Feb. 2013

Uri Mingelgrin – Abbreviated Curriculum Vitae

Professional address:
Institute of Soil, Water and Environmental Sciences
Volcani Center, Agricultural Research Organization
P.O.B. 6 Bet Dagan 50250 Israel
tel. 972-3-968-3641 cell: 05-06220641
fax 972-3-960-4017
E-mail:uriming@agri.gov.il

Education

1971	Ph.D., Physical Chemistry, Harvard University, Cambridge, Massachusetts. Thesis: The pressure broadening of the O_2 microwave spectrum.
1966	M.S., Soil Chemistry, Cornell University, Ithaca, New York. Minor: Physical Chemistry. Thesis: The isolation from an organic soil of a water-soluble and alcohol-insoluble polysaccharide and the identification of the sugars in it.
1965	B.S. in Soil Chemistry, Cornell University, Ithaca, New York. Graduated first in class.

Areas of specialization

- Reclamation of polluted soils
- Fate of pollutants in soils and water systems
- Mechanochemistry of mineral surfaces
- Controlled release of agrochemicals

Professional Experience and Appointments

1972–	Institute of Soils, Water and Environmental Sciences, Agricultural Research Organization, The Volcani Center, Bet Dagan, Israel. Since 1987 Principal Scientist (equivalent to Full Professor). Since 2007- Emeritus.
2001-	Israeli Representative to the Panel of Environmental Experts of the International Permanent Court of Arbitration, The Hague, Netherlands.
1996-2010	Full Professor (adjunct), Dept. of Soil Science, The Hebrew University of Jerusalem, Israel.
2005-2007	Deputy Head Agricultural Research Organization, The Volcani Center, Bet Dagan, Israel. In charge of Scientific Affairs.
2001-2003	Sabbatical appointment at the University of California. The Department of Environmental Sciences, Riverside and the Department of Land Air and Water Resources, Davis.
1994-1999	Chief Scientist of the Israel Ministry of the Environment.
1976-1994	Chairman, Dept. of Soil Environmental and Physical Chemistry, Institute of Soils, Water and Environmental Sciences, Agricultural Research Organization, The Volcani Center, Bet Dagan, Israel.
1992	U.N. Consultant to the Institute for Technology of Nuclear and Other Mineral Raw Materials, Belgrade, Yugoslavia.

1988-1989	Visiting Professor, Dept. of Agronomy, Cornell University, Ithaca, N.Y
1973-1982	Consultant, Chemical Physics Department, Weizmann Institute of Science, Rehovot, Israel.
1971-1972	Visiting Fellow, Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, Colorado.
1968-1970	Visiting Fellow, NASA, Electronic Research Center, Cambridge, MA.

Selected Committees and Boards:

2009-	Chairman, Israeli RBCA Committee – joint government-private sector committee to formulate risk assessment procedures for contaminated soils and water bodies.
1996-	Chairman, Scientific committee on pollutants of the Israel Coal Ash Administration.
2008-2010	Member, National Steering Committee for Governmental Research and Development.
2003- 2010	Member, steering committee for the evaluation of the extent of pollution in the coastal aquifer in the Ramat Hasharon region. Appointed by the Israel Water Commissioner.
2003-2009	Chairman, committee for defining means to handle polluted river sediments. Appointed by the Israel Ministry of the Environment.
2008	Israeli representative to the steering committee of CIRCLE: Climate impact Research Coordination for a Larger Europe.
2005-2007	Chairman, Academic Committee of the Agricultural Research Organization, Volcani Center, Israel.
2005-2007	Israeli representative to the Domain Committee on Food and Agriculture of the COST Research and Development program of the European Union.
1997- 2002	Chairman, Board of Governors, Kishon River Authority, Israel.
1998- 2002	Member, National Steering Committee for the Reduction in Use of Methyl Bromide, Israel.
1996- 2001	Member, U.S.-Israel Science and Technology Commission's Task Force on Energy and Environmental Standardization.
1995–2001	Member, Board of the Israel Coal Ash Administration.
1997-2000	Member, Technical Advisory Committee (TAC) of the U.S.-Israel Binational Agricultural Science and Technology Fund (BARD).
1999	Chairman, Organizing Committee of the Israel-U.K. Binational Conference Water Quality Control. London, U.K.
1998-1999	Chairman, Water Quality Criteria Committee, Kishon River Authority, Israel.
1997-1999	Member, Board of Directors, U.S. Israel Science and Technology Commission.
1996-1999	Israeli Representative, Managing Committee of the Environment and Climate Research and Development Program of the European Union.
1995 – 1999	Member, Israeli National Council for Research and Development.
1996-1998	Chairman, Joint Government-Private Sector Committee for the Definition of Methodology and Procedures for Establishing Environmental Laws and Regulations.
1995 – 1998	Member, Scientific Council to the Israel Water Commissioner.
1992	Member, Scientific Evaluation Committee for Research in Environmental Quality within the framework of the cooperation between the EC and Israel.

Selected Editorial Boards

2000-2012	Editorial Board of Water, Air and Soil Pollution: Focus.
1993-present	Editorial Board of Agrochimica
1980-2012	Editorial Board of Water, Air and Soil Pollution.
1999-2002	Editorial Board of Ecology and the Environment.

