Electronic Supplementary Material (ESI) for Dalton Transactions

Supplementary material

Ruthenium imidazole oxime carbonyls and their activities as CO-releasing molecules

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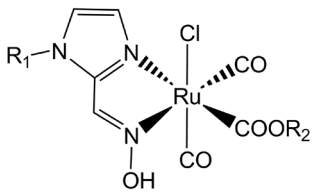
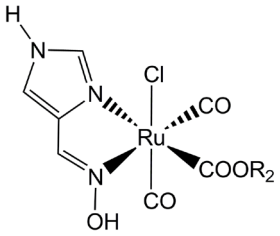
Figures presenting the changes in the UV-Vis spectrum of myoglobin in concentration 60 µM, 40 µM and 20 µM , formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM in DMSO to deoxymyoglobin solution.



1: R1: H R2: Et
2: R1: H R2: Me
3: R1: Me R2: Et
4: R1: Me R2: Me



5: R2: Et
6: R2: Me

Ru(imidazole-2-carbaldehyde oxime)(COOEt)$(CO)_2$Cl (1)

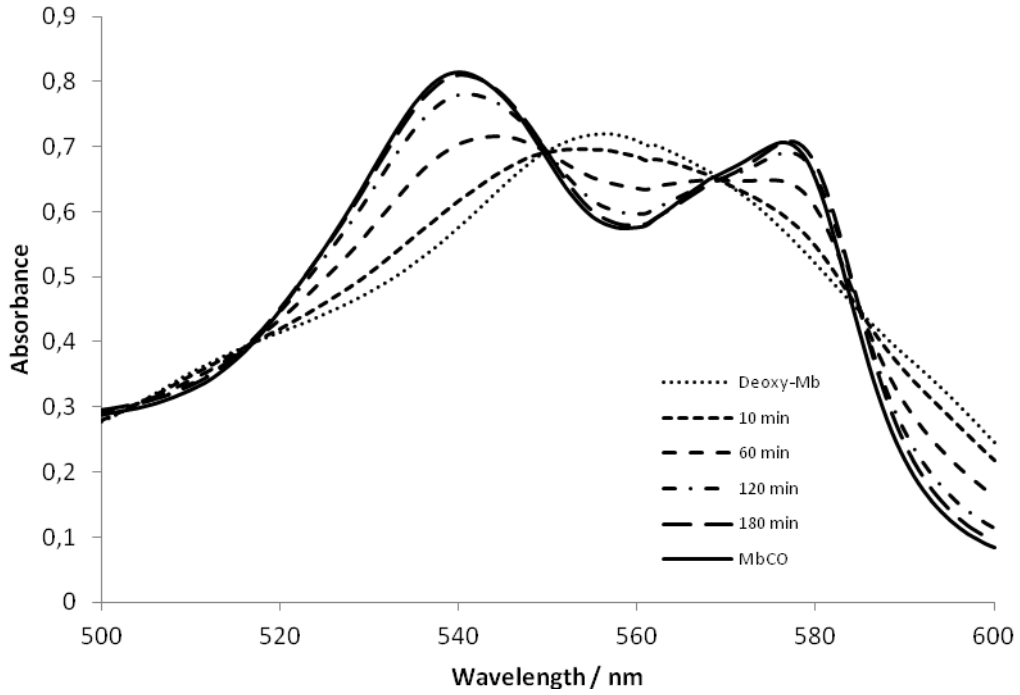


Fig. 1. The changes in the UV-Vis spectrum of myoglobin as CO is released from **1** (60 μM)

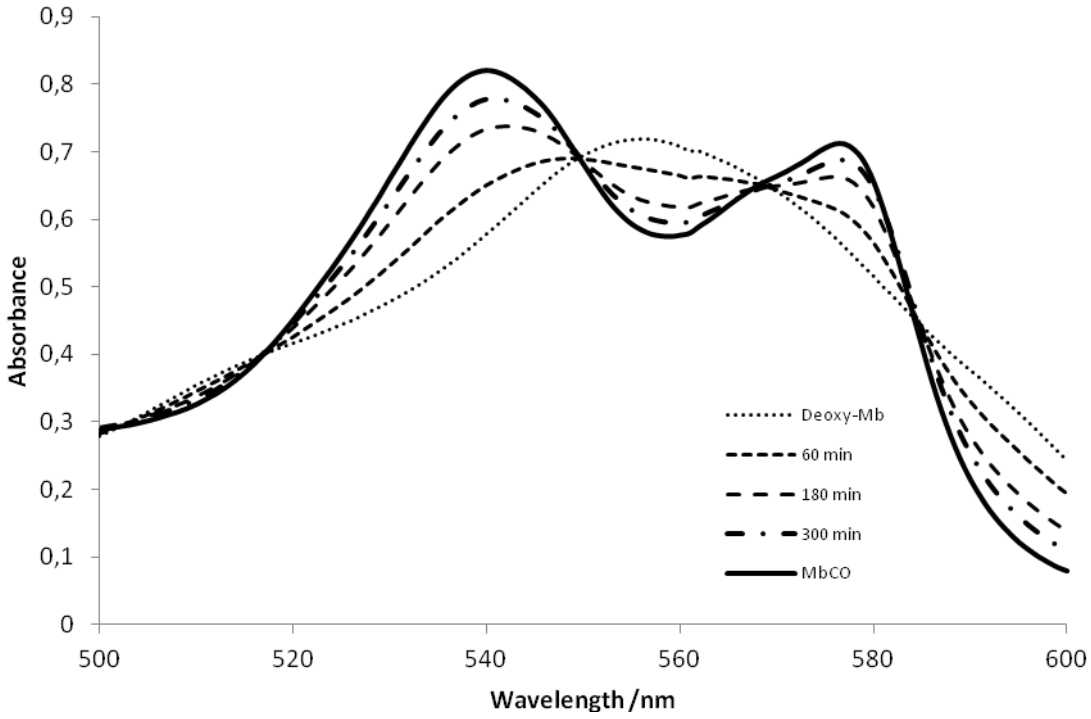


Fig. 2. The changes in the UV-Vis spectrum of myoglobin as CO is released from **1** (40 μM)

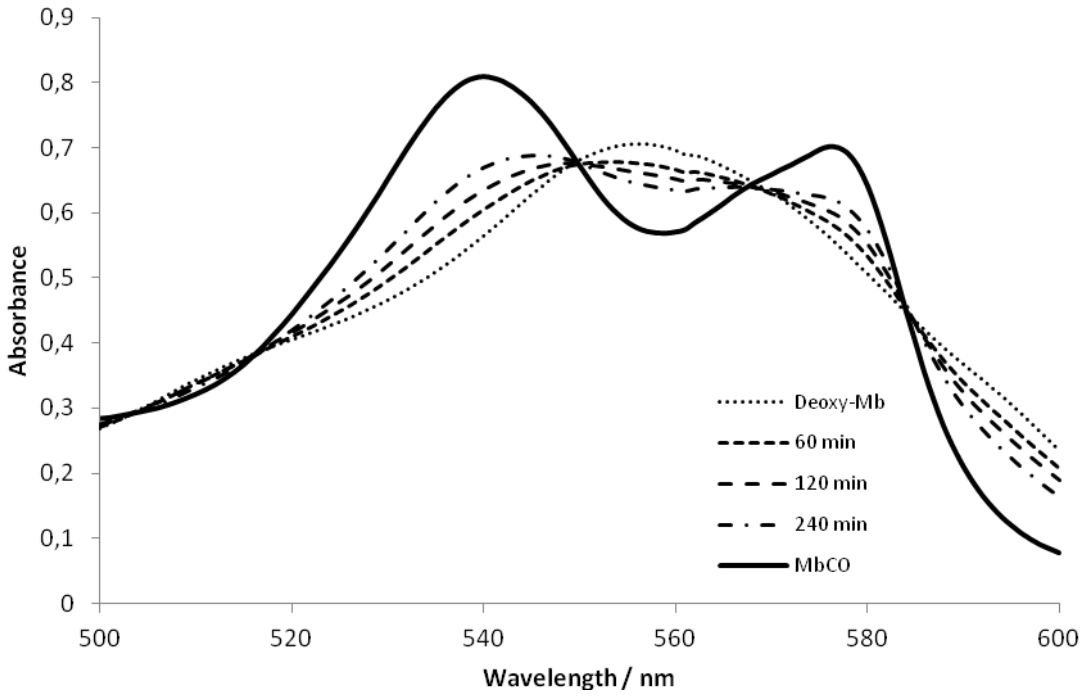


Fig. 3. The changes in the UV-Vis spectrum of myoglobin as CO is released from **1** (20 µM)

