Contents

Scope of the Book Wastewater Reuse and Current Challenges ................. 1
Klaus Kümmerer, Dionysios D. Dionysiou, and Despo Fatta-Kassinos

New Challenges for the Analytical Evaluation of Reclaimed
Water and Reuse Applications .......................................................... 7
Ana Agüera and Dimitra Lambropoulou

Bioassays Currently Available for Evaluating the Biological Potency
of Pharmaceuticals in Treated Wastewater ........................................ 49
Marlen I. Vasquez, Irene Michael, Klaus Kümmerer,
and Despo Fatta-Kassinos

Bioavailability and Uptake of Organic Micropollutants During Crop
Irrigation with Reclaimed Wastewater: Introduction to Current Issues
and Research Needs ................................................................. 81
N. Cañameras, J. Comas, and J.M. Bayona

Irrigation with Treated Wastewater: Potential Impacts
on Microbial Function and Diversity in Agricultural Soils .............. 105
Ana Rita Lopes, Cristina Becerra-Castro, Ivone Vaz-Moreira,
M. Elisabete F. Silva, Olga C. Nunes, and Célia M. Manaia

Antibiotic Resistance Elements in Wastewater Treatment Plants:
Scope and Potential Impacts ......................................................... 129
Joao Gatica, Ella Kaplan, and Eddie Cytryn

Safe Drinking Water? Effect of Wastewater Inputs and Source
Water Impairment and Implications for Water Reuse ..................... 155
Susan D. Richardson and Cristina Postigo
Design of Water Recovery System with Process Integration ............... 183
Dominic C.Y. Foo

Wastewater Use in Agriculture and Relevance of Micropollutants in North African Countries ............................................................. 193
Olfa Mahjoub

Water Reuse Within the Paper Industry ........................................... 213
Angeles Blanco, Daphne Hermosilla, and Carlos Negro

Reusing Landfill Leachate Within the Framework of a Proper Management of Municipal Landfills ...................................................... 239
G. Del Moro, C. Pastore, E. Barca, C. Di Iaconi, G. Mascolo,
G. Brunetti, and V. Uricchio

Index .................................................................................................. 257