

Publicaciones

- Molina, M.J., and G.C. Pimentel, Tandem chemical laser measurements of vibrational energy distribution in the dichloroethylene photoelimination reactions, *J. Chem. Phys.*, **56**, 3988, 1972
- Molina, M.J., and G.C. Pimentel, Chemical laser studies of vibrational energy distributions: The equal-gain and zero-gain temperature techniques, *IEEE J. Quantum Electronics*, **QE-9**, 64, 1973
- Molina, M.J., and F.S. Rowland, Stratospheric sink for chlorofluoromethanes-chlorine atom catalyzed destruction of ozone, *Nature*, **249**, 810, 1974
- Molina, M.J., and F.S. Rowland, Predicted present stratospheric abundances of chlorine species from photodissociation of carbon tetrachloride, *Geophys. Res. Lett.*, **1**, 309, 1974
- Molina, M.J., and F.S. Rowland, Chlorofluoromethanes in the environment, *Rev. Geophys. and Space Phys.*, **13**, 1, 1975
- Rowland, F.S., and M.J. Molina, Some unmeasured chlorine atom reaction rates important for stratospheric modeling of chlorine atom catalyzed removal of ozone, *J. Phys. Chem.*, **79**, 667, 1975
- Rowland, F.S., and M.J. Molina, The ozone question, *Science*, **190**, 1038, 1975
- Rowland, F.S., M.J. Molina, and C.C. Chou, Natural halocarbons in air and sea, *Nature*, **258**, 775, 1975
- Rowland, F.S., and M.J. Molina, Estimated future atmospheric concentrations of CCl₃F (fluorocarbon-11) for various hypothetical tropospheric removal rates, *J. Phys. Chem.*, **80**, 2049, 1976
- Rowland, F.S., J.E. Spencer, and M.J. Molina, Stratospheric formation and photolysis of chlorine nitrate, ClONO₂, *J. Phys. Chem.*, **80**, 2711, 1976
- Rowland, F.S., J.E. Spencer, and M.J. Molina, Estimated stratospheric concentrations of chlorine nitrate, ClONO₂, *J. Phys. Chem.*, **80**, 2713, 1976
- Chou, C.C., W.S. Smith, H. Vera Ruiz, K. Moe, G. Crescentini, M.J. Molina, and F.S. Rowland, The temperature dependence of the ultraviolet absorption cross-sections of CCl₂F₂ and CCl₃F, and their stratospheric significance, *J. Phys. Chem.*, **81**, 286, 1977
- Molina, L.T., J.E. Spencer, and M.J. Molina, The rate constant for the reaction of O(³P) atoms with ClONO₂, *Chem. Phys. Lett.*, **45**, 158-162, 1977
- Molina, L.T., and M.J. Molina, Ultraviolet absorption spectrum of chlorine nitrite, ClONO, *Geophys. Res. Lett.*, **4**, 8386, 1977
- Graham, R.A., E.C. Tuazon, A.M. Winer, J.N. Pitts, L.T. Molina, L. Beaman, and M.J. Molina, High resolution infrared absorptivities for gaseous chlorine nitrate, *Geophys. Res. Lett.*, **4**, 3-5, 1977
- Molina, L.T., S.D. Schinke, and M.J. Molina, Ultraviolet absorption spectrum of hydrogen peroxide vapor, *Geophys. Res. Lett.*, **4**, 580-582, 1977

- Murcray, D.G., A. Goldman, W.J. Williams, F.H. Murcray, F.S. Bonomo, C.M. Bradford, G.R. Cook, P.L. Hanst, and M.J. Molina, Upper limit for stratospheric ClONO₂ from balloon-borne infrared measurements, *Geophys. Res. Lett.*, **4**, 227-230, 1977
- Miziolek, A.W., and M.J. Molina, The rate constant for the reaction of oxygen (O³P) atoms with dichlorine monoxide, *J. Phys. Chem.*, **82**, 1769-1771, 1978
- Chou, C.C. R.J. Milstein, W.S. Smith, H. Vera Ruiz, M.J. Molina, and F.S. Rowland, Stratospheric photodissociation of several saturated perhalo-chlorofluorocarbon compounds of current technological use - (Fluorocarbons - 13, 113, 114, 115), *J. Phys. Chem.*, **82**, 1-7, 1978
- Molina, L.T., and M.J. Molina, The ultraviolet spectrum of HOCl, *J. Phys. Chem.*, **82**, 2410-2414, 1978
- Molina, L.T. and M.J. Molina, Chlorine nitrate ultraviolet absorption spectrum at stratospheric temperatures, *J. Photochemistry*, **11**, 139-144, 1979
- Molina, M.J., and G. Arguello, Ultraviolet absorption spectrum of methylhydroperoxide. *Geophys. Res. Lett.*, **6**, 953-955, 1979. Molina, M.J., T. Ishiwata and L.T. Molina, Production of OH from photolysis of HOCl at 307-309 nm, *J. Phys. Chem.*, **84**, 821-826, 1980
- Molina, M.J., L.T. Molina, and T. Ishiwata, Kinetics of the ClO + NO₂ + M reaction, *J. Phys. Chem.*, **84**, 3100-3104, 1980
- Molina, L.T. and M.J. Molina, UV absorption cross sections of HO₂NO₂ vapor, *J. Photochem.*, **15**, 97-108, 1981
- Molina, M.J., L.T. Molina, and J.J. Lamb, Temperature dependent UV absorption cross sections of carbonyl sulfide, *Geophys. Res. Lett.*, **8**, 1008-1011, 1981
- Molina, L.T., M.J. Molina, and F.S. Rowland, Ultraviolet absorption cross sections of several brominated methanes and ethanes of atmospheric interest, *J. Phys. Chem.*, **86**, 2672, 1982
- Molina, L.T. and M.J. Molina, Quantum yields for photodissociation of CBr₂F₂ in the 200-300 nm region, *J. Phys. Chem.*, **87**, 1306-1308, 1983
- Lamb, J.J., L.T. Molina, C.A. Smith, and M.J. Molina, Rate constant of the OH + H₂O₂ → HO₂ + H₂O reaction. *J. Phys. Chem.*, **87**, 4467-4470, 1983
- Smith, C.A., L.T. Molina, J.J. Lamb, and M.J. Molina, Kinetics of the reaction of OH with pernitric and with nitric acids, *Inter. J. Chem. Kinetics*, **16**, 41-55, 1984
- Molina, M.J., L.T. Molina, and C.A. Smith, The rate of the reaction of OH with HCl, *Inter. J. Chem. Kinetics*, **16**, 1151-1160, 1984
- Molina, L.T., M.J. Molina, R.A. Stachnik, and R.D. Tom, An upper limit to the rate of the HCl + ClONO₂ reaction, *J. Phys. Chem.*, **89**, 3779-3781, 1985
- Molina, L.T., and M.J. Molina, Absolute absorption cross sections of ozone in the 185 to 350 nm wavelength range. *J. Geophys. Res.*, **91**, 14501-14508, 1986
- Stachnik, R.A., L.T. Molina, and M.J. Molina, Pressure and temperature dependences of the reaction of OH with nitric acid, *J. Phys. Chem.*, **90**, 2777-2780, 1986

