Perfluorinated Chemicals (PFCs): Contaminants of Concern
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DESCRIPTION

This new volume provides a timely study on the environmental challenges from a specific class of perfluorinated chemical compounds (PFCs) that are now being recognized as a worldwide health threat. Recent studies report that levels of classes of PFCs known as polyfluoroalkyl and perfluoroalkyl (PFASs) exceed federally recommended safety levels in public drinking-water supplies for 6 million people in the United States and that as many as 100 million people could be at risk from exposure to these chemicals.

These chemicals occur globally in wildlife and humans. Both PFCAs and PFSAs have been produced for more than 50 years, but have only become of interest to regulators and environmentalists since the late 1990s. Recent advances in analytical methodology has enabled widespread detection in the environment and humans at trace levels. These toxic chemicals have been found in outdoor and indoor air, surface and drinking water, house dust, animal tissue, human blood serum, and human breast milk. Of great concern to communities is the presence of these compounds in a number of drinking water supplies in the U.S. and other countries.

This new volume provides a timely explanation of the chemicals, provides a detailed review of the regulations both in the US and European Community, explains the health risk literature, and then explores in great detail available treatment technologies. The volume is a must for public water supply facilities, industrial operations that have historically used these chemicals and face legacy pollution issues, policy makers and the general public.
Nicholas P. Cheremisinoff is the Principal of No Pollution Enterprises. He is a chemical engineer specializing in the safe handling and management of industrial chemicals and hazardous materials with nearly forty years of industry, business and applied research experience. He earned his B.Sc., M.Sc. and Ph.D. in chemical engineering from Clarkson College of Technology in Potsdam, New York. Over his long career he has worked pollution prevention and waste to energy projects in the refining, gas processing and the petrochemicals industries for numerous U.S. and foreign clients. For international lending institutions including the World Bank Organization, the U.S. Export-Import Bank, the International Finance Corporation, and donor agencies including the U.S. Agency for International Development, the U.S. Trade & Development Agency, and the European Union he has served as consultant and technical advisor on pollution management, worker safety, and environmental management practices. He has also held academic positions, including adjunct professor at the New Jersey Institute of Technology and Farleigh Dickenson University, and has been an invited Lecturer at the Russian and Ukrainian Academies of Sciences, the Jordan University of Science and Technology, Texas A&M University, University of Missouri-Rolla, Cooper Union University, and the University of Leuven. He has authored, co-authored or edited more than 100 technical reference and textbooks.

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