

2.4.3.2.	Introduction	51
2.4.3.3.	Results and discussion.....	52
2.4.3.4.	Conclusions	59
2.4.3.5.	Acknowledgements.....	59
2.4.3.6.	References and Notes	59
2.4.3.7.	Supporting Information.....	62
3.	OPTICAL CHEMOSENSORS FOR ANIONS	75
3.1.	ABOUT THIS CHAPTER	75
3.2.	PRELIMINARY DISCUSSION.....	75
3.3.	THEORETICAL CONSIDERATIONS	76
3.4.	ANION CHEMOSENSOR BY BINDING SITE-SIGNALING SUBUNIT APPROACH.....	78
3.4.1.	<i>Experimental objectives</i>	78
3.4.2.	<i>Chemosensor design</i>	78
3.4.3.	<i>Synthesis and evaluation of thiosemicarbazones functionalized with furyl moieties as new chemosensors for anion recognition.</i>	79
3.4.3.1.	Abstract.....	81
3.4.3.2.	Introduction	81
3.4.3.3.	Results and discussion.....	84
3.4.3.4.	Conclusions	101
3.4.3.5.	Experimental section.....	102
3.4.3.6.	Acknowledgements.....	108
3.4.3.7.	References and Notes	108
3.4.3.8.	Supporting information.....	111
3.4.4.	<i>Synthesis and evaluation of fluorimetric and colorimetric chemosensors for anions based on (oligo)thienyl-thiosemicarbazones</i>	117
3.4.4.1.	Abstract.....	119
3.4.4.2.	Introduction	119
3.4.4.3.	Results and discussion.....	121
3.4.4.4.	Conclusions	132
3.4.4.5.	Experimental section.....	132
3.4.4.6.	Acknowledgements.....	136
3.4.4.7.	References and notes.....	137
3.5.	ANION CHEMOSENSOR BY DISPLACEMENT ASSAY APPROACH	139
3.5.1.	<i>Experimental objectives</i>	139
3.5.2.	<i>Chemosensor design</i>	139
3.5.3.	<i>Highly selective fluorescence detection of hydrogen sulfide by using an anthracene-functionalized cyclam–Cu(II) complex</i>	140

3.5.3.1.	Abstract	142
3.5.3.2.	Introduction	142
3.5.3.3.	Results and discussion.....	144
3.5.3.4.	Conclusions	148
3.5.3.5.	Acknowledgements.....	149
3.5.3.6.	References and notes.....	149
3.5.3.7.	Supporting information.....	151
3.6.	ANION CHEMOSENSOR BY CHEMOSIMETER PARADIGM APPROACH	159
3.6.1.	<i>Experimental objectives</i>	159
3.6.2.	<i>Chemosensor design</i>	159
3.6.3.	<i>A chemosensor bearing sulfonyl azide moieties for selective chromo- fluorogenic hydrogen sulfide recognition in aqueous media and in living cells</i>	160
3.6.3.1.	Abstract.....	162
3.6.3.2.	Introduction	162
3.6.3.3.	Results and Discussion	165
3.6.3.4.	Conclusions	172
3.6.3.5.	Experimental Section	173
3.6.3.6.	Acknowledgments.....	176
3.6.3.7.	References and Notes	177
3.6.3.8.	Supporting information.....	180
4.	SUPRAMOLECULAR NANOSYSTEMS AS CHEMOSENSORS	189
4.1.	ABOUT THIS CHAPTER	189
4.2.	PRELIMINARY DISCUSSION.....	189
4.3.	THEORETICAL CONSIDERATIONS	190
4.4.	HYBRID SENSOR MATERIAL AS A FUNCIONAL SYSTEM	191
4.4.1.	<i>Experimental objectives</i>	191
4.4.2.	<i>Chemosensor design</i>	192
4.4.3.	<i>Selective and Sensitive Chromofluorogenic Detection of the Sulfite Anion in Water Using Hydrophobic Hybrid Organic–Inorganic Silica Nanoparticles</i>	193
4.4.3.1.	Introduction	195
4.4.3.2.	Results and Discussion	197
4.4.3.3.	Conclusions	204
4.4.3.4.	References and Notes	204
4.4.3.5.	Supporting information.....	207
5.	CONCLUSIONS AND PERSPECTIVES	227