

Jay (Jianying) Gan

Professor of Environmental Science

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I. Employment and Education Background

7.2012 - now	Professor, Step VIII O/S, Dept. Environmental Sciences, Univ. California, Riverside
7.2010 - 7.2012	Professor, Step VII O/S, Dept. Environmental Sciences, Univ. California, Riverside
7.2004 - 7.2010	Professor Steps I-VI O/S, Dept. Environmental Sciences, Univ. California, Riverside
7.2003-6.2004	Associate Professor, Dept. Environmental Sciences, Univ. California, Riverside
7.2001-6.2003	Assistant Professor, Dept. Environmental Sciences, Univ. California, Riverside
7.1999-7.2001	Associate Researcher, USDA-ARS US Salinity Laboratory and Dept. Environmental Sciences, Univ. California, Riverside
5.1995-7.1999	Assistant Researcher, USDA-ARS US Salinity Laboratory and Dept. Environmental Sciences, Univ. California, Riverside
3.1993-5.1995	Postdoctoral Researcher, USDA-ARS US Salinity Laboratory and Dept. Environmental Sciences, Univ. California, Riverside
8.1991-3.1993	Postdoctoral Researcher, Dept. Soil, Air and Climate, Univ. Minnesota, St. Paul, MN
2.1990-8.1991	Visiting Fellow, Agrochemicals Unit, Agricultural Research Laboratory, the International Atomic Energy Agency (UN), Seibersdorf, Austria
9.1982-7.1988	Ph.D., Environmental Chemistry, Zhejiang University, Hangzhou, China

II. Expertise and Interests

- Environmental fate, transport and risk assessment of pesticides and emerging contaminants
- Contaminant bioavailability in sediments and soils, biomimetic analysis, and ecotoxicology
- Biotic and abiotic transformations, phase partition, leaching, runoff, aquatic bioaccumulation, and plant uptake
- Analysis of trace organic residues in environmental matrices
- Wastewater reuse and fate/risks of emerging contaminants
- Mitigation strategies and risk-reduction practices (e.g., wetlands, biochar, vegetative buffers)

III. Awards and Honors

2005	Fellow, American Society of Agronomy
2008	Fellow, American Association for Advancement of Science
2006	Fellow, Soil Science Society of America (SSSA), 2010
2008	Distinguished Team Service Award, DANR, University of California
2008	Western Extension Directors' Award of Excellence (Team award)
2012	Outstanding Faculty Mentor, UCR Environmental Toxicology Graduate Program
2013	Award of Excellence, W-2045 Multistate Project, The Western Association of AES Directors
2013	Outstanding Reviewer, <i>Environmental Science & Technology</i>
2014	Best Paper Finalist, <i>Environmental Toxicology & Chemistry</i>

III. University Service Highlights

10.2011 - 8.2014	Member, Committee on Academic Personnel (CAP), Univ. California, Riverside
10.2007 - 7.2010	Chair, Dept. Environmental Sciences, Univ. California, Riverside
2010 - 2011	Chair, CNAS Advisory Committee on Cooperative Extension, Univ. California, Riverside
2005 - 2007	Chair, UC-ANR Water Quality Workgroup, Univ. California
2005 - 2006	Graduate Council Courses Committee, Graduate Council Fellowships Committee
2005 - 2007	Chair, Equipment Committee, Dept. Environmental Science, UCR

2005 - 2007 UC-ANR Associate Editor for Land, Air and Water Sciences, Univ. California
2011 - 2014 Chair, Website, Outreach and Social Committee, Dept. Environmental Science
2011 - 2012 Senate Committee on UCR Extension

IV. Professional Activities and Service Highlights

2001 - now Review panels USDA, EPA, NIEHS, UC-ANR
2014 - now Vice Chair (next year's Chair), Agrochemicals Division, American Chemical Society
2009 - 2011 Chair, Division S-11 Soil and Environmental Quality, Soil Science Society of America
2006 - now Executive Committee, Agrochemicals Division, American Chemical Society, 2006-now.
2013 - now Associate Editor, *Environmental Pollution* (tier 1 journal, impact factor 3.90)
2000 - 2006 Associate Editor, *Journal of Environmental Quality*, American Soc. Agronomy
2007 - 2010 Editorial Board, *Environmental Toxicology & Chemistry*, 2007-2010
2007 - now Editorial Advisory Board, *J. Agricultural & Food Chemistry*, American Chemical Society
2007 - now Cal EPA Review Advisory Committee, Berkeley Institute of the Environment
2008 - 2010 Chair, Environmental Quality Research Award Committee, American Society of Agronomy
2009 - 2010 Chair, International Soil Science Award Committee, Soil Science Society of America
2010 - 2014 Member, Fellow Selection Committee, Soil Science Society of America
2013 - 2014 Member, Fellow Selection Committee, Agronomy Society of America
2013 - 2014 Vice Chair for Programming, 13th IUPAC Int. Congress of Pest. Chem, San Francisco, CA
2014 - 2014 Program Review, Dept. Biosystems Engin. Soil Sci. (BESS), Univ. Tennessee, Knoxville

