

# Contents

<b>Preface .....</b>	<b>ix</b>
<b>1. Overview: Current Status of Environmental Research on Water Contaminants .....</b> Satinder Ahuja	<b>1</b>
<b>2. Synthetic Organic Chemical Pollutants in Water: Origin, Distribution, and Implications for Human Exposure and Health .....</b> Bommanna G. Loganathan, Satinder Ahuja, and Bikram Subedi	<b>13</b>
<b>3. Current Status of Heavy Metal Contaminants and Their Removal/Recovery Techniques .....</b> Manavi Yadav, Radhika Gupta, Gunjan Arora, Priya Yadav, Anju Srivastava, and Rakesh Kumar Sharma	<b>41</b>
<b>4. A Review of Microplastics in Freshwater Environments: Locations, Methods, and Pollution Loads.....</b> Julie R. Peller, Cassandra R. Nelson, Bharath Ganesh Babu, Christopher Iceman, and Edward Kostelnik	<b>65</b>
<b>5. GenX in Cape Fear River Water Was Only One Part of the PFAS Story in North Carolina .....</b> Lawrence B. Cahoon	<b>91</b>
<b>6. A Review on Disinfection and Disinfection Byproducts.....</b> Surbhi Tak, Bhanu Prakash Vellanki, and Satinder Ahuja	<b>105</b>
<b>7. Disinfection Byproducts in Drinking Water: Formation, Characterization, Control Technologies .....</b> Bineyam Mezgebe, Endalkachew Sahle-Demessie, and George A. Sorial	<b>119</b>
<b>8. The Binding of Ciprofloxacin with Perfluorooctanesulfonic Acid (PFOS): Fluorescence and pH Studies.....</b> Carol A. Ajjan, Abul Hussam, and Greg Foster	<b>143</b>
<b>9. Designing Multidentate Ligands for Ion Complexation and Water Remediation .....</b> Marianne Kajy, Courtney Mather, Hayden Cunningham, Kayla Polisano, Coryn Le, Ahmed Al-Hilali, Justin Pothoof, Clayton Blackwell, and Mark A. Benvenuto	<b>167</b>
<b>10. Recent Progress on the Development of Superhydrophobic and Superoleophilic Meshes for Oil and Water Separation: A Review .....</b> Nadeem Baig	<b>175</b>

<b>11. Recent Developments in Aqueous Arsenic(III) Remediation Using Biomass-Based Adsorbents .....</b>	<b>197</b>
Chanaka Navarathna, Jacinta Alchouron, Achala Liyanage, Amali Herath, Pathum Wathudura, Samadhi Nawalage, Prashan Rodrigo, Sameera Gunatilake, Dinesh Mohan, Charles Pittman, and Todd Mlsna	
<b>12. Cellulose-Supported Nanosized Zinc Oxide: Highly Efficient Bionanomaterial for Removal of Arsenic from Water.....</b>	<b>253</b>
Sunil K. Sharma, Priyanka R. Sharma, Hui Chen, Ken Johnson, Chengbo Zhan, Ruifu Wang, and Benjamin Hsiao	
<b>13. Remediation of <math>UO_2^{2+}</math> from Water by Nitro-Oxidized Carboxycellulose Nanofibers: Performance and Mechanism .....</b>	<b>269</b>
Priyanka R. Sharma, Sunil K. Sharma, William Borges, Hui Chen, and Benjamin S. Hsiao	
<b>Editors' Biographies .....</b>	<b>285</b>
<b>Indexes</b>	
<b>Author Index.....</b>	<b>289</b>
<b>Subject Index .....</b>	<b>291</b>