-precipitating clouds on aerosol size distribution. *Journal of Geophysical Research*, 99, 14, 443-459.
- Hoppel, W.A., Frick, G.M., Fitzgerald, J.W., 1996. Deducing droplet condensation and supersaturation in marine boundary layer clouds from surface aerosol measurements. *Journal of Geophysical Research* 101, 26, 553-565.
- Horvath, H., 1992. Effects on visibility, weather and climate. Atmospheric acidity. Sources, consequences and abatement. M. Radojevic, and R.M. Harrison (eds.). 435-466. Elsevier Applied Science. London and New York.
- Husar, R.B., Whitby, K.T., 1973. Growth mechanism and size spectra of photochemical aerosols. *Environmental Science and Technology* 7, 241-247.
- Husar, R.B., Husar, J.D., Martin, L., 2000. Distribution of continental surface aerosol extinction based on visual range data. *Atmospheric Environment* 34, 5067-5078.
- Janssen, N.A., Van Mansom, D.F.M., Van Der Jagt, K., Harssema, H., Hoek, G., 1997. Mass concentration and elemental composition of airborne particulate matter at street and background locations. *Atmospheric Environment* 31, 1185-1193.
- Johnson, D. W., Osborne, S. R., Wood, R., Suhre, K., Andrae, M.O., Johnson, R., Businger, S., Quinn, P.K., Bates, T., Durkee, P., Johnson, H., Russell, L.M., Noone, K., Glantz, P., Bandy, B., O'Dowd, C., Rapsomanikis S., Rudolph, J., 2000. An overview of the Lagrangian experiments undertaken during the North Atlantic Regional Aerosol Characterisation Experiment (ACE - 2). *Tellus* 52B, 290-320.
- Kallos, G., Kotroni, V., Lagouvardos, K., 1997. The regional weather forecasting system SKIRON: an overview. Proceedings of the symposium on regional weather prediction on parallel computer environments, University of Athens, Greece, pp. 109-122.
- Kallos, G., Cortón, V., Lagouvardos, K., Papadopoulos, A., 1998. On the long range transport of air pollutants from Europe to Africa. *Geophysical Research Letters* 25, 5, 619-622.
- Kemerdere, N., 1997. The emissions inventory of Gebze and air quality modeling sutdy. In: Proceeding of the fifth international conference in air pollution, modelling,monitoring and management, Bologna, Italy, 16-18 Sep 1997. Power H, Tirabassi T, Brebbia C A (Ed.) Southampton, UK, Computational Mechanism Publications, 737-746.

- King A.M., Dorling S., 1997. PM10 particulate matter-the significance of ambient levels. *Atmospheric Environment* 31, 2379-2381.
- Kleeman, M.J., Cass, G.R., 1998. Source contributions to the size and composition distribution of urban particulate air pollution. *Atmospheric Environment* 32, 2803-2816.
- Koch, S., Winterhalter, R., Uhrek, E., Kolloff, A., Neeb, P., Moortgat, G.K., 2000. Formation of new particles in the gas-phase ozonolysis of monoterpenes. *Atmospheric Environment* 34, 4031-4042.
- Krivacsy, Z., Hoffer, A., Sárvári, Zs., Temesi, D., Baltensperger, U., Nyeki, S., Weingartner, E., Kleefeld, S., Jennings, S.G., 2001. Role of organic and black carbon in the chemical composition of atmospheric aerosol at European background sites. *Atmospheric Environment* 35, 6231-6244.
- Kubilay, N., Saydam, A.C., 1995. Trace elements in atmospheric particulates over the Eastern Mediterranean: concentrations, sources and variability. *Atmospheric Environment* 29, 2289-2300.
- Kubilay, N., Nickovic, S., Moulin, C., Dulac, F., 2000. An illustration of the transport and deposition of mineral dust onto the Eastern Mediterranean. *Atmospheric Environment* 34, 1293-1303.
- Kremling, K., Streu, P., 1993. Saharan dust influenced trace element fluxes in deep North Atlantic subtropical waters. *Deep Sea Research I*, 40, 1155-1168.
- Lefèvre, R., Gaudichet, A., De Félice, P., 1986. Charactérisation chimicominéralogiques des flux microparticulaires dans la basse atmosphère de la Méditerranée moyenne. Permanence et fluctuation des apports atmosphériques à la sédimentation. Centre de Research Academia de Science Paris 303, 1215-1220.
