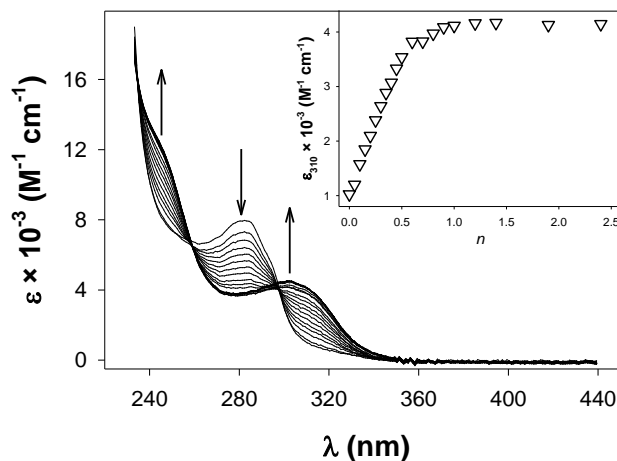


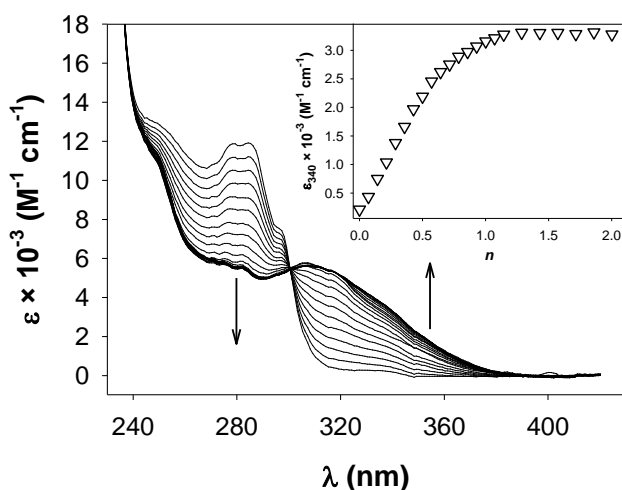
# Interligand Charge-Transfer Processes in Zinc Complexes

Carlo Ciarrocchi, Guido Colucci, Massimo Boiocchi, Donatella Sacchi, Maduka L. Weththimuni, Alessio Orbelli Biroli and Maurizio Licchelli

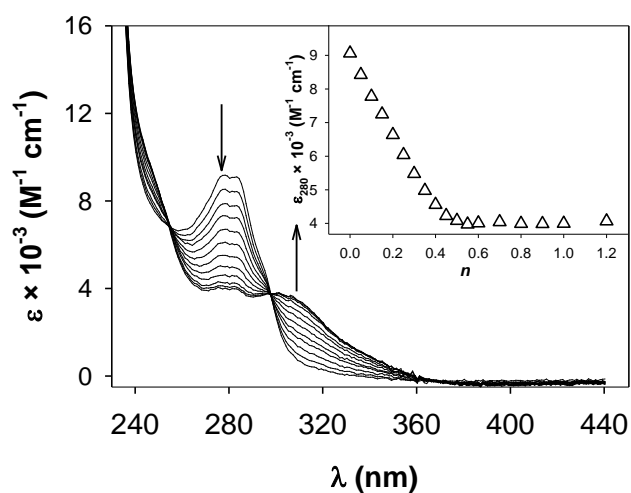
## Supplementary Materials



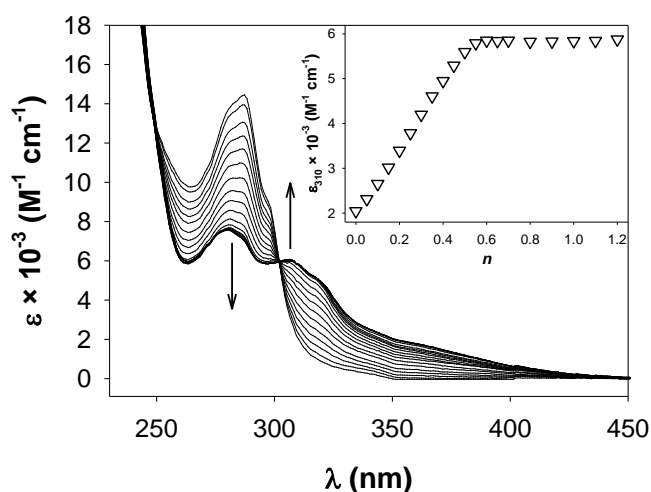
**Figure S1.** Absorption spectra recorded during the titration of a MeCN solution of **3b** ( $10^{-5}$  M) with zinc(II) ion. Titration profile in the inset ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **3b**).



