

## Appendix 4

### UV-Vis of the Schiff bases and complexes

Compound	$\lambda_{\max}$ (nm)	$\epsilon$ ( $M^{-1}cm^{-1}$ )	Tentative assignment
H <sub>2</sub> L1	270	$1.1 \times 10^4$	$\pi - \pi^*$
	300	$1.4 \times 10^4$	$n - \pi^*$
NiL1.2H <sub>2</sub> O	1060	273	d-d
	1010	318	d-d
	899	400	d-d
CuL1. H <sub>2</sub> O	407	$1.5 \times 10^4$	MLCT
	271	$1.9 \times 10^4$	$\pi^* - \pi$
	700	200	d-d
ZnL1.2H <sub>2</sub> O	268	$1.7 \times 10^4$	$\pi - \pi^*$
	396	$0.8 \times 10^4$	MLCT
	390	$1.4 \times 10^4$	MLCT
H <sub>2</sub> L2	272	$2 \times 10^4$	$\pi - \pi^*$
	279	$1.5 \times 10^4$	$\pi - \pi^*$
NiL2.2H <sub>2</sub> O	345	$1.6 \times 10^4$	$n - \pi^*$
	1060	298	d-d
	899	500	d-d
CuL2. H <sub>2</sub> O	405	$1.9 \times 10^4$	MLCT
	699	313	d-d
	403	$1.9 \times 10^4$	MLCT
ZnL2.2H <sub>2</sub> O	391	$1.3 \times 10^4$	MLCT
	279	$1.8 \times 10^4$	$\pi - \pi^*$

Compound	$\lambda_{\max}$ (nm)	$\epsilon$ ( $M^{-1}cm^{-1}$ )	Tentative assignment
H <sub>2</sub> L3	272	$1.9 \times 10^4$	$\pi - \pi^*$
	309	$1.9 \times 10^4$	$n - \pi^*$
NiL3.2H <sub>2</sub> O	899	458	d-d
	410	$1.8 \times 10^4$	MLCT
CuL3. H <sub>2</sub> O	699	276	<i>d-d</i>
	401	$1.8 \times 10^4$	MLCT
ZnL3.2H <sub>2</sub> O	404	$1.7 \times 10^4$	MLCT
	273	$1.8 \times 10^4$	$\pi - \pi^*$
H <sub>2</sub> L4	286	$1.4 \times 10^4$	$\pi - \pi^*$
	344	$1.2 \times 10^4$	$n - \pi^*$
NiL4.2H <sub>2</sub> O	902	405	d-d
	736	189	d-d
	343	$0.31 \times 10^4$	MLCT
	260	$0.38 \times 10^4$	$\pi - \pi^*$
CuL4. H <sub>2</sub> O	690	200	d-d
	420	$0.2 \times 10^4$	MLCT
	260	$0.4 \times 10^4$	$\pi - \pi^*$
ZnL4.2H <sub>2</sub> O	414	$0.28 \times 10^4$	MLCT
	291	$1.7 \times 10^4$	$\pi - \pi^*$

Compound	$\lambda_{\max}$ (nm)	$\varepsilon$ ( $M^{-1}cm^{-1}$ )	Tentative assignment
H <sub>2</sub> L5	282	$1.4 \times 10^4$	$\pi - \pi^*$
	310	$1.7 \times 10^4$	$n - \pi^*$
NiL5.2H <sub>2</sub> O	902	405	d-d
	737	189	<i>d-d</i>
	296	$2.1 \times 10^4$	$\pi - \pi^*$
CuL5. H <sub>2</sub> O	685	200	d-d
	279	$2.1 \times 10^4$	$\pi - \pi^*$
ZnL5.2H <sub>2</sub> O	296	$1.9 \times 10^4$	$\pi - \pi^*$
H <sub>2</sub> L6	288	$2.1 \times 10^4$	$\pi - \pi^*$
	351	$2.3 \times 10^4$	$n - \pi^*$
NiL6.2H <sub>2</sub> O	902	550	d-d
	736	257	d-d
	410	$0.5 \times 10^4$	MLCT
	274	$2.4 \times 10^4$	$\pi - \pi^*$
	348	$0.7 \times 10^4$	$n - \pi^*$
CuL6. H <sub>2</sub> O	402	$1.02 \times 10^4$	MLCT
	297	$2.5 \times 10^4$	$\pi - \pi^*$
ZnL6.2H <sub>2</sub> O	390	$1.7 \times 10^4$	MLCT
	275	$2.5 \times 10^4$	$\pi - \pi^*$