Selected Additional Activities

- Frequent manuscript reviewer for many scientific journals including the Journal of Environmental Quality and Environmental Science and Technology.
- Authored 80 reviewed publications and invited chapters. Authored or edited 6 books and special issues.
- Taught courses on topics in soil and environmental chemistry as related to soil and water pollution and pesticides behavior, in the Hebrew University of Jerusalem, University of Minnesota, St. Paul, University of California, Riverside and the Weizmann Institute of Science, Rehovot, Israel.
- Supervised 17 M.S. students and 5 Ph.D students.

Membership in Professional Societies

- International Society of Soil Science.
- Soil Science Society of America.
- American Society of Agronomy.
- International Assoc. for the Study of Clays.
- Association of Harvard Chemists.
- Israel Society of Soil Science.
- Israel Society for the Study of Clays.

Selected Awards and Honorary Appointments

2001	Designated Scientist of the Year by the Israel Agricultural research Organization, Volcani Center.
1998	Appointed Fellow of the American Society of Agronomy.
1998	Appointed Fellow of the Soil Science Society of America.
1994	Recipient of the Arc En Ciel Grant for French-Israeli Scientists Exchange.
1989-92 and 1983-84	President, Israel Society for the Study of Clays.
1978	The Royal Society (London) Visiting Fellow at the Dept. of Chemistry, University of Birmingham, England.
1977	The J. and A.Z. Cohen Award for research in the field of pesticide use.
1966-1971	Harvard University Fellowship.
1968	Hercules Prize for Excellence in Teaching of Chemistry, Harvard University.
1965	First in graduating class, College of Agriculture, Cornell University.
1965	Member, Phi Kappa Phi - Honorary Society in Applied Sciences.
1964-l965	Agronomy Student Award for Scholastic Achievements and Student Contributions. Awarded by the American Society of Agronomy.
1963	Alpha Zeta Key for highest average of any freshman in the College of Agriculture, Cornell University.

Summary of Relevant Experience

Prof. Uri Mingelgrin served as a researcher in the Institute of Soils, water and Environmental Sciences of the Agricultural Research Organization, Volcani Center, since 1972, specializing in the study of the fate of pollutants in soil and water bodies and of procedures to minimize the pollutants' adverse effect on the environment. He retired from the institute in the year 2007. Between 1994 and 1999 he served as the Chief Scientist of the Ministry of the Environment and for over two years (2005-2007) as the deputy director in charge of scientific affairs, of the Agricultural Research Organization. Since 2007, he is an environmental consultant, specializing in environmental issues, in particular as related to soil and water pollution and remediation. At the same time he is active as an emeritus scientist at the Volcani Center, Institute of Soils, Water and Environmental Sciences. He chaired or was a member of a number of important committees that dealt with environmental issues. Thus, Prof. Mingelgrin chaired the joint government-private sector committee that determined the methodology, later adopted by the Israeli government, for formulating environmentally related laws and regulations.

Selected Examples of recent, relevant experience

- Chairman of the IRBCA (Israeli Risk Based Corrective Action) Committee. This committee formulated the protocol for conducting risk assessment and remediation of soil and water bodies to be used in Israel and was jointly appointed by the Ministry of the Environment, The Water Authority, The Industrialists Association and the Israeli Electric Company.
- Consultant to Maccabi Carasso in the evaluation of an innovative procedure for removal of organic pollutants and anions from water systems.
- Chairman of the Israel Coal Ash Administration's Scientific Team in charge of preventing soil and water pollution from coal ash applications.
- Consultant to Ecotech, Poland on the application of solidification/stabilization methodology in Israel.
- Consultant to Messinger Construction Company on waste storage procedures.
- Consultant to the Government Company for the Protection of the Dead Sea in two areas: 1.The environmental implications of development plans in the Dead Sea and along its shores and 2. The feasibility of proposals for testing and applying novel technologies for salt and potash extraction from the Dead Sea.

Selected Publications

Dissertations

1. Mingelgrin, U., 1966. M.S. in Soil Chemistry. Title: The isolation from an organic soil of a water-soluble and alcohol-insoluble polysaccharide and the identification of the sugars in it. Supervisor: J.E. Dawson. Cornell University, Ithaca, N.Y., U.S.A.

2. Mingelgrin, U., 1971. Ph.D. in Physical Chemistry. Title: The pressure broadening of the O_2 microwave spectrum. Supervisor: R.G. Gordon. Harvard University, Cambridge, Massachusetts, U.S.A.

Books and Special Publications Edited

1. Toxic Organic Chemicals in Porous Media. 1989. Gerstl, Z., Y. Chen, U. Mingelgrin, and B. Yaron, editors. Ecological Studies 73. Springer-Verlag, Berlin. 343 pp.
2. Organic Substances in Soil and Water: Natural Constituents and Their Influence on Contaminant Behavior. 1993. Beck, A.J., K.C. Jones, M.H.B. Hayes and U. Mingelgrin, editors. Royal Society of Chemistry, London. 200 pp.
3. Economic Tools for the Protection of the Environment. 1998. Palevitch, Y., U. Mingelgrin, O. Bergerson and Y. Arnon, editors. Israel Ministry of the Environment, Jerusalem. 81 pp. In Hebrew.

4. Science at the Service of the Environment. 1999. Mingelgrin, U. And O. Bergerson, editors. Israel Ministry of the Environment, Jerusalem. 56 pp. In Hebrew.

5. Soils and the Environment. 1999 Ben-Hur, M., U. Mingelgrin and Z. Gerstl, editors. Special Issue of Agricultural Research in Israel. 258 pp. In Hebrew (English abstracts).

6. Environmental Chemistry. 2002. Special Issue of the Israel Journal of Chemistry. Mingelgrin U. and D. Yakir Editors. Vol. 42. 134 pp.