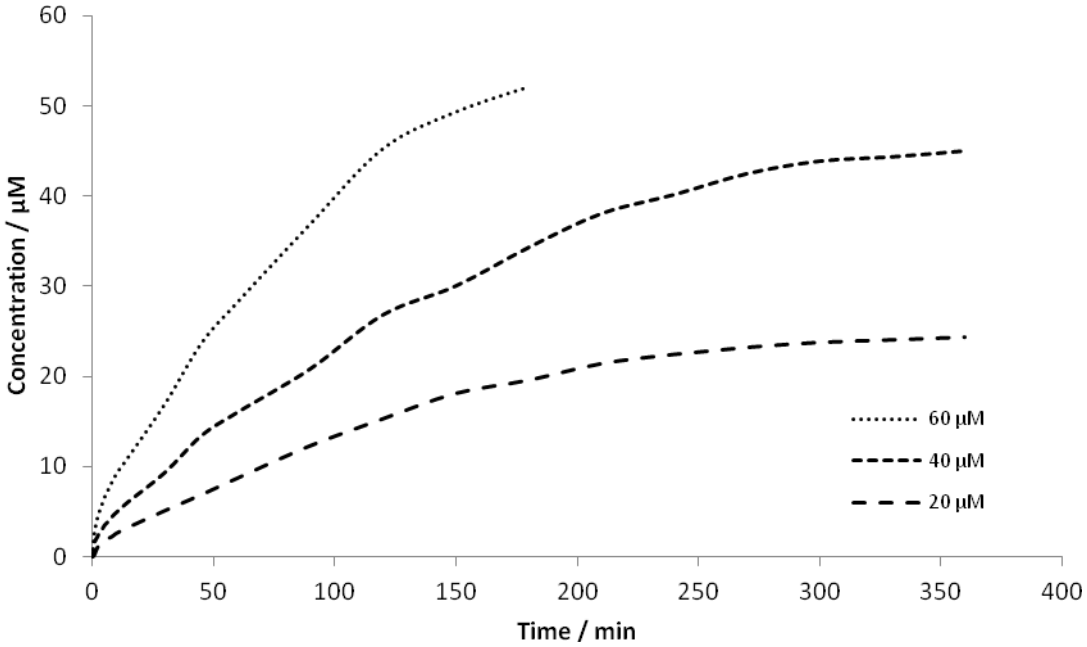


Fig. 4. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **1** in DMSO to a deoxy-myoglobin solution.

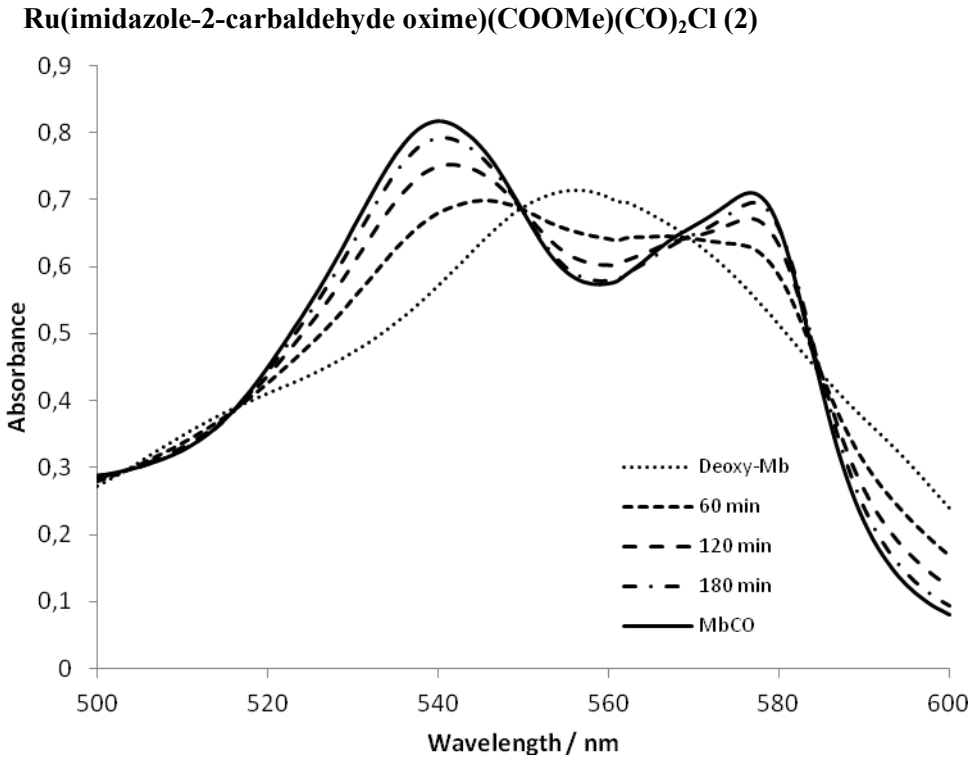


Fig. 5. The changes in the UV-Vis spectrum of myoglobin as CO is released from **2** (60 μM)

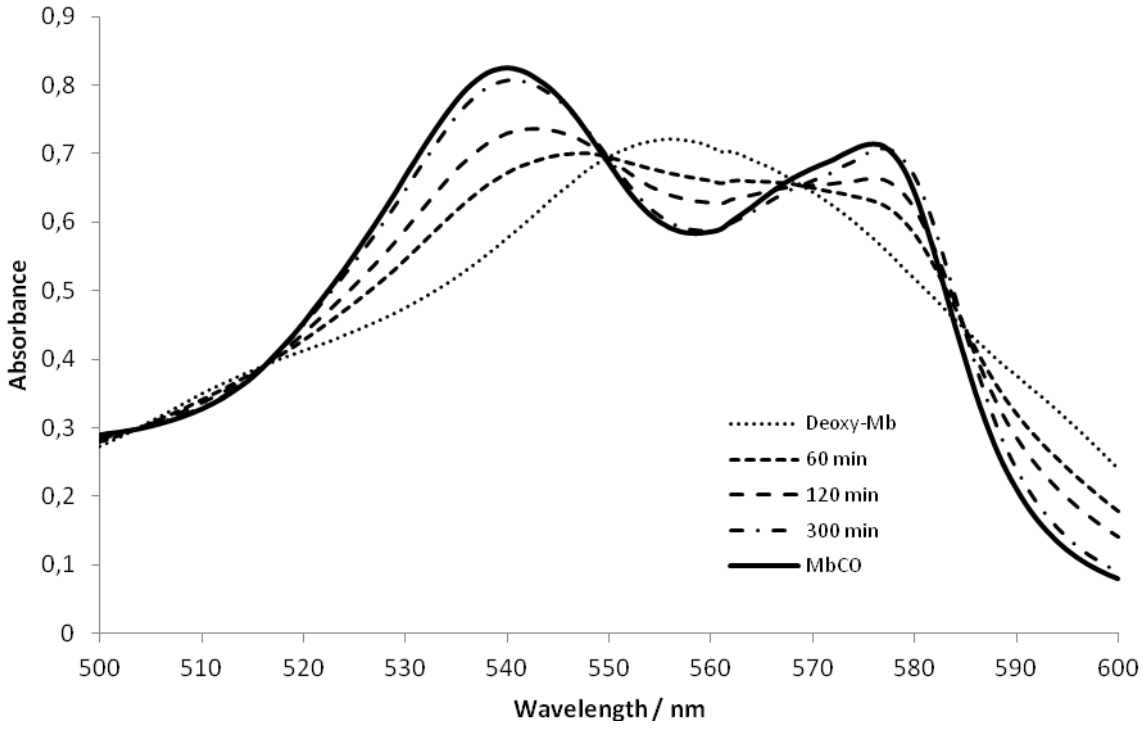


Fig. 6. The changes in the UV-Vis spectrum of myoglobin as CO is released from **2** (40 μM)