2001 - now Invited talks > 100
2001 - now Technical presentations > 200
2001 - now Manuscript and proposal reviews > 25 per year
2001 - now Support letter for external promotion files > 15

V. Teaching

- Introduction to Environmental Science (Lower Division, Undergraduate Level, 240-320 students)
- Fate and transport of contaminants in soil (Upper Division, Undergraduate Level)
- Environmental Organic Chemistry (Graduate Level)
- Fate and Transport of Chemicals (Graduate Level)
- Graduate programs: *Environmental Sciences*; *Environmental Toxicology*

VI. Scholarly Publications and Grant Support

Edited Books:

1. Gan, J., P. Zhu, S.D. Aust and A.T. Lemley. 2003. *Pesticide Decontamination and Detoxification*. American Chemical Society Symposium Series 863, American Chemical Society: Washington, DC. ISBN 0-8412-3847-2.
2. Gan, J., F. Spurlock, P. Hendley, and D. Weston. 2008. *Synthetic Pyrethroids: Occurrence and Effects in Aquatic Environments*. American Chemical Society Symposium Series 991, American Chemical Society: Washington, DC. ISBN 978-0-8412-7433-4.
- 3). Goh, K., B. Bret, T. Potter, and J. Gan. 2011. *Pesticide Mitigation Strategies for Surface Water Quality*. American Chemical Society Symposium Series 1075, American Chemical Society: Washington, D.C. ISBN13 978-0-8412-2658-6.
- 4). Garrison, A.W., J. Gan, and W.P. Liu. 2011. *Chiral Pesticides: Stereoselectivity and Its Consequences*. American Chemical Society Symposium Series 1085, American Chemical Society: Washington, D.C. ISBN13 978-0-8412-2679-1.

Peer-review journal articles:

1. Gan, J., J.H. Sun and Z.Y. Chen. 1986. Fate of fenvalerate in an agricultural ecosystem. *Acta Scientiae Circumstantiae* 6: 263-272.
2. Sun, J.H., J. Gan and Z.Y. Chen. 1989. Fate of carbofuran in model rice/fish ecosystems. *Pesticide Science* 26: 147-157.
3. Gan, J., J.H. Sun and Z.Y. Chen. 1989. Fate of carbofuran in rice/fish and rice/fish/azolla ecosystems. *Acta Scientiae Circumstantiae* 9: 68-73.
4. Gan, J., M. Hussain, H. Perscke and M.N. Rathor. 1990. The effect of substituted benzophenones on the photochemical fate of fenitrothion insecticide. *Chemosphere* 21: 589-596.
5. Hussain, M., J. Gan and M.N. Rathor. 1992. Preparation of controlled-release formulations of ¹⁴C-labelled thiobencarb herbicide and study of their environmental behavior. *Pesticide Science* 34: 341-347.
6. Gan, J., M. Hussain and M.N. Rathor. 1994. Behavior of an alginate-kaolin based controlled-release formulation of the herbicide thiobencarb in simulated ecosystems. *Pesticide Science* 42: 265-272.
7. Gan, J., S.R. Yates, M.A. Anderson, W.F. Spencer and F.F. Ernst. 1994. Effect of soil properties on degradation and sorption of methyl bromide in soil. *Chemosphere* 29: 2685-2700.
8. Buhler, D.D., W.C. Koskinen, M.M. Schreiber and J. Gan. 1994. Dissipation of alachlor, metolachlor, and atrazine from starch encapsulated formulation in a sandy loam soil. *Weed Science* 42: 411-417.
9. Gan, J., S.R. Yates, W.F. Spencer and M.V. Yates. 1994. Automated headspace analysis of fumigants 1,3-dichloropropene and methylisothiocyanate on charcoal sampling tubes. *Journal of Chromatography* 684: 121-131.
10. Gan, J., M.R. Weimer, W.C. Koskinen, D.D. Buhler, R.L. Becker and D. L. Wyse. 1994. Sorption and desorption of imazethapyr and 5-hydroxy-imazethapyr in Minnesota soils. *Weed Science* 42: 92-97.
11. Gan, J., M.A. Anderson, S.R. Yates, W.F. Spencer and M.V. Yates. 1995. Sampling and stability of methyl bromide on activated charcoal sampling tubes. *Journal of Agricultural & Food Chemistry* 43: 1361-1367.
12. Gan, J., S.R. Yates, W.F. Spencer and M.V. Yates. 1995. Optimization of headspace analysis of methyl bromide on charcoal sampling tubes. *Journal of Agricultural & Food Chemistry* 43: 960-966.
13. Yates, S.R., F.F. Ernst, J. Gan and W.F. Spencer. 1995. Sampling mast for measuring volatile organic compounds in the near-surface atmosphere. *Journal of Environmental Quality* 24: 1027-1033.
14. Gan, J., W.C. Koskinen, R.L. Becker and D.D. Buhler. 1995. Effect of concentration on persistence of alachlor in soil. *Journal of Environmental Quality* 24: 1162-1169.
15. Yates, S.R., J. Gan, F.F. Ernst and M.V. Yates. 1996. Methyl bromide emissions from a tarped field. I. Experimental conditions and degradation in soil. *Journal of Environmental Quality* 25: 184-192.
16. Yates, S.R., F.F. Ernst, J. Gan and M.V. Yates. 1996. Methyl bromide emissions from a tarped field. II. Volatilization. *Journal of Environmental Quality* 25: 192-202.
17. Yates, S.R., J. Gan, F.F. Ernst and D. Wang. 1996. Methyl bromide emissions from a tarped field. III. Correcting chamber flux for temperature. *Journal of Environmental Quality* 25: 892-898.
18. Gan, J., S.R. Yates, D. Wang and W.F. Spencer. 1996. Effect of soil factors on methyl bromide volatilization after soil application. *Environmental Science & Technology* 30: 1629-1636.
19. Gan, J., R.L. Becker, W.C. Koskinen and D.D. Buhler. 1996. Degradation of atrazine in two soils as a function of concentration. *Journal of Environmental Quality* 25: 1064-1072.
20. Gan, J., and S.R. Yates. 1996. Degradation and phase partition of methyl iodide in soil. *Journal of Agricultural & Food Chemistry* 44: 4001-4008.
21. Gan, J., S.R. Yates, D. Wang, W.F. Spencer and W.A. Jury. 1997. Laboratory-scale measurement and model simulation of the effect of application methods on methyl bromide volatilization from soil. *Journal of Environmental Quality* 26: 310-317.
22. Gan, J., S.R. Yates, H.D. Ohr and J.J. Sims. 1997. Volatilization and distribution of methyl iodide and methyl bromide after subsoil application. *Journal of Environmental Quality* 26: 1107-1115.
23. Yates, S.R., D. Wang, F.F. Ernst and J. Gan. 1997. Methyl bromide emissions from agricultural fields: Bare-soil, deep injection. *Environmental Science & Technology* 31: 1136-1143.
24. Wang, D., S.R. Yates and J. Gan. 1997. Temperature effect on methyl bromide volatilization in soil fumigation. *Journal of Environmental Quality* 26: 1072-1079.
25. Wang, D., S.R. Yates, F.F. Ernst, J. Gan, F. Gao and J.O. Becker. 1997. Methyl bromide emission reduction with field management practices. *Environmental Science & Technology* 31: 3017-3022.
26. Gao, F., S.R. Yates, M.V. Yates, J. Gan and F.F. Ernst. 1997. Design, fabrication, and application of a dynamic chamber for measuring gas emissions from soil. *Environmental Science & Technology* 31: 148-153.
27. Wang, D., S.R. Yates, F.F. Ernst, J. Gan and W.A. Jury. 1997. Reducing methyl bromide emission with a high barrier plastic film and reduced dosage. *Environmental Science & Technology* 31: 3686-3691.

