Moshe Shenker

List of Publications

a) Dissertations

1. **Shenker, M.**, 1989. Studies on iron deficiency in mango: uptake mechanisms and new approaches to fertilization. M.Sc. thesis. The Hebrew University of Jerusalem.
2. **Shenker, M.**, 1996. Chemical characterization of the siderophore produced by *Rhizopus arrhizus* and its properties as Fe carrier for plants. Ph.D. thesis. The Hebrew University of Jerusalem.

b) Books

1. Lahav, N., **M. Shenker** and Y. Chen. 1995. Introduction to Soil Science. Temporal edition. The Hebrew University of Jerusalem (in Hebrew). 228 p.
2. Lahav, N., **M. Shenker** and Y. Chen. 1999. Introduction to Soil Science. The Hebrew University of Jerusalem (in Hebrew). 272 p.
3. Chen, Y., Y. Inbar, P. Barak, and M. Shenker. 2008. Methods for Soil Analysis. The Hebrew University of Jerusalem (in Hebrew). 174 p.
4. Lahav, N., **M. Shenker** and Y. Chen. 2008. Introduction to Soil Science. 2nd edition. The Hebrew University of Jerusalem (in Hebrew). 280 p.

c) Chapters in Books (reviewed)

1. **Shenker, M.**, Y. Chen and S. Gazit. 1991. Iron deficiency in mango trees: I. New approaches to fertilization. pp. 331-338 in: Chen, Y. and Y. Hadar (Eds.), Iron Nutrition and Interactions in Plants. Kluwer Academic Publishers, Dordrecht, The Netherlands.
2. **Shenker, M.**, Y. Chen and S. Gazit. 1991. Iron deficiency in mango trees: II. Iron uptake mechanisms. pp. 339-344 in: Chen, Y. and Y. Hadar (Eds.), Iron Nutrition and Interactions in Plants. Kluwer Academic Publishers, Dordrecht, The Netherlands.
3. Chen, Y. and **M. Shenker**. 2004. Agronomic approaches for increasing iron availability to food crops. In: Impacts of Agriculture on Human Health and Nutrition. Ross M. Welch, and Ismail Cakmak (eds.), in *Encyclopedia of Life Support Systems (EOLSS)*, Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford ,UK, [http://www.eolss.net] [Retrieved May 18, 2006]. (Invited review)
4. Litaor, M.I., O. Reichmann, A. Nishri, K. Auerswald and **M. Shenker**. 2008. The geochemistry of phosphorus in the histosols of the Hula Valley, Israel. in: Gofen, M. (Ed.), The Hula Book. Kluwer Academic Publishers, The Netherlands (in press).

5. Litaor, M.I., K. Auerswald, O. Reichmann, A. Nishri, and **M. Shenker**. 2008. The soils of the Hula Valley: classification and genesis. in: Gofen, M. (Ed.), The Hula Book. Kluwer Academic Publishers, The Netherlands (in press).

6. Nathan, Y., D. Soudry, C. Glenn, M. Shenker, X.L. Huang, and B. Schilman. 2008. Organic C to organic P ratios in sediments from a Cretaceous-Eocene sequence in an upwelling continental margin, in the Negev, Israel: Implications for the $C/P_{organic}$ ratio in marine sediments. IAS Special Publication. Authigenic minerals: sedimentology, geochemistry, origins, distribution and applications. (in press).

d) Articles in scientific Journals (reviewed)

1. **Shenker, M.**, I. Oliver, M. Helmann, Y. Hadar, and Y. Chen. 1992. Utilization by tomatoes of iron mediated by a siderophore produced by *Rhizopus arrhizus*. J. Plant Nutr. 15: 2173-2182.

2. **Shenker, M.**, R. Ghirlando, I. Oliver, M. Helmann, Y. Hadar, and Y. Chen. 1995. Chemical structure and biological activity of a siderophore produced by *Rhizopus arrhizus*. Soil Sci. Soc. Am. J. 59: 837-843.

3. **Shenker, M.**, Y. Hadar and Y. Chen. 1995. Rapid method for accurate determination of colorless siderophores and synthetic chelates. Soil Sci. Soc. Am. J. 59: 1612-1618.