- Lenschow, P., Abraham, H.J., Kutzner, K., Lutz, M. Preu, J.D. Reichenb, Reichenbächer, W., 2001. Some ideas about the sources of PM10. *Atmospheric Environment* 35, s23-s33.
- Lippmann, M., 2001. Ambient Particulate Matter. In *Environmental Toxicants*. Morton Lippmann (eds.). 31-64. Wiley Interscience.
- Loÿe-Pilot, M.D., Martin, J.M., Morelli, J., 1986. Influence of Sahara dust on the rain acidity and atmospheric input to the Mediterranean. *Nature* 321, 427-428.
- Malm, W.C., Sisler, J.F., Human, D., Eldred, R.A., Cahill, T.A., 1994. Spatial and seasonal trends in particle concentration and optical extinction in the United States. *Journal of Geophysical Research* 99, 1347-1370.
- Malm, W.C., 1999. Introduction to visibility. Colorado State University. Cooperative Institute for Research in the Atmosphere. Fort Collins.
- Mamane, Y., Mehler, M., 1987. On the nature of nitrate in a coastal urban area. *Atmospheric Environment* 21, 1989-1994.
- Mamane, Y., Gottlieb, J., 1992. Nitrate formation on sea-salt particles and mineral particles – a single particle approach. *Atmospheric Environment* 26, 1763-1769.
- Manson, B.J., 1992. Acid rain – Its causes and its effects on inland waters. Clarendon press, Oxford.
- Marcazzan, G.M., Vaccaro, S., Valli, G., Vecchi, R., 2001. Characterisation of PM10 and PM2.5 particulate matter in the ambient air of Milan (Italy). *Atmospheric Environment* 35, 4639-4650.
- Marchand, G., Lavoie, J., Lazure, L., 1995. Evaluation of bioaerosols in a municipal solid waste recycling and composting plant. *Journal of the Air and Waste Management Association* 45, 778-781.
- Martín, M., Plaza, J., Andrés, M.D., Bezires, J.C., Millán, M.M., 1991. Comparative study of seasonal air pollutant behaviour in a Mediterranean coastal site: Castellón (Spain). *Atmospheric Environment* 25, 1523 –1532.
- McDowell, W.H., Sanchez, C.G., Asbury, C.E., Perez, C.R.R., 1990. Influence of sea salt aerosols and long range transport on precipitation chemistry at El Verde, Puerto Rico. *Atmospheric Environment* 24, 2813-2821.
- McGovern, F.M., Raes, F., Dingena, R.V., Maring, H., 1999. Anthropogenic influences on the chemical and physical properties of aerosols in the Atlantic subtropical region during July 1994 and July 1995. *Journal of Geophysical Research* 104, 14309-319.
- Meagher J.F., E.M. Bailey, M. Luria, 1983. The seasonal variations of the atmospheric SO₂ to SO₄⁼ conversion rate. *Journal of Geophysical Research* 88, 1525-1527.

- Meng, Z., J.H. Seinfeld, 1996. Time scales to achieve atmospheric gas-aerosol equilibrium for volatile species, *Atmospheric Environment* 30, 2889-2900.
- Meszaros, E., 1999. Fundamentals of atmospheric aerosol chemistry. Akademiai Kiado, Budapest. pp308.
- Meteorological Office, 1962. Weather in the Mediterranean. Vol I, General Meteorology HM Stat. Office, London, 2nd Edition.
- Mildford J.B., Davidson C.I., 1987. The sizes of particulate sulphate and nitrate in the Atmosphere. A review. *Journal of Air Pollution Control Association* 37, 2, 125-134.
- Millán M.M., Artiñano B., Alonso L., Navazo M., 1991. The effect of meso-scale flows on regional and long-range atmospheric transport in the Western Mediterranean area. *Atmospheric Environment* 25, 949-963.
- Millán, M. M., Artiñano, B., Alonso, L.A., Castro M., R. Fernandez Tapier, and G. Goberna, 1992. Meso-meteorological cycles of air pollution in the Iberian Peninsula (MECAPIP), *Air Pollution Res. Report* 44, EUR 14834, European Commission, Brussels.
- Millán, M.M., Sanz, M.J., 1993. La contaminación atmosférica en la comunidad Valenciana: Estado de conocimientos sobre los problemas del maestrazgo y Els Ports de Catellón. Centro de Estudios Ambientales del Mediterráneo (CEAM), Valencia, Spain.