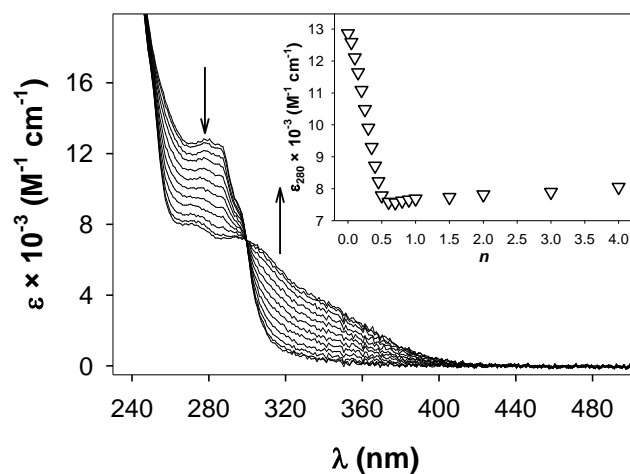
**Figure S2.** Absorption spectra recorded during the titration of a MeCN solution of **4a** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **4a**).



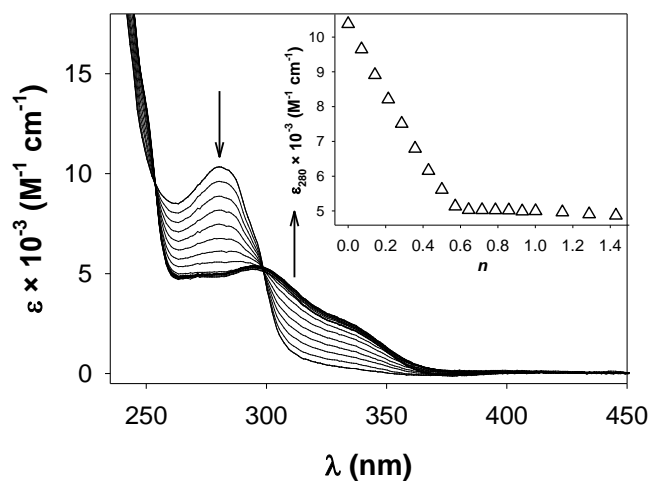
**Figure S3.** Absorption spectra recorded during the titration of a MeCN solution of **4b** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **4b**).



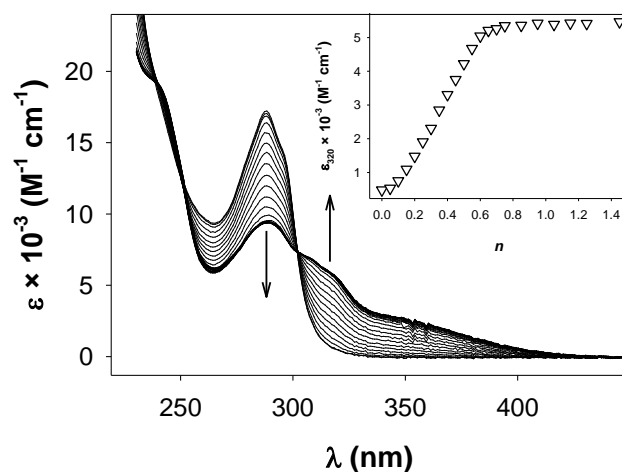
**Figure S4.** Absorption spectra recorded during the titration of a MeCN solution of **5a** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **5a**).



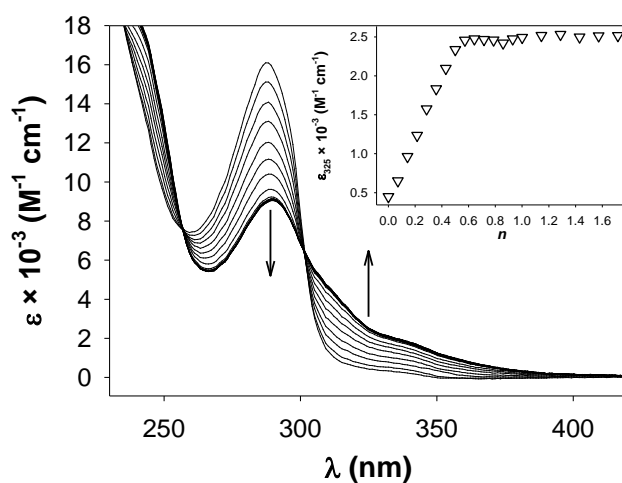
**Figure S5.** Absorption spectra recorded during the titration of a MeCN solution of **6a** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **6a**).