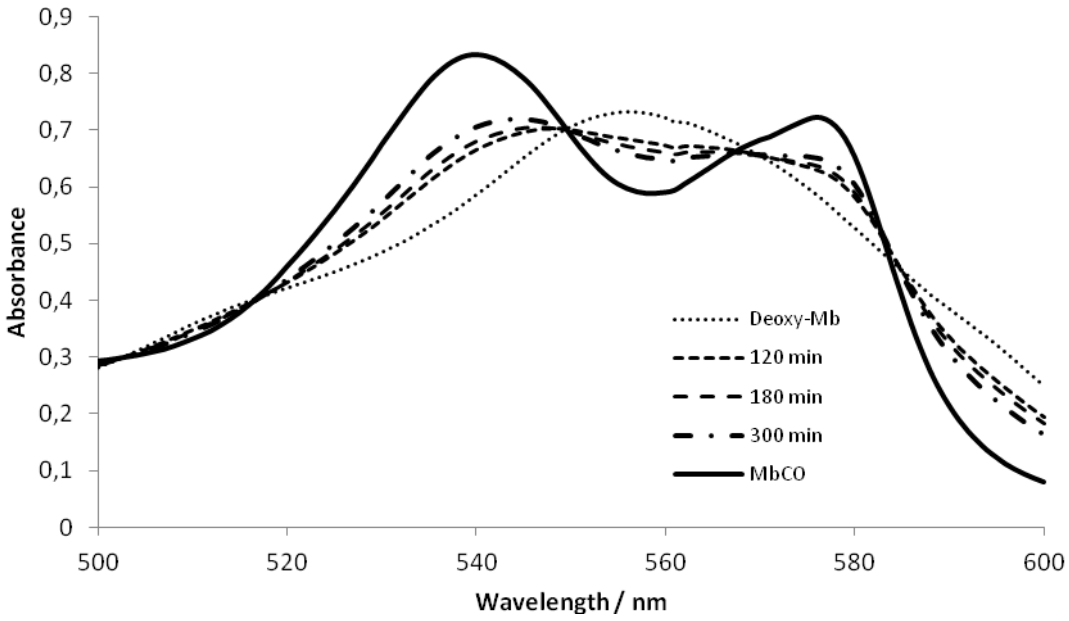


Fig. 7. The changes in the UV-Vis spectrum of myoglobin as CO is released from **2** (20 µM)

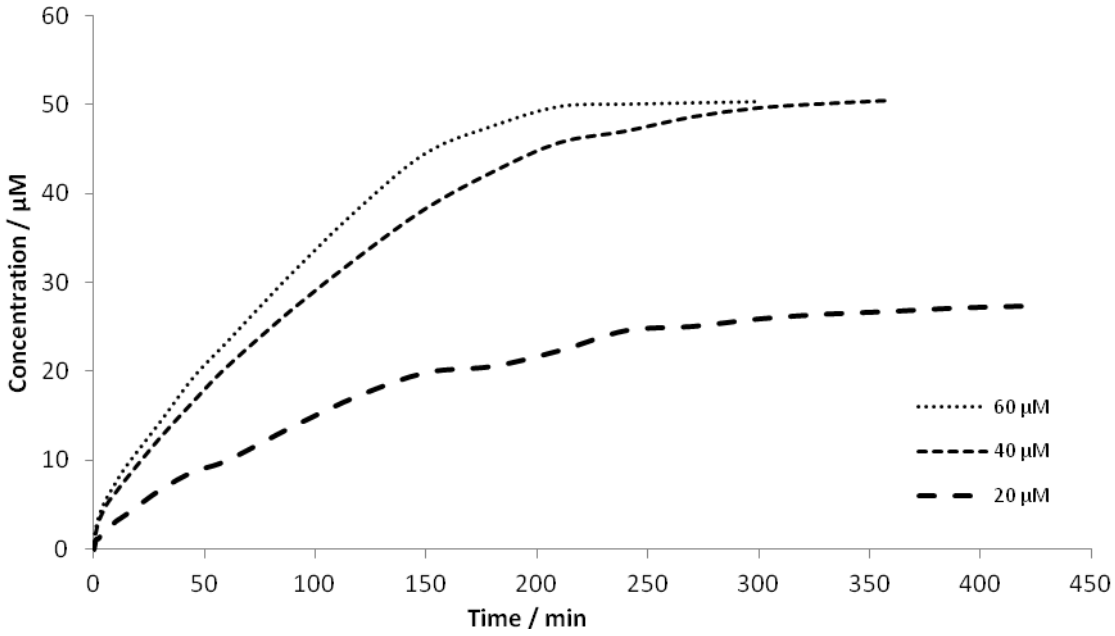


Fig. 8. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **2** in DMSO to a deoxy-myoglobin solution.

Ru(1-methylimidazole-2-carbaldehyde oxime)(COOEt)$(CO)_2$Cl (3)

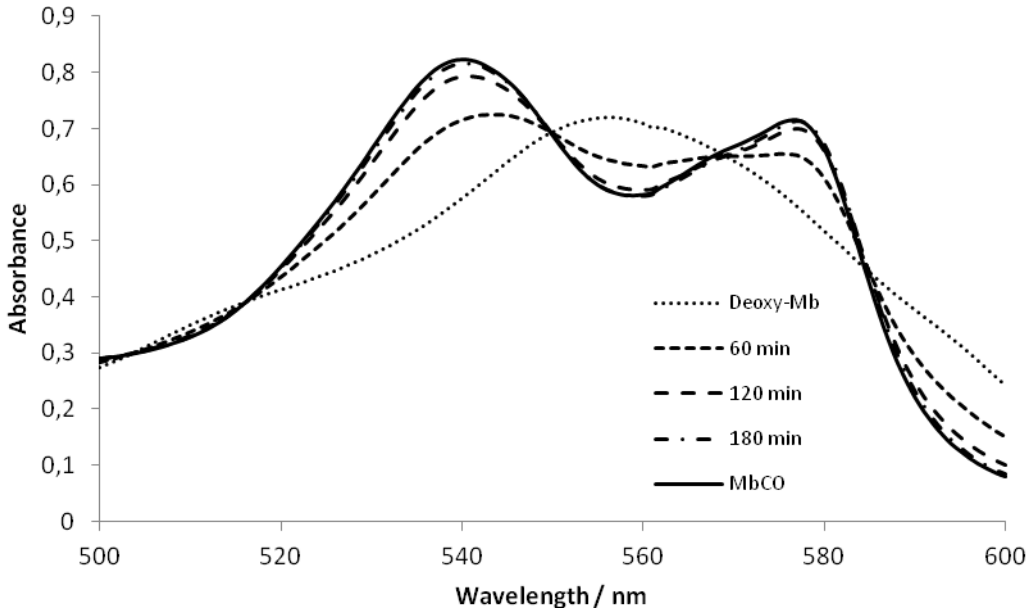


Fig. 9. The changes in the UV-Vis spectrum of myoglobin as CO is released from **3** (60 µM)