- Millán, M.M., Salvador, R., Mantilla, E., Artíñano, B., 1996. Meteorology and photochemical air pollution in Southern Europe: Experimental results from EC research projects. *Atmospheric Environment* 30, 1909-1924.
- Millán, M.M., Salvador, R., Mantilla, E., Kallos, G., 1997. Photo-oxidant dynamics in the Mediterranean basin in summer: results from European research projects. *Journal of Geophysical Research* 102, 8811-8823.
- Millán, M.M., Sanz, M.J., Carratalá, A., Mantilla, E., 1998. La calidad del aire en la comunidad Valenciana: Comarcas del Els Ports-Maestrat. Evaluación de Resultados hasta 1997 y optimización de las redes de sensores. Fundación CEAM, Valencia, Spain.
- Millán, M.M., Mantilla, E., Salvador, R., Carratalá, A., Sanz, M.J., Alonso, L., Gangoiti, G., Navazo, M., 2000. Ozone cycles in the Western Mediterranean basin: Interpretation of monitoring data in complex coastal terrain. *Journal of Applied Meteorology* 39, 487-508.
- Ministry of Health, 1954. Mortality and Morbidity during the London fog of December 1952. Her Majesty's Stationery Office, London.
- Molinaroli, E., Gerzoni, S., Giacarlo, R., 1993. Contribution of Saharan dust to the Central Mediterranean Basin. In: Jhonson, N.J., Basu, A., (Eds.), *Processes Controlling the Composition of the Clastic Sediments*, Geological Society of America Special Paper, 284, pp. 303-312.
- Monn, Ch., Braendly O., Schaeppi G., Schindler Ch. Ackermann U., Leuenberger Ph and Sapaldia Team, 1995. Particulate matter < 10(m (PM10) and total suspended particulates (TSP) in urban, rural and Alpine air in Switzerland. *Atmospheric Environment* 29, 2565-2573.
- Morales, J.A., Hermoso, M., Serrano, J., Sanhueza, E., 1990. Trace elements in the Venezuela savannah during the dry season, with and without vegetation burning. *Atmospheric Environment* 24A, 407-414.
- Moreno-Grau, S., Pérez-Tornell, A., Bayo, J., Moreno, J., Angosto, J. M. Moreno-Clavel, J., 2000. *Atmospheric Environment* 34, 29-30, 5161-5167.
- Muhs, D.R., Bush, C.A., Stewart, K.G., 1990. Geochemical evidence of Saharan dust parent material for soils developed on quaternary limestones of the Caribbean and Western Atlantic islands. *Quaternary Research* 33, 157-177.
- Nickovic, S., Dobricic, S., 1996. A model for long-range transport of desert dust, *Monthly Weather Review* 124, 2537-2544.
- Nickovic, S., Kallos, G., Kakaliagou, O., Jovic, D., 1997. Aerosol production/transport/deposition processes in the ETA model: Desert dust cycle simulations. Proceedings of the symposium on regional weather prediction on parallel computer environments, University of Athens, Greece, pp. 109-122.
- Nickovic, S., Mihailovic, D., Rajkovic, B. Papadopoulou, A., 1998a. The Weather Forecast System SKIRON. Vol. II, Description of the model. University of Athens, 231 pp.

- Nickovic, S., Jovic, D., Kakaliagou, O., Kallos, G., 1998b. Production and Long range transport of desert dust in the Mediterranean region: ETA model simulations. In: Gryning, S.E., Chaumerliac, N. (Eds.), Air pollution modelling and its applications XII. Plenum press, 374 pp.
- Nickovic, S., Kallos, G., Papadopoulos, A., Kakaliagou, O., 2001. A model for prediction of desert dust cycle in the atmosphere. *Journal of Geophysical Research* 106, 18113-18129.
- Odum, J.R., Hoffman T., Bowman F., Collin D., Flagan R.C. y Seinfeld J. H., 1996. Gas/particle partitionig and secoundary organis aerosol yields. *Environmental Science and Technology* 30, 2580-2585.
- Odum, J.R., Jungkamp T.P.W., Griffin R.J., Flagan R.C. Seinfeld J.H., 1997a. The atmospheric aerosol-formation potential of whole gasoline vapour. *Science* 276, 96-99.
- Odum, J.R., Jungkamp T.P.W., Griffin R.J., Flagan R.C. Seinfeld J.H., 1997b. Aromatics, reformulated gasoline, and atmospheric aerosol. *Environmental Science and Technology* 31, 1890-1897, 1997b.
