

Dedication



Michel Frankignoulle was instrumental in setting up the 37th Liège Colloquium. He left us on March, 13, 2005 before the meeting. With the unanimous approval from the steering committee of the 37th Liège Colloquium, the present volume is dedicated to his memory.

Michel graduated in Chemistry from the University of Liège (Belgium) in 1981. He completed his Ph.D. in 1986 in the laboratory of Professor Albert Distèche and became a Research Associate at the Fonds National de la Recherche Scientifique (FNRS) in 1989. He defended his aggregation thesis in 2003, and became a Senior Research Associate at the FNRS in 2004.

Michel carried out his Ph.D. research in the Bay of Calvi (Corsica) where he developed *in situ* pH probes which allowed him to tackle a wide range of research themes such as dissolved inorganic carbon dynamics, eddy diffusion in the water column, gas transfer velocity, carbonate buffer factors, and ecosystem metabolism. The latter led him to team up with Jean-

Pierre Gattuso on pioneering studies of carbon dynamics in coral reefs. Together they showed that coral reefs are net sources of CO₂ to the atmosphere, based on experimental and theoretical approaches. They also showed that a decrease in calcium carbonate saturation state would lead to a decrease in calcification, and hence act as a potential negative feedback on the increase of atmospheric CO₂. The effect of ocean acidification on marine biogeochemistry, air–sea CO₂ fluxes and climate change has become a hot research topic partly as a result of these earlier studies.

In the early 1980s, Michel met Roland Wollast and in the early 1990s they worked on CO₂ dynamics in the Scheldt estuary. Their close collaboration was one of the cornerstones of the BIOGEST (Biogas Transfer in Estuaries) project that allowed quantifying rigorously the fluxes of biogases (and in particular greenhouse gases) between temperate tidal estuaries and the atmosphere. Michel was the first to demonstrate the significance of CO₂ emissions from estuaries in the global carbon cycle.

Michel also worked extensively in the North Sea and the Gulf of Biscay in collaboration with Roland Wollast, in the framework of several projects among which OMEX (Ocean Margin Exchange). Results of the BIOGEST and OMEX projects pointed towards the significance of the coastal ocean in the global carbon and CO₂ cycles, a topic which presently receives a growing attention.

More recently, Michel's love of adventure and dedication to discovery led him to work on CO₂ dynamics in tropical estuaries and mangrove environments. He left comfortable European research vessels for pirogues and creeks infested by mosquitoes to point out the biogeochemical significance of low-latitude coastal areas with his long-lived determination and unaltered enthusiasm.

Together with Roland Wollast, Jean-Pierre Gattuso, Jack J. Middelburg and Carlos M. Duarte among others, in the framework of the EUROTROPH (Nutrients

Cycling and the Trophic Status of Coastal Ecosystems) project he investigated the past and future changes of ecosystem metabolism and CO₂ fluxes in coastal environments related to pollution and eutrophication. This has also become a hot topic in coastal biogeochemistry.

Michel had the same level of passion for life and mankind as for science. Throughout his life, he fought against intolerance, injustice and pre-conceived ideas at all ideological, political and scientific levels. All of his close collaborators and friends will continue to cherish his philosophy.

His wife, his three daughters, his numerous friends and colleagues will sorely miss “Miche” as we all called him.

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