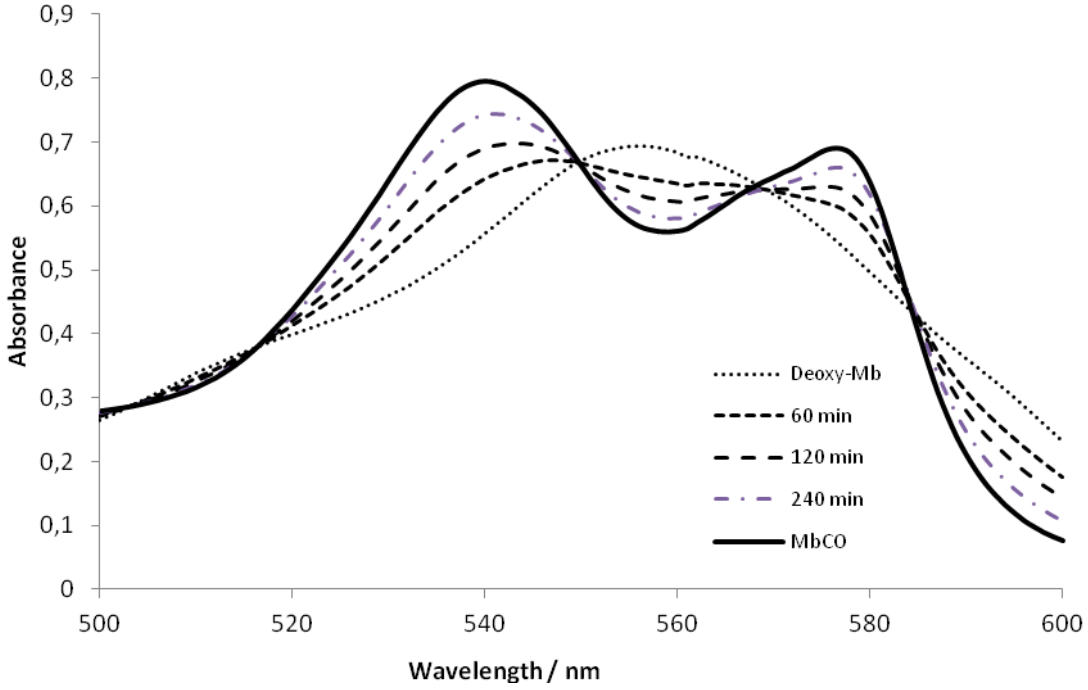


Fig. 10. The changes in the UV-Vis spectrum of myoglobin as CO is released from **3** (40 µM)

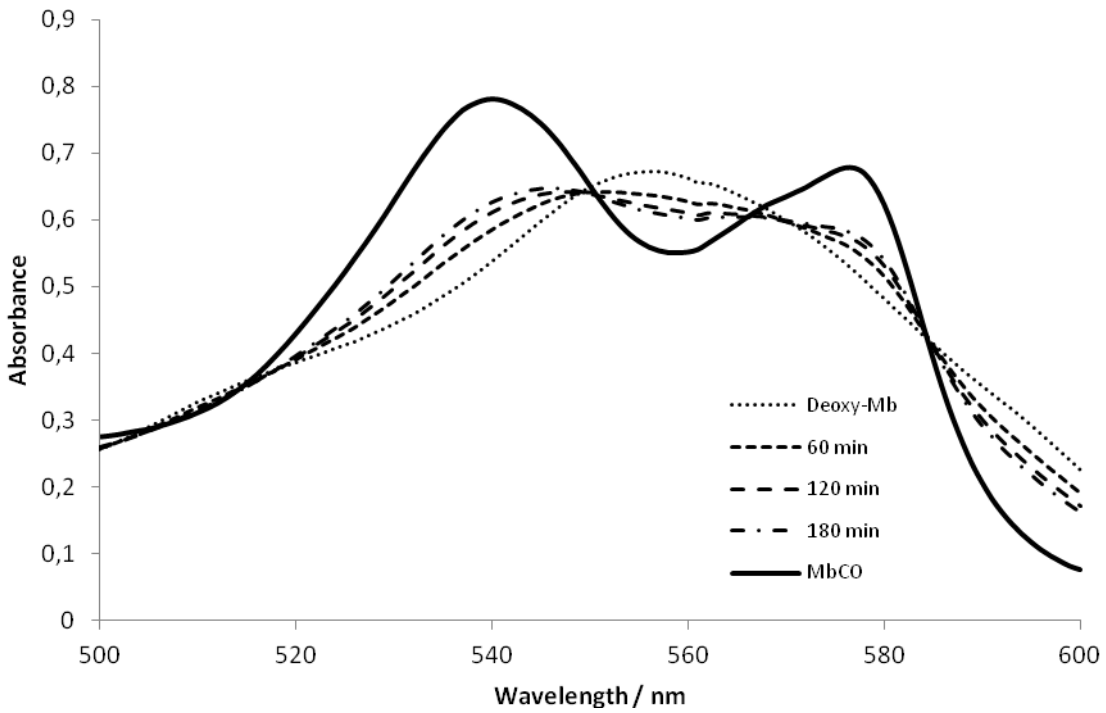


Fig. 11. The changes in the UV-Vis spectrum of myoglobin as CO is released from **3** (20 µM)

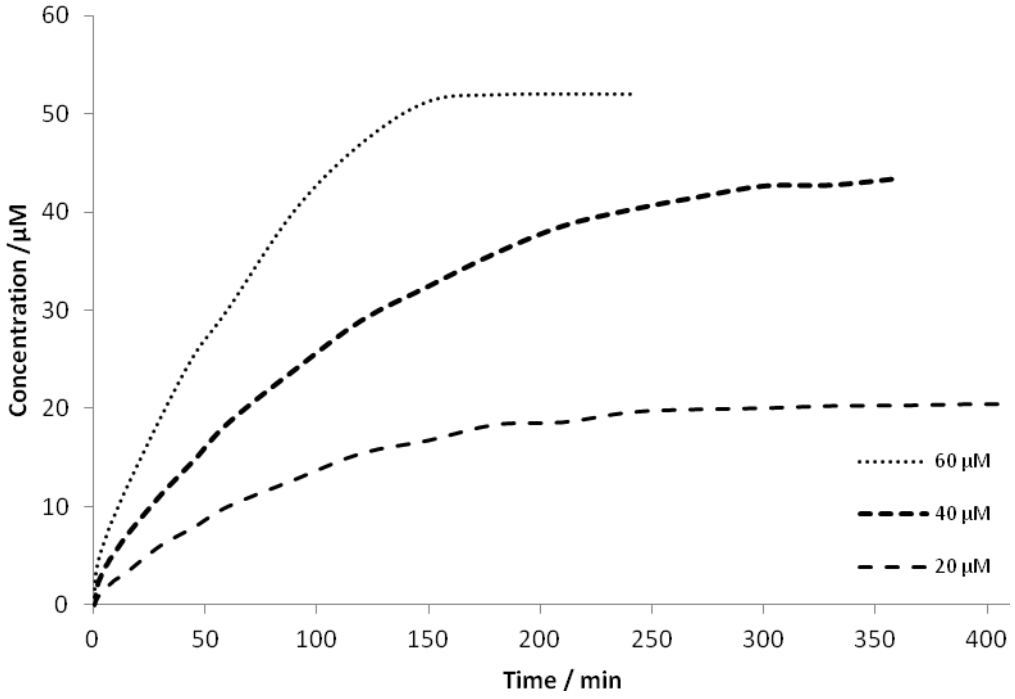


Fig. 12. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **3** in DMSO to a deoxy-myoglobin solution.