- Molina, L.T., and M.J. Molina, Production of the Cl_2O_2 from the self-reaction of the ClO radical, *J. Phys. Chem.*, **91**, 433-436, 1987
- Stachnik, R.A., and M.J. Molina, Kinetics of the reactions of SH radicals with NO_2 and O_2 , *J. Phys. Chem.*, **91**, 4603-4606, 1987
- Molina, M.J., T.L. Tso, L.T. Molina and F.C.-Y. Wang, Antarctic stratospheric chemistry of chlorine nitrate, hydrogen chloride, and ice: Release of active chlorine, *Science*, **238**, 1253-1257, 1987
- Wofsy, S.C., M.J. Molina, R. J. Salawitch, L.E. Fox, and M.B. McElroy, Interactions between HCl, NO_x , and H_2O ice in the Antarctic stratosphere: implications for ozone, *J. Geophys. Res.*, **93**, 2442-2450, 1988
- Molina, M.J., The Antarctic ozone hole, *Oceanus*, **31**, 47-52, 1988
- Molina, M.J., The chemistry of some reactions believed to be important in ozone depletion over Antarctica, In *Ozone in the Atmosphere*, ed. by R.D. Bojkov and P. Fabian, pp 61-64. Deepak, Hampton, VA, 1989
- Molina, M.J., A.J. Colussi, L.T. Molina, R.N. Schindler, and T.L. Tso, Quantum yield of chlorine-atom formation in the photodissociation of chlorine peroxide (ClOOCl) at 308 nm, *Chem. Phys. Lett.*, **173**, 310-315, 1990
- Molina, M.J., Heterogeneous chemistry on polar stratospheric clouds, *Atm. Environment*, **25A**, 2535-2537, 1991
- Molina, M.J., Chemistry of stratospheric ozone depletion. In *Atmospheric Chemistry: models and predictions for climate and air quality*, C.S. Sloane and T.W. Tesche, eds., 1-8. Lewis Publishers, MI., 1991
- Abbatt, J.P.D., and M.J. Molina, The heterogeneous reaction $\text{HOCl} + \text{HCl} \rightarrow \text{Cl}_2 + \text{H}_2\text{O}$ on ice and nitric acid trihydrate: Reaction probabilities and stratospheric implications, *Geophys. Res. Lett.*, **19**, 461-464, 1992
- Abbatt, J.P.D. and M.J. Molina, Heterogeneous interaction of ClONO_2 and HCl on nitric acid trihydrate at 202K. *J. Phys. Chem.*, **96**, 7674-7679, 1992
- Molina, M.J., and L.T. Molina, Stratospheric Ozone. In *The Science of Global Change: The Impact of Human Activities on the Environment*, D.A. Dunnette and R.J. O'Brien, eds., 24-35. American Chemical Society, Washington, DC, 1992
- Abbatt, J.P.D. , K.D. Beyer, A.F. Fucaloro, J.R. McMahon, P.J. Wooldridge, R. Zhang, and M.J. Molina, Interactions of HCl vapor with water-ice: Implications for the stratosphere, *J. Geophys. Res.*, **97**, 15819-15826, 1992
- Zhang, R., P.J. Wooldridge, and M.J. Molina, Vapor pressure measurements for the $\text{H}_2\text{SO}_4/\text{HNO}_3/\text{H}_2\text{O}$ and $\text{H}_2\text{SO}_4/\text{HCl}/\text{H}_2\text{O}$ systems: Incorporation of stratospheric acids into background sulfate aerosols. *J. Phys. Chem.*, **97**, 8541-8548, 1993
- Seeley, J.V., J.T. Jayne, and M.J. Molina, High pressure fast-flow technique for gas phase kinetics studies, *Int. J. Chem. Kinetics*, **25**, 571-594, 1993

- Zhang, R., P.J. Wooldridge, J.P.D. Abbatt, and M.J. Molina, Physical chemistry of the $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$ binary system at low temperatures: Stratospheric implications, *J. Phys. Chem.*, **97**, 7351-7358, 1993
- Abbatt, J.P.D. and M.J. Molina, Status of stratospheric ozone depletion, *Ann. Rev. of Energy & Environment*, **18**, 1-29, 1993
- Molina, M.J., R. Zhang, P.J. Wooldridge, J.R. McMahon, J.E. Kim, H.Y. Chang, and K.D. Beyer, Physical chemistry of the $\text{H}_2\text{SO}_4/\text{HNO}_3/\text{H}_2\text{O}$ system: Implications for polar stratospheric clouds, *Science*, **261**, 1418-1423, 1993
- Molina, M.J., Chemical interactions of tropospheric halogens on snow/ice. In *The Tropospheric Chemistry of Ozone in the Polar Regions*, N. Niki and K.H. Becker, eds. NATO ASI Series 1: Global Environmental Change, Vol. **7**, pp 273-279, Springer-Verlag, 1993
- Zhang, R., J.T. Jayne, and M.J. Molina, Heterogeneous interactions of ClONO_2 and HCl with sulfuric acid tetrahydrate: Implications for the stratosphere, *J. Phys. Chem.*, **98**, 867-874, 1994
- Molina, M.J., Science and Policy Interface, In *Business & the Contemporary World* **6**(2), 125-128, 1994
- Molina, M.J., The probable role of stratospheric 'ice' clouds: Heterogeneous chemistry of the 'Ozone Hole', in *The Chemistry of the Atmosphere: Its Impact on Global Change*, J.G. Calvert, ed., 27-38. Blackwell, Oxford, U.K, 1994
- Beyer, K.D., S.W. Seago, H.Y. Chang, and M.J. Molina, Composition and freezing of aqueous $\text{H}_2\text{SO}_4/\text{HNO}_3$ solutions under polar stratospheric conditions, *Geophys. Res. Lett.*, **21**, 871-874, 1994
- Kolb, C.E., J.T. Jayne, D.R. Worsnop, M.J. Molina, R.F. Meads, and A.A. Viggiano, Gas phase reaction of sulfur trioxide with water vapor, *J. Am. Chem. Soc.*, **116**, 10314-10315, 1994
- Rowland, F.S. and M.J. Molina, Ozone depletion: 20 years after the alarm, *Chem. & Engr. News*, **72**, 8, 1994
- Molina, M.J. Chemical mechanism of atmospheric ozone depletion, in *The Chemistry of the Atmosphere, Oxidants and Oxidation in the Earth's Atmosphere*, A.R. Bandy, ed., 83-87, The Royal Society of Chemistry, UK, 1995
- Kolb, C.E., D.R. Worsnop, M.S. Zahniser, P. Davidovits, C.F. Keyser, M.T. Leu, M.J. Molina, D.R. Hanson, A.R. Ravishankara, L.R. Williams, and M.A. Tolbert, Laboratory studies of atmospheric heterogeneous chemistry. In *Current Problems and Progress in Atmospheric Chemistry*, J.R. Barker, ed., *Advances in Physical Chemistry Series*, vol. **3**, 771-875, World Scientific Publishing, 1995
- Shen, T.-L., P.J. Wooldridge, and M.J. Molina, Stratospheric pollution and ozone depletion. In *Composition, Chemistry and Climate of the Atmosphere*, H.B. Singh, ed., 394-442. Van Nostrand Reinhold, 1995