- Özsoy, E., Kubilay, N., Nickovic, Moulin, C., 2001. A hemispheric dust storm affecting Atlantic and Mediterranean in April 1994: Analyses, modeling, ground-based measurements and satellite observations. *Journal of Geophysical Research* 106, 18439-18460.
- Pacyna J.M., 1998. Source inventories for atmospheric trace metals. In *Atmospheric Particles*. Harrison, R.M., Van Grieken, R.E. (Eds). IUPAC Series on Analytical and Physical Chemistry of Environmental Systems 5, pp 387-423.
- Pakkanen, T.A., Hillamo, R.E., Keronen, P., Maenhaut, W., Ducastel, G., Pacyna, J.M., 1996. Sources and physicochemical characteristics of the atmospheric aerosol in southern Norway. *Atmospheric Environment* 30, 1391–1405.
- Pakkanen, T.A., Kerminen, V.M., Ojanen, C.H., Hillamo, R.E., Aarnio, P., Koske talo, T., 2000. Atmospheric black carbon, i Helsinki. *Atmospheric Environment* 34, 1497–1506.
- Pakkanen, T.A., Kerminen, V.M., Korhonen, C.H., Hillamo, R.E., Aarnio, P., Koskentalo, T., Maenhaut, W., 2001a. Use of atmospheric elemental size distributions in estimating aerosol sources in the Helsinki area. *Atmospheric Environment* 35, 5537-5551.
- Pakkanen, T.A., Loukkola, K., Korhonen, C.H., Aurela, M., Mäkelä, T., Hillamo, R.E., Aarnio, P., Koskentalo, T., Kousa, A., Maenhaut, W., 2001b. Sources and chemical composition of atmospheric fine and coarse particles in the Helsinki area. *Atmospheric Environment* 35, 5381-5391.
- Pakkanen, T.A., Kerminen, V.M., Korhonen, C.H., Hillamo, R.E., Aarnio, P., Koskentalo, T., Maenhaut, W., 2001c. Urban and rural ultrafine (PM0.1) particles in the Helsinki area. *Atmospheric Environment* 35, 4593-4607.
- Perry, K.D., Cahill, T.A., Eldred, R.A., Dutcher, D.D., Gill, T.E., 1997. Long range transport of North African dust to the Eastern United States. *Journal of Geophysical Research* 102, 11225-11238.
- Pio, C.A., Santos, I.M., Anacleto, T.D., Nunes, T.V., Leal, R.M., 1991. Particulate and gaseous air pollutants levels at the Portuguese West coast. *Atmospheric Environment* 25, 669-680.
- Pio, C.A., Castro, L.M., Ramos, M.O., 1994. Differentiated determination of organic and elemental carbon in atmospheric aerosol particles by thermal-optics method. In *Physicochemical behaviour of Atmospheric Pollutants*. Ed. G. Angletti and Restilli, pp.706-710, European Commission, Report EUR 15609/2 EN.
- Pio, C.A., L.M. Castro, M.A. Cerqueira, I.M. Santos, F. Belchior, M.L. Salgueiro , 1996. Source assessment of particulate pollutants measured at the Southwest European coast. *Atmospheric Environment* 30, 3309-3320.
- Pio, C.A., D.A. Lopes, 1998. Chlorine loss from marine aerosol in a coastal atmosphere. *Journal of Geophysical Research* 103, 25263-25272.
- Pio, C.A., Ramos, M.M., Duarte, A.C., 1998. Atmospheric aerosol and soling of external surfaces in an urban environment. *Atmospheric Environment* 32, 1979-1989.
- Pope III, C.A. Jr., Dockery, D.W., Schwartz, J., 1995. Review of epidemiological evidence of health effects of particulate air pollution. *Inhalable Toxicology* 7, 1-18.

- Pósfai, M., Molnár, A., 2000. Aerosol particles in the troposphere: a mineralogical introduction. In Environmental Mineralogy. Edited by David J. Vaughan and Roy A. Wogelius, pp434.
- Prati, P., Zucchiatti, A., Lucarelli, F., Mando, P.A., 2000. Source apportionment near a steel plant in Genoa (Italy) by continuous sampling and PIXE analysis. *Atmospheric Environment* 34, 3149-3157.
- Price, C., Penner, J., Prather, M., 1997a. NO_x from lightning: 1.Global distribution based on lightning physics. *Journal of Geophysical Research* 102, 5929-5941.