Ru(1-methylimidazole-2-carbaldehyde oxime)(COOMe)$(CO)_2$Cl (4)

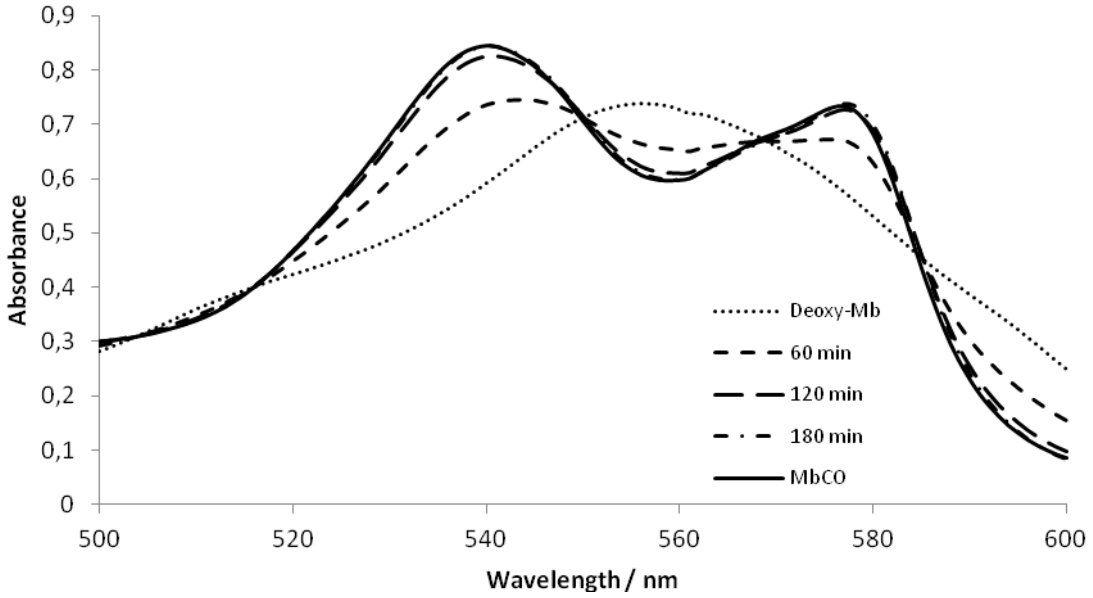


Fig. 13. The changes in the UV-Vis spectrum of myoglobin as CO is released from **4** (60 µM)

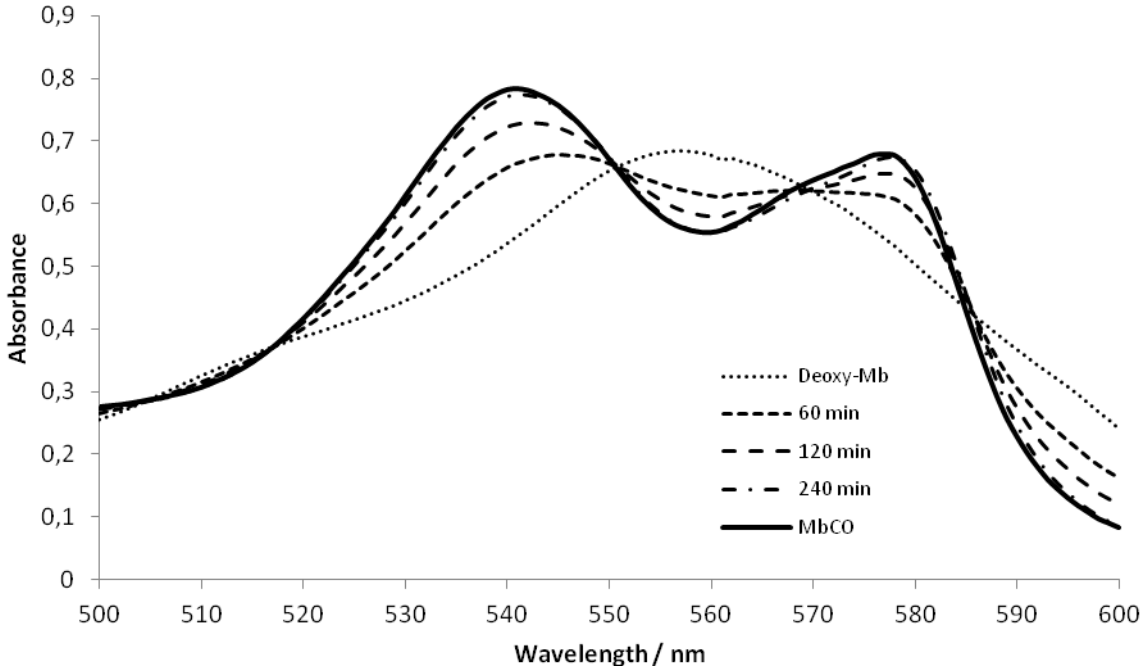


Fig. 14. The changes in the UV-Vis spectrum of myoglobin as CO is released from **4** (40 µM)

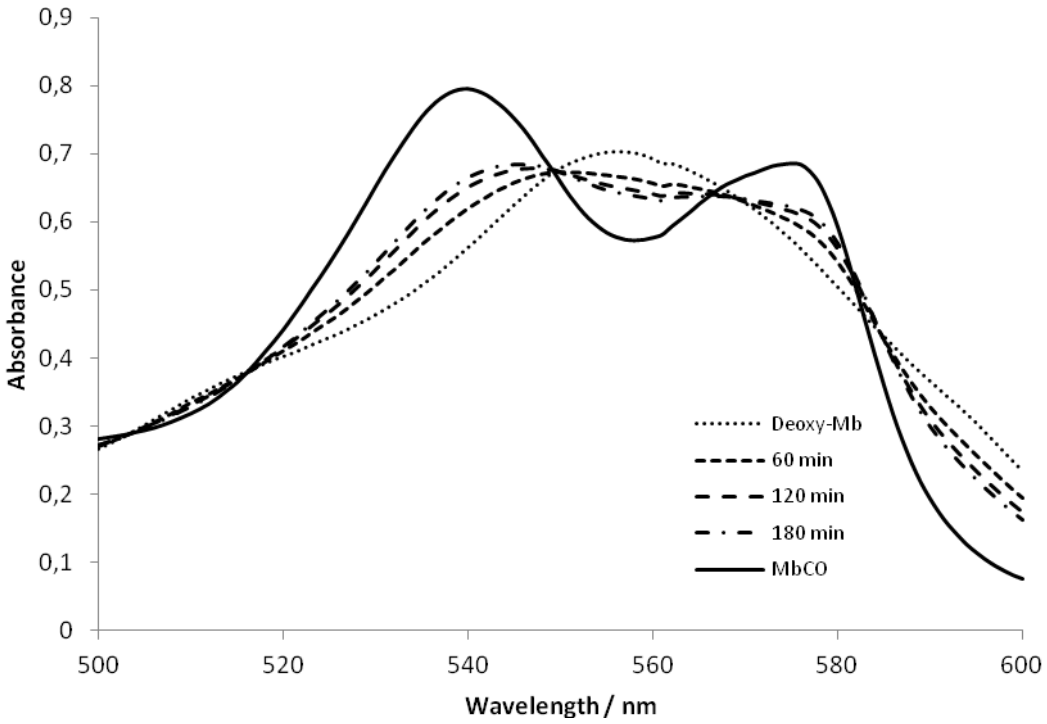


Fig. 15. The changes in the UV-Vis spectrum of myoglobin as CO is released from **4** (20 µM)

