Fiona REGAN

Function	Director
Institution	Dublin City University - DCU Water Institute
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Key words	Emerging contaminants, sensor technologies (pharmaceuticals, toxins, E. coli, and nutrients), passive sampling, and decision support tools for water monitoring.

Areas of expertise

Fiona's research focuses on environmental monitoring using sensing and passive sampling. She has special interest in priority and emerging contaminants as well as the establishment of decision support tools for environmental monitoring using novel technologies and data management tools. Her work includes the areas of separations and sensors, materials for sensing and antibiofouling applications on aquatic deployed systems.

Professional Background

Full Professor of Chemistry, School of Chemical Sciences Dublin City University (DCU)

Director, DCU Water Institute (> 40 PIs, researchers: Themes of Water & Health, Marine, Sustainable Agriculture, Energy)

Projects: FP7, H2020, Interreg, (National EPA, Marine Institute, SFI), enterprise partnerships etc.

>100 publications, books, book chapters; > 25 PhDs/MScs, current group 3 Post docs, 6 PhDs.

Associate Editor/Editor: RSC Analytical Methods; Springer Water Conservation Science and Engineering.

Scientific advisor: Oceanids (NERC Marine Autonomous Systems); Royal Irish Academy - Climate Change and Environmental Sciences.

Board Member: SmartBay Ireland (National Marine Test and Demonstration Site)

Publications (multidisciplinary projects):

On the harmonization of methods for measuring the occurrence, fate and effects of microplastics, CM Rochman, F Regan, RC Thompson, (2017) Analytical Methods 9 (9), 1324-1325

A robust analytical method for the determination of pesticide residues in wastewater, L Jones, B Kinsella, K Forde, A Furey, F Regan, (2018) Analytical Methods 9 (28), 4167-4174

Recent developments in sensing methods for eutrophying nutrients with a focus on automation for environmental applications, G Duffy, F Regan, (2018) Analyst 142 (23), 4355-4372

ChromiSense: A colourimetric lab-on-a-disc sensor for chromium speciation in water, G Duffy, I Maguire, B Heery, P Gers, J Ducrée, F Regan, (2018) Talanta 178, 392-399 2018

Ivan Maguire, Jenny Fitzgerald, Brendan Heery, Charles Nwankire, a Richard O'Kennedy, Jens

Ducrée and Fiona Regan, A novel centrifugal microfluidic sensor for the simultaneous determination of algal toxins Microcystin-LR, Domoic Acid and Saxitoxin, (2018) ACS Omega 3 (6), 6624-6634

EPA reports: Research 243: Role of Passive Sampling in Screening and Monitoring of New and Emerging Chemicals; STRIVE 117 - Monitoring of Priority Substances in Waste Water Effluents; Summary of Findings - Smart Catchment Demonstration: Long-term deployment of sensor monitoring system (DEPLOY).

Key activities:

Engaged in OECD workshops on emerging contaminants; IWA Diffuse Pollution Group.

Water related R & D > 20 years; 3rd level training in water science & technology; Invited lectures on water monitoring technologies