- Wooldridge, P. J., R. Zhang, and M.J. Molina, Phase equilibria of H_2SO_4 , HNO_3 , and HCl hydrates and the composition of polar stratospheric clouds, *J. Geophys. Res.*, **100**, 1389-1396, 1995
- Molina, L.T., P.J. Wooldridge, and M.J. Molina, Atmospheric reactions and ultraviolet and infrared absorptivities of nitrogen trifluoride, *Geophys. Res. Lett.*, **22**, 1873-1876, 1995
- Emanuel, P.J., K. Speer, R. Rotunno, R. Srivastava, and M.J. Molina, Hypercanes: A possible link in global extinction scenarios, *J. Geophys. Res.*, **100**, 13755-13765, 1995
- Elrod, P. J., R.E. Koch, J.E. Kim, and M.J. Molina, HCl vapor pressures and reaction probabilities for $\text{ClONO}_2 + \text{HCl}$ on liquid $\text{H}_2\text{SO}_4\text{-HNO}_3\text{-HCl-H}_2\text{O}$ solutions, *Faraday Discuss.*, **100**, 269-278, 1995
- Molina, L.T. and M.J. Molina, Ultraviolet spectrum of CF_3OH : Upper limits to the absorption cross sections. *Geophys. Res. Lett.*, **23**, 563-565, 1996
- Seeley, J.V., J.T. Jayne, and M.J. Molina, Kinetics studies of chlorine atom reactions using the turbulent flow tube technique, *J. Phys. Chem.*, **100**, 4019-4025, 1996
- Seeley, J.V., R.F. Meads, M.J. Elrod, and M.J. Molina, Temperature and pressure dependence of the rate constant for the $\text{HO}_2 + \text{NO}$ reaction, *J. Phys. Chem.*, **100**, 4026-4031, 1996
- Elrod, M.J., R.F. Meads, J.B. Lipson, J.V. Seeley, and M.J. Molina, Temperature dependence of the rate constant for the $\text{HO}_2 + \text{BrO}$ reaction, *J. Phys. Chem.*, **100**, 5808-5812, 1996
- Zhang, R., M-T. Leu, and M.J. Molina, Formation of polar stratospheric clouds on preactivated background aerosols. *Geophys. Res. Lett.*, **23**, 1669-1672, 1996
- Molina, M.J., L.T. Molina, and D.M. Golden, Environmental chemistry (gas and gas-solid interactions): The role of physical chemistry. *J. Phys. Chem.*, **100**, 12888-12896, 1996
- Molina, M.J., Role of chlorine in stratospheric chemistry, *Pure & Appl. Chem.*, **68**, 1749-1756, 1996
- Molina, M.J., Polar Ozone Depletion (Nobel Lecture), *Angew. Chem. Int. Ed. Engl.*, **35**, 1778-1785, 1996
- Molina, M.J., L.T. Molina, and C.E., Gas Phase and Heterogeneous Chemical Kinetics of the Troposphere and Stratosphere. *Ann. Rev. Phys. Chem.*, **47**, 327-367, 1996
- Castro, T., L.G. Ruiz-Suarez, J.C. Ruiz-Suarez, M.J. Molina, and M. Montero, Sensitivity analysis of a UV radiation transfer model and experimental photolysis rates of NO_2 in the atmosphere of Mexico City, *Atm. Environ.*, **31**, 609-620, 1997
- Lipson, J.B., M.J. Elrod, T.W. Beiderhase, L.T. Molina, and M.J. Molina, Temperature Dependence of the rate constant and branching ratio for the $\text{OH} + \text{ClO}$ reaction. *J. Chem. Soc., Faraday Trans.*, **93**, 2665-2773, 1997
- Martin, S.T., D. Salcedo, L.T. Molina, and M.J. Molina, Phase transformation of micron-sized $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$ particles studied by infrared spectroscopy. *J. Phys. Chem.*, **101**, 5307-5313, 1997

- Molina, M.J., L.T. Molina, R. Zhang, R.F. Meads, and D.D. Spencer, The reaction of ClONO₂ with HCl on aluminum oxide, *Geophys. Res. Lett.*, **24**, 1619-1622, 1997
- Wallington, T.J., W.F. Schneider, J. Sehested, M. Bilde, J. Platz, O.J. Nielsen, L.K. Christensen, M.J. Molina, L.T. Molina, and P.W. Wooldridge, Atmospheric chemistry of HFE-7100 (C₄F₉OCH₃): Reaction with OH radicals, UV spectra and kinetic data for C₄F₉OCH₂ and C₄F₉OCH₂O₂ radicals, and the atmospheric fate of C₄F₉OCH₂ radicals, *J. Phys. Chem.*, **101**, 8264--8274, 1997
- Jayne, J.T., U. Poeschl, Y-M. Chen, D. Dai, L.T. Molina, D.R. Worsnop, C.E. Kolb, and M.J. Molina, Pressure and temperature dependence of the gas-phase reaction of SO₃ with H₂O and the heterogeneous reaction of SO₃ with H₂O/H₂SO₄ surfaces, *J. Phys. Chem.*, **101**, 10,000-10,011, 1997
- Percival, C.J., G.D. Smith, L.T. Molina, and M.J. Molina, Temperature and pressure dependence of the rate constant for the ClO and NO₂ reaction, *J. Phys. Chem.*, **101**, 8830-8833, 1997
- Martin, S.T., D. Salcedo, L.T. Molina, and M.J. Molina, Deliquescence of sulfuric acid tetrahydrate following volcanic eruptions or denitrification, *Geophys. Res. Lett.*, **25**, 31-34, 1998
- Christensen, L.K., J. Sehested, O.J. Nielsen, M. Bilde, T.J. Wallington, A. Guschin, L.T. Molina, and M.J. Molina, Atmospheric chemistry of HFE-7200(C₄H₉ OC₂H₅): Reaction with OH radicals and fate of C₄F₉OCH₂CH₂O and C₄F₉OCHOCH₃ radicals, *J. Phys. Chem.*, **102**, 4839-4845, 1998
- Navarro-Gonzales, R., M.J. Molina, and L.T. Molina, Nitrogen fixation by volcanic lightning in the early Earth, *Geophys. Res. Lett.*, **25**, 3123, 1998
- Molina, M.J., The changing chemistry of the atmosphere: A challenge for the 21st Century, in *Chemical Research 2000 and Beyond: Challenges and Vision*, P. Barkin, ed., 11-21. American Chemical Society, 1998
- Molina, M.J., and L.T. Molina, Chlorofluorocarbons and destruction of the ozone layer, in *Environmental and Occupational Medicine, 3rd Edition*, W.N. Rom, ed., 1639-1648. Lippincott-Raven, Philadelphia, 1998
- Zhang, R., L.T. Molina, and M.J. Molina, Development of an electrostatic ion guide in chemical ionization mass spectrometry, *Rev. Sci. Instrum.*, **69**, 4002-4003, 1998
- Koop, T. H.P. Ng, L.T. Molina, and M.J. Molina, A new optical technique to study aerosol phase transitions: The nucleation of ice from H₂SO₄ aerosols, *J. Phys. Chem.*, **102**, 8924-8931, 1998
- Pöschl, U, M. Canaragatna, J.T. Jayne, L.T. Molina, D.R. Worsnop, C.E. Kolb, and M.J. Molina, Mass accommodation coefficient of H₂SO₄ vapor on aqueous sulfuric acid surfaces and gaseous diffusion coefficient of H₂SO₄ in N₂/H₂O, *J. Phys. Chem.*, **102**, 10082-10089, 1998
- Chang, H-Y. A., T. Koop, L.T. Molina, and M.J. Molina, Phase transitions in emulsified HNO₃/H₂O and HNO₃/H₂SO₄/H₂O solutions, *J. Phys. Chem.*, **103**, 2673-2679, 1999

