

- Figure A.** Distribution diagrams for the systems: a) Cu(II)/ligand **5**; b) Cu(II)/ligand **6**. [Cu(II)] = 1.0 mM; [ligand] = 1.1 mM.
- Figure B.** Spectroscopic results for the Cu(II)/ligand **2** system: a) VIS, b) CD, c) EPR spectra. [Cu(II)] = 1.0 mM; [ligand **2**] = 1.1 mM.
- Figure C.** Spectroscopic results for the Cu(II)/ligand **3** system: a) VIS, b) CD, c) EPR spectra. [Cu(II)] = 1.0 mM; [ligand **3**] = 1.1 mM.
- Figure D.** Spectroscopic results for the Cu(II)/ligand **5** system: a) VIS, b) CD, c) EPR spectra. [Cu(II)] = 1.0 mM; [ligand **5**] = 1.1 mM.
- Figure E.** Spectroscopic results for the Cu(II)/ligand **6** system: a) VIS, b) CD, c) EPR spectra. [Cu(II)] = 1.0 mM; [ligand **6**] = 1.1 mM.
- Table A.** Spectroscopic results for the Cu(II)/ligand **5** system.
- Table B.** Spectroscopic results for the Cu(II)/ligand **6** system.

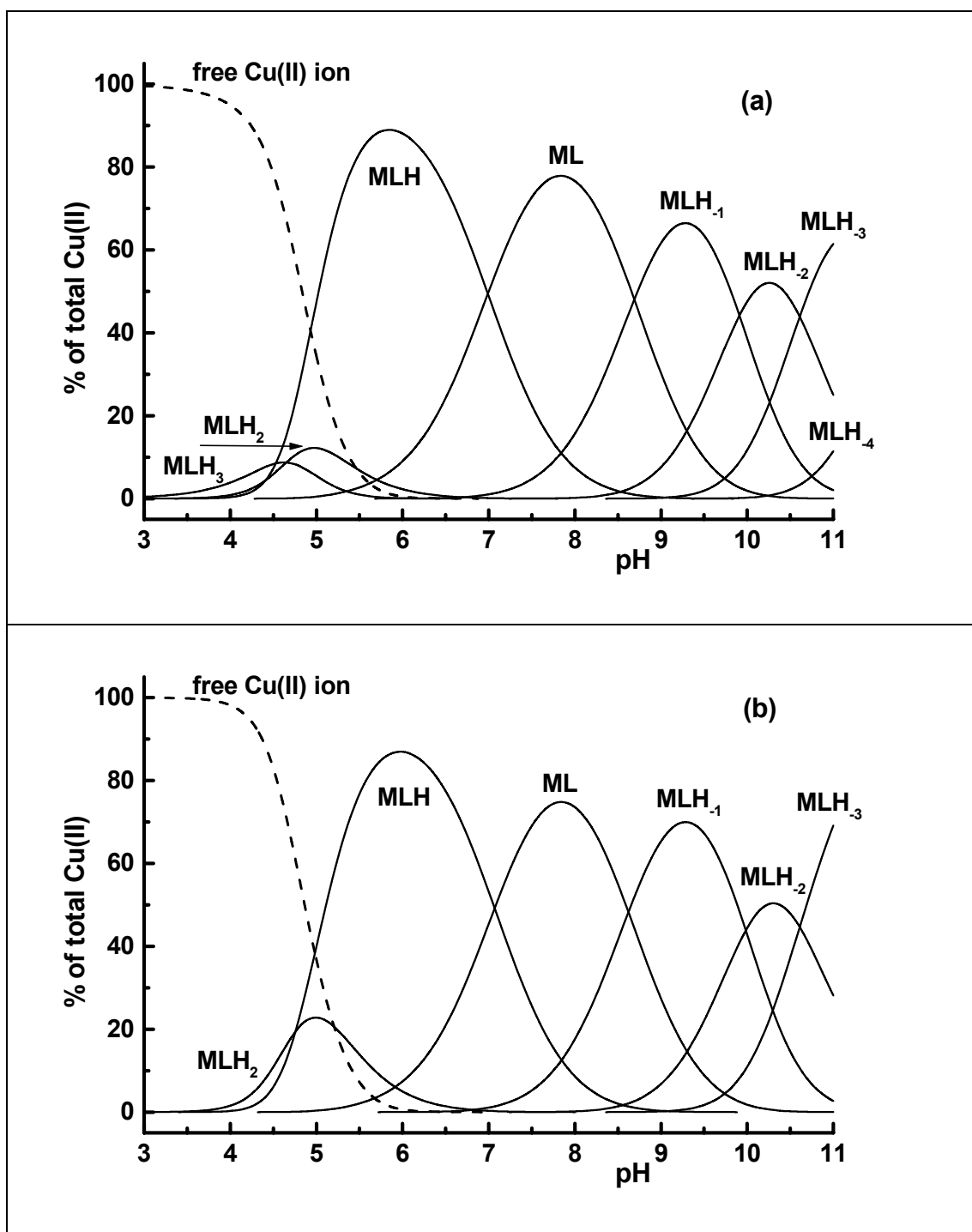


Figure A

Figure B

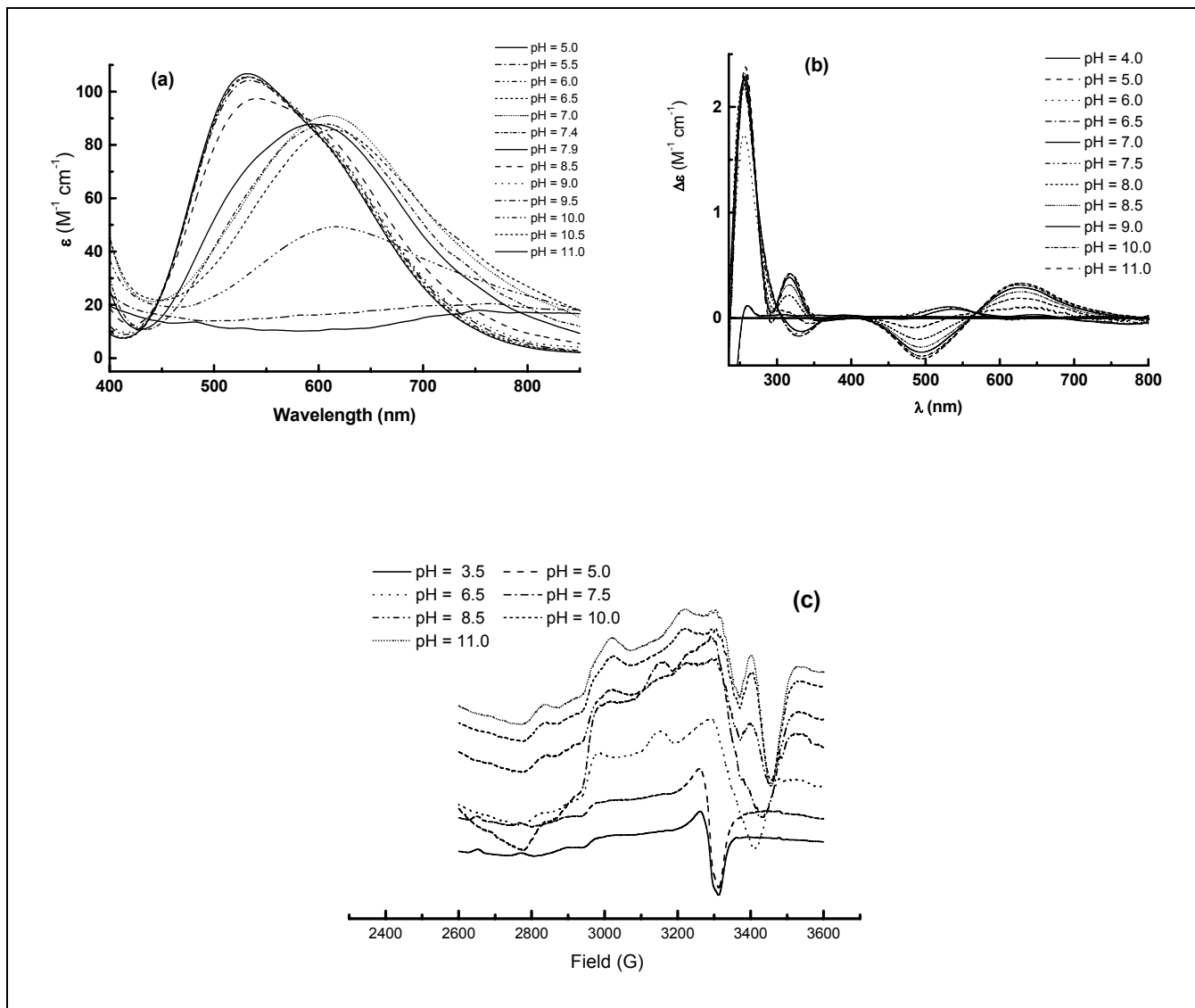


Figure C

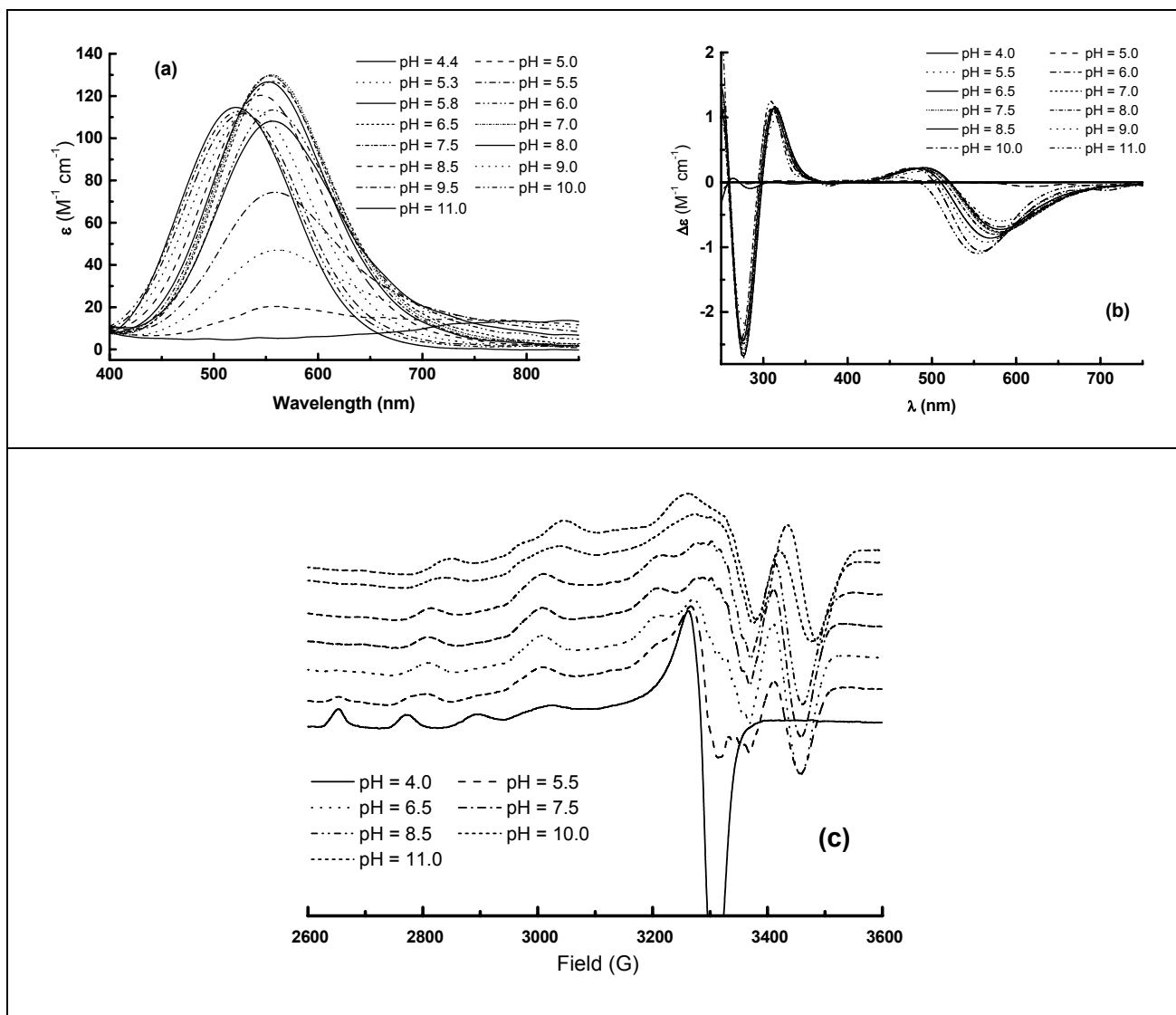


Figure D

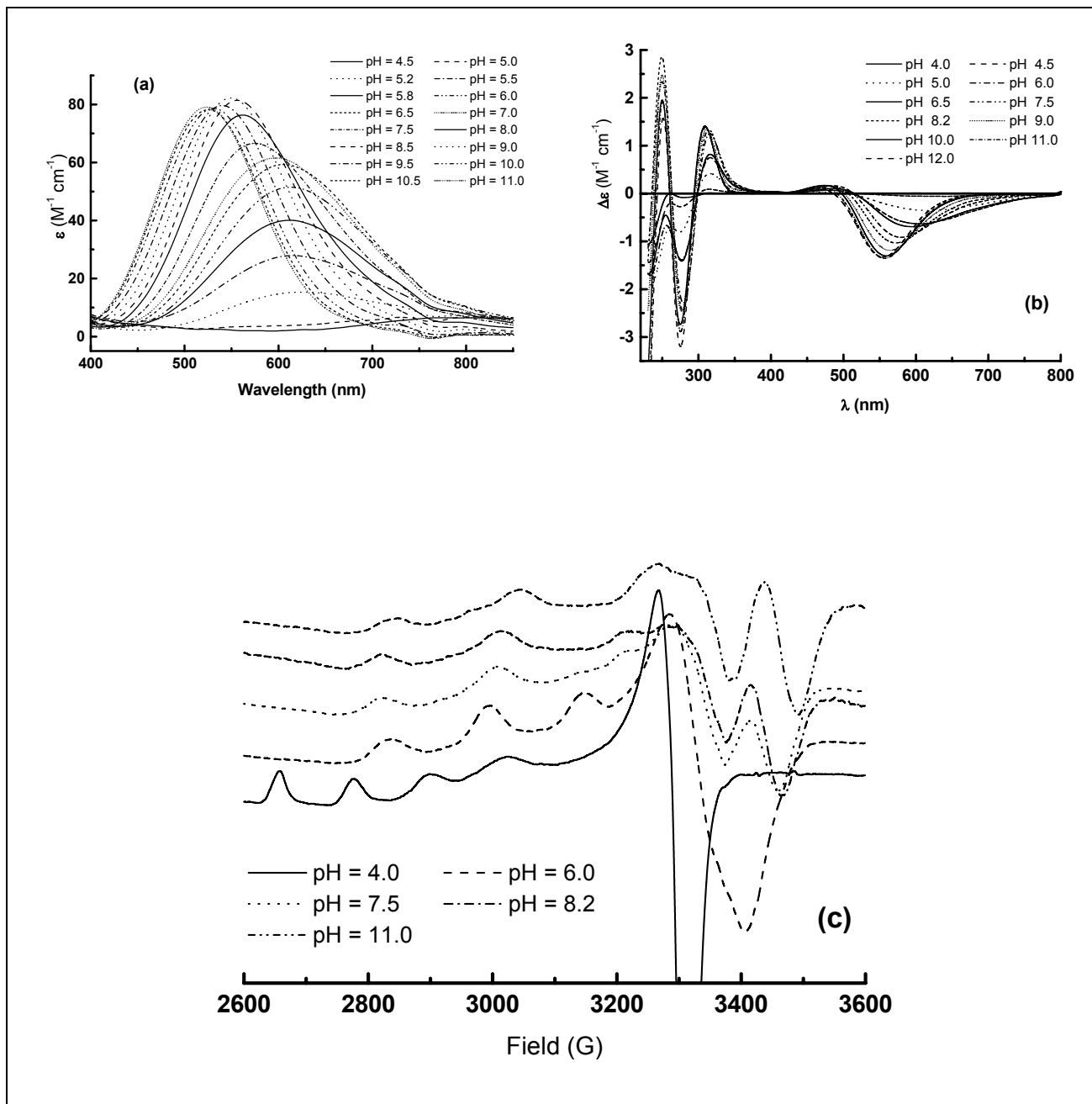


Figure E

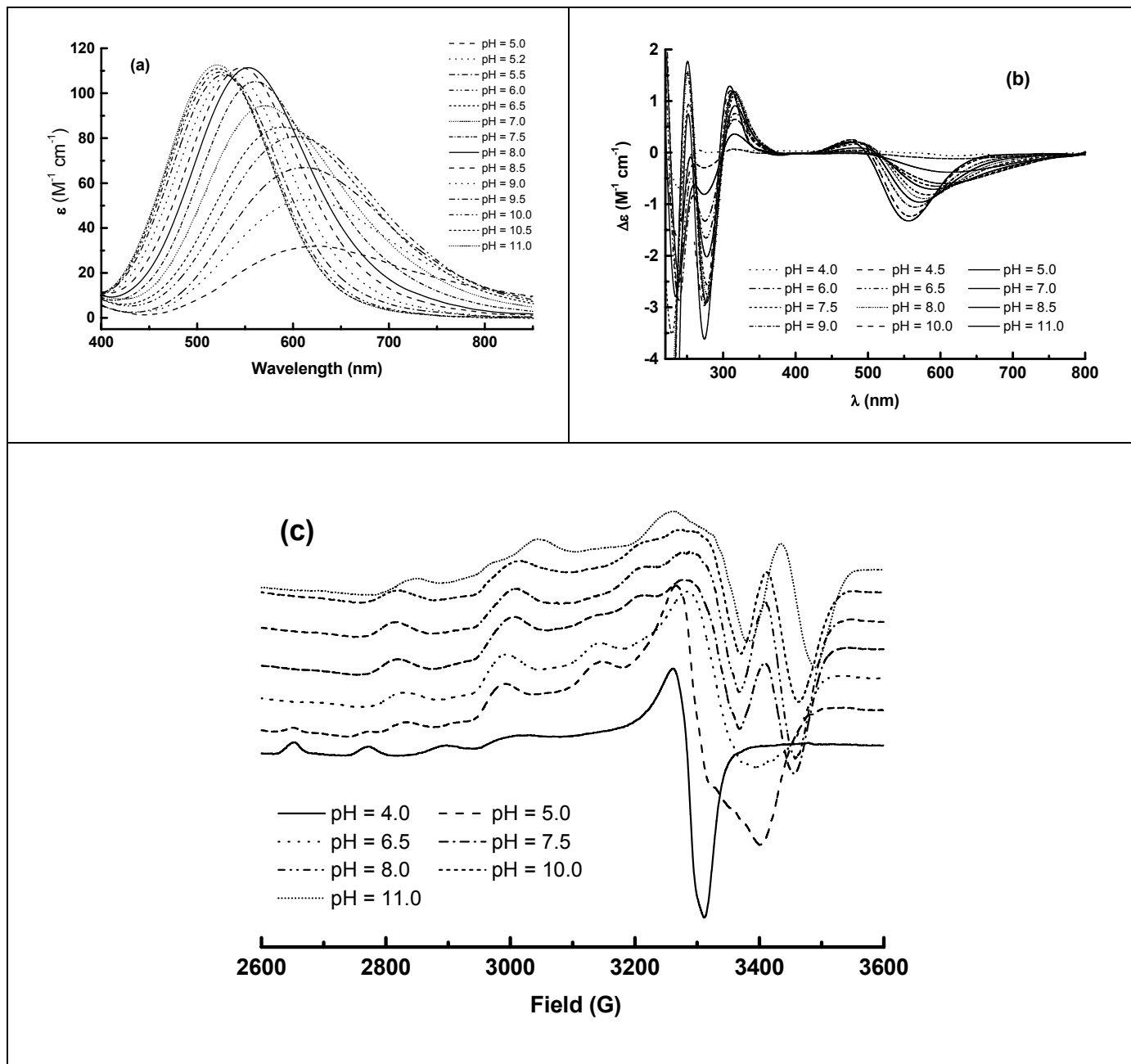


Table A – Spectroscopic results for the Cu(II)/ligand **5** system.

pH	Main species	VIS		CD		EPR	
		λ/nm	$\epsilon/\text{M}^{-1} \text{ cm}^{-1}$	λ/nm	