

## Benny Chefetz

For recent publications: → [Citations Profile at Google Scholar](#)

### Articles in refereed journals

- 1.1. **Chefetz, B.**, P.G. Hatcher, Y. Hadar and Y. Chen. 1996. Chemical and biological characterization of organic matter during composting of municipal solid waste. Journal of Environmental Quality 25:776-785.
- 1.2. **Chefetz, B.**, Z. Kerem, Y. Chen and Y. Hadar. 1998. Isolation and partial characterization of laccase from a thermophilic composted municipal solid waste. Soil Biology & Biochemistry 30:1091-1098.
- 1.3. **Chefetz, B.**, P.G. Hatcher, Y. Hadar and Y. Chen. 1998. Characterization of dissolved organic matter extracted from composted municipal solid waste. Soil Science Society of America Journal 62:326-332.
- 1.4. **Chefetz, B.**, Y. Hadar and Y. Chen. 1998. Dissolved organic carbon fractions formed during composting of municipal solid waste: properties and significance. Acta Hydrochimica et Hydrobiologica 26:172-179.
- 1.5. **Chefetz, B.**, F. Adani, P. Genevini, F. Tambone, Y. Hadar and Y. Chen. 1998. Humic-Acid transformation during composting of municipal solid waste. Journal of Environmental Quality 27:794-800.
- 1.6. **Chefetz, B.**, Y. Chen and Y. Hadar. 1998. Purification and characterization of laccase from *Chaetomium thermophilum* and its role in humification. Applied and Environmental Microbiology 64:3175-3179.
- 1.7. Helfrich, P., **B. Chefetz**, Y. Chen, Y. Hadar and H. Schnabl. 1998. A novel method for determining phytotoxicity in composts. Compost Science & Utilization 6:6-13.
- 1.8. Amitai, G., R. Adani, G. SodMoriah, I. Rabinovitz, A. Vincze, H. Leader, **B. Chefetz**, L. Leibovitz Persky, D. Friesem and Y. Hadar. 1998. Oxidative biodegradation of phosphorothiolates by fungal laccase. FEBS Letters 438:195-200.
- 1.9. **Chefetz, B.**, J.D.H. van Heemst, Y. Chen, C.P. Romaine, J. Chorover, R. Rosario, M. Guo and P.G. Hatcher. 2000. Organic matter transformation during the weathering process of spent mushroom substrate. Journal of Environmental Quality 29:592-602.
- 1.10. **Chefetz, B.**, Y. Chen, E.D. Clapp and P.G. Hatcher. 2000. Characterization of organic matter in soils by thermochemolysis using tetramethylammonium hydroxide (TMAH). Soil Science Society of America Journal 64:583-589.
- 1.11. **Chefetz, B.**, A.P. Deshmukh, P.G. Hatcher and E.A. Guthrie. 2000. Pyrene sorption by natural organic matter. Environmental Science & Technology 34:2925-2930.
- 1.12. Chen, Y., **B. Chefetz**, R. Rosario, J.D.H. van Heemst, C.P. Romaine and P.G. Hatcher. 2000. Chemical nature and composition of compost during mushroom growth. Compost Science & Utilization 8:347-359.
- 1.13. Deshmukh, A.P., **B. Chefetz** and P.G. Hatcher. 2001. Characterization of organic matter in pristine and contaminated coastal marine sediments using solid-state <sup>13</sup>C NMR, pyrolytic and thermochemolytic methods: a case study in the San Diego harbor area. Chemosphere 45:1007-1022.

