

## Dionysios (Dion) Demetriou Dionysiou (1966–2023)

By Kevin E. O’Shea & Maria G. Antoniou

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**Pioneer in the development of innovative drinking water treatment processes and wastewater remediation methods.**

Professor Dionysiou, a brilliant scientist, worked tirelessly towards the expansion of global access to clean affordable drinking water. For nearly three decades, he played an active role in the exploration of innovative technologies for water treatment. Dion was an exemplary scholar, a powerful advocate of professional service, a gifted lecturer, and an exceptional mentor to students and young faculty. He was a leader in addressing drinking water problems caused by naturally occurring and manmade toxins with research interests from advanced oxidation processes for water treatment to physicochemical phenomena on particle–water interfaces to fundamental, fate, transport, and applications of nanomaterials.

Dion was born in a small village in the Paphos District, Yiouliou on the island nation of Cyprus on 13 June 1966. He spent his childhood exploring nature, going to the beach, fishing, and playing outdoors with an army of friends and relatives. Dion often reflected on a magical childhood as one living with nature from which he developed a purposeful motivation to protect the environment. He seemed to enjoy everything he did from picking grapes in hot summers to his military service. Dion experienced political and social unrest during the invasion of Cyprus in 1974 and a first-hand appreciation of water scarcity growing up in Cyprus especially during difficult times. These experiences motivated him to identify solutions to global water shortages.

He earned a bachelor’s degree in chemical engineering at the National Technical University of Athens (1991), a master’s degree in chemical engineering at Tufts University (1995), and a doctoral degree in environmental engineering from the University of Cincinnati (2000). Upon completing his PhD he joined the faculty in the Department of Chemical and Environmental Engineering



at the University of Cincinnati (UC) where he served for 23 years as a faculty member, teacher, and mentor to hundreds of students, faculty and research scholars. Dion held Herman Schneider and Distinguished Research Professorships at UC.

Dion possessed a unique curiosity to understand chemical processes. He was tireless in the pursuit of sustainable solutions for the remediation of naturally occurring toxins and anthropogenic pollutants, from the detection and treatment of naturally occurring cyanotoxins to the remediation of perfluoroalkyl substances. Among his greatest research achievements are contributions to the fundamental understanding and the development of photochemical, oxidative, and reductive transformation processes for the remediation of toxic substances. Early in his career, he studied the use of chemical processes to generate radical species for the degradation of water contaminants<sup>1</sup>. Dion was also at the forefront of developing innovative visible light-activated photocatalysts, with a single publication being cited more than 4,000 times<sup>2</sup>. His tremendous contributions to the understanding and application

of advanced oxidation processes extended for more than two decades<sup>3</sup>. Dion published more than 650 journal publications with over 80,000 citations. He had an H-index -150, and i10-index -600 on Google Scholar. Leading an extensive number of funded and collaborative research projects, Dion delivered over 600 talks in over 50 countries and taught more than 30 different courses in engineering.

Dion was widely known and respected for his contributions through professional engagement and as a powerful advocate for young researchers, women, and underprivileged groups. His drive, vision, leadership, kindness, and selflessness, combined with his ability to form strong and trusting professional relationships, were critical in his ability to form fruitful international collaborations. Dion built a huge family of academic children, brothers, and sisters around the globe, through his extensive service on editorial boards and review panels, leading large research teams, and the organization of meetings around the world. Over his career, Dion served as a pillar in numerous professional organizations, was recognized as a fellow of multiple national and international societies and served major editorial roles for at least ten different journals.

Beyond science, Dion was a loving and dedicated husband and father. He loved nature, photography, travelling and experiencing different cultures and cuisines. He possessed the happiest smiles and made others laugh with his contagious sense of humour and his re-enactment of Seinfeld episodes. Dion loved to listen and dance to Greek music and was known to occasionally break plates in the celebration of good times. While his professional legacy will live on through his scholarly contributions and his students, his love for life, contagious smile, dedication to family and friends, and exceptional kindness brought incredible pleasure and inspiration to all those that his heart touched.

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# Obituary

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## Additional information

M.G.A., a doctoral student of Professor Dion Dionysiou from 2003–2010, maintained a rewarding collaboration with him over the past two decades as a post-doctoral fellow at the Technical University of Denmark and throughout her current appointment as a faculty member at the Cyprus University of Technology. M.G.A. has co-authored papers, book chapters, served in European COST actions, and co-trained and co-mentored doctoral students from Professor Dionysiou's group on cyanobacteria and cyanotoxin-related projects.

The collaboration of K.E.O. and Dion started around 2005 over common research interests. Dion and

K.E.O. developed a close friendship and shared great times enjoying meals and wine during attendance at conferences in Hawaii, London, Miami, San Francisco, New Orleans, Barcelona, Istanbul, and Dublin.

Their research collaboration was supported nearly continually for ~20 years, resulting in ~50 co-authored papers, organized symposia, shared mentoring of students, service on committees together and participation in conferences around the globe. Dion was devoted to quality and impactful science, and the selfless sharing of his time, knowledge and networks was a transformational influence on the lives and careers of many, especially K.E.O. K.E.O. feels blessed by the friendship with and memories of Dion and is thankful to Dion's wife, Paula and their daughters for sharing Dion with the rest of us.