$\Delta\epsilon/\text{M}^{-1} \text{ cm}^{-1}$	$A_{\parallel}/\text{G}$	$g_{\parallel}$
6.0	MLH	612	52	601 482 315 276	-0.64 +0.09 +0.78 -1.36	165	2.23
8.0	ML	562	76				
8.2	ML	-	-	572 481 314 278 249	-1.03 +0.15 +1.34 -2.43 +2.85	193	2.20
9.0	ML, MLH ₁	549	82	564 476 310 276 249	-1.18 +0.18 +1.38 -2.45 +2.51		
10.0	MLH ₁ , MLH ₂	531	79	559 472 308 275 249	-1.30 +0.18 +1.40 -2.73 +1.96	196	2.19
11.0	MLH ₂ , MLH ₃ , MLH ₄	523	79	557 469 309 275 249	-1.35 +0.12 +1.43 -2.85 +1.91	197	2.18

Table B – Spectroscopic results for the Cu(II)/ligand **6** system.

pH	Main species	VIS		CD		EPR	
		λ/nm	$\epsilon/\text{M}^{-1} \text{cm}^{-1}$	λ/nm	$\Delta\epsilon/\text{M}^{-1} \text{cm}^{-1}$	$A_{\parallel}/\text{G}$	$g_{\parallel}$
5.0	M, MLH ₂ , MLH	625	32	238	-2.35	120	2.41
				274	-0.81	157	2.23
				314	+0.36		
				612	-0.38		
6.0	MLH	603	81	238	-2.86	157	2.23
				275	-1.33		
				316	+0.65		
				604	-0.60		
8.0	ML	553	111	250	+1.56	195	2.20
				278	-2.76		
				316	+1.19		
				484	+0.20		
9.0	MLH ₁	536	109	578	-0.89		
				250	+1.54	195	2.20
				276	-2.94		
				313	+1.17		
10.0	MLH ₁ , MLH ₂	524	109	480	+0.22		
				565	-1.06		
				250	-	196	2.19
				274	-2.97		
11.0	MLH ₂ , MLH ₃	520	113	310	+1.20		
				476	+0.25		
				558	-1.24		
				252	+0.75	196	2.19
				274	-3.61		
				309	+1.29		
				474	+0.21		
				556	-1.32		