4. **Shenker, M.**, Y. Hadar, and Y. Chen. 1996. Stability constants of the fungal siderophore rhizoferrin with various microelements and calcium. Soil Sci. Soc. Am. J. 60: 1140-1144.

5. Yehuda, Z., **M. Shenker**, V. Römheld, H. Marschner, Y. Hadar, and Y. Chen. 1996. The role of ligand exchange in the uptake of iron from microbial siderophores by graminaceous plants. Plant Physiol. 112: 1273-1280.

6. Plessner, O. E., Y. Chen, **M. Shenker**, and E. Tel-Or. 1998. Iron enriched Azolla as a slow release biofertilizer for cucumber plants grown in hydroponic model system. J. Plant Nutr. 21: 2357-2367.

7. **Shenker, M.**, Y. Hadar, and Y. Chen. 1999. Kinetics of Fe complexing and metal exchange in solutions by rhizoferrin – a fungal siderophore. Soil Sci. Soc. Am. J. 63: 1681-1687.

8. Yehuda, Z., **M. Shenker**, Y. Hadar, and Y. Chen. 2000. Remedy of chlorosis induced by iron deficiency in plants with the fungal siderophore rhizoferrin. J. Plant Nutr. 23: 1991-2006.

9. Fan, T.W.M., A.N. Lane, **M. Shenker**, J.P. Bartley, D.E. Crowley, and R.M. Higashi. 2001. Comprehensive chemical profiling of gramineous plant root exudates using high-resolution NMR and MS. Phytochemistry 57: 209-221.

10. **Shenker, M.**, T.W.M. Fan, and D.E. Crowley. 2001. Phytosiderophores influence on cadmium mobilization and uptake by wheat and barley plants. J. Environ. Qual. 30: 2091-2098.

11. Litaor, M.I., O. Reichmann, M. Belzer, K. Auerswald, A. Nishri, and **M. Shenker**. 2003. Spatial analysis of phosphorus sorption capacity in a semi-arid altered wetland. J. Environ. Qual. 32: 335-343.

12. **Shenker, M.**, A. Ben-Gal, and U. Shani. 2003. Sweet corn response to combined nitrogen and salinity environmental stresses. Plant and Soil 256: 139-147.

13. **Shenker, M.**, O.E. Plessner, and E. Tel-Or. 2004. Manganese nutrition effects on tomato growth, chlorophyll content, and superoxide dismutase activity. J. Plant Physiol. 161: 197-202.

14. Otabbong, E., P. Leinweber, A. Schlichting, R. Meissner, **M. Shenker**, I. Litaor, A. Sapek, S. Robinson, H. Hacin, and I.R. Otabbong. 2004. Comparison of Ammonium Lactate, Sodium Bicarbonate and Double Calcium Lactate Methods for Extraction of Phosphorus from Wetland Peat Soils. Acta Agric. Scand. 54: 9-13.

15. Huang, X. and **M. Shenker**. 2004. Water-soluble and solid-state speciation of phosphorus in stabilized sewage sludge. J. Environ. Qual. 33: 1895-1903.

16. Litaor, M.I., O. Reichmann, K. Auerswald, A. Haim, and **M. Shenker**. 2004. The geochemistry of phosphorus in peat soils of a semi-arid altered wetland. Soil Sci. Soc. Am. J. 68: 2078-2085.

17. Huang, X., Y. Chen, and **M. Shenker**. 2005. Rapid whole-plant bioassay for phosphorus phytoavailability in soils. Plant and Soil 271: 365-376.

18. **Shenker, M.**, S. Seitelbach, S. Brand, A. Haim, and M.I. Litaor. 2005. Redox reactions and phosphorus release from re-flooded soils of an altered wetland. Eur. J. Soil Sci. 56: 515-525.

19. **Shenker, M.** and Y. Chen. 2005. Increasing iron availability to crops: fertilizers, organo-fertilizers, and biological approaches. Soil Sci. Plant Nutr. 51: 1-17.