- Lipson, J.B., T.W. Beiderhase, L.T. Molina, and M.J. Molina, Production of the HCl in the OH+ClO Reaction: Laboratory measurements and statistical rate theory calculations, *J. Phys. Chem. A*, **103**, 6540-6551, 1999
- Molina, M.J., Abbau von stratosphärischem Ozon durch FCKW, *Naturw. Rdsch*, **52**, 144-146, 1999
- Molina, M.J., R. Zhang, K. Broekhuizen, W. Lei, R. Navarro, and L.T. Molina, Experimental study of intermediates from OH-initiated reactions of toluene, *J. Am. Chem. Soc.*, **121**, 10225-10226, 1999
- Lee, S.H., D.C. Leard, R. Zhang, L.T. Molina, and M.J. Molina, The HCl + ClONO₂ reaction rate on various water ice surfaces, *Chem. Phys. Lett.*, **315**, 7-11, 1999
- Koop, T., A.K. Bertram, L.T. Molina and M.J. Molina, Phase transitions in aqueous NH₄HSO₄ solutions, *J. Phys. Chem.*, **103**, 9042-9048, 1999
- Bertram, A.K., T. Koop, L.T. Molina, and M.J. Molina, Ice formation in (NH₄)₂SO₄-H₂O particles, *J. Phys. Chem.*, **104**, 584-588, 2000
- Ninomiya, Y., M. Kawaski, A. Guschin, L.T. Molina, M.J. Molina, and T. Wallington, *J. Environ. Sci. Technol*, **34**, 2973, 2000
- Salcedo, D., L.T. Molina, and M.J. Molina, Nucleation rates of nitric acid dihydrate in 1:2 HNO₃/H₂O solutions at stratospheric temperatures, *Geophys. Res. Lett.*, **27**, 193- 196, 2000
- Smith, G. D., L.T. Molin and M. J. Molina, Temperature dependence of O(¹D) quantum yields from the photolysis of ozone between 295 and 338 nm, *J. Phys. Chem. A*, **104**, 8916-8921, 2000
- Koop, T., A. Kapilashrami, L.T. Molina, and M.J. Molina, Phase transitions of sea salt/water mixtures at low temperatures: Implications for ozone chemistry in the polar marine boundary layer, *J. Geophys. Res.*, **105**, 26,393-26,402, 2000
- Molina, M.J., L.T. Molina, T.B. Fitzpatrick and P.T. Nghiem, Ozone depletion and human health effects, in *Environmental Medicine*, Lennart Moller, ed., 28-51, Joint Industrial Safety Council Product 33, Sweden, 2000
- Zhang, R., W. Lei, L.T. Molina, and M.J. Molina, Ion transmission and ion/molecule separation using an electrostatic ion guide in chemical ionization mass spectrometry, *Intl. J. Mass Spectrom.*, **194**, 41-48, 2000
- Mantz, Y.A., F.M. Geiger, L.T. Molina, M.J. Molina, and B.L. Trout, First principles theoretical study of molecular HCl adsorption on a hexagonal ice (0001) surface, *J. Chem. Phys.*, **113**, 7037-7046, 2000
- Mantz, Y. A., F.M. Geiger, L.T. Molina, M.J. Molina, and B.L. Trout, First principles molecular dynamics study of surface disordering of the (0001) face of hexagonal ice, *J. Chem. Phys.*, **113**, 10733-10743, 2000
- Salcedo, D., L.T. Molina, and M.J. Molina, Homogeneous Freezing of Concentrated Aqueous Nitric Acid Solutions at Polar Stratospheric Temperatures, *J. Phys. Chem.*, **105**, 1433, 2001

- Navarro-Gonzales, R., M. Villagran-Muniz, H. Sobral, L.T. Molina, and M.J. Molina, The physical mechanism of nitric oxide formation in simulated lightning, *Geophys. Res. Lett.*, **28**, 3867-3870, 2001
- Mantz, Y.A., F.M., Geiger, L.T. Molina, M.J. Molina, and B.L. Trout, The interaction of HCl with the (0001) face of hexagonal ice studied theoretically via Car-Perrinello molecular dynamics, *Chem. Phys. Lett.*, **348**, 285-292, 2001
- Bertram, A.K., A.V. Ivanov, M. Hunter, L.T. Molina, and M.J. Molina, The reaction probability of OH on organic surfaces of tropospheric interest, *J. Phys. Chem.*, **105**, 9415-9421, 2001
- Smith, G.D., F.M.G. Tablas, L.T. Molina, and M.J. Molina, Measurement of relative product yields from the photolysis of dichlorine monoxide (Cl₂O), *J. Phys. Chem.*, **105**, 8658-8664, 2001
- Zuberi, B., A.K. Bertram, T. Koop, L.T. Molina, and M.J. Molina, Heterogeneous freezing of aqueous particles induced by crystallized (NH₄)₂SO₄, ice, and letovicite, *J. Phys. Chem.*, **105**, 6458-6464, 2001
- Lei, W. F., D. Zhang, R. Zhang, L.T. Molina, and M.J. Molina, Rate constants and isomeric branching of the Cl-isoprene reaction, *Chem. Phys. Lett.*, **357**, 45-50, 2002
- Goto, M., Y. Inoue, M. Kawasaki, A.G. Guschin, L. T. Molina, and M.J. Molina, T.J. Wallington and M. D. Hurley, Atmospheric Chemistry of HFE-7500 (*n*-C₃F₇CF(OC₂H₅)CF(CF₃)₂): Reaction with OH radicals and Cl atoms and Atmospheric Fate of *n*-C₃F₇CF(OCHO(•))CF(CF₃)₂ and *n*-C₃F₇CF(OCH₂CH₂O(•))CF(CF₃)₂ Radicals, *Environ. Sci. Technol.*, **36**, 2395-2402, 2002
- Zuberi, B., A.K. Bertram, C.A. Cassa, L.T. Molina, and M.J. Molina, Heterogeneous Nucleation of Ice in (NH₄)₂SO₄-H₂O Particles with Mineral Dust Immersions, *Geophys. Res. Lett.*, **29**, 1421-1424, 2002
- Smith, G.D., L.T. Molina, and M.J. Molina, Measurement of radical quantum yields from formaldehyde photolysis between 269 and 339 nm, *J. Phys. Chem.*, **106**, 1233-1240, 2002
- Remorov, R.G., Y.M. Gershenson, L.T. Molina, and M.J. Molina, Kinetics and Mechanism of HO₂ Uptake on Solid NaCl, *J. Phys. Chem.*, **106**, 4558-4565, 2002
- Lei, W.F., R.Y. Zhang, L.T. Molina, and M.J. Molina, Theoretical study of chloroalkenylperoxy radicals, *J. Phys. Chem.*, **106**, 6415-6420, 2002
- Molina, L.T., and M.J. Molina, eds., *Air Quality in the Mexico Megacity: An Integrated Assessment*, 390 pp. Kluwer Academic Publishers, Dordrecht, 2002
- Mantz, Y.A., F.M. Geiger, L.T. Molina, M.J. Molina, and B.L. Trout, A theoretical study of the interaction of HCl with crystalline NAT, *J. Phys. Chem. A*, **106**, 6972-6981, 2002
- Suh, I., D. Zhang, R.Y. Zhang, L.T. Molina, and M.J. Molina, Theoretical study of OH addition reaction to toluene, *Chem. Phys. Lett.*, **364**, 454-462, 2002
- Taniguchi N, T.J. Wallington, M.D. Hurley, A.G. Guschin, L.T. Molina, and M.J. Molina, Atmospheric chemistry of C₂F₅C(O)CF(CF₃)₂: Photolysis and reaction with Cl atoms, OH radicals, and ozone, *J. Phys. Chem. A*, **107**, 2674-2679, 2003