Articles in Reviewed Journals

l. Mingelgrin, U., R.G. Gordon, L. Frenkel and T.E. Sullivan, l972. The microwave spectrum of compressed O_2 and O_2-foreign gas mixtures at the 45-80 GHz region. J. Chem. Phys. 57: 2923-293l.

2. Mingelgrin, U. l972. Classical scattering calculations for diatomic molecules. A general procedure and application to the microwave spectrum of 0_2. Telecommunications: Research and Engineering Report 32: 58 pp.

3. Mingelgrin, U. and J.E. Dawson. l973. The isolation and properties of a neutral polysaccharide from a woody peat soil. Soil Sci. 116: 36-43.

4. Mingelgrin, U. and B. Yaron. l973. Conversion of some organophosphorus insecticides on adsorbing surfaces as affected by formulation. Bulletin of Environmental Contamination and Toxicology l0: 632-638.

5. Mingelgrin, U. l974. The microwave dispersion spectrum of O_2. Molecular Physics 28: l59l-l602.

6. Saltzman, S., B. Yaron and U. Mingelgrin. l974. The surface catalyzed hydrolysis of parathion on kaolinite. Soil Sci. Soc. Am. Proc. 38: 231-234.

7. Mingelgrin, U. and B. Yaron. l974. The effect of calcium salts on the degradation of parathion in sand and soil. Soil Sci. Soc. Am. Proc. 38: 914-917.

8. Mingelgrin, U., Z. Gerstl and B. Yaron. l975. Pirimiphos-ethyl-clay surface interactions. Soil Sci. Soc. Am. Proc. 39: 834-837.

9. Saltzman, S., U. Mingelgrin and B. Yaron. l976. The role of water in the hydrolysis of parathion and methyl-parathion on kaolinite. J. Agric. Fd Chem. 24: 739-743.

10. Mingelgrin, U., S. Saltzman and B. Yaron. l977. A possible model for the surface induced hydrolysis of organophosphorus pesticides on kaolinite clays. Soil Sci. Soc. Am. J. 4l: 5l9-523.

11. Gerstl, Z., U. Mingelgrin and B. Yaron. l977. Behavior of vapam and methylisothio- cyanate in soils. Soil Sci. Soc. Am. J. 4l: 545-548.

12. Mingelgrin, U., L. Kliger, M. Gal and S. Saltzman. l978. The effect of grinding on the structure and behavior of bentonite. Clays and Clay Minerals 26: 299-307.

l3. Gerber, R.B., N.C. Zaritsky and U. Mingelgrin. l978. Optical potential approach to the calculations of vib-rotational relaxation rates. Molecular Physics 35: l247-l268.

l4. Zaritsky, N.C., U. Mingelgrin and R.B. Gerber. l978. Vib-rotational relaxation in Li + N_2 collisions: Calculations with the optical potential method. Molecular Physics 35:1269-1281.

l5. Mingelgrin, U., S. Yariv and S. Saltzman. l978. Differential infra-red spectroscopy in the study of parathion-bentonite complexes. Soil Sci. Soc. Am. J. 42: 664-665.

l6. Shomer, I. and U. Mingelgrin. l978. A direct procedure for determining the number of plates in tactoids of smectites: The Na/Ca montmorillonite case. Clays and Clay Minerals 26: 135-138.

l7. Biggar, J.W., U. Mingelgrin and M.W. Cheung. 1978. Equilibrium and kinetics of adsorption of picloram and parathion in soils. J. Agric. Fd Chem. 26: 1306-13l2.

l8. Mingelgrin, U. and S. Saltzman. l979. Surface reactions of parathion on clays. Clays and Clay Minerals 27: 72-78.

l9. Mingelgrin, U., L. Kliger and S. Saltzman. l979. Determination of the products of surface induced hydrolysis of organophosphorus pesticides. Pesticide Sci. 10: 133-138.

20. Mingelgrin, U. and R.G. Gordon. 1979. The interaction potential and determination of some cross-sections and spectra of pure O_2 and O_2-Ar gas mixtures. J. Chem. Phys. 70: 3828-3839.

21. Gerstl., Z. and U. Mingelgrin. 1979. A note on the sorption of organic molecules on clays. Clays and Clay Minerals 27: 285-290.

22. Cheung, M.W., U. Mingelgrin and J.W. Biggar. 1979. Equilibrium and kinetics of desorption of picloram and parathion in soils. J. Agric Fd Chem. 27: 120l-1206.

23. Yinnon, A.T., U. Mingelgrin and R.B. Gerber. l980. Dynamics of molecular scattering from stepped surfaces. J. Chem. Phys. 73: 5363-5370.

24. Valdares, J.M.A.S., M. Gal, U. Mingelgrin and A.L. Page. l983. Some heavy metals in soils treated with sewage sludge, their effects on yield and their uptake by plants. J. Environmental Quality 12: 49-57.

25. Vinten, A.J.A., U. Mingelgrin and B. Yaron. l983. The effect of suspended solids in wastewater on soil hydraulic conductivity. I. Suspended solids labeling method. Soil Sci. Soc. Am. J. 47: 402-407.

26. Vinten, A.J.A., U. Mingelgrin and B. Yaron. l983. The effect of suspended solids in wastewater on soil hydraulic conductivity. II. Vertical distribution of suspended solids. Soil Sci. Soc. Am. J. 47: 408-4l2.

27. Metzger, L, B. Yaron and U. Mingelgrin. l983. Soil hydraulic conductivity as affected by physical and chemical properties of effluents. Agronomie 3: 771-777.

