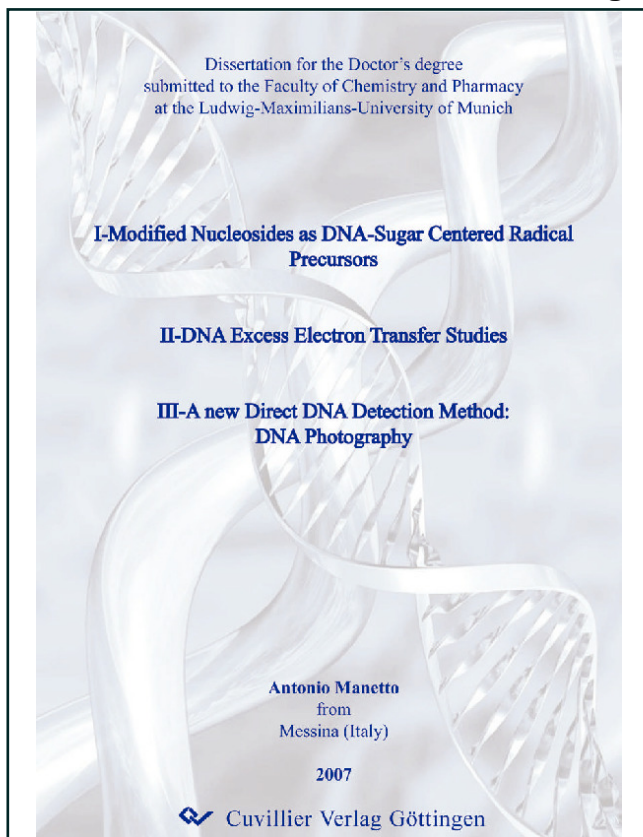




Antonio Manetto (Autor)

**I-Modified Nucleosides as DNA-Sugar Centered Radical
Precursors II-DNA Excess Electron Transfer Studies III-A new
Direct DNA Detection Method: DNA-Photography**



<https://cuvillier.de/de/shop/publications/1489>

Copyright:

Cuvillier Verlag, Inhaberin Annette Jentsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen, Germany
Telefon: +49 (0)551 54724-0, E-Mail: info@cuvillier.de, Website: <https://cuvillier.de>

Table of contents

Summary.....	I
Zusammenfassung	V
General.....	1
1 Nucleoside models for the study of C5'-radicals fate	2
1.1 Introduction	2
1.1.1 Aim of Chapter 1	20
1.2 Results and Discussion.....	21
1.2.1 Formation and fate of the <i>pseudo</i> C4'-radical.....	21
1.2.2 Radical Cyclisation Approach to Cyclonucleosides	33
1.2.3 Independent Generation of C5'-Nucleosidyl Radicals in Thymidine	46
1.3 Conclusions	53
2 Electron Transfer Through DNA	54
2.1 Introduction	54
2.1.1 Aim of Chapter 2.....	76
2.2 Results and Discussion.....	82
2.2.1 Flavin / Br-nucleoside model systems	82
2.2.2 SED: Single electron donor and multiple acceptors.....	108
2.2.3 M-MEET: Metal-Mediated Excess Electron Transfer	127
2.3 Conclusions	137
3 Molecular Beacons for DNA-Photography. Selective Detection of a Target	138
3.1 Introduction	138
3.2 Results and Discussion.....	143
3.3 Conclusions and Outlook.....	153
4 Experimental Section	154
4.1 Nucleoside models for the study of C5'-radicals fate associated with oxidative damage of DNA	155
4.1.1 Formation and fate of the <i>pseudo</i> C4'-radical.....	155
4.1.2 Radical Cyclization Approach to Cyclonucleosides	162
4.1.3 Independent Generation of C5'-Nucleosidyl Radicals in Thymidine	169
4.2 Electron Transfer through DNA.....	186
4.2.1 Sequence dependence studies.....	186
4.2.2 Single electron donor and two acceptors.....	193
4.3 M-MEET. High resolution mass	194
4.4 Molecular beacon for DNA-photography	198
5 Abbreviations	200
6 References	203
7 Curriculum Vitae.....	223