- Bogdan A., M.J. Molina, M. Kulmala, A.R. MacKenzie, and A. Laaksonen, Study of finely divided aqueous systems as an aid to understanding the formation mechanism of polar stratospheric clouds: Case of HNO₃/H₂O and H₂SO₄/H₂O systems, *J. Geophys. Res. Atm.*, **108**, D10, 4302, 2003
- Molina, M.J., Aerosol Processes in the Stratosphere, In *Handbook of Weather, Climate and Water*, T.D. Potter and B.R. Colman, eds., 405-414, Wiley Interscience, New Jersey, 2003
- Suh I., R.R. Zhang, L.T. Molina, and M.J. Molina, Oxidation mechanism of aromatic peroxy and bicyclic radicals from OH-toluene reactions, *J. Am. Chem. Soc.*, **125 (41)**, 12655-65, 2003
- Marley N.A., J.S. Gaffney, R.V. White, L. Rodriguez-Cuadra, S.E. Herndon, E. Dunlea, R.M. Volkamer, L.T. Molina, and M.J. Molina, Fast gas chromatography with luminol chemiluminescence detection for the simultaneous determination of nitrogen dioxide and peroxyacetyl nitrate in the atmosphere, *Review of Scientific Instruments*, **75 (11)**, 4595-4605, 2004
- West J.J., M.A. Zavala, L.T. Molina, M.J. Molina, F. San Martini, G.J. McRae, G. Sosa-Iglesias, and J.L. Arriaga-Colina, Modeling ozone photochemistry and evaluation of hydrocarbon emissions in the Mexico City metropolitan area, *J. Geophys. Res.*, **109**, D19312, doi: 10.1029/2004 JD004614 2004
- Molina L.T., Molina M.J., Improving air quality in megacities - Mexico City Case Study, *Urban Biosphere and Society: Partnership of Cities, Annals of the New York Academy of Sciences*, **1023**, 142-158, 2004
- Molina, M.J., A.V. Ivanov, S. Trakhtenberg, and L.T. Molina, Atmospheric evolution of organic aerosol, *Geophys. Res. Lett.*, **31**, L22104, doi:10.1029/2004GL020910, 2004
- Molina M.J., Molina L.T., Megacities and atmospheric pollution., *Review, J Air Waste Manag Assoc*, **54(6)**, 644-80, 2004
- Zhang R.Y., I. Suh, J. Zhao, D. Zhang, E.C. Fortner, X.X. Tie, L.T. Molina, and M.J. Molina, Atmospheric new particle formation enhanced by organic acids, *Science*, **304 (5676)**, 1487-1490, 2004
- Marr L.C., LA. Grogan, H. Wornschimmel, L.T. Molina, M.J. Molina, T.J. Smith, and E. Garshick, Vehicle traffic as a source of particulate polycyclic aromatic hydrocarbon exposure in the Mexico City metropolitan area, *Environ. Sci. & Tech.*, **38 (9)**, 2584-2592, 2004
- Chow J.C., J.G. Watson, J.J. Shah, C.S. Kiang, C. Loh, M. Lev-On, J.M. Lents, M.J. Molina, and L.T. Molina, Megacities and atmospheric pollution, *Journal of the Air & Waste Management Association*, **54 (10)**, 1226-1235, 2004
- Marr L.C., Grogan L.A., Wornschimmel H., Molina L.T., Molina M.J., Smith T.J., Garshick E., Vehicle traffic as a source of particulate polycyclic aromatic hydrocarbon exposure in the Mexico City metropolitan area, *Environ. Sci. Technol.*, **38 (9)**, 2584-92, 2004

- San Martini F.M., J.J. West, B. de Foy, L.T. Molina, M.J. Molina, G. Sosa G., and G.J. McRae, Modeling inorganic aerosols and their response to changes in precursor concentration in Mexico City, *Journal of the air and waste management association*, **55** (6), 803-815, 2005
- Jiang M., L.C. Marr, E.J. Dunlea, S.C. Herndon, J.T. Jayne, C.E. Kolb, W.B. Knighton, T.M. Rogers, M. Zavala, L.T. Molina, and M.J. Molina, Mobile laboratory measurements of black carbon, polycyclic aromatic hydrocarbons and other vehicle emissions in Mexico City, *Atmos. Chem. Phys. Discuss.*, **5**, 7387-7414, 2005
- Johnson, K.S., B. Zuberi, L.T. Molina, M.J. Molina, M.J. Iedema, J.P. Cowin, D.J. Gaspar, C. Wang, and A. Laskin, Processing of soot in an urban environment: case study from the Mexico City Metropolitan Area, *Atmos. Chem. Phys. Discuss.*, **5**, 5585-5614, 2005
- Shirley T.R., W.H. Brune, X. Ren, J. Mao, R. Leshner, B. Cardenas, R. Volkamer, L.T. Molina, M.J. Molina, B. Lamb, E. Velasco, T. Jobson, and M. Alexander, Atmospheric oxidation in the Mexico City Metropolitan Area (MCMA) during April 2003, *Atmos. Chem. Phys. Discuss.*, **5**, 6041-6076, 2005
- García A.R., R. Volkamer, L.T. Molina, M.J. Molina, J. Samuelson, J. Mellqvist, B. Galle, S.C. Herndon, and C.E. Kolb, Separation of emitted and photochemical formaldehyde in Mexico City using a statistical analysis and a new pair of gas-phase tracers, *Atmos. Chem. Phys. Discuss.*, **5**, 11583-11615, 2005
- Marr L. C., K. Dzepina, J.L. Jimenez, F. Reisen, H.L. Bethel, J. Arey, J.S. Gaffney, N.A. Marley, L.T. Molina, and M.J. Molina, Sources and transformations of particle-bound polycyclic aromatic hydrocarbons in Mexico City, *Atmos. Chem. Phys. Discuss.*, **5**, 12741-12773, 2005
- Barnard J. C., E.I. Kassianov, T.P. Ackerman, S. Frey, K. Johnson, B. Zuberi, L.T. Molina, M.J. Molina, J.S. Gaffney, and N.A. Marley, Measurements of Black Carbon Specific Absorption in the Mexico City Metropolitan Area during the MCMA 2003 Field Campaign, *Atmos. Chem. Phys. Discuss.*, **5**, 4083-4113, 2005
- de Foy B., E. Caetano, V. Magaña, A. Zitácuaro, B. Cárdenas, A. Retama, R. Ramos, L.T. Molina, and M.J. Molina, Mexico City basin wind circulation during the MCMA-2003 field campaign, *Atmos. Chem. Phys. Discuss.*, **5**, 2503-2558, 2005
- de Foy B., A. Clappier, L.T. Molina, and M.J. Molina, Distinct wind convergence patterns due to thermal and momentum forcing of the low level jet into the Mexico City basin, *Atmos. Chem. Phys. Discuss.*, **5**, 11055-11090, 2005
- de Foy B., L.T. Molina, and M.J. Molina, Satellite-derived land surface parameters for mesoscale modelling of the Mexico City basin, *Atmos. Chem. Phys. Discuss.*, **5**, 9861-9906, 2005
- Volkamer R., L.T. Molina, M.J. Molina, T. Shirley, and W.H. Brune, DOAS measurement of glyoxal as an indicator for fast VOC chemistry in urban air, *Geophysical Research Letters*, **32**(8), L08806, 2005
- Zuberi B., K.S. Johnson, G.K. Aleks, L.T. Molina, M.J. Molina, and A. Laskin, Hydrophilic properties of aged soot, *Geophysical Research Letters*, **32** (1), L01807, 2005