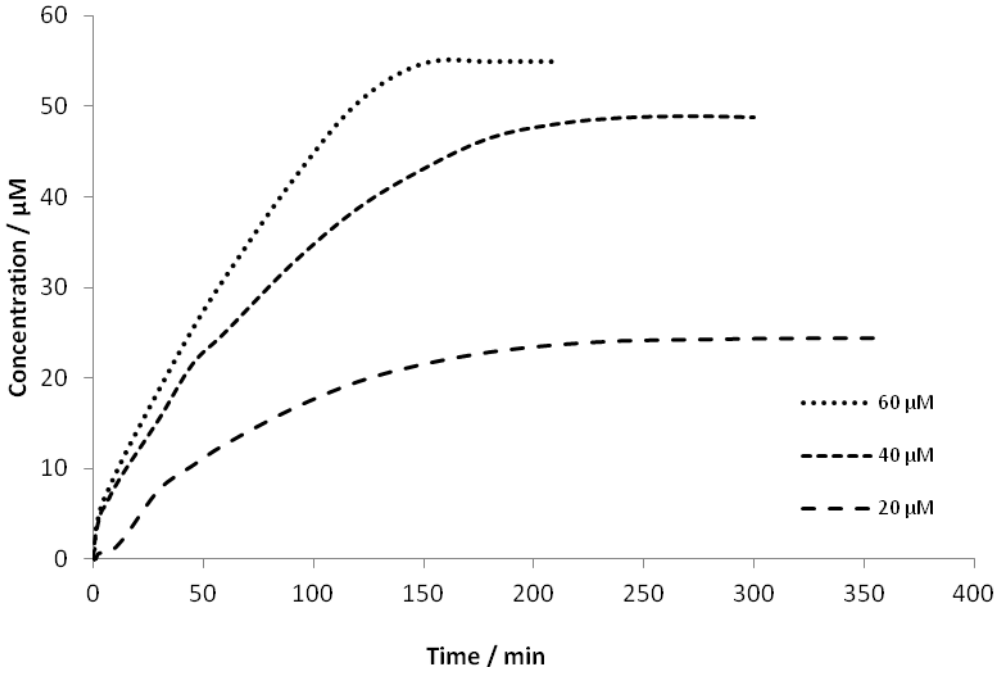


Fig. 16. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **4** in DMSO to a deoxy-myoglobin solution.

Ru(imidazole-4-carbaldehyde oxime)(COOEt)(CO)$_2$Cl (5)

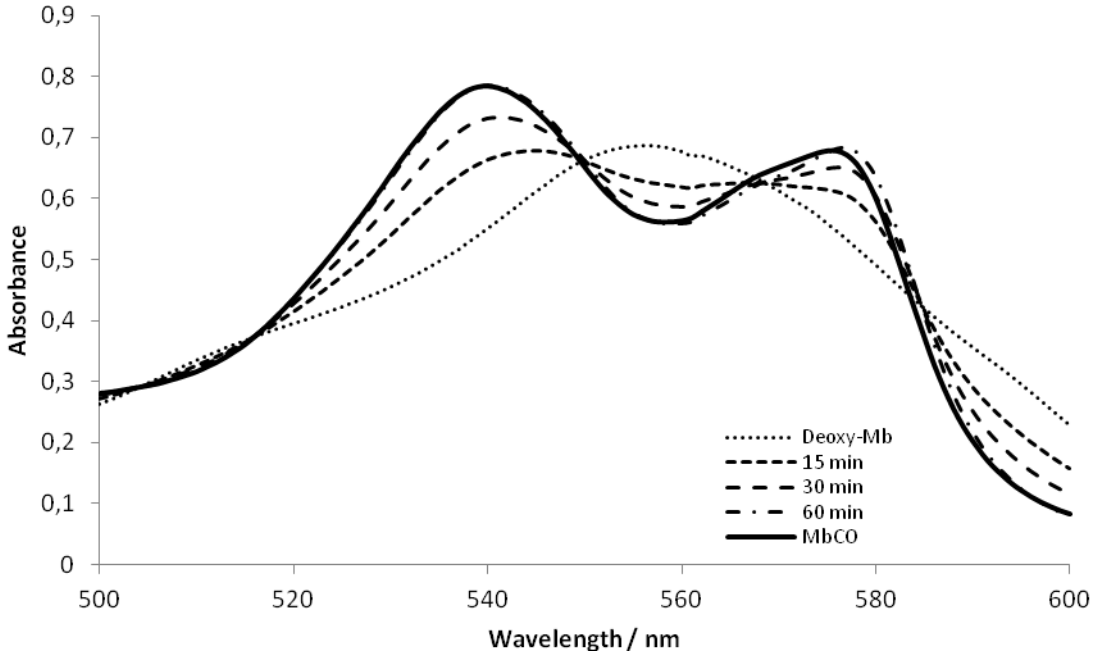


Fig. 17. The changes in the UV-Vis spectrum of myoglobin as CO is released from **5** (60 μM)

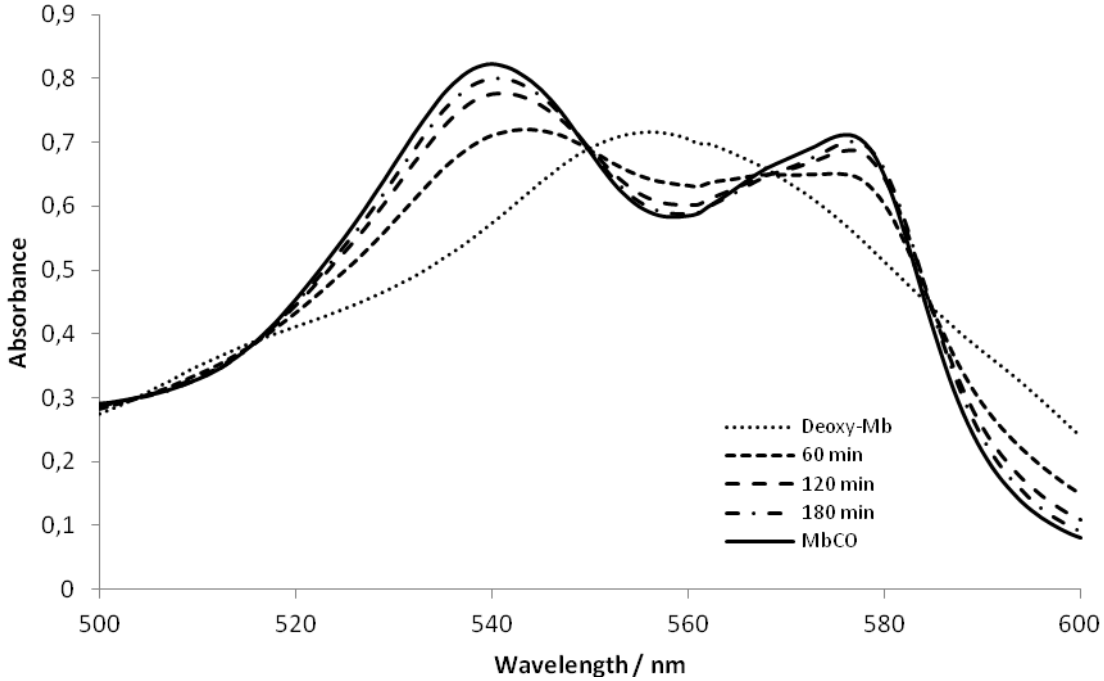


Fig. 18. The changes in the UV-Vis spectrum of myoglobin as CO is released from **5** (40 μM)