28. Gan, J., and S.R. Yates. 1998. Recapturing and decomposing methyl bromide in fumigation effluents. *Journal of Hazardous Materials* 57: 249-258.
29. Gan, J., S. Papiernik and S.R. Yates. 1998. Static headspace and gas chromatographic analysis of fumigant residues in soil and water. *Journal of Agricultural & Food Chemistry* 46: 986-990.
30. Gan, J., S.R. Yates, D. Crowley and J.O. Becker. 1998. Acceleration of 1,3-dichloropropene degradation by organic amendments and potential application for emissions reduction. *Journal of Environmental Quality* 27: 408-414.
31. Gan, J., S.R. Yates, D. Wang and F.F. Ernst. 1998. Effect of application methods on 1,3-dichloropropene volatilization from soil under controlled conditions. *Journal of Environmental Quality* 27: 432-438.
32. Yates, S.R. and J. Gan. 1998. Volatility, adsorption and degradation of propargyl bromide as a soil fumigant. *Journal of Agricultural & Food Chemistry* 46: 755-761.
33. Yates, S.R., D. Wang, J. Gan, F.F. Ernst, and W.A. Jury. 1998. Minimizing methyl bromide emissions from soil fumigation. *Geophysical Research Letters* 25: 1633-1636.
34. Wang, D., S.R. Yates, J. Gan, and W.A. Jury. 1998. Temperature effect on MeBr volatilization: Permeability of plastic cover films. *Journal of Environmental Quality* 27:821-827.
35. Gan, J., S.R. Yates, J.O. Becker, and D. Wang. 1998. Surface amendment of fertilizer ammonium thiosulfate to reduce methyl bromide emission from soil. *Environmental Science & Technology* 32: 2438-2441.
36. Gan, J., S.R. Yates, S. Papiernik and D. Crowley. 1998. Application of organic amendments to reduce volatile pesticide emissions from soil. *Environmental Science & Technology* 32: 3094-4098.
37. Gan, J., S.R. Yates, J. Sims, and H.D. Ohr. 1998. Production of methyl bromide by terrestrial higher plants. *Geophysical Research Letters* 25: 3595-3598.
38. Wang, D., S.R. Yates, J. Gan, and J.A. Knuteson. 1999. Atmospheric volatilization of methyl bromide, 1,3-dichloropropene, and propargyl bromide through two plastic films, transfer coefficient and temperature effect. *Atmospheric Environment* 33: 401-407.
39. Gan, J., S.K. Papiernik, S.R. Yates, and W.A. Jury. 1999. Temperature and moisture effects on fumigant degradation in soil. *Journal of Environmental Quality* 28: 1436-1441.
40. Gan, J., S.K. Papiernik, W.C. Koskinen, and S.R. Yates. 1999. Evaluation of accelerated solvent extraction (ASE) for analysis of pesticide residues in soil. *Environmental Science & Technology* 33: 3249-3253.
41. Papiernik, S.K., J. Gan, J.A. Knuteson and S.R. Yates. 1999. Sorption of fumigants to agricultural films. *Environmental Science & Technology* 33: 1213-1217.
42. Gan, J., C. Hutchinson, F.F. Ernst, J.O. Becker and S.R. Yates. 2000. Column system for concurrent assessment of emission potential and pest control of soil fumigants. *Journal of Environmental Quality* 29: 657-661.
43. Gan, J., J.O. Becker, F.F. Ernst, C. Hutchinson, J.A. Knuteson and S.R. Yates. 2000. Surface application of ammonium thiosulfate fertilizer to reduce volatilization of 1,3-dichloropropene from soil. *Pesticide Management Science* 56: 264-270.
44. Liu, W.P., J. Gan, S.K. Papiernik and S.R. Yates. 2000. Sorption and catalytic hydrolysis of diethyl-ethyl on homoionic clays. *Journal of Agricultural & Food Chemistry* 48:1935-1940.
45. Papiernik, S.K., J. Gan and S.R. Yates. 2000. Mechanism of degradation of methyl bromide and propargyl bromide in soil. *Journal of Environmental Quality* 29: 1322-1328.
46. Wang, Q., J. Gan, S.K. Papiernik and S.R. Yates. 2000. Transformation and detoxification of halogenated fumigants by ammonium thiosulfate. *Environmental Science & Technology* 34:3717-3721.
47. Yates, S.R., S.K. Papiernik, F. Gao and J. Gan. 2000. Analytical solutions for the transport of volatile organic chemicals in unsaturated layered systems. *Water Resources Research* 36: 1993-2000.
48. Xue, S.K., J. Gan, J.O. Becker and S.R. Yates. 2000. Nematode response to methyl bromide and 1,3-dichloropropene soil fumigation at different temperatures. *Pest Management Science* 56: 737-742.
49. Liu, W.P., J. Gan, S. Papiernik and S.R. Yates. 2000. Structural influences in relative sorptivity of chloroacetanilide herbicides on soil. *Journal of Agricultural & Food Chemistry* 48:4320-4325.
50. Gan, J., S.R. Yates, J.O. Becker and J. Knuteson. 2000. Transformation of 1,3-dichloropropene by thiosulfate salts in soil. *Journal of Environmental Quality* 29: 1476-1481.
51. Gan, J., S.R. Yates, F.F. Ernst and W.A. Jury. 2000. Degradation and volatilization of the fumigant chloropicrin after soil treatment. *Journal of Environmental Quality* 29:1391-1397.
52. Gan, J., N.E. Megonnell and S.R. Yates. 2000. Adsorption and catalytic hydrolysis of methyl bromide and methyl iodide on activated carbons. *Atmospheric Environment* 35:941-947.
53. Nelson, S.D., L.H. Allen, J. Gan, C. Riegel, D.W. Dickson, S.J. Locascio and D.J. Mitchell. 2000. Can virtually-impermeable films reduce the amount of fumigants required for pest-pathogen management in high-value crops? *Soil & Crop Science Society of Florida Proceedings* 59: 85-89.

