Table of contents

Chapter 1  General introduction 7

Chapter 2  Are luminescent bacteria suitable for on-line detection and monitoring of toxic compounds in drinking water and its sources? 17

Chapter 3  Responsiveness of the genetically modified bacterial strain DPD2794 for the detection of genotoxic compounds 51

Chapter 4  Construction of an on-line water toxicity sensor based on immobilized genetically modified bacteria 71

Chapter 5  Application of a sensor with immobilized luminescent bacteria for on-line surface water monitoring 93

Chapter 6  Summary, general discussion and outlook 115

Chapter 7  Samenvatting, algemene discussie en vooruitblik 127

Dankwoord 139

Curriculum Vitae 141

Publications 143