28. Mingelgrin, U. and Z. Gerstl. 1983. Reevaluation of partitioning as a mechanism of nonionic chemicals adsorption in soils. J. Environmental Quality l2: 1-11.

29. Gerstl, Z. and U. Mingelgrin. 1984. Sorption of organic substances by soils and sediments. J. Environmental Sci. and Health, Bl9: 297-3l2.

30. Mingelgrin, U. and F. Tsvetkov. 1985. Surface condensation of organophosphate esters on smectites. Clays and Clay Minerals 33: 62-70.

31. Mingelgrin, U. and F. Tsvetkov. 1985. Adsorption of dimethylanilines on montmorillonite in high-pressure liquid chromatography. Clays and Clay Minerals 33:285-294.

32. Mingelgrin, U. and J.W. Biggar. 1986. Copper species in aqueous sewage sludge extract. Water, Air and Soil Pollution 28: 35l-359.

33. Metzger, L., D. Levanon and U. Mingelgrin. 1987. The effect of sewage sludge on soil structural stability - microbiological aspects. Soil Sci. Soc. Am. J. 5l: 346-35l.

34. Tsvetkov, F. and U. Mingelgrin. l987. Optically selective adsorption of alpha-amino acids on montmorillonite-Cu-l-lysine complexes in high-pressure liquid chromatography. Clays and Clay Minerals 35: 391-399.

35. Fine, P., U. Mingelgrin, and A. Feigin. 1989. Incubation studies of the fate of organic nitrogen in soils amended with activated sludge. Soil Sci. Soc. Am. J. 53:444-450.

36. Tsvetkov, F., U. Mingelgrin, and N. Lahav. 1990. Cross-linked hydroxy-Al-montmorillonite as a stationary phase in liquid chromatography. Clays and Clay Minerals 38:380-390.

37. Dornai, D., Z. Gerstl, Y. Chen and U. Mingelgrin. 1991. Trifluralin effects on the development of cotton in arid zone soils. Weed Research 31:375-384.

38. Gannon, J.T., U. Mingelgrin, M. Alexander and R.J. Wagenet. 1991. Bacterial transport through homogeneous soil. Soil Biology and Biochem. 23: 1155-1160.

39. Ben-Hur, M., M. Malik, J. Letey and U. Mingelgrin. 1992. Adsorption of polymers on clays as affected by clay charge and structure, polymer properties and water quality. Soil Science 153:349-356.

40. Dornai, D., Mingelgrin, H. Frenkel and M. Bar-Yosef. 1993. Direct quantification of unadsorbed viruses in suspensions of adsorbing colloids with enzyme-linked immunosorbent assay. Applied and Environmental Microbiology 59:3123-3125.

41. Tsvetkov, F., L. Heller-Kallai and U. Mingelgrin. 1993. Potassium halide-treated montmorillonite as a solid phase in liquid chromatography. Clays and Clay Minerals 41: 527-536.

42. Tchelet, R., D. Levanon, U. Mingelgrin and Y. Henis. 1993. Parathion degradation by a Pseudomonas sp. and a Xanthomonas sp. and by their crude enzyme extracts as affected by some cations. Soil Biology and Biochemistry 25: 1665-1671.

43. Tsvetkov, F., U. Mingelgrin and M. Gal. 1994. HPLC separations of some substituted benzenes on thermally treated clays. J. Thermal Analysis 42: 113-129.

44. Graber, E. R. and U. Mingelgrin. 1994. Clay swelling and Regular Solution Theory. Environ. Sci. Technol. 28: 2360-2365.

45. Graber, E. R., Z. Gerstl, E. Fischer and U. Mingelgrin. 1995. Enhanced transport of atrazine under irrigation with effluents. Soil Sci. Soc. Am. J. 59: 1513-1519.

46. Fine, P. and U. Mingelgrin. 1996. Release of phosphorus from activated sludge. Soil Sci. Soc. Am. J. 60: 505-511.

47. Masaphy, S., T. Fahima, D. Levanon, Y. Henis, and U. Mingelgrin. 1996. Parathion degradation by Xanthomonas sp. and its crude enzyme extract in clay suspensions. J. Environ. Qual. 25: 1248-1255.

48. Nasser, A., M. Gal, Z. Gerstl, U. Mingelgrin and S. Yariv. 1997. Adsorption of alachlor by montmorillonite. J. Thermal Analysis 50: 257-268.

49. Clapp, C.E., U. Mingelgrin, R. Liu, H. Zhang and H.B. Hayes. 1997. A quantitative estimation of the complexation of small organic molecules with soluble humic acids. J. Environ. Qual. 26: 1277-1281.

50. Gerstl, Z., A. Nasser and U. Mingelgrin. 1998. Controlled release of pesticides into soils from clay-polymer formulations. J. Agricultural and Food Chemistry 46: 3797-3802.

51. Gerstl, Z., A. Nasser and U. Mingelgrin. 1998. Controlled release of pesticides into water from clay-polymer formulations. J. Agricultural and Food Chemistry 46: 3803- 3809.

52. Bar-Ilan, Y., D. Levanon, V. Shmerkin and U. Mingelgrin. 2001. Preliminary survey of pesticides distribution in the upper Jordan catchment basin. Water Air and Soil Pollution 119:139-156.

53. Vulkan, R., U. Mingelgrin, J. Ben-Asher and H. Frenkel. 2002. Characterization and time dependence of transition metal speciation in the solution of a sandy soil amended with sewage sludge. J. Environ. Qual. 31: 193-203.