- Price, C., Penner, J., Prather, M., 1997b. NO_x from lightning: 2.Constraintis from the global atmospheric electric circuit. *Journal of Geophysical Research* 102, 5943-5951.
- Prospero, J.M., Carlson, T.N., 1972. Vertical and areal distribution of Saharan dust over the Western equatorial North Atlantic Ocean. *Journal of Geophysical Research* 77, 5255-5265.
- Prospero, J.M., Glaccum, R.A., Nees, R.T., 1981. Atmospheric transport of soil dust from Africa to South America. *Nature* 289, 570-572.
- Prospero, J.M., Ness, R.T., 1986. Impact of the North African drought and El Niño on mineral dust in the Barbados trade winds. *Nature* 320, 735-738.
- Prospero, J.M., R.T. Nees, M. Uematsu, 1987. Deposition rate of particulate and dissolved aluminium derived from Saharan dust in precipitation at Miami, Florida. *Journal of Geophysical Research* 92, 14723-14731.
- Prospero, J.M., Schmitt, R. Cuevas, E., Savoie, D.L. Graustein, W.C., Turekian, K.K. Volz-Thomas, A., Díaz, A., Oltmans, S.J., Levy II, H., 1995. Temporal variability of summer-time ozone and aerosols in the free troposphere over the eastern North Atlantic. *Geophysical Research Letters* 22, 2925-2928.
- Prospero, J.M., 1999. Long-term measurements of transport of African mineral dust to the southeast United States: Implications for the regional air quality. *Journal of Geophysical Research* 104, 15917-15927.
- Putaud, J.P., R.V. Dingenen, M. Mangoni, A. Virkkula, F. Raes, H. Maring, J.M. Prospero, E. Swietlicki, O.H. Berg, R. Hillamo, T. Mäkelä. Chemical mass closure and assessment of the origin of the submicron aerosol in the marine boundary layer at Tenerife during ACE- 2. *Tellus* 52B, 141-168, 2000.
- QUARG, Quality of Urban Air Review Group, 1996. Air Borne Particulate matter in the United Kindom. Birmingham, UK, University of Birmingham, Institute of Public Health and Environmental Health.
- Querol, X., Alastuey, A., Lopez-Soler, A., Mantilla, E., Plana, F., 1996. Mineral composition of atmospheric particulates around a large coal-fired power station. *Atmospheric Environment* 30, 3557-3572.
- Querol, X., Alastuey, A., Puicercus, J.A., Mantilla, E., Carmen, R.R., Lopez-Soler, A., Plana, F., Juan, R., 1998a. Seasonal Evolution of Suspended Particles Around a Large Coal-Fired Power Station: Chemical Characterisation. *Atmospheric Environment* 32, 11 719-731.
- Querol, X., Alastuey, A., Puicercus, J.A., Mantilla, E., Miros, J.V., Lopez-Soler, A., Plana, F., Artinano, B., 1998b. Seasonal Evolution of Suspended Particles Around a Large Coal-Fired Power Station: Particles Levels and Sources. *Atmospheric Environment* 32, 11 1963-1978.
- Querol, X., Alastuey, A., Bezares, J.C., Cabañas, M., Mantilla, E., Miró, J.V., La Orden, A., Plana, F., Ruiz, C.R., Spiro, B.F., 1998. Estudio integral de material particulado atmosférico y compuestos sulfatados procedentes de la combustión del carbón en una gran central térmica termoeléctrica. Informe Final de proyecto (amb95-1102).
- Querol, X., Alastuey, A., Lopez-Soler, A., Plana, F., Mantilla, E., Juan, R., Ruiz, C.R., La Orden, A., 1999a. Characterisation of atmospheric particulates around a coal-fired power station. *International Journal of Coal Geology* 40, 2-3, 175-188.
- Querol, Alastuey, Lopez-Soler, A., Plana, F., Puicercus, J.A., 1999b. Daily evolution of sulphate aerosols in a rural area, north-eastern Spain- elucidation of an atmospheric reservoir effect. *Environmental Pollution* 105, 397-407.
- Raes, F., R.V. Dingenen, E. Vignati, J. Wilson, J.-P. Putaud, J.H. Seinfeld, P. Adams, 2000. Formation and cycling of aerosol in the global troposphere, *Atmospheric Environment* 34, 4215-4240.

- Rajkumar, W.S., Siung Chang A., 2000. Suspended Particulate Matter concentrations along the East-West Corridor, Trinidad, West Indies. *Atmospheric Environment* 34, 1181-1187.