- D. Salcedo, K. Dzepina, T.B. Onasch, M.R. Canagaratna, Q. Zhang, J.A. Huffman, P.F. DeCarlo, L. T. Molina, M.J. Molina, R.M. Bernabé, B. Cárdenas, C. Márquez, J.S.Gaffney, N.A. Marley, A. Laskin, V. Shutthanandan, and J.L. Jimenez, Characterization of Ambient Aerosols in Mexico City during the MCMA-2003 Campaign with Aerosol Mass Spectrometry. Part I: Quantification, Shape-Related Collection Efficiency, and Comparison with Collocated Instruments, *Atmos. Chem. Phys. Discuss.*, **5**, 4143-4182, 2005
- Salcedo D., K. Dzepina, T.B. Onasch, M.R. Canagaratna, J.T. Jayne, D.R. Worsnop, J. S. Gaffney, N.A. Marley, K.S. Johnson, B. Zuberi, L.T. Molina, M.J. Molina, V. Shutthanandan, Y. Xie, and J.L. Jimenez, Characterization of ambient aerosols in Mexico City during the MCMA-2003 campaign with Aerosol Mass Spectrometry – Part II: overview of the results at the CENICA supersite and comparison to previous Studies, *Atmos. Chem. Phys. Discuss.*, **5**, 4183-4221, 2005
- Volkamer, R., J.L. Jimenez, F. San Martini, K. Dzepina, Q. Zhang, D. Salcedo, L.T. Molina, D.R. Worsnop, and M.J. Molina, Secondary organic aerosol formation from anthropogenic air pollution: Rapid and higher than expected , *Geophysical Research Letters*, **33 (17)**, L17811, 2006
- Loerting, T., A.F. Voegele, C.S. Tautermann, S. Christofor, K.R. Liedl, L.T. Molina, and M.J. Molina, Modeling the heterogeneous reaction probability for chlorine nitrate hydrolysis on ice, *Journal of Geophysical Research Atmospheres*, **111 (D14)**, D14307 2006
- Rogers T.M., E.R. Grimsrud, S.C. Herndon, J.T. Jayne, C.E.Kolb, E. Allwine, H. Westberg, B.K. Lamb, M. Zavala, L.T. Molina, M.J. Molina, W.B. Knighton, On-road measurements of volatile organic compounds in the Mexico City metropolitan area using proton transfer reaction mass spectrometry , *International Journal of Mass Spectrometry* , **252 (1)**, 26-37, 2006
- Johnson, K.S., B. de Foy, B. Zuberi, L.T. Molina, M.J. Molina, Y. Xie, A. Laskin, and V. Shutthanandan, Aerosol composition and source apportionment in the Mexico City Metropolitan Area with PIXE/PESA/STIM and multivariate analysis, *Atmos. Chem. Phys. Discuss.*, **6**, 3997-4022, 2006
- San Martini, F.M., E. J. Dunlea, M. Grutter, T.B. Onasch, J.T. Jayne, M.R. Canagaratna, D.R. Worsnop, C.E. Kolb, J.H. Shorter, S.C. Herndon, M.S. Zahniser, J.M. Ortega, G.J. McRae, L.T. Molina, and M.J. Molina, Implementation of a Markov Chain Monte Carlo Method to inorganic aerosol modeling of observations from the MCMA-2003 Campaign. Part I: Model description and application to the La Merced Site, *Atmos. Chem. Phys. Discuss.*, **6**, 5933-5998, 2006
- San Martini, F. M., E.J. Dunlea, R. Volkamer, T.B. Onasch, J.T. Jayne, M.R. Canagaratna , D.R. Worsnop, C.E. Kolb, J.H. Shorter, S.C. Herndon, M.S. Zahniser, D. Salcedo, K. Dzepina, J.L. Jimenez, J.M. Ortega, K.S. Johnson, G.J. McRae, L.T. Molina, and M.J. Molina, Implementation of a Markov Chain Monte Carlo Method to inorganic aerosol modeling of observations from the MCMA-2003 Campaign. Part II: Model application to the CENICA, Pedregal and Santa Ana sites, *Atmos. Chem. Phys. Discuss.*, **6**, 5999-6040, 2006