54. Haran, M., R. Samuels, S. Gabbay and U. Mingelgrin. 2002. The use of quality indicators for the evaluation of the state of chemical pollution in Israel. Israel Journal of Chemistry 42: 119-132.

55. Groisman, L., C. Rav-Acha, Z. Gerstl and U. Mingelgrin. 2004. Sorption of organic compounds of varying hydrophobicities from water and industrial wastewater by long- and short-chain organoclays. Appl. Clay Sci. 24:159-166.

56. Badreddine, R, A-N. Humez, U. Mingelgrin, A. Benchara, F. Meducin and R. Prost. 2004. Retention of trace metals by solidified/stabilized wastes: Assessment of long term metal release. Environ. Sci. Technol. 38:1383-1398.

57. Groisman, L., C. Rav-Acha, Z. Gerstl and U. Mingelgrin. 2004. Sorption and detoxification of toxic compounds by a bifunctional organoclay. J. Environ. Qual. 33:1930-1936.

58. Eshel, G., G. Levy, M. Singer and U. Mingelgrin. 2004. Critical evaluation of the use of laser light scattering for particle size distribution analysis. Soil Sci. Soc. Am. J. Soil Sci. Soc. Am. J. 68: 736-743.

59. Vulkan, R., U. Yermiyahu, U. Mingelgrin, G. Rytwo, and T.B. Kinraide. 2004. Sorption of copper and zinc to the plasma membrane of wheat root. J. Membrane Biology. 202-2:97-104.

60. Fine, P., A. Scagnossi, Y. Chen and U. Mingelgrin. 2005. Practical and mechanistic aspects of the removal of cadmium from aqueous systems using peat. Environ. pollution. 138: 358-367.

61. Rav-Acha, C., L. Groisman, U. Mingelgrin, Z. Kirson, Y. Sasson and Z. Gerstl. 2007. A mechanistic study of methyl-parathion hydrolysis by a bifunctional organoclay. Environ. Sci. and Tech. 41: 106-111.

62. Nasser, A., Mingelgrin, U., and Gerstl, Z. 2008. The effect of soil moisture on the release of alachlor from alginate based controlled release formulations. Journal of Agricultural and Food Chemistry 56: 1322-1327.

63. Sorek, A., Atzmon, N., Dahan, O., Gerstl, Z., Kushisin, L., Laor, Y., Mingelgrin, U., Nasser, A., Ronen, D., Tsechansky, L., Weisbrod, N., Graber, E.R. 2008. Phytoscreening: The use of trees for discovering subsurface contamination by VOCs, Environ. Sci. Technol. 42: 536-542.

64. Borisover, M, Gerstl, Z, Burshtein, F, Yariv, S, Mingelgrin, U. 2008. Organic sorbate-organoclay interactions in aqueous and hydrophobic environments: Sorbate-water competition. Environ. Sci. Technol., 42: 7201-7206.

65. Nasser, A., Buchanovsky, A., Gerstl, Z., and Mingelgrin, U. 2009. Mechanochemical degradation of imazaquin. Chemosphere, 75: 20-27.

66. Nasser, A., Mingelgrin, U. 2012. Mechanochemistry: A review of surface reactions and environmental applications. Applied Clay Sci., 67-68: 141-150.

67. Fine, P. Rathod, P. H., Beriozkin, A., and Mingelgrin U. 2013. Uptake of cadmium by hydrponically grown, mature Eucalyptus Camaldulensis saplings and the effect of organic ligands. INTERNAT. J. Phytoremediation, 15: 585-601.

Invited Chapters in Books

1. Saltzman, S. and U. Mingelgrin. l980. Montmorillonite-parathion interactions in aqueous suspensions as affected by the mode of preparation. p. 91-97. In: Agrochemicals in Soils. A. Banin Editor, Pergamon Press, Oxford, U.K.

2. Saltzman, S. and U. Mingelgrin. l984. Non-biological degradation of pesticides in the unsaturated zone. In: Pollutants in Porous Media. Yaron, B., G. Dagan and J. Goldshmid, Editors. Ecological Studies 47: l53-l6l. Springer-Verlag, Berlin.

3. Yaron, B., A.J. Vinten, P. Fine, L. Metzger and U. Mingelgrin. l984. The effect of solid organic components of sewage on some properties of the unsaturated zone. In: Pollutants in Porous Media. Yaron, B., G. Dagan and J. Goldshmid, Editors. Ecological Studies 47: 168-181. Springer-Verlag, Berlin.

4. Mingelgrin U. and R. Prost. 1989. Surface interactions of toxic organic chemicals with minerals. p. 91-135. In: Toxic organic chemicals in Porous Media. Gerstl, Z., Y. Chen, U. Mingelgrin, and B. Yaron, Editors. Ecological Studies 73. Springer-Verlag, Berlin.

5. Wolfe, N.L., U. Mingelgrin and G.C. Miller. 1990. Abiotic transformations in water, sediments and soil. p. 103-168. In: Pesticides in The Soil Environment. Cheng, H.H., Editor, Soil Science Society of America Inc., Madison WI.

6. Hayes M.H.B. and U. Mingelgrin. 1991. Interactions between small organic molecules and soil colloidal constituents. p. 323-407. In: Interactions at The Soil Colloid/Soil Solution Interface. Bolt, G.H., M.F. Deboodt, M.H.B. Hayes and M.B. McBride, Editors. Kluwer, Dodrecht.