- Reichhoff, J.H., 1986. Is the Saharan dust a major source of nutrients for the Amazonian rain forest?. *Stud. Neotrop. Fauna Environ.*, 21, 251-255.
- Rodríguez, S., Guerra, J.C., 2001. Monitoring of ozone in a marine environment in Tenerife (Canary Islands). *Atmospheric Environment* 35, 1829-1841.
- Roelle, P.A., Aneja, V.P., Gay, B., Geron, C. Pierce, T, 2001. Biogenic nitric oxide emissions from cropland soils. *Atmospheric Environment* 35, 115-124.
- Röösli, M., Theis, G. Künzli, N., Künzli, Staehelin, J., Mathys, P., Oglesby, L., Camenzind, Braun- Fahrländer, C.H., 2001. Temporal and spatial variation of the chemical composition of PM10 at urban and rural sites in the Basel area, Switzerland. *Atmospheric Environment* 35, 3701-3713.
- Rosenfeld, D., 2000. Suppression of rain and snow by urban and industrial air pollution. *Science* 287, 1793-1796.
- Rúa, A., Hernández, E., de las Parras, J., Martín, I., Gimeno, L., 1998. Sources of SO₂, SO₄⁻², NOx and NO₃-in the air of Four Spanish Remote Stations. *Journal of the Air & Waste Management Association* 48, 838-845.
- Salvador, R., Calbó, J., Millán, M.M., 1999. Horizontal grid size selection and its influence on mesoscale model simulations. *Journal of Applied Meteorology* 38, 1311-1329.
- Sánchez, M.L., Ramos, M.C., 1987. Application of cluster analysis to identify sources of airborne particles. *Atmospheric Environment* 21, 1521-1527.
- Sanhueza, E., Crutzen, P.J., Fernández, E., 1990. Production of boundary layer ozone from the tropical American savannah bio-mass burning emissions. *Atmospheric Environment* 33, 4969-4975.
- Saucy, D.A., Anderson, J.R., Buseck, P.R., 1987. Cluster analysis applied to atmospheric aerosols samples from the Norwegian arctic. *Atmospheric Environment* 21, 1649-1657.
- Savoie, D.L., Prospero, J.M., Saltzman, E.S., 1989. Non-sea salt sulphate and nitrate in trade wind aerosols at Barbados: evidence for long range transport. *Journal of Geophysical Research* 94, 5069-5080.
- Savoie, D.L., Prospero, J.M., Oltmans, S.J. , Graustein, W.C., Turekian, K.K., Merrill, J.T., Levy II, H., 1992. Sources of Nitrate and Ozone in the Marine Boundary Layer of the Tropical North Atlantic. *Journal of Geophysical Research* 97, 11, 575-589.
- Schaap, M., K. Müller, H.M. ten Brink, 2002. Constructing the European aerosol nitrate concentration field from air quality analysed data. *Atmospheric Environment* 36, 1323- 1335.
- Schichtel, B.A., Husar, R.B., Falke, R.S., Wilson, W.E., 2001. Haze trends over the United States, 1980-1995. *Atmospheric Environment* 35, 5205 –5210.
- Schrenk, H.H., Heimann, H., Clayton, G.D. Gafater, W.M., 1949. Air pollution in Donora, Pennsylvania, *Public Health Bulletin*, 306, Washington, D.C. Government Printing Office.
- Schwartz, J., 1993. Particulate air pollution and chronic respiratory disease. *Environmental Research* 62, 7-13.
- Schwartz, J., Docherty, D.W., Neas, LM, 1996. Is daily mortality associated specifically with fine particles? *Journal of Air & Waste Management Association* 46, 927-939.
- Schwikowski, M., Seibert, P., Baltensperger, U., Gäggeler, H.W., 1995. A study of an outstanding Saharan dust event at the high-alpine site jungfraujoch, Switzerland. *Atmospheric Environment* 29, 1829-1842.
- Seinfeld, J.H., Pandis, S.N., 1998. Atmospheric chemistry and physics – From air pollution to climate change. John Wiley & Sons, inc. Wiley Interscience.
- Sexton, K., Liu, K.S., Hayward, B., Spengler, J.D., 1985. Characterisation and sources apportionment of wintertime aerosol in a wood-burning community. *Atmospheric Environment* 19, 1225-1236.
- SLB. Stockholm Environmental and Health Protections Agency, 2001. Metal emissions from Stockholm traffic. Report from SLB. Analysis No. 3:2001.