- 1.14. **Chefetz, B.**, M.J. Salloum, A.P. Deshmukh and P.G. Hatcher. 2002. Structural components of humic acids as determined by chemical modifications and <sup>13</sup>C NMR, pyrolysis- and thermochemolysis-GC/MS. Soil Science Society of America Journal 66:1159-1171.
- 1.15. Salloum, M.J., **B. Chefetz** and P.G. Hatcher. 2002. Phenanthrene sorption by aliphatic-rich natural organic matter. Environmental Science & Technology 36:1953-1958.
- 1.16. **Chefetz, B.**, J. Tarchitzky, A.P. Deshmukh, P.G. Hatcher and Y. Chen. 2002. Structural characterization of humic substances in particle-size fraction of an agricultural soil. Soil Science Society of America Journal 66:129-141.
- 1.17. Simpson, M.J., **B. Chefetz** and P.G. Hatcher. 2003. Phenanthrene sorption to structurally modified humic acids. Journal of Environmental Quality 32:1750-1758.
- 1.18. **Chefetz, B.** 2003. Sorption of phenanthrene and atrazine by plant cuticular fractions. Environmental Toxicology and Chemistry 22:2492-2498.
- 1.19. Sachleben, J.R., **B. Chefetz**, A. Deshmukh, and P.G. Hatcher. 2004. Solid-state NMR characterization of pyrene-cuticular matter interactions. Environmental Science & Technology 38:4369-4376.
- 1.20. **Chefetz, B.**, Y.I. Bilkis and T. Polubesova. 2004. Sorption-desorption behavior of triazine and phenylurea herbicides in Kishon river sediments. Water Research 38:4383-4394.
- 1.21. Simpson, M.J., **B. Chefetz**, A.P. Deshmukh, and P.G. Hatcher. 2005. Comparison of polycyclic aromatic hydrocarbon distribution and sedimentary organic matter structure in near-shore contaminated sediments from Pensacola Bay, Florida. Marine Environmental Research 59:139 –163.
- 1.22. Ilani, T., E. Schulz and **B. Chefetz**. 2005. Interactions of organic compounds with wastewater dissolved organic matter: role of the hydrophobic fractions. Journal of Environmental Quality 34:552-562.
- 1.23. Oren, A., and **B. Chefetz**. 2005. Sorption-desorption behavior of polycyclic aromatic hydrocarbons in upstream and downstream river sediments. Chemosphere 61:19-29.
- 1.24. Drori, Y., Z. Aizenshtat and **B. Chefetz**. 2005. Sorption-desorption behavior of atrazine in soils irrigated with reclaimed wastewater. Soil Science Society of America Journal 69:1703-1710.
- 1.25. **B. Chefetz**, Sominski, L. M. Pinhas, T. Ginsburg, E. Tel-Or and A. Gedanken. 2005. New approach for removal of metallic ions from water: adsorption onto aquatic plants and microwave radiation for the fabrication of nanometals. The Journal of Physical Chemistry B 109:15179-15181.
- 1.26. Chen, B.L., E.J. Johnson, **B. Chefetz**, L. Zhu and B. Xing. 2005. Sorption of polar and nonpolar aromatic organic contaminants by plant cuticular materials: the role of polarity and accessibility. Environmental Science & Technology 39:1613-1641.
- 1.27. Oren, A., Z. Aizenshtat and **B. Chefetz**. 2006. Persistent organic pollutants and sedimentary organic matter properties: a case study in the Kishon River, Israel. Environmental Pollution 141:265-274.
- 1.28. **Chefetz, B.**, T. Ilani, E. Schulz and J. Chorover. 2006. Wastewater dissolved organic matter: characteristics and sorptive capabilities. Water Science and Technology

53:51-57.