7. Mingelgrin, U. and Z. Gerstl. 1993. A unified approach to the interaction of small molecules with macrospecies. p. 102-127. In: Organic Substances in Soil and Water: Natural Constituents and Their Influence on Contaminant Behavior. Beck, A.J., K.C. Jones M.H.B. Hayes and U. Mingelgrin, Editors. Royal Society of Chemistry, London.

8. Liu, R., C.E. Clapp, M.H.B. Hayes and U. Mingelgrin. 1996. Stability of complexes formed by the herbicide napropamide and soluble humic acids. p. 305-317. In: Humic Substances and Organic Matter in Soils and Water Environment: Characterization, Transformation and Interactions. Clapp C.E., N. Senesi and S.M. Griffith, Editors. International Humic Substances Soc. Inc. Publishers, St. Paul MN.

9. Graber, E.R., U. Mingelgrin. 1998. Permeability of porous media as affected by shrinkage and swelling of clays. p. 59-78. In: Soil and Aquifer Pollution. Rubin, H., N. Narkis and J. Carbery, Editors. Springer Verlag, Berlin.

10. Mingelgrin, U. 2001. Binding of small organic molecules by soluble humic substances. Chapter 10 in: Humic Substances and Chemical Contaminants. C.E. Clapp , M.H.B. Hayes, N. Senesi, P.R. Bloom and P.M. Jardine Editors. Soils Science Society of America Inc., Madison WI.

11. Clapp, C.E., M.H.B. Hayes and U. Mingelgrin. 2001. Measurements of sorption-desorption and isotherm analyses. Chapter 11 in: Humic Substances and Chemical Contaminants. C.E. Clapp , M.H.B. Hayes, N. Senesi, P.R.

Bloom and P.M. Jardine Editors. Soil Science Society of America Inc., Madison WI.

12. Gerstl, Z., L. Groisman, C. Rav-Acha and U. Mingelgrin. 2006. Sorption and Hydrolysis of Environmental Pollutants by Organoclays. Chapter 5 in: Symposium Series No. 940/Remediation of Hazardous Waste in the Subsurface: Bridging Flask and Field, Clark, C. II and Lindner, A., (Eds.). 248 p. American Chemical Society Publication.

13. Mingelgrin, U. and A. Nasser. 2006. Diagnosis and prognosis of the distribution of contaminants in the geosphere. In: Viable Methods of Soil and Water Pollution Monitoring, Protection and Remediation. Twardowska, I; Allen, HE; Haggblom, MM; Stefaniak, S. (Eds.). Book Series: NATO Science Series IV Earth and Environmental Sciences. Volume: 69, Pages: 3-23.

Selected Articles Published in Proceedings of Symposia

1. Mingelgrin, U. l980. Possible interactions of pesticides in irrigation water. In: Les Phenomenes de Transport de L'eau et des Solutes et L'irrigation. Colloque Franco-Israelien. Institute National de la Recherche Agronomique, Paris. pp. 49-60.

2. Fine, P., U. Mingelgrin and B. Yaron. l984. Nitrogen mineralization in sludge amended soils in relation to soil type and application rate. In: Proc. 2nd International Symposium on Peat in Agriculture and Horticulture (K.M. Schallinger Ed.). Bet Dagan, Israel. pp. 171-177.

3. Levanon, D., L. Metzger and U. Mingelgrin. 1986. The role of microflora in soil stabilization by sewage sludge. In: Proc. 4th International Symposium on Microbiological Ecology. Ljubljana, Yugoslavia. pp. 24-29.

4. Gerstl, Z. and U. Mingelgrin. l986. Principles of pestigation. In: Proc. 2nd International Conference on Irrigation (Y. Kahana Ed.). Tel Aviv, Israel. pp. l27-l35.

5. Mingelgrin, U., Z. Gerstl and V. Giat. 1993. The role of non-equilibrium phenomena in the mobility of xenobiotics in the unsaturated zone. Proc. IX Pesticide Chemistry Symposium on the mobility and degradation of xenobiotics. (A. M. Del Re, E. Capri, S. P. Evans P. Natali and M. Trevisan Eds.) Piacenza, Italy. pp. 335-342.

6. Liu, R., C.E. Clapp, U. Mingelgrin, M.H.B. Hayes and R.H. Dowdy. 1993. Characterization of complexes of humic acids and herbicides. In: Proc. of symposium on Agricultural Research to Protect Water Quality of the Soils and Water Conservation Society. Radisson South, MN, U.S.A. pp. 571-573.

7. Gerstl, Z., U. Mingelgrin and A. Nasser. 1994. Novel clay carriers for the controlled release of organic agrochemicals. In: Proc. International Seminar on Research and Development of Controlled Release Formulations of Pesticides.

Sponsored by the U.N-F.A.O and the International Atomic Energy Agency. Vienna, Austria, September, 1993. pp. 47-57.

8. Liu, R., C.E. Clapp, U. Mingelgrin, M.H.B. Hayes and R.H. Dowdy. 1994. Assessment of herbicide complexation with soluble humic acids by equilibrium dialysis. Transactions of the 15th World Congress of Soil Science, Acapulco, Mexico, July, 1994. 3b: 240-241.

9. Clapp, C.E., R. Liu, R.H. Dowdy, U. Mingelgrin and M.H.B. Hayes. 1995. Humic acid-herbicide complexes in soil and water biosystems. Water Quality Users Conference: Clean Water-Clean Environment-21st century. ASAE, Kansas City, Mo. March, 1995. Conference proceedings vol. 1: Pesticides pp. 33-36.