54. Wang, Q., J. Gan, S.K. Papiernik and S.R. Yates. 2001. Isomeric effects in thiosulfate transformation and detoxification of 1,3-dichloropropene. *Environmental Toxicology & Chemistry* 20:960-964.
55. Ma, Q.L., J. Gan, S.K. Papiernik, J.O. Becker and S.R. Yates. 2001. Degradation of soil fumigants as affected by initial concentration and temperature. *Journal of Environmental Quality* 30:1278-1286.
56. Nelson, S.D., C. Riegel, L.H. Allen, D.W. Dickson, J. Gan, S.J. Locascio and D.J. Mitchell. 2001. Volatilization of 1,3-dichloropropene in Florida plasticulture and effects on fall squash production. *Journal of American Society of Horticultural Science* 126: 496-502.
57. Papiernik, S.K., S.R. Yates and J. Gan. 2001. An approach for estimating the permeability of agricultural films. *Environmental Science & Technology*. 35:1240-1246.
58. Ibekwe, A.M., S.K. Papiernik, J. Gan, S.R. Yates, D. Crowley and C.H. Yang. 2001. Impact of fumigants on soil microbial communities. *Applied and Environmental Microbiology* 67: 3245-3257.
59. Ma, Q.L., J. Gan, J. Ole Becker, S.K. Papiernik and S.R. Yates. 2001. Evaluation of propargyl bromide for control of barnyardgrass and *Fusarium oxysporum* in three soils. *Pest Management Sciences* 57: 781-786.
60. Ibekwe, A.M., S.K. Papiernik, J. Gan, S.R. Yates, D.E. Crowley and C.-H. Yang. 2001. Microcosm enrichment of 1,3-dichloropropene-degrading soil microbial communities in a compost-amended soil. *Journal of Applied Microbiology* 91: 668-676.
61. Dungan, R.S., J. Gan and S.R. Yates. 2001. Effect of temperature, organic amendment rate and moisture content on the degradation of 1,3-dichloropropene in soil. *Pest Management Science* 57: 1107-1113.
62. El-Ghamry, A.M., J.M. Xu, C.Y. Huang and J. Gan. 2002. Microbial response to bensulfuron-methyl treatment in soil. *Journal of Agricultural & Food Chemistry* 50: 136-139.
63. Wu, L., G. Liu, M.V. Yates, R.L. Green, P. Pacheco, J. Gan and S.R. Yates. 2002. Environmental fate of metalaxyl and chlorothalonil applied to a bentgrass putting green under southern California climatic conditions. *Pest Management Science* 58: 335-342.
64. Wu, L., R.L. Green, G. Liu, M.V. Yates, P. Pacheco, J. Gan and S.R. Yates. 2002. Partitioning and persistence of trichlorfon and chlorpyrifos in a creeping bentgrass putting green. *Journal of Environmental Quality* 31: 889-895.
65. Gan, J., Q. Wang, S.R. Yates, W.C. Koskinen and W.A. Jury. 2002. Dechlorination of chloroacetanilide herbicides by thiosulfate salts. *Proceedings of National Academy of Sciences (USA)* 99: 5189-5194.