- 1.29. **Chefetz, B.**, K. Stimler, M. Shechter and. Y. Drori. 2006. Interactions of sodium azide with triazine herbicides: effect on sorption to soils. Chemosphere 65:352-357.
- 1.30. Stimler, K., B. Xing and **B. Chefetz**. 2006. Transformation of plant cuticles in soil: effect on their sorptive capabilities. Soil Science Society of America Journal 70:1101-1109.
- 1.31. Drori, Y., B. Lam, A. Simpson, Z. Aizenshtat and **B. Chefetz**. 2006. The role of lipids on sorption characteristics of freshwater- and wastewater-irrigated soils. Journal of Environmental Quality 35:2154-2161.
- 1.32. Shechter, M., B. Xing, F.-D. Kopinke and **B. Chefetz**. 2006. Competitive sorption-desorption behavior of triazine herbicides with plant cuticular fractions. Journal of Agricultural and Food Chemistry 54:7761-7768.
- 1.33. Johnson, E.J., O. Dorot, J. Liu, **B. Chefetz** and B. Xing. 2007. Spectroscopic characterization of aliphatic moieties in four plant cuticles. Communications in Soil Science and Plant Analysis 38:2461-2478.
- 1.34. **Chefetz, B.** 2007. Decomposition and sorption characterization of plant cuticles in soil. Plant and Soil 298:21-30.
- 1.35. Polubesova, T., M. Sherman-Nakache and **B. Chefetz**. 2007. Binding of pyrene to hydrophobic fractions of dissolved organic matter: effect of polyvalent metal complexation. Environmental Science & Technology 41:5389-5394.
- 1.36. Shechter, M. and **B. Chefetz**. 2008. Insights into the sorption properties of cutin and cutan biopolymers. Environmental Science & Technology 42:1165-1171.
- 1.37. Drori, Y., Z. Aizenshtat and **B. Chefetz**. 2008. Sorption of organic compounds to humin from soils irrigated with reclaimed wastewater. Geoderma 145:98-106.
- 1.38. Polubesova, T., Y. Chen, R. Navon and **B. Chefetz**. 2008. Interactions of hydrophobic fractions of dissolved organic matter with  $\text{Fe}^{3+}$ - and  $\text{Cu}^{2+}$ -montmorillonite. Environmental Science & Technology 42:4797-4803.
- 1.39. **Chefetz, B.**, T. Mualem and J. Ben-Ari. 2008. Sorption and mobility of pharmaceutical compounds in soil irrigated with reclaimed wastewater. Chemosphere 73:1335-1343.
- 1.40. Marciano, A., **B. Chefetz** and A. Gedanken. 2008. Differential adsorption of silver nanoparticles to the inner and outer surfaces of the *Agave Americana* cuticle. Journal of Physical Chemistry C 112:18082-18086.
- 1.41. **Chefetz, B.** and B. Xing. 2009. The relative role of aliphatic and aromatic moieties as sorption domains for organic compounds: a review. Environmental Science & Technology 43:1680-1688.
- 1.42. Polubesova, T., Y. Chen, C. Stefan, M. Selle, P. Werner and **B. Chefetz**. 2009. Sorption of polyaromatic compounds by organic matter-coated  $\text{Ca}^{2+}$ - and  $\text{Fe}^{3+}$ -montmorillonite. Geoderma 154:36-41.
- 1.43. Maoz, A., and **B. Chefetz**. 2010. Sorption of the pharmaceuticals carbamazepine and naproxen to dissolved organic matter: Role of structural fractions. Water Research. 44:981-989.
- 1.44. Shechter, M., B. Xing and **B. Chefetz**. 2010. Cutin and cutan biopolymers: Their role

- as natural sorbents. Soil Science Society of America Journal 74:1139-1146.
- 1.45. Polubesova, T., S. Eldad and B. **Chefetz**. 2010. Adsorption and oxidative transformation of phenolic acids by Fe(III)-montmorillonite. Environmental Science & Technology 44:4203-4209.
- 1.46. Hauff, S., B. **Chefetz**, M., Shechter and W. Vetter. 2010. Determination of hydroxylated fatty acids from the biopolymer of tomato cutin and their fate during incubation in soil. Phytochemical Analysis 21:582-589.
- 1.47. Elmachliy, S., B. **Chefetz**, E. Tel-Or, L. Vidal, A. Canals, and A. Gedanken. 2011. Removal of silver and lead ions from waste waters using *Azolla Filiculoides* an aquatic plant, which adsorbs and reduces the ions into the corresponding metallic nanoparticles under microwave radiation in 5 minute. Water, Air and Soil Pollution 218:365-370.
- 1.48. Shenker, M., D. Harush, J. Ben-Ari and B. **Chefetz**. 2011. Uptake of carbamazepine by cucumber plants – A case study related to irrigation with reclaimed wastewater. Chemosphere 82: 905-910
- 1.49. Borisover, M., M. Sela and B. **Chefetz**. 2011. Enhancement effect of water associated with natural organic matter (NOM) on organic compound–NOM interactions: A case study with carbamazepine. Chemosphere 82:1454-1460.
- 1.50. **Chefetz**, B., S. Eldad and T. Polubesova. 2011. Interactions of aromatic acids with montmorillonite:  $\text{Ca}^{2+}$ - and  $\text{Fe}^{3+}$ -saturated clays versus  $\text{Fe}^{3+}$ - $\text{Ca}^{2+}$ -clay system. Geoderma 160:608-613.
- 1.51. Anagu, I., J. Ingwersen, Y. Drori, B. **Chefetz**, and T. Streck. 2011. Modeling concentration-dependent sorption-desorption hysteresis of atrazine in a sandy loam soil. Journal of Environmental Quality 40:538–547.
- 1.52. Navon, R., S. Hernandez-Ruiz, J. Chorover and B. **Chefetz**. 2011. Interactions of carbamazepine in soil: effects of dissolved organic matter. Journal of Environmental Quality 40:942-948.
- 1.53. Wang, Z., J. Zhao, L. Song, H. Mashayekhi, **B. Chefetz**, and B. Xing. 2011. Adsorption and desorption of phenanthrene on carbon nanotubes in simulated gastrointestinal fluids. Environmental Science & Technology 45:6018–6024.
- 1.54. Golan-Rozen, N., **B. Chefetz**, J. Ben-Ari, J. Geva, and Y. Hadar. 2011. Transformation of the recalcitrant pharmaceutical compound carbamazepine by *Pleurotus ostreatus*: Role of cytochrome P450 monooxygenase and manganese peroxidase. Environmental Science & Technology 45:6800–6805.
- 1.55. Olshansky, Y., T. Polubesova, W. Vetter, and **B. Chefetz**. 2011. Sorption-desorption behavior of polybrominated diphenyl ethers in soils. Environmental Pollution 159:2375-2379.
- 1.56. Hernandez Ruiza, S., L. Abrell, S. Wickareseramara, B. Chefetz, and J. Chorover. 2012. Quantifying PPCP interaction with dissolved organic matter in aqueous solution: Combined use of fluorescence quenching and tandem mass spectrometry. Water Research 46:943–954.
- 1.57. Oren A. and **B. Chefetz**. 2012. Sorptive and desorptive fractionation of dissolved organic matter (DOM) by mineral soil matrices. Journal of Environmental Quality 41:526–533.

