



Universiteit
Leiden
The Netherlands

The metallophilic interaction between cyclometalated complexes: photobiological applications

Zhou, X.

Citation

Zhou, X. (2021, May 26). *The metallophilic interaction between cyclometalated complexes: photobiological applications*. Retrieved from <https://hdl.handle.net/1887/3158746>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3158746>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle #<https://hdl.handle.net/1887/3158746> holds various files of this Leiden University dissertation.

Author: Zhou, X.

Title: The metallophilic interaction between cyclometalated complexes: photobiological applications

Issue Date: 2021-04-08

The Metallophilic Interaction between Cyclometalated Complexes: Photobiological Applications

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties

te verdedigen op donderdag 8th April 2021
klokke 11:15 uur

Xuequan Zhou

Geboren te Xianning (Hubei), China

In 1990

Samenstelling promotiecomissie

Promotores

Prof. dr. Sylvestre Bonnet

Prof. dr. Elisabeth Bouwman

Overige leden

Prof. dr. Hermen Overkleeft (Leiden University)

Dr. Luis J. Cruz (Leiden University Medical Center)

Prof. dr. Mario van der Stelt (Leiden University)

Prof. dr. Luisa De Cola (Strasbourg University, France)

Prof. dr. Luigi Messori (University of Florence, Italy)

Table of Contents

Chapter 1	Introduction	4
Chapter 2	The two isomers of a cyclometalated palladium sensitizer show distinct photodynamic properties in cancer cells	22
Chapter 3	The self-assembly of a cyclometalated palladium photosensitizer into proteins-stabilized nanorods triggered drug uptake in vitro and in vivo.....	38
Chapter 4	Intracellular dynamic assembly of deep-red emitting supramolecular nanostructures based on Pt...Pt metallophilic interaction.....	74
Chapter 5	Self-assembling cyclopalladated photosensitizers for photodynamic therapy: tumor accumulation and anti-tumor activity in a skin melanoma xenograft....	100
Chapter 6	Nitrogen coordination vs. rollover cyclometalation in tetrapyrrolyl anticancer gold(III) complexes	122
Chapter 7	Summary & General discussion & Outlook	

APPENDICES

Appendix I	Supporting information for chapter 2.....	158
Appendix II	Supporting information for chapter 3	163
Appendix III	Supporting information for chapter 4	173
Appendix IV	Supporting information for chapter 5.....	182
Appendix V	Supporting information for chapter 6	189