10. Mingelgrin, U. 1997. Formation and significance of hydrophobic plugs. In: Preprints of Papers Submitted at The 214th American Chemical Society National Meeting. Las Vegas, Nevada. Vol. 37 (2): 134-135.

11. Vulkan, R., U. Mingelgrin and J. Ben-Asher. 1999. Characterization of transition metal species in the solution of a sandy soil amended with sewage sludge. Proceedings of the 5th International Conference on The Biogeochemistry of Trace Elements. Vienna, Austria. pp. 268-269.

12. Giat, V. and U. Mingelgrin. 2001. Fluorene uptake by soils: A case study. Extended abstracts of papers presented at the Symposium on Mechanistic Aspects of the Uptake of Hydrophobic Organic Compounds by Soils and Sediments, in the framework of the annual meeting of the Soil Science Society of America. October, 2001. Charlotte, North Carolina. pp. 25-26.

13. Fine P., A. Haas, R. Rosenberg, S. Suriano, A. Berezkin and U. Mingelgrin. 2002. The role of DOC in controlling mobility and bioavailability of trace metals under effluent irrigation – a lysimeter study. Book of extended abstracts of the 2002 Bouyoucos Conference on Molecular Level Processes Controlling Availability of Chemical Species to Plants and Microbes in Soil. June, 2002. Kassandra, Halkidiki, Greece. pp. 46-47.

14. Vulkan R., U. Yermiyahu, T.B. Kinraide, U. Mingelgrin, and G. Rytwo. 2003. Binding and electrostatic attraction of copper and zinc to plasma membrane of wheat root. 7th International Conference on the Biogeochemistry of Trace Elements. Uppsala, Sweden. June, 2003. (eds. G.R. Gobran and N. Lepp), Volume 2:142-143.

Numerous presentations at international and Israeli professional meetings published as abstracts in the proceedings of the conferences.

Selected Non-Reviewed Publications

1. Mingelgrin, U., Z. Gerstl and J. Krikun. l976. The behavior of vapam in soil and its application through the irrigation system. Hassadeh 57: 372-374. (Hebrew with English summary).

2. Mingelgrin, U. l982. Toxic organic traces. In: Irrigation with Effluents - A Literature Review (A. Feigin Ed.). ARO, Inst. of Soils and Water, Bet Dagan. pp. 28-32. (Hebrew with English summary).

3. Mingelgrin, U. and Z. Gerstl. l984. Pesticides in Soils: I. Soil properties and optimal methods for dispersal of pesticides. Hassadeh 64: l490-l492. (Hebrew with English summary).

4. Gerstl, Z., D. Dornai, Y. Chen and U. Mingelgrin. 1990. Trifluralin in cotton in the Negev soils. Hassadeh 70: 1662-1667. (Hebrew with English summary).

5. Gerstl, Z., D. Dornai, Y. Chen and U. Mingelgrin. 1991. Behavior of the herbicides trifluralin and kovex in the soils of the Northern Negev and the Negev Heights. Hassadeh 71: 792-795. (Hebrew with English summary).

6. Mingelgrin, U. 1996. Sustainable development in agriculture. In: Towards Sustainable Development in Israel (T. Ben-Yeshaia Ed.). Israel Ministry of the Environment. pp. 63-65. (Hebrew).

7. Mingelgrin, U. 2000. The Office of the Chief Scientist at the Ministry of the Environment. In: The Chief Scientist in the Israeli Ministries. (Y. Segal Ed.). Israel national Science Academy. pp. 53-57. (Hebrew).

8. Ben-Hur, M., L. Porat and U. Mingelgrin. 2003. The sources of pollution of the Yarkon river. Maim U'Sviva (Water and the Environment). Vol. 57: 17-27. (Hebrew).

9. Hazan, N., M. Ben-Hur and U. Mingelgrin. 2007. Irrigation with effluents – Effect on the content and composition of the soil organic matter. Yevool See. Vol. 26: pp. 26-29. (Hebrew).

10. Nasser, A. Meir, E., Mingelgrin, U. and Gerstl, Z. 2009. Carriers for the controlled release of organic agrochemicals. Yevool See. Vol. 39: pp. 20-23. (Hebrew).

Book reviews in various professional journals.

Selected Invited Lectures

1. Mingelgrin, U. 1980. a. Interactions of organic molecules with clays; b. Heavy metals speciation in natural aqueous systems and its implication to sludge and effluent land disposal. Laboratorio per la Chemica del Terreno, Pisa, Italy.

2. Mingelgrin, U. 1980. Possible interactions of pesticides in irrigation water. France-Israel colloquium on: Transport Phenomena of Water and Solutes in Irrigation. I.N.R.A., Avignon, France.

3. Mingelgrin, U. and S. Saltzman. 1983. Chemical conversion of organic pollutants in the unsaturated zone. International Union of Pure and Applied Chemistry (IUPAC) and The International Assoc. of Hydrological Science (IAHS) Joint International Workshop on the Behavior of Pollutants in the Unsaturated Zone. Bet Dagan, Israel.

4. Mingelgrin, U. 1985. The use of HPLC in the study of the interaction of organic molecules with clays. Station de Science du Sol, I.N.R.A., Versailles, France.

5. Mingelgrin, U. and M.H.B. Hayes. l986. Adsorption of small organic molecules on soil constituents. 2nd International Workshop on Interactions at the Soil Colloid - Soil Solution Interface. Ghent, Belgium.