20. Litaor, M.I., O. Reichmann, A. Haim, K. Auerswald, and **M. Shenker** . 2005. Sorption characteristics of phosphorus in peat soils of a semi-arid altered wetland. Soil Sci. Soc. Am. J. 69: 1658-1665.

21. Netzer, Y., C. Yao, M. Shenker, B. Bravdo, S. Cohen, and A. Schwartz. 2005. Water consumption of 'Superior' grapevines grown in a semiarid region. Acta Hort. 689: 399-405.

22. **Shenker, M**. and P.R. Bloom. 2005. Comments on "Amounts, forms, and solubility of phosphorus in soils receiving manure". Soil Sci. Soc. Am. J. 69: 1353-1354.

23. Adhikari, T., E. Tel-Or, Y. Libal, and **M. Shenker**. 2006. Effect of cadmium and iron on rice (Oryza Sativa L.) plant in chelator-buffered nutrient solution. J. Plant Nutr. 29: 1919-1940.

24. Litaor, M.I., G. Eshel, O. Reichmann, and **M. Shenker**. 2006. Hydrological control of phosphorus mobility in altered wetland. Soil Sci. Soc. Am. J. 70: 1975–1982.

25. Huang, X., Y. Chen, and **M. Shenker**. 2007. Solid phosphorus phase in aluminum- and iron-treated biosolids. J. Environ. Qual. 36: 549-556.

26. Brand-Klibanski, S., M.I. Litaor, and **M. Shenker**. 2007. Overestimation of P adsorption capacity in reduced soils: An artifact of typical batch adsorption experiments. Soil Sci. Soc. Am. J. 71: 1128-1136.

27. Meissner, R., P. Leinweber, H. Rupp, **M. Shenker**, M.I. Litaor, S. Robinson, and A. Schlichting. 2008. Mitigation of diffuse phosphorus pollution during re-wetting of fen peat soils: a trans-European case study. Water Air Soil Poll. 188: 111-126.

28. Litaor, M.I., G. Eshel, R. Sade, A. Rimmer, and **M. Shenker**. 200**8**. Hydrogeological Characterization of an Altered Wetland. J. Hydrol. 349 :333-349.

29. Clapp, C.E., **M. Shenker**, M.H.B. Hayes, R. Liu, V.W. Cline, A.J. Palazzo, and Y. Chen. 2008. Microsystems for rapid evaluation of plant growth response to organic amendments. Soil Sci. 173:342-349.

30. Huang, X., Y. Chen, and **M. Shenker**. 200**8**. Chemical Fractionation of Phosphorus in Stabilized Biosolids. J. Environ. Qual. 37: 1949-1958.

31. **Yishai Netzer, Chongren Yao, Moshe Shenker, Ben-Ami Bravdo, and Amnon Schwartz. 2008.** Water use and the development of seasonal crop coefficients for Superior Seedless grapevines trained to an open-gable trellis system. Irrigation Science. DOI 10.1007/s00271-008-0124-1.

Journal articles in Hebrew

1. **Shenker, M.**, Y. Chen and S. Gazit. 1990. Iron deficiency in mango trees. Alon Hanotea 43: 1027-1034.

2. **Shenker, M.** and I. Nissim. 1997. Yard waste – environmental hazards and conceptual background for a new policy. The Biosphere 25/3: 8-14.

3. Kitain, S., N. Bar-Shavit, Y. Nir and **M. Shenker**. 1998. Indexes for top dressing fertilization to set wheat grain protein content by using SPAD chlorophyll meter. Gan Sade Vameshek 1998/12: 12-13.

4. Cohen, Y., V. Alchanatis, Y. Zusman, Z. Dar, D. Bonfil, A. Zilberman, A. Karnieli, V. Ostrovsky, A. Levi, R. Brikman, and **M. Shenker**. 2006. Multi- and Hyper spectral images for precision agriculture: Nitrogen application in potato. Agricultural Mechanization and Engineering, December 2006, 50(6):41-46.

5. Netzer, Y., **M. Shenker**, B. Bravdo, and A. Schwartz. 2007. From the lysimeter to the vineyard: application of an irrigation model in the vineyard. Alon Hanotea 61: 31-35 (595-599).