- Dunlea, E.J., S.C. Herndon, D.D. Nelson, R.M. Volkamer, B.K. Lamb, E.J. Allwine, M. Grutter, C.R. Ramos Villegas, C. Marquez, S. Blanco, B. Cardenas, C.E. Kolb, L.T. Molina, and M.J. Molina, Technical note: Evaluation of standard ultraviolet absorption ozone monitors in a polluted urban environment, *Atmos. Chem. Phys. Discuss.*, **6**, 2241-2279, 2006
- Räisänen, P., A. Bogdan, K. Sassen, M. Kulmala, and M.J. Molina, Impact of H₂SO₄/H₂O coating and ice crystal size on radiative properties of sub-visible cirrus, *Atmos. Chem. Phys. Discuss.*, **6**, 5231-5250, 2006
- Zavala, M., S.C. Herndon, R.S. Slott, E.J. Dunlea, L.C. Marr, J.H. Shorter, M. Zahniser, W.B. Knighton, T.M. Rogers, C.E. Kolb, L.T. Molina, and M.J. Molina, Characterization of on-road vehicle emissions in the Mexico City Metropolitan Area using a mobile laboratory in chase and fleet average measurement modes during the MCMA-2003 field campaign, *Atmos. Chem. Phys. Discuss.*, **6**, 4689-4725, 2006
- de Foy, B., J. R. Varela, L.T. Molina, and M.J. Molina, Rapid ventilation of the Mexico City basin and regional fate of the urban plume, *Atmos. Chem. Phys. Discuss.*, **6**, 839-877, 2006
- McNeill, V.F., T. Loerting, F.M. Geiger, B.L. Trout, and M.J. Molina, Hydrogen chloride-induced surface disordering on ice, *Proceedings of the National Academy of Sciences*, **103** (25), 9422-9427, 2006**
- Rauch S., B. Peucker-Ehrenbrink, L.T. Molina, M.J. Molina, R. Ramos, H.F. Hemond, Platinum group elements in airborne particles in Mexico City, *Environ. Sci. Technol.*, **15**; **40** (24): 7554-7560, 2006
- Bogdan, A., M.J. Molina, K. Sassen, and M. Kulmala, Formation of low-temperature cirrus from H₂SO₄/H₂O aerosol droplets, *J. Phys. Chem. A*, **110** (46), 12541-12542, 2006
- Dzepina, K., J. Arey, L. Marr, D.R. Worsnop, D. Salcedo, Q. Zhang, T.B. Onasch, L.T. Molina, M.J. Molina, J.L. Jimenez, Detection of particle-phase polycyclic aromatic hydrocarbons in Mexico City using an aerosol mass spectrometer, *International Journal of Mass Spectrometry*, **263** (2-3): 152-170, 2007.
- Ivanov, A.V., S. Trakhtenberg, A.K. Bertram, Y.M. Gershenzon, M.J. Molina, OH, HO₂, and Ozone Gaseous Diffusion Coefficients, *J. Phys. Chem. A*, **111** (9), 1632 -1637, 2007.
- Dunlea, E.J., S. C. Herndon, D. D. Nelson, R. M. Volkamer, F. San Martini, P. M. Sheehy, M. S. Zahniser, J. H. Shorter, J. C. Wormhoudt, B. K. Lamb, E. J. Allwine, J. S. Gaffney, N. A. Marley, M. Grutter, C. Marquez, S. Blanco, B. Cardenas, A. Retama, C. R. Ramos Villegas, C. E. Kolb, L. T. Molina, and M. J. Molina, Evaluation of nitrogen dioxide chemiluminescence monitors in a polluted urban environment, *Atmos. Chem. Phys. Discuss.*, **7**, 569-604, 2007,
- R. Volkamer, P. M. Sheehy, L. T. Molina, and M. J. Molina, Oxidative capacity of the Mexico City atmosphere – Part 1: A radical source perspective, *Atmos. Chem. Phys. Discuss.*, **7**, 5365-5412, 2007.

- McNeill, V.F., M. Geiger, T. Loerting, B. L. Trout, L. T. Molina and M.J. Molina, Interaction of Hydrogen Chloride with Ice Surfaces: The Effects of Grain Size, Surface Roughness, and Surface Disorder, *J. Phys. Chem. A*, 111(28):6274-84, 2007.
- Zhang, R., G. Li, J. Fan, D.L. Wu, M.J. Molina., Intensification of Pacific storm track linked to Asian pollution, *Proceedings of the National Academy of Sciences A*, 104(13), 2007.
- Ivanov A.V., S. Trakhtenberg, Bertram AK, Gershenson YM and Molina MJ., OH, HO₂, and ozone gaseous diffusion coefficients, *J Phys Chem A*, 8;111(9):1632-7, 2007.
- Molina, L.T., C.E. Kolb, B. de Foy, B.K. Lamb, W.H. Brune, J.L. Jimenez, R. Ramos-Villegas, J. Sarmiento, V.H. Paramo-Figueroa, B. Cardenas, V. Gutierrez-Avedoy and M.J. Molina, M.J., Air quality in North America's most populous city - overview of the MCMA-2003 campaign, *Atmos. Chem. Phys. Discuss*, 7 (10), 2447-2473, 2007.
- Volkamer, R., F. San Martini, L.T. Molina, D. Salcedo, J.L. Jimenez and M.J. Molina, A missing sink for gas-phase glyoxal in Mexico City: Formation of secondary organic aerosol, *Geophys. Res. Lett.* 34(19), A L19807, 2007.
- Molina, L.T., C.E. Kolb, B. de Foy, B.K. Lamb, W.H. Brune, J.L. Jimenez, R. Ramos-Villegas, J. Sarmiento, V.H. Paramo-Figueroa, B. Cardenas, V. Gutierrez-Avedoy and M.J. Molina, Air quality in North America's most populous city - overview of the MCMA-2003 campaign, *Atmos. Chem. Phys. Discuss*, 7 (10), 2447-2473, 2007.
- Volkamer, R., FS Martini, L.T. Molina, D. Salcedo, J.L. Jimenez and M.J. Molina, A missing sink for gas-phase glyoxal in Mexico City: Formation of secondary organic aerosol, *Geophys. Res. Lett.*, 34(19), A L19807, 2007.
- Johnson, K.S., A. Laskin, J.L. Jimenez, V. Shutthanandan, L.T. Molina, D. Salcedo, K. Dzepina and M.J. Molina, Comparative analysis of urban atmospheric aerosol by particle-induced X-ray emission (PIXE), proton elastic scattering analysis (PESA), and aerosol mass spectrometry (AMS), *Environ Sci Technol*, 42(17), 7091-7097, 2008.
- Moffet, R.C., Y. Desyaterik, R.J. Hopkins, A.V. Tivanski, M.K. Gilles, Y. Wang, V. Shutthanandan, L.T. Molina, R.G. Abraham, K.S. Johnson, V. Mugica, M.J. Molina, A. Laskin and K.A. Prather, Characterization of aerosols containing Zn, Pb, and Cl from an industrial region of Mexico City, *Environ Sci Technol*, 42(19), 7091-7097, 2008.
- Moffet, R.C., B. de Foy, L.T. Molina, M.J. Molina and K.A. Prather, Measurement of ambient aerosols in northern Mexico City by single particle mass spectrometry, *Atmos. Chem. Phys. Discuss*, 8 (16), 4499-4516, 2008.
- Park, J.H., A.V. Ivanov and M.J. Molina, Effect of relative humidity on OH uptake by surfaces of atmospheric importance, *J. Phys. Chem.*, 112 (30), 6968-6977, 2008.
- Zavala, M., W. Lei, M.J. Molina and L.T. Molina, Modeled and observed ozone sensitivity to mobile-source emissions in Mexico City, *Atmos. Chem. Phys. Discuss*, 9 (1), 39-55, 2009.
- Zavala, M., S.C. Herndon, J. Jayne, D.D. Nelson, A.M. Trimborn, E. Dunlea, W.B. Knighton, A. Mendoza, D.T. Allen, M.J. Molina and L.T. Molina, Comparison of emissions from on-road sources using a mobile laboratory under various driving and operational sampling modes, *Atmos. Chem. Phys. Discuss*, 9(1), 1-14, 2009.
- Liu, Y., A.V. Ivanov and M.J. Molina, Temperature dependence of OH diffusion in air and He, *Geophys. Res. Lett.*, 36, A L03816, 2009.

