2015 Clarke Prize Laureate

John C. Crittenden, Ph.D., P.E., N.A.E, C.A.E.
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Crittenden was selected as the 2015 recipient for his vision and dedication to developing sustainable urban water resources. At Michigan Technical University, he directed a center for green chemistry and environmentally responsible engineering that focused on eliminating contaminants rather than just treating them. In this position, Crittenden led professionals from various disciplines in collaborative research to develop clean technologies for manufacturing and chemical production. Because of his leadership in this area, Crittenden was selected by the American Institute of Engineers as one of the "100 Eminent Chemical Engineers in Modern Times."

In 2008, Crittenden was recruited to Georgia Tech to direct the Brook Byers Institute for Sustainable Systems (www.sustainable.gatech.edu), which was established to create technological, management, and policy strategies to ensure a sustainable future. Crittenden focuses on developing sustainable water resources through a system-wide examination of water use in transportation, energy production, low-impact development (such as green roofs and permeable pavement), and land use.

An intellectual leader in environmental engineering, Crittenden has made numerous contributions to the discipline. His team developed software routinely used for the preliminary design of GAC, air stripping, and advanced oxidation systems. These tools have also been used to optimize water treatment for the International Space Station (NASA launched the system into space three years ago, and it has been in use ever since). Crittenden also created a model called the Rapid Small Scale Column Test (RSSCT), which uses a simple set of experiments to simulate the operation of full-scale GAC treatment systems. Now an industry standard, RSSCT makes it possible for engineers to efficiently design GAC treatment systems more quickly and economically than traditional methods. Crittenden has authored or co-authored 84 peer-reviewed articles and contributed to more than a dozen books, including his work as the senior author of the 2011 textbook, *Water Treatment: Principles and Design*, which has sold more than 10,000 copies.

Currently, he serves as Co-Editor-in-Chief of *Frontiers in Environmental Science and Engineering*, and Executive Associate Editor-in-Chief of Frontiers of Chemical Science and Engineering. In addition, Crittenden has been an Associate Editor *of Environmental Science and Technology* since 1998.