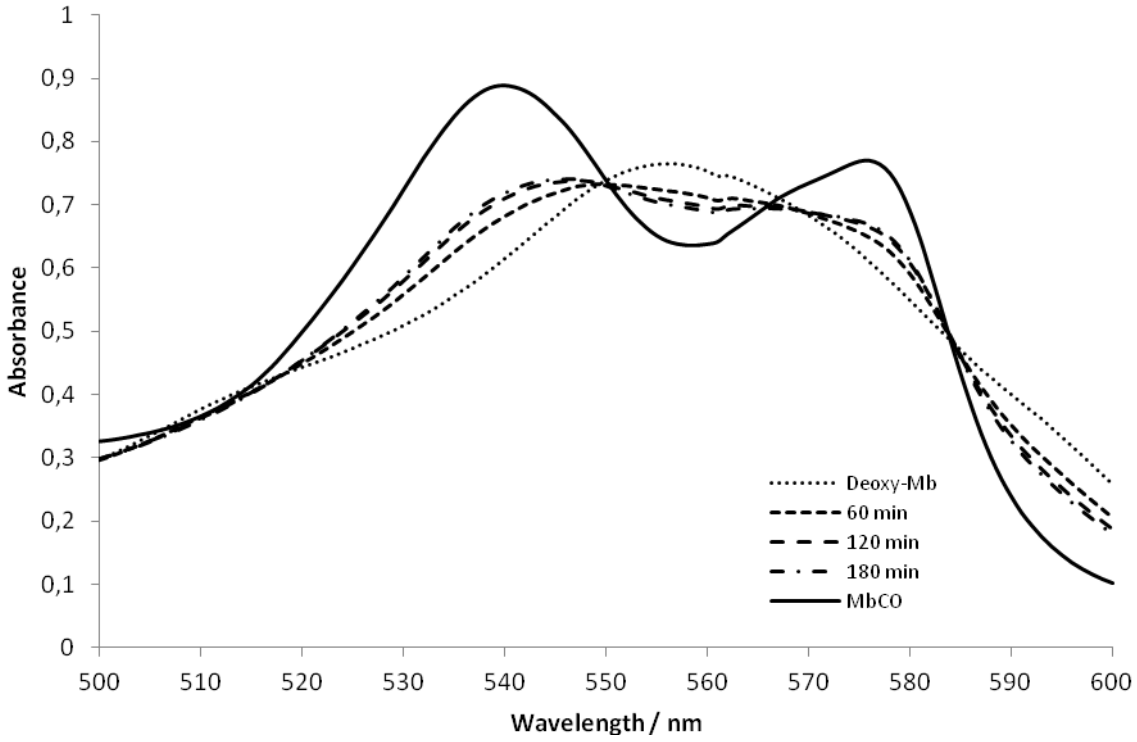


Fig. 19. The changes in the UV-Vis spectrum of myoglobin as CO is released from **5** (20 µM)

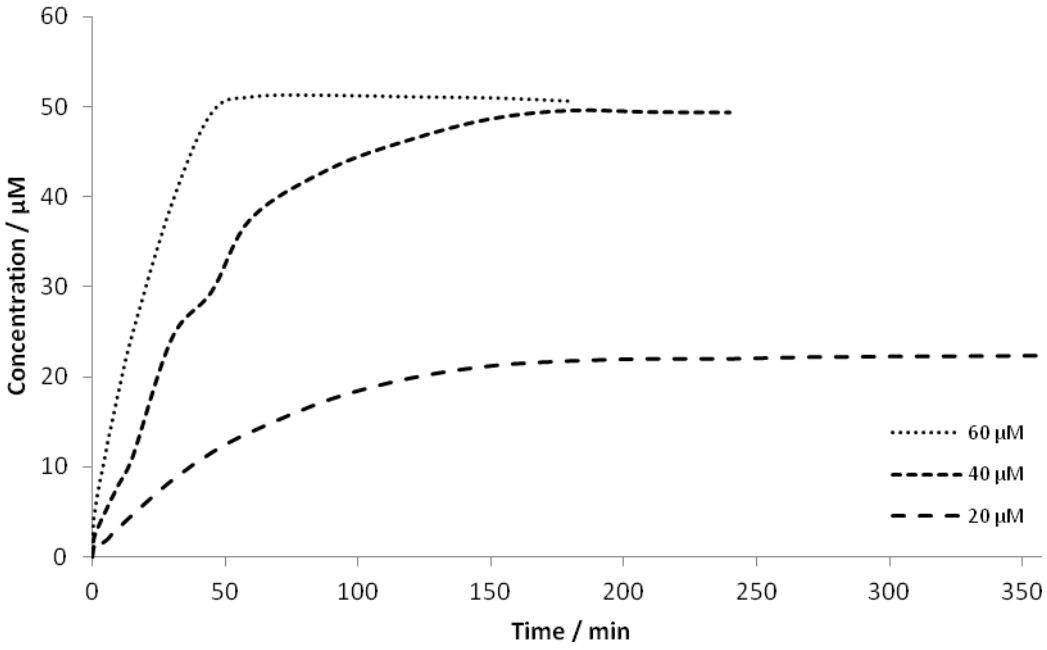


Fig. 20. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **5** in DMSO to a deoxy-myoglobin solution.

Ru(imidazole-4-carbaldehyde oxime)(COOMe)$(CO)_2$Cl (6)

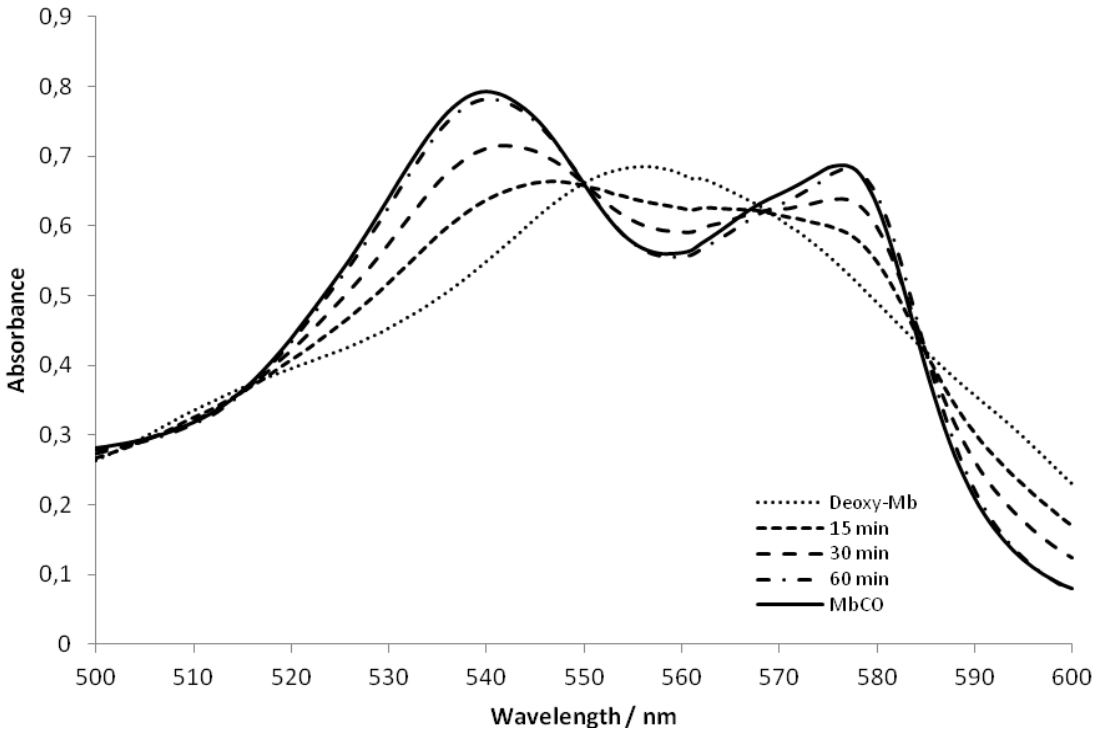


Fig. 21. The changes in the UV-Vis spectrum of myoglobin as CO is released from **6** (60 μM)