- Volkamer, R., P.J. Ziemann and M.J. Molina, Secondary Organic Aerosol Formation from Acetylene (C₂H₂): seed effect on SOA yields due to organic photochemistry in the aerosol aqueous phase, *Atmos. Chem. Phys. Discuss*, 9 (6), 1907-1928, 2009.
- Lei, W., M. Zavala, B. de Foy, R. Volkamer, M.J. Molina and L.T. Molina, Impact of primary formaldehyde on air pollution in the Mexico City Metropolitan Area, *Atmos. Chem. Phys. Discuss*, 9 (7), 2607-2618, 2009.
- Noda, J., R. Volkamer and M.J. Molina, Dealkylation of Alkylbenzenes: A Significant Pathway in the Toluene, o-, m-, p-Xylene plus OH Reaction, *J. Phys. Chem.*, 113 (35), 9658-9666, 2009.
- Bogdan, A. and M.J. Molina, Why Does Large Relative Humidity with Respect to Ice Persist in Cirrus Ice Clouds?, *J. Phys. Chem.*, 113 (51), 14123-14130, 2009.
- Park, J., C. Christov, A.V. Ivanov and M.J. Molina, On OH uptake by sea salt under humid conditions *Geophys. Res. Lett.*, 36, A L02802, 2009.
- Bogdan, A., M.J. Molina, H. Tenhu, E. Mayer and T. Loerting, Formation of mixed-phase particles during the freezing of polar stratospheric ice clouds, *Nature Chem.*, 2(3), 197-201, 2010
- Bogdan, A. and M.J. Molina, Aqueous Aerosol May Build Up an Elevated Upper Tropospheric Ice Super saturation and Form Mixed-Phase Particles after Freezing, *J. Phys. Chem.*, 114 (8), 2821-2829, 2010.
- Volkamer, R., P. Sheehy, L.T. Molina and M.J. Molina, Oxidative capacity of the Mexico City atmosphere - Part 1: A radical source perspective, *Atmos. Chem. Phys. Discuss*, 10 (14), 6969,6991, 2010.
- Sheehy, P.M., R. Volkamer, L.T. Molina and M.J. Molina, Oxidative capacity of the Mexico City atmosphere - Part 2: A ROx radical cycling perspective, *Atmos. Chem. Phys. Discuss*, 10 (14), 6993-7008, 2010.
- Bogdan, A., M.J. Molina, H. Tenhu, E. Mayer, E. Bertel and T. Loerting, Different freezing behavior of millimeter- and micrometer-scaled (NH₄)₂SO₄/H₂O droplets, *Journal of Physics: Condensed Matter*, 23(3), A 035103, 2011.
- Steffen, E., Å. Persson, L. Deutsch, J. Zalasiewicz, M. Williams, K. Richardson, C. Crumley, P. Crutzen, C. Folke, L. Gordon, M. Molina, V. Ramanathan, J. Rockström, M. Scheffer, H. J. Schellnhuber and U. Svedin, The Anthropocene: From Global Change to Planetary Stewardship, Royal, *AMBIO: A Journal of the Human Environment*, 40(7),739-761, 2011.
- Guus J. M. Velders, A. R. Ravishankara, M. K. Miller, M. J. Molina, J. Alcamo, J. S. Daniel, D. W. Fahey, S.A. Montzka and S. Reimann, Preserving Montreal Protocol Climate Benefits by Limiting HFCs, Policy Forum, *Science* 335, 922-923, 2012.
- Cicerone Ralph J., Mario J. Molina, and Donald R. Blake, Retrospective F. Sherwood Rowland (1927–2012), Perspective, *Science* 336, 170, 2012.
- Liu, Yong, Ivanov, A. V., Zelenov, V. V., and Molina, MJ. Temperature dependence of OH uptake by carbonaceous surfaces of atmospheric importance, *Russian Journal of Physical Chemistry* Vol. 6, Issue 2, 2012
- Hefferanan, O. & Molina, M. Social responsible Science, *Nature* Vol. 490, S. Issue 7419, 2012.
- Shields, K.N., Cavallari, JM, Hunt, MJO, Lazo M., Molina, M., et al. Traffic-related air pollution exposures and changes in heart rate variability in Mexico City: A panel study. *Environmental Health*, Vol. 12 No. 7, 2013

- Prather, K.A., Bertram, T.H., Grassian, V.H., Seinfeld, J.H., Moffet, R.C., Molina, MJ et al. Bringing the ocean into the laboratory to probe the chemical complexity of sea spray aerosol *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 110, Issue 19, 2013
- Bogdan, Anatoli, Molina, Mario J., Kulmala, Markku, et al. Solution coating around ice particles of incipient cirrus clouds, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 110, Issue 27, 2013
- J. K. Shoemaker, D. P. Schrag, M. J. Molina and V. Ramanathan, What Role for Short-Lived Climate Pollutants in Mitigation Policy? , Policy Forum, *Science* 342, 1323-1324, 2013.

Libros

- Carabias, J., M.J. Molina, and J. Sarukhán, El Cambio Climático, Causas, Efectos y Soluciones, Ed. DGE-Equilibrista, Mexico City, 2010.
- Ravishankara A.R., Guus J.M. Velders, M.K. Miller and M. Molina, HFCs: A Critical Link in Protecting Climate and the Ozone Layer, *UNEP Report*, 2011
- Panel de Ciencia Climática de la AAAS (Presidente: Mario Molina), What We Know: The Reality, Risks and Response to Climate Change, American Association for the Advancement of Science (AAAS) Report, 2014

Capítulos de libros

- Molina, M.J., Why is the Sky Blue?, *The Nobel Book of Answers*. Editado por Bettina Stiekel, Ed. Atheneum Books for Young Readers, Nueva York, 2003.
- Molina, M.J, Aerosol processes in the stratosphere, Handbook of Weather, Climate, and water, Atmospheric Chemistry, Hydrology and Societal Impacts. Editado por T. Potter and B. Colman, Ed. Wiley-Interscience, Nueva Jersey, 2003.
- Molina, M.J., Pollution atmosphérique mondiale: La dégradation de la couche d’ozone et le changement climatique, *La science, l’homme et le monde: les nouveaux enjeux*. Editado por Jaune Staune, Presses de la Renaissance, Paris, 2008.
- Molina, M.J., Uncertainties in Climate Change Science, *Predictability in Science: Accuracy and Limitations*, Proceedings of the Plenary Session of the Pontifical Academy of Sciences. Editado por W. Arber, N. Cabibbo y M. Sánchez Sorondo, Ciudad del Vaticano, 2008.
- Molina, M.J., Climate change-learning from the stratospheric ozone challenge, *Global Sustainability a Nobel Cause*. Editado por H.J. Schellnhuber, M.J. Molina, N. Stern, V. Huber y S. Kadner, Cambridge University Press, 2010.
- Molina, M.J., El ozono, *Libro de Texto: Ciencias 3-Química*, V Talanquer and G. Irazoque, Ed. Castillo, México, 2008.

Molina, M.J., Nuclear Energy and Climate change, *Proceedings of the Study on Nuclear disarmament, non-proliferation, and Development*, The Pontifical Academy of Sciences, Scripta Varia 115, Ciudad del Vaticano, 2010

Molina, M.J, P. Serrano, R. Lacy and D. Noriega, Energía, desarrollo sostenible y salud, *Determinantes ambientales y sociales de la salud*, Editado por L.A.Galvão, J. Finkelman, S. Henao, Organización Panamericana de la Salud, México, 2010