- Smith, I. M., Sloos, L. L., 1998. PM10/PM2.5 emissions and effects. IEA Coal Research.

- Sokolik, I.N., Toon, O.W., 1996. Direct radiative forcing by anthropogenic airborne mineral dust. *Nature* 381, 681-683.
- Soriano, C., Baldasano, J.M., Coutinho M., 1998. Seasonal variation of the atmospheric circulatory patterns in the Barcelona area. In: Proceedings of the Second Urban Environment Symposium, 13th Conference on Biometeorology and Aerobiology, American Meteorological Society, Albuquerque, New Mexico, US, pp 55-58.
- Soriano, C., Baldasano, J.M., Buttler, W.T., Moore, K.R., 2001. Circulatory patterns of air pollutants within the Barcelona air basin in summertime situation: Lidar and numerical approaches. *Boundary-Layer Meteorology* 98, 33-55.
- Stedman, J.R., 1997a. A UK-wide episode of elevated particle (PM10) concentration in March 1996. *Atmospheric Environment* 31, 2381-2383.
- Stedman, J.R., 1997b. PM10 particulate matter – The significance of ambient levels. *Atmospheric Environment* 31, 2379-2383.
- Stedman, J.R., 1998. The secondary particle contribution to elevated PM10 concentration in the UK. *Clean Air* 28, 87-93.
- Stedman, J.R., Linehan, E., Conlan, B., 2001. Receptor modelling of PM10 concentrations at the United Kingdom national network monitoring site in central London. *Atmospheric Environment* 35, 297-304.
- Sternbeck, J., Sjödin, A., Andréasson, K., 2002. Metal emissions from road traffic and the influence of resuspension – results from two tunnel studies. *Atmospheric Environment* 36, 4735-4744.
- Konrad, S., Gunten, U., 2000a. OH radical-initiated oxidation of organic compounds in atmospheric water phases: part 1. Reactions of peroxy radicals derived from 2-butoxyethanol in water. *Atmospheric Environment* 34, 4241-4252.
- Konrad, S., Gunten, U., 2000b. OH radical-initiated oxidation of organic compounds in atmospheric water phases: part 2. Reactions of peroxy radicals with transition metals, *Atmospheric Environment* 34, 4253-4264.
- Swap, R., Garstang, M., Greco, S., Talbot, R., Kallberg, P., 1992. Saharan dust in the Amazon basin. *Tellus* 44B, 133-149.
- Swap, R., Ulanski, S., Cobbett, M., Garstang, M., 1996. Temporal and spatial characteristics of Saharan dust outbreaks. *Journal of Geophysical Research* 101, 4205-4220.
- Switzer P., Enger, L. Hoffer, T.E., Koracin, D., White, W.H., 1996. Ambient sulfate concentrations near Grand Canyon as a function of fluctuating loads at the Mohave power project: An explanatory analysis of an atmospheric experiment. *Atmospheric Environment* 30, 2551-2564.
- Taylor, K.E., Penner, J.E., 1994. Response of climate system to atmospheric aerosols and greenhouse gases. *Nature* 396, 734-737.
- Taylor, I., Lacis, A.A., Fung, I., 1996. The influence on climate forcing of mineral aerosols from disturbed soils. *Nature* 380, 419-422.
- Tegen, I., Ron, M., 1998. A general circulation model study on the inter-annual variability of soil dust aerosol. *Journal of Geophysical Research* 103, 975-955.
- Thurston, G. D., Spengler, J.D., 1985. A quantitative assessment of source contributions to inhalable particulate matter pollution in metropolitan Boston. *Atmospheric Environment* 19, 9-25.
- Toll, I., Baldasano J.M., 2000. Modeling of photochemical air pollution in the Barcelona area with highly disaggregated anthropogenic and biogenic emissions. *Atmospheric Environment* 34, 3069-3084.
- Tomza, U., Arimoto, R., Ray, B.J., 2001. Color-related differences in the chemical composition of aerosol-laden filters. *Atmospheric Environment* 35, 1703-1709.
- Toon, O.B., 2000. How pollution suppresses rain. *Science* 287, 1763-1765.
- Turnbull, A.B., Harrison, R.M., 2000. Major components contributions to PM10 composition in the UK atmosphere. *Atmospheric Environment* 34, 3129-3137.
- US-EPA, 1986. Second addendum to air quality criteria for particulate matter and sulfur oxides (1982): assessment of newly available health effects information. US Environmental Protection Agency. EPA/600/8-86-020F.