6. Mingelgrin, U. 1989. An up to date view of the interaction of organic pollutants with soils and soil constituents. Cornell University, Ithaca, NY, U.S.A.

7. Mingelgrin, U., J. Gannon and M. Alexander. 1989. Inoculation with degrading microorganisms as a mean of bioremediation of sites contaminated with toxic organic substances. EPA meeting on cleanup of contaminated sites. Oklahoma City, OK, U.S.A.

8. Mingelgrin, U. 1991. Irrigation with effluents and chemigation: Ecological risks due to toxic organic residues. Workshop on various aspects of water pollution and treatment. London, United Kingdom.

9. Mingelgrin U. 1991. Non-equilibrium and secondary transport related processes. The 1st Gentner symposium on low temperature and environmental geochemistry. Rehovot, Israel.

10. Mingelgrin U. 1992. Novel aspects of surface interactions of small organic molecules. University of Belgrade. By invitation of the Yugoslav Academy of Science.

11. Mingelgrin U. and Z. Gerstl. 1992. A unified approach to the interaction of small molecules with macrospecies. International Conference on Organic Substances in Soil and Water, Lancaster University, Lancaster, United Kingdom.

12. Mingelgrin, U. 1993. The effect of soil moisture fluctuations on the behavior of organic pollutants in the unsaturated zone. University of Minnesota, St. Paul, MN, U.S.A.

13. Mingelgrin, U. 1993. a. Non-equilibrium effects related to the transport of xenobiotic organic substances; b. The role of steric factors in the interaction of organic monomers with clay-based materials, implications to the environment, chromatography and controlled release. Joint invitation by The Italian National Research Council and The Institute of Agricultural Chemistry, University of Pisa. Pisa Italy.

14. Mingelgrin, U. 1994. Controlled release of agrochemicals for minimizing input and reducing environmental pollution. Keynote address at the U.K.-Israel Rothamsted Conference. Rothamsted, United Kingdom.

15. Mingelgrin, U. 1995. Clay-organic interactions as studied by chromatography. Israeli-Spanish Workshop on Organo-Clays: Structure, Properties and Uses. Ein-Gedi, Israel.

16. Graber, E. and U. Mingelgrin. 1995. The role of enhanced transport in the downward movement of organic pollutants. The 60th annual meeting of the Israel Society of Chemistry. Rehovot, Israel.

17. Mingelgrin, U. 1997. Formation and significance of hydrophobic plugs. The 214th American Chemical Society National Meeting. Las Vegas, Nevada, U.S.A.

18. Mingelgrin, U. 1997. Quantitative and thermodynamic aspects of sorbate-sorbent complexes. Joint American Society of Soil Science and the International Humic Substance Society Workshop on Humics Transport Processes. In the framework of the American Society of Soil Science Annual Meeting. Anaheim, California, U.S.A.

19. Mingelgrin, U. 1998. Environment and social welfare. The 28th ICSW International Conference of Social Welfare. Jerusalem, Israel.

20. Mingelgrin, U. 1998. Interactions of natural organic matter with xenobiotic organic compounds. Workshop on Natural Organic Matter Research. University of Minnesota, St. Paul, Minnesota, U.S.A.

21. Mingelgrin, U. 2000. The role of steric factors in the retention of organic pollutants by soils clays. Bouyoucos Conference on Environmental Chemistry at the Clay-Water Interface. Honolulu, Hawaii.

22. Mingelgrin, U. 2001. The thermodynamic basis for the sorption of hydrophobic molecules and the role of steric factors in the process. Harvard University, Cambridge, Massacusetts.

23. Mingelgrin, U. 2001. Riding the green wave-political, economic, social and scientific aspects of the environmental revolution. Purdue University, West Lafayette, Indiana.

24. Mingelgrin, U. 2002. Thermodynamic and steric aspects of uptake of organic molecules in the environment. University of California, Riverside, California.

25. Mingelgrin, U. 2002. Thermodynamic and steric aspects of uptake of organic molecules in the environment. Notre Dame University, Notre Dame, Indiana.

26. Mingelgrin, U. 2002. Binding of Trace Metals to Soluble Organic Matter in Soils Treated with Effluents or Sludges--Environmental Implications. University of California, Los Angeles, California.

27. Mingelgrin, U. 2002. Soluble organic matter as a facilitator of the bioavailability of micronutrients. Bouyoucos Conference on Molecular Level Processes on Availability of Chemical Species to Plants and Microbes in Soil. Sani Halkidiki, Greece.

28. Mingelgrin, U. 2002. Mineral surfaces as catalysts in remediation scenarios. Symposium on Minerals and Surface Controls in Soil remediation Processes, in the framework of the annual meeting of the Soil Science Society of America, Indianapolis, Indiana.

29. Mingelgrin, U. 2008. The water scenario: Figures, sustainability and the ecosystem- Intenational cases (Israel). The Blue Revolution: Water, Agriculture and the Environment Forum, Rome, Italy.

30. Mingelgrin, U. 2008. NATO in the 21st Century and the Mediterranean Dialogue. NATO Public Diplomacy Division, Ber Sheva, Israel.

31. Mingelgrin, U. 2009. Preparing the agricultural sector for the effects of climate change. 1st Congress on Agriculture and Climate Change. Takirdag, Turkey.

32. Mingelgrin, U. 2013. Mechanochemistry. Annual meeting of the Israeli Society of Soil Science. Keynote speaker.

Numerous other invited lectures in meetings of Israeli professional societies and during visits to research institutions in Israel and abroad. Chairman of many sessions in international and local scientific meetings.