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## **Towards a single-molecule FRET study of Frauenfelder's nonexponential rebinding of CO in myoglobin**

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### **Citation**

Eskandari Alughare, Z. (2022, June 23). *Towards a single-molecule FRET study of Frauenfelder's nonexponential rebinding of CO in myoglobin*. *Casimir PhD Series*. Retrieved from <https://hdl.handle.net/1887/3348505>

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

# Towards a single-molecule FRET study of Frauenfelder's nonexponential rebinding of CO in myoglobin

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 23 juni 2022  
klokke 13.45 uur

door

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geboren te Falavarjan-Isfahan, Iran  
in 1979

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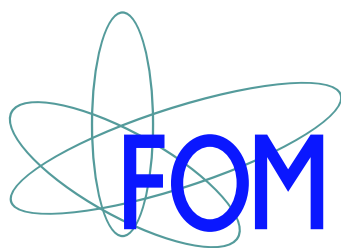
Promotiecommissie: Prof. dr. R. Croce (Vrije Universiteit Amsterdam)  
Prof. dr. D. C. Lamb (Ludwig-Maximilians-Universität München, Munich,  
Duitsland)  
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Universiteit  
Leiden  
The Netherlands



*Casimir*  
research school



Nederlandse Organisatie voor Wetenschappelijk Onderzoek

Casimir PhD series, Delft-Leiden 2022-17

ISBN 978-90-8593-528-5

An electronic version of this thesis can be found at <https://openaccess.leidenuniv.nl>

This work is part of the research programme of the Foundation of Fundamental Research on Matter (FOM), which is now part of Netherlands Organization for Scientific Research (NOW). The research of this thesis was performed at Leiden University.

Cover: designed and draw by Mrs. Zohre Eskandari Alughare. The front side of cover shows two states of fluorescent dye-labeled Myoglobin: the left 3D structure and the left cartoon show dye-labeled carboxymyoglobin (MbCO) and the right 3D structure and the right cartoon show dye-labeled dextroxy-myoglobin (Deoxy-Mb). They demonstrate that when CO bound to the myoglobin (MbCO), less FRET and less quenching effect occurs and the fluorescent dye shines, whereas in Deoxy-Mb, the attached dye is quenched due to the higher FRET. It is possible to follow this conversion in a microscope. At the bottom, the structure of heme in two states are shown. The back cover presents two fluorescent dyes (donor-acceptor) doped in a polymeric layer of PMMA to study FRET quenching at both single-molecule and ensemble levels.

*To my husband: Payam*

*and*

*To our parents*



# Contents

<b>1 Introduction.....</b>	<b>1</b>
1.1 Luminescence .....	2
1.2 Photoluminescence .....	2
1.3 Properties of fluorophores .....	4
1.3.1 Molar absorption coefficient .....	4
1.3.2 Quantum yield .....	4
1.3.3 Fluorescence lifetime .....	5
1.4 Fluorescence resonance energy transfer (FRET) .....	5
1.4.1 Distance between donor and acceptor .....	7
1.4.2 The overlap integral .....	7
1.4.3 The orientation factor $\kappa^2$ .....	9
1.5 Ensemble and single-molecule spectroscopy .....	10
1.6 Confocal microscopy .....	11
1.6.1 Time-Correlated Single-Photon Counting (TCSPC) .....	12
1.7. Proteins .....	12
1.7.1 Primary Structure .....	12
1.7.2 Secondary Structure .....	14
1.7.3 Tertiary Structure .....	14
1.7.4 Quaternary Structure .....	15
1.8. FRET in proteins.....	16
References .....	18
<b>2 The photodissociation of carboxymyoglobin (MbCO).....</b>	<b>23</b>
2.1 Myoglobin function.....	24
2.2 Myoglobin structure .....	24
2.3. Components of MbCO and deoxy-Mb spectra .....	27
2.3.1 Soret Band .....	27
2.3.2 Q- Band.....	28
2.3.3 Near Infrared .....	28
2.4 Photodissociation and its mechanism .....	29
2.5 Photodissociation of Mb-CO bond .....	30
2.6 Photodissociation and CO rebinding at room temperature.....	34
2.7 Photodissociation at low temperature.....	36
2.7.1 Model for photodissociation at low temperature .....	36
2.8 Outline .....	40
References .....	41