- US-EPA, 1996. Air Quality Criteria for Particulate Matter. US Environmental Protection Agency. EPA/600/P-95/001F.

- US NRC, US National Research Council, 1991. Rethinking the ozone problem in urban and regional air pollution. National Academy Press, Washington, D.C.
- Viana, M.M., 2002, personal communication. Preliminary results of the "Comparative study on the atmospheric particulate matter composition in urban environments of Eastern (Barcelona) and Northern (Llodio) Iberian Peninsula and the Canary Islands (Las Palmas)". Institute of Earth Science "Jaume Almera" CSIC.
- Vickery, J., 2002. Atmospheric Aerosol Science For Public Policy - The NARSTO PM Assessment. Proceedings of the NETL Conference "PM2.5 and Electric Power Generation: Recent Findings and Implications," Pittsburgh, PA, April 9-10, 2002. Available in <http://www.netl.doe.gov/publications/proceedings/02/PM25/>
- Wakamatsu, S., Utsunomiya, A. Han, J.S., Mori, A. Uno, I. Uehara, K., 1996. Seasonal variation in atmospheric aerosols concentration covering Northern Kyushu, Japan and Seoul, Korea. *Atmospheric Environment* 30, 2343-2354.
- Wal, J.T. van der, Janssen, L.H.J.M., 2000. Analysis of spatial and temporal variations of PM10 concentrations in the Netherlands using Kalman filtering. *Atmospheric Environment* 34, 3675-3687.
- Wall, S.M., John, W., Ondo, J.L, 1988. Measurement of aerosol size distribution for nitrate and major ionic species. *Atmospheric Environment* 22, 1649-1656.
- Wang, X., Ding, H., Ryan, L., Xu, X., 1997. Association between air pollution and low weight birth: A communication-based cohort study. *Environmental Health Perspectives* 105, 514-520.
- Warneck, P., 1987. Chemistry of the natural atmosphere. International Geophysics Series, vol.41. Academy press, pp757.
- Watson, J.G., Chow, J.C., Fujita, E.M., 2001. Review of volatile organic compound source apportionment by chemical mass balance. *Atmospheric Environment* 35, 1567-1584.
- Westphal, D.L., Toon, O.B., Carlson, T.N., 1988. A case study of mobilisation and transport of Saharan dust. *Journal of Atmospheric Science* 45, 2145-2175.
- Wexler, A.S., J.H. Seinfeld, 1990. The distribution of ammonium salts among a size and composition dispersed aerosol. *Atmospheric Environment* 24, 1231-1246.
- Whitby, K.T., 1978. The physical characteristics of sulphur aerosols. *Atmospheric Environment* 12, 135-159.
- Whitby, K.T, Cantrell, D., 1976. Fine particles. International Conference on Environmental Sensing and Assessment, Las Vegas, NV, Institute of Electrical and Electronic Engineers.
- White, W.H., 1990. The contribution of fine particles scattering to total light extinction. Section 4.1-4.4. Visibility and Historical condition – causes and effects, 85-102. Acid deposition state of and Technology report 24, national acid deposition program, Government printing office, Washington D.C. USA.
- White, W.H., Macias, E.S., Nininger, R.C., Schorran, D., 1994. Size-resolved measurements of light scattering by ambient particles in the south-western USA. *Atmospheric Environment* 28, 909-921.
- WHO, 1999. World Health Organisation. Report presented in the Third Ministerial Conference on Health and Environment. London, June 16-19 1999.
- Wu, P.M., Okada, K., 1994. Nature of coarse nitrate particles in the atmosphere – a single particle approach. *Atmospheric Environment* 28, 2053-2060.
- Xu, X., Ding, H., Wang, X., 1995. Acute effects of total suspended particles and sulphur dioxide on preterm delivery: A communication-based cohort study. *Archives on Occupational and Environmental Health* 50, 407-415.
- Yu, J., Griffin, R.J., Cocker, D.R., Flangan, R.C., Seinfeld, J.H., Blanchard, P., 1999. Observation of gaseous and particulate products of monoterpene oxidation in forest atmosphere. *Geophysical Research Letters* 26, 1145-1148.
- Zee, S.C.V.D., Hoek, G., Harssema, H., Brunekreef, B., 1998. Characterisation of particulate air pollution in urban and non-urban areas in the Netherlands. *Atmospheric Environment* 32, 3717-3729.