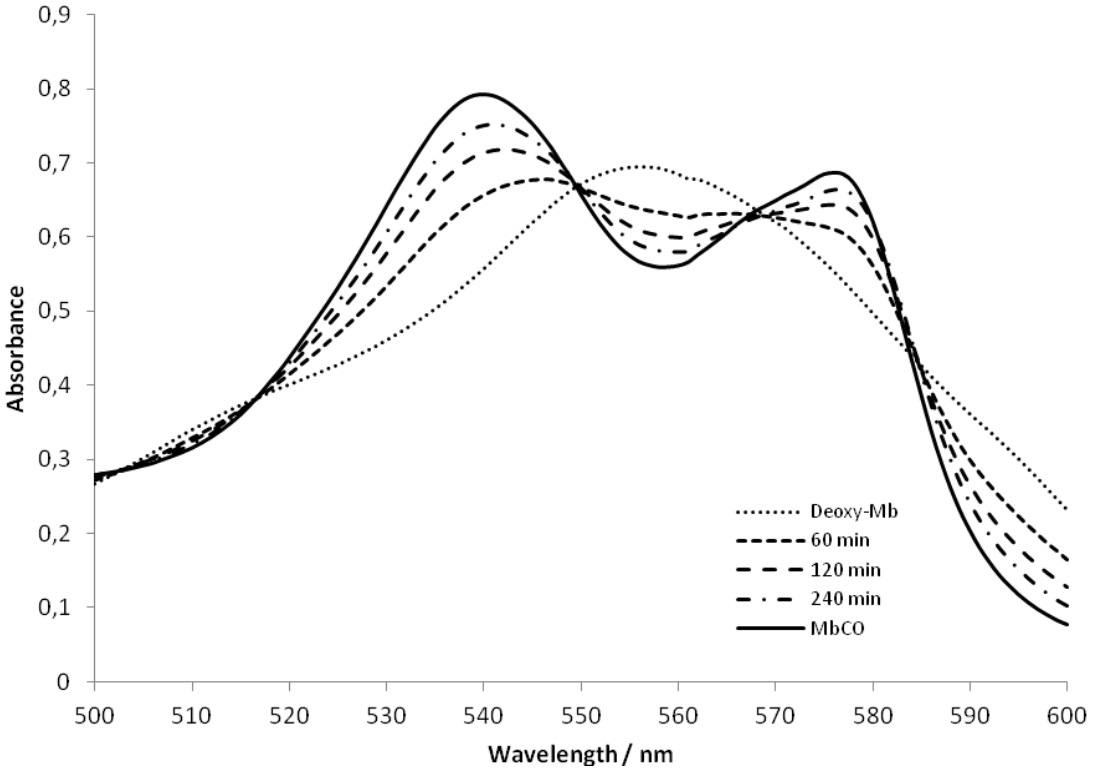


Fig. 22. The changes in the UV-Vis spectrum of myoglobin as CO is released from **6** (40 μM)

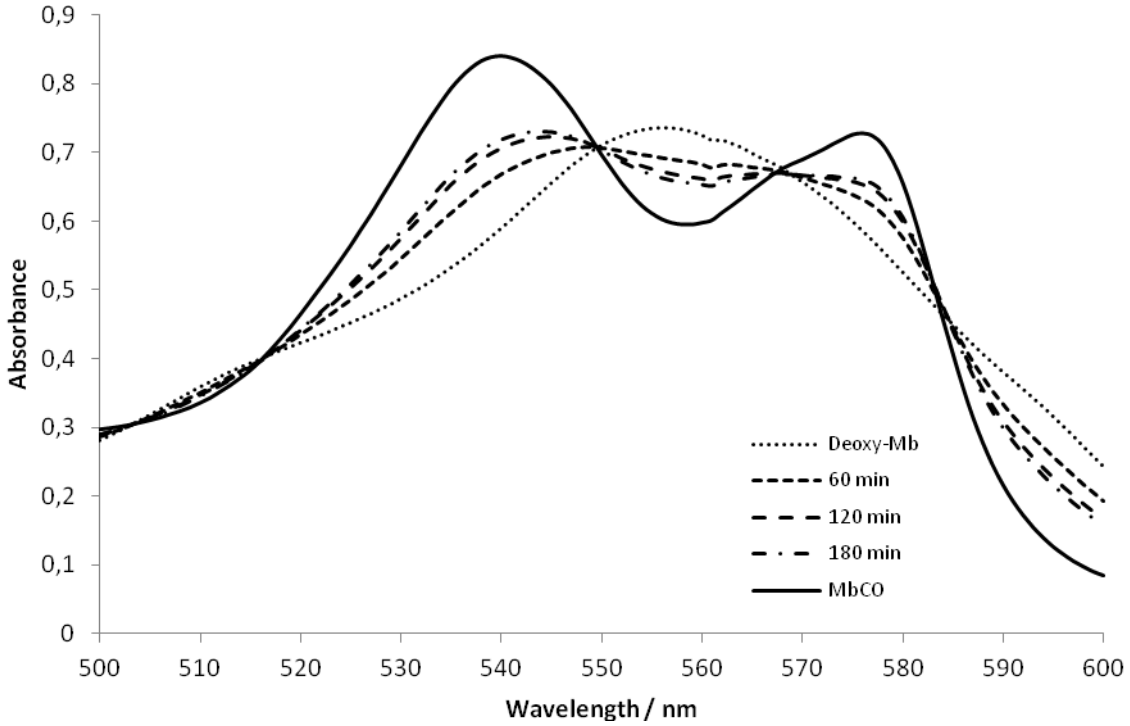


Fig. 23. The changes in the UV-Vis spectrum of myoglobin as CO is released from **6** (20 µM)

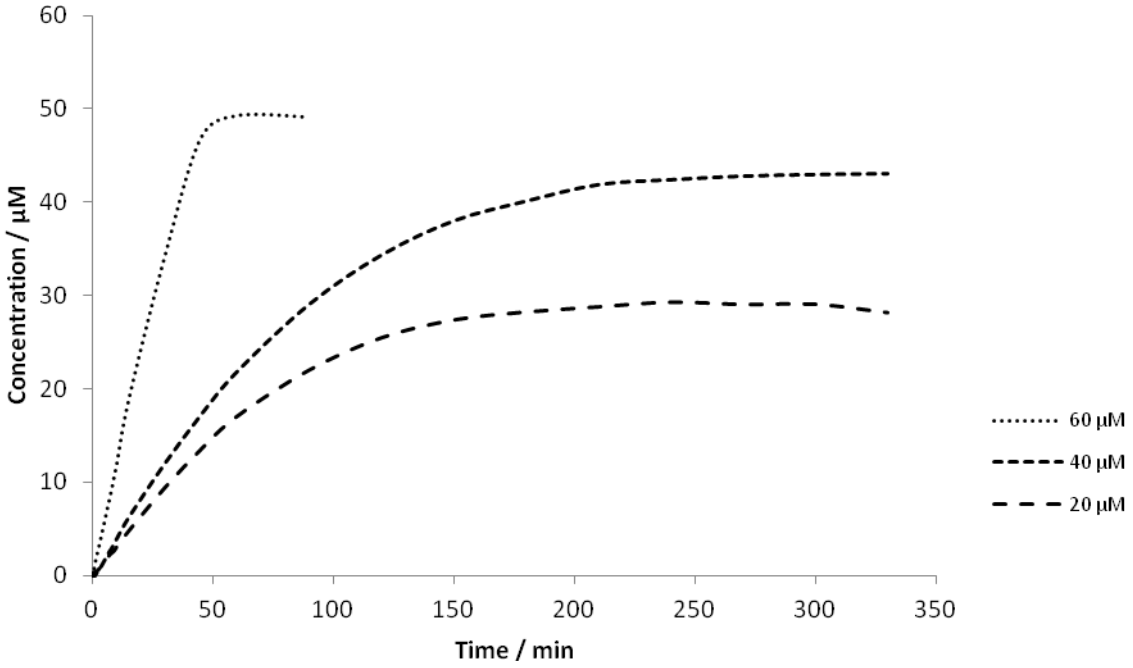


Fig. 24. Formation of MbCO over time after addition of 60 µM, 40 µM and 20 µM of **6** in DMSO to a deoxy-myoglobin solution.