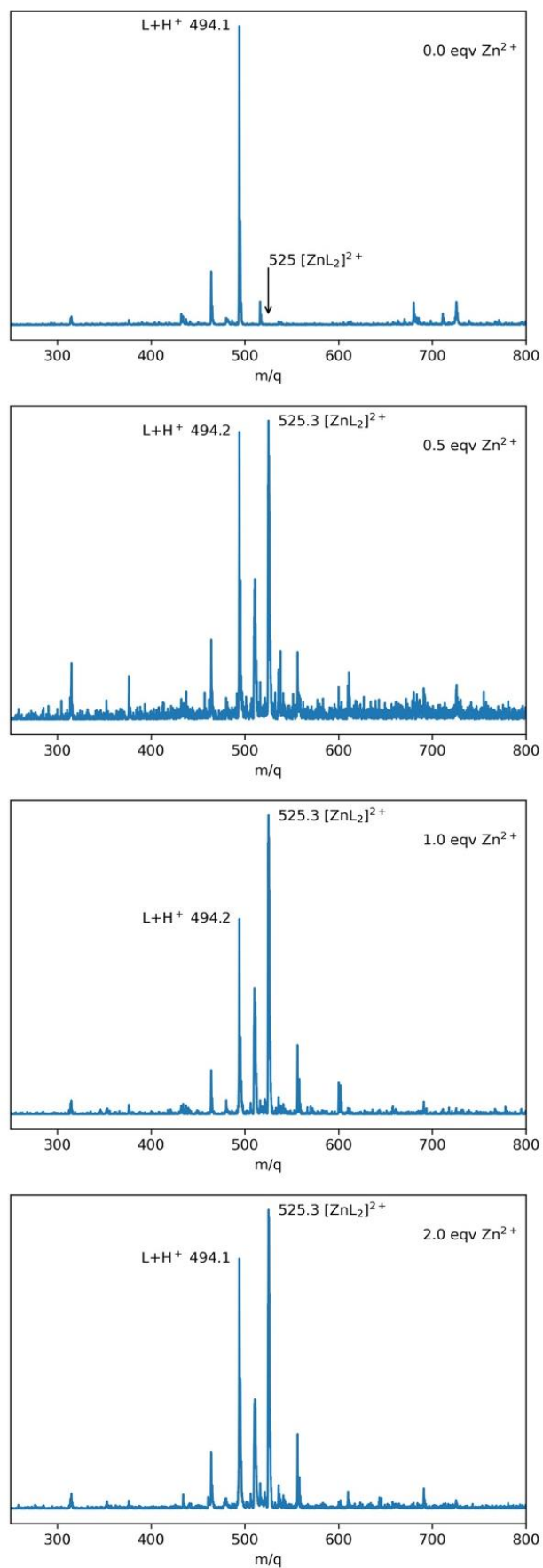
**Figure S6.** Absorption spectra recorded during the titration of a MeCN solution of **6b** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **6b**).



**Figure S7.** Absorption spectra recorded during the titration of a MeCN solution of **8a** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **8a**).



**Figure S8.** Absorption spectra recorded during the titration of a MeCN solution of **8b** ( $10^{-5}$  M) with zinc(II) ion. In the inset, titration profile shows the formation of a 1:1 adduct ( $n$ = equiv of  $\text{Zn}^{\text{II}}$  ion/equiv of **8b**).



**Figure S9.** ESI-MS spectra measured on MeCN solutions of compound **7a** in the presence of increasing amount of zinc(II) trifluoromethanesulfonate ( $\text{L} = \mathbf{7a}$ ).

**Table S1.** Chemical shift observed for ligand **6a** and the corresponding zinc(II) complex.

<i>protons</i>	<b>6a</b>	$[\text{Zn}(\mathbf{6a})_2]^{2+}$
a	7.90	8.53
b	8.10	8.00
c	8.52	8.13
d	4.80	4.24
e	6.71	5.91
f	3.83	3.60
g	3.73	3.78