66. Liu, W.P., J. Gan and S.R. Yates. 2002. Influence of herbicide structure, clay acidity and humic acid coating on acetanilide herbicide adsorption on homoionic clays. *Journal of Agricultural & Food Chemistry* 50: 4003-4008.
67. Allaire, S.E., S.R. Yates, F.F. Ernst and J. Gan. 2002. A dynamic two-dimensional system for measuring volatile organic compound volatilization and movement in soils. *Journal of Environmental Quality* 31: 1079-1087.
68. Papiernik, S. K., J. Gan and S. R. Yates. 2002. Characterization of propargyl bromide transformation in soil. *Pest Management Sciences* 58: 1055-1062.
69. Liu, W., W. Zheng, and J. Gan. 2002. Competitive sorption between imidacloprid and imidacloprid-urea on clay minerals and humic acids. *Journal of Agricultural & Food Chemistry* 50: 6823-6827.
70. Lee, S.J., J. Gan, and J. Kabashima. 2002. Recovery of synthetic pyrethroids in water samples during storage and extraction. *Journal of Agricultural & Food Chemistry* 50: 7194-7198.
71. Yates, S.R., J. Gan, S.K. Papiernik, R. Dungan, and D. Wang. 2002. Reducing fumigant emissions after soil application. *Phytopathology* 92: 1344-1348.
72. Dungan, R., J. Gan, and S.R. Yates. 2003. Accelerated degradation of methyl isothiocyanate in soil. *Water, Air, and Soil Pollution* 142: 299-310.
73. Kim, J.H., J. Gan, W.J. Farmer, S.R. Yates, S.K. Papiernik and R. Dungan. 2003. Organic matter effects on phase partition of 1,3-dichloropropene in soil. *Journal of Agricultural & Food Chemistry* 51: 165-169.
74. Yates, S., D. Wang, S.K. Papiernik and J. Gan. 2002. Predicting pesticide volatilization from soils. *Environmetrics* 13: 569-578.
75. Xu, J.M., J. Gan, S.K. Papiernik, J.O. Becker and S.R. Yates. 2003. Incorporation of fumigants into soil organic matter. *Environmental Science & Technology* 37: 1288-1291.
76. Gan, J., Y. Zhu, C. Wilen, D. Crowley and D. Pittenger. 2003. Effects of planting covers on herbicide persistence in landscape soils. *Environmental Science & Technology* 37: 2775-2779.
77. Lu, J., L. Wu and J. Gan. 2003. Determination of polyacrylamide in soil waters by size exclusion chromatography. *Journal of Environmental Quality* 32: 1922-1926.
78. Lee, S.J., J. Gan, J.S. Kim, J.N. Kabashima and D. Crowley. 2004. Microbial transformation of pyrethroid insecticides in aqueous and sediment phases. *Environmental Toxicology and Chemistry* 23: 1-6.
79. Kim, J. -H., S. K. Papiernik, W. J. Farmer, J. Gan and S. R. Yates. 2003. Effect of formulation on the behavior of 1,3-dichloropropene in soil. *Journal of Environmental Quality* 32: 2223-2229.
80. Liu, W.P., J. Gan, S.J. Lee and J.N. Kabashima. 2004. Phase fractionation of pyrethroids in runoff and stream water. *Environmental Toxicology & Chemistry* 23: 7-11.