### **3 Estimation of dissociation quantum yield of the Mb-CO bond ... 49**

3.1 Introduction .....	50
3.1.1 Does red light ( $\lambda > 700$ nm) break the Mb-CO bond?.....	52
3.1.2 Preparation of MbCO and deoxy-Mb from Met-Mb .....	52
3.1.3 Photodissociation methods .....	53
3.2 Results .....	54
3.2.1 Preparation of deoxy-Mb and MbCO from met-Mb .....	54
3.2.2 Design of the setup .....	56
3.2.3 Study of photodissociation kinetics of Mb-CO and designed experiment .....	56
3.2.4 Control experiment.....	58
3.2.5 Study of the photodissociation kinetics of Mb-CO in the presence of..... H <sub>2</sub> O <sub>2</sub> under blue LED illumination ( $\lambda = 450$ nm) .....	60
3.2.6 Study of photodissociation kinetics of the Mb-CO in presence of H <sub>2</sub> O <sub>2</sub> ... and red LED illumination ( $\lambda = 730$ nm) .....	61
3.2.7 Estimation of photon rate .....	62
3.2.8 Comparison and calculation of quantum yield efficiency for..... photodissociation of unlabeled Mb-CO by red and blue LEDs .....	64
3.3 Conclusion and outlook .....	64
References .....	65

### **4 FRET study of CO binding to fluorescently labeled myoglobin . 67**

4.1 Introduction .....	68
4.1.1. Can we measure the FRET efficiency of different states of labeled..... Mb(CO)? .....	69
4.1.2 Investigating rebinding kinetics of CO to Mb with FRET .....	70
4.2 Results .....	70
4.2.1 Labeling position and fluorescent dye selection .....	70
4.2.2 Preparation of labeled Mb variants .....	74
4.2.3 Materials and equipment.....	74
4.2.4 Labeling and characterization of met-Mb .....	74
4.2.5 Preparation of ATTO 643-, Cy7-, and ATTO 740 -labeled deoxy-Mb..... and MbCO.....	78
4.2.6 Ensemble fluorescence lifetime measurement of ATTO 643-, Cy7-,..... and ATTO 740-labeled Mb.....	79
4.2.7 Comparison of ensemble fluorescence lifetime measurement of ATTO... 643-, Cy7-, and ATTO 740-labeled deoxy-Mb, MbCO, and met-Mb .....	81
4.3 Discussion .....	84
4.3.1 Fluorescent labelling and preparation of different states of Mb .....	84
4.3.2 Comparison of calculated Förster resonance energy transfer..... parameters and experimental lifetime .....	84
4.3.3 Förster resonance energy transfer radius ( $R_0$ ).....	85
4.3.4 Förster Resonance Energy Transfer Rate ( $k_{ET}$ ) and Energy Transfer..... Efficiency (E).....	85
4.4 Conclusion .....	90
Reference .....	90

<b>5 FRET to a distribution of acceptors at the ensemble and single-molecule levels .....</b>	<b>93</b>
5.1 Introduction .....	94
5.1.1 <i>Non-fluorescent quenching</i> .....	94
5.1.2 <i>Donor: Long-lifetime fluorescent ADOTA dye, a triangulenium dye</i> .....	95
5.1.3 <i>Acceptor: ATTO575Q, a non-fluorescent quencher dye</i> .....	95
5.1.4 <i>Calculation of the Förster radius <math>R_0</math> for ADOTA (donor)- ATTO575Q.....</i> ( <i>acceptor</i> ) .....	96
5.1.5 <i>Ensemble fluorescent quenching</i> .....	96
5.1.6 <i>Ensemble measurements of fluorescence quenching in solid-state dye-doped polymer layers.....</i>	97
5.1.7 <i>Fluorescence quenching as a function of quencher concentration</i> .....	97
5.1.8 <i>Single-molecule fluorescence quenching</i> .....	98
5.2 Results .....	99
5.2.1 <i>Confocal setup</i> .....	99
5.2.2 <i>Surface preparation of glass microscope cover slips.....</i>	100
5.2.3 <i>Ensemble sample preparation</i> .....	100
5.2.4 <i>Ensemble fluorescent lifetime quenching measurements.....</i>	101
5.2.5 <i>Single-molecule sample preparation.....</i>	101
5.2.6 <i>Single-molecule fluorescence lifetime measurements.....</i>	102
5.3 Discussion .....	103
5.3.1 <i>Comparison of single-molecule results with and without quenchers</i> .....	103
5.3.2 <i>Comparison of ensemble and single molecule results.....</i>	104
5.4 Conclusion .....	104
References .....	105
<b>Summary .....</b>	<b>107</b>
<b>Samenvatting .....</b>	<b>111</b>
<b>Curriculum Vitae .....</b>	<b>115</b>
<b>List of Publications .....</b>	<b>117</b>
<b>Acknowledgments.....</b>	<b>119</b>