- 1.58. Oren A. and **B. Chefetz**. 2012. Successive sorption-desorption cycles of dissolved organic matter in mineral soil matrices. Geoderma 189-190:108–115.
- 1.59. Zhao, J., Z. Wang, H. Mashayekhi, P. Mayer, **B. Chefetz** and B. Xing. 2012. Pulmonary surfactant suppressed phenanthrene adsorption on carbon Nanotubes through solubilization and competition as examined by passive dosing technique. Environmental Science & Technology 46:5369–5377.
- 1.60. Dvorkin, G., M. Manor, M. Sibony, **B. Chefetz** and B. Rubin. 2012. Effects of long-term irrigation with reclaimed wastewater on the efficacy and fate of trifloxysulfuron-sodium in the soil. Weed Research 52:441–448.
- 1.61. Haham, H., A. Oren, and **B. Chefetz**. 2012. Insight into the role of dissolved organic matter in sorption of sulfapyridine by semiarid soils. Environmental Science & Technology 46:11870-11877.
- 1.62. Hernandez Ruiz, S., S. Wickramasekara, L. Abrell, X. Gao, **B. Chefetz** and J. Chorover. 2013. Complexation of trace organic contaminants with fractionated dissolved organic matter: Implications for mass spectrometric quantification. Chemosphere 91:344-350.
- 1.63. Borgman, O. and **B. Chefetz**. 2013. Combined effects of biosolids application and irrigation with reclaimed wastewater on transport of pharmaceutical compounds in arable soils. Water Research 47:3431-3443.
- 1.64. Lerman, I., Y. Chen, B. Xing, and **B. Chefetz**. 2013. Adsorption of carbamazepine by carbon nanotubes: effects of DOM introduction and competition with phenanthrene and bisphenol A. Environmental Pollution 182:169-176.
- 1.65. Mitchell, P.J., A. Simpson, A. R. Soong, A. Oren, **B. Chefetz**, and M. J. Simpson. 2013. Solution-state NMR investigation of dissolved organic matter sorptive fractionation by mineral soils. Environmental Chemistry 10:333–340.
- 1.66. Grossberger, A., Y. Hadar, T. Borch, and **B. Chefetz**. 2014. Biodegradability of pharmaceutical compounds in agricultural soils irrigated with treated wastewater. Environmental Pollution 185:168-177.
- 1.67. Polubesova, T. and **B. Chefetz**. 2014. DOM-affected transformation of contaminants on mineral surfaces: A review. Critical Reviews in Environmental Science and Technology 44:223-254.
- 1.68. Young, R.B., **B. Chefetz**, A. Liu Y. Desyaterik, and T. Borch. 2014. Direct photodegradation of lamotrigine (an antiepileptic) in simulated sunlight – pH influenced rates and products. Environmental Science: Processes & Impacts 16:848-857.
- 1.69. Goldstein, M., M. Shenker, and **B. Chefetz**. 2014. Insights into the uptake processes of wastewater-borne pharmaceuticals by vegetables. Environmental Science & Technology 48:5593–5600.
- 1.70. Olshansky, Y. T. Polubesova, and **B. Chefetz**. 2014. Reconstitution of cutin monomers on smectite surfaces: Adsorption and esterification. Geoderma 232–234:406–413.