81. Lee, S.J., J. Gan, W.P. Liu and M.A. Anderson. 2003. Evaluation of K_d underestimation using solid phase microextraction. *Environmental Science & Technology* 37: 5597-5602.
82. Liu, W.P. and J. Gan. 2004. Separation and analysis of diastereomers and enantiomers of cypermethrin and cyfluthrin by gas chromatography. *Journal of Agricultural & Food Chemistry* 52, 755-761.
83. Liu, W.P. and J. Gan. 2004. Determination of enantiomers of synthetic pyrethroids in water using solid phase microextraction (SPME) – enantioselective gas chromatography (GC). *Journal of Agricultural & Food Chemistry* 52, 736-741.
84. Bondarenko, S. and J. Gan. 2004. Degradation and adsorption of selected organophosphate and carbamate insecticides in urban stream sediments. *Environmental Toxicology & Chemistry* 23, 1809-1814.
85. Bondarenko, S. and J. Gan. 2004. Persistence of selected organophosphate and carbamate insecticides in waters from a coastal watershed. *Environmental Toxicology & Chemistry* 23, 2649-2654.
86. Qin, S., J. Gan, W.P. Liu and J.O. Becker. 2004. Degradation and adsorption of fosthiazate in soil. *Journal of Agricultural & Food Chemistry* 52, 6239-6242.
87. Yang, W.C., J. Gan, S. Bondarenko and W.P. Liu. 2004. Nucleophilic radical substitution reaction of triazine herbicides with polysulfides. *Journal of Agricultural & Food Chemistry* 54, 7051-7055.
88. Liu, W.P., J. Gan, S.J. Lee and I. Werner. 2004. Isomer selectivity in aquatic toxicity and biodegradation of cypermethrin. *Journal of Agricultural & Food Chemistry* 52, 6233-6238.
89. Zhou, P., Y.T. Lu, B.F. Liu and J. Gan. 2004. Dynamics of fipronil residue in vegetable-field ecosystem. *Chemosphere* 57: 1691-1696.
90. Yang, W.C., J. Gan, W.P. Liu and R. Green. 2005. Degradation of *N*-nitrosodimethylamine (NDMA) in landscape soils. *Journal of Environmental Quality* 34: 336-341.
91. Gan, J., S.J. Lee, W.P. Liu, D. Haver and J.N. Kabashima. 2005. Distribution and persistence of synthetic pyrethroids in runoff sediments. *Journal of Environmental Quality* 34: 836-841.
92. Liu, W.P., J. Gan, D. Schlenk and W.A. Jury. 2005. Enantioselectivity in environmental safety of current chiral insecticides. *Proceedings of National Academy of Sciences (USA)* 103: 701-706.
93. Liu, W.P., S.J. Qin and J. Gan. 2005. Chiral stability of synthetic pyrethroid insecticides. *Journal of Agricultural & Food Chemistry* 54: 3814-3820.
94. Liu, W.P. and J. Gan. 2005. Separation and aquatic toxicity of enantiomers of synthetic pyrethroids. *Chirality* 17, S127-133.
95. Liu, W.P., J. Gan, S.J. Lee and I. Werner. 2005. Isomer selectivity in aquatic toxicity and biodegradation of bifenthrin and permethrin. *Environmental Toxicology & Chemistry* 24: 1861-1866.
96. Gan, J., S. Bondarenko, F. Ernst, W. Yang, S.B. Ries, and D.L. Sedlak. 2006. Leaching of *N*-nitrosodimethylamine (NDMA) in turfgrass soils during wastewater irrigation. *Journal of Environmental Quality* 35: 277-284.
97. Arienzo, M., J. Gan, F. Ernst, S. Qin, S. Bondarenko, and D.L. Sedlak. 2006. Loss pathways of *N*-nitrosodimethylamine (NDMA) in turfgrass soils. *Journal of Environmental Quality* 35: 285-292.
98. Yang, W.C., F. Spurlock, W.P. Liu, and J. Gan. 2006. Effects of dissolved organic matter on the bioavailability and toxicity of permethrin to aquatic invertebrates. *Journal of Agricultural & Food Chemistry* 54: 3967-3972.
99. Yang, W.C., W. Hunter, J. Gan and F. Spurlock. 2006. Effect of suspended solids on bioavailability of synthetic pyrethroids. *Environmental Toxicology & Chemistry* 25: 1585-1591.
100. Zheng, W., S.R. Yates, S.K. Papiernik, M.X. Guo, and J. Gan. 2006. Dechlorination of chloropicrin and 1,3-dichloropropene by hydrogen sulfide species: Redox and nucleophilic substitution reactions. *Journal of Agricultural & Food Chemistry* 54: 2280-2287.
101. Lu, J.H., L.S. Wu, J. Newman, B. Faber, and J. Gan. 2006. Degradation of selected pesticides in nursery recycling pond waters. *Journal of Agricultural & Food Chemistry* 54: 2658-2663.
102. Lao, W.J., and J. Gan. 2006. High-performance liquid chromatographic separation of imidazolinone herbicide enantiomers and their methyl derivatives on polysaccharide-coated chiral stationary phases. *Journal of Chromatography A* 1117: 184-193.
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