

Figure S1

Cu/GT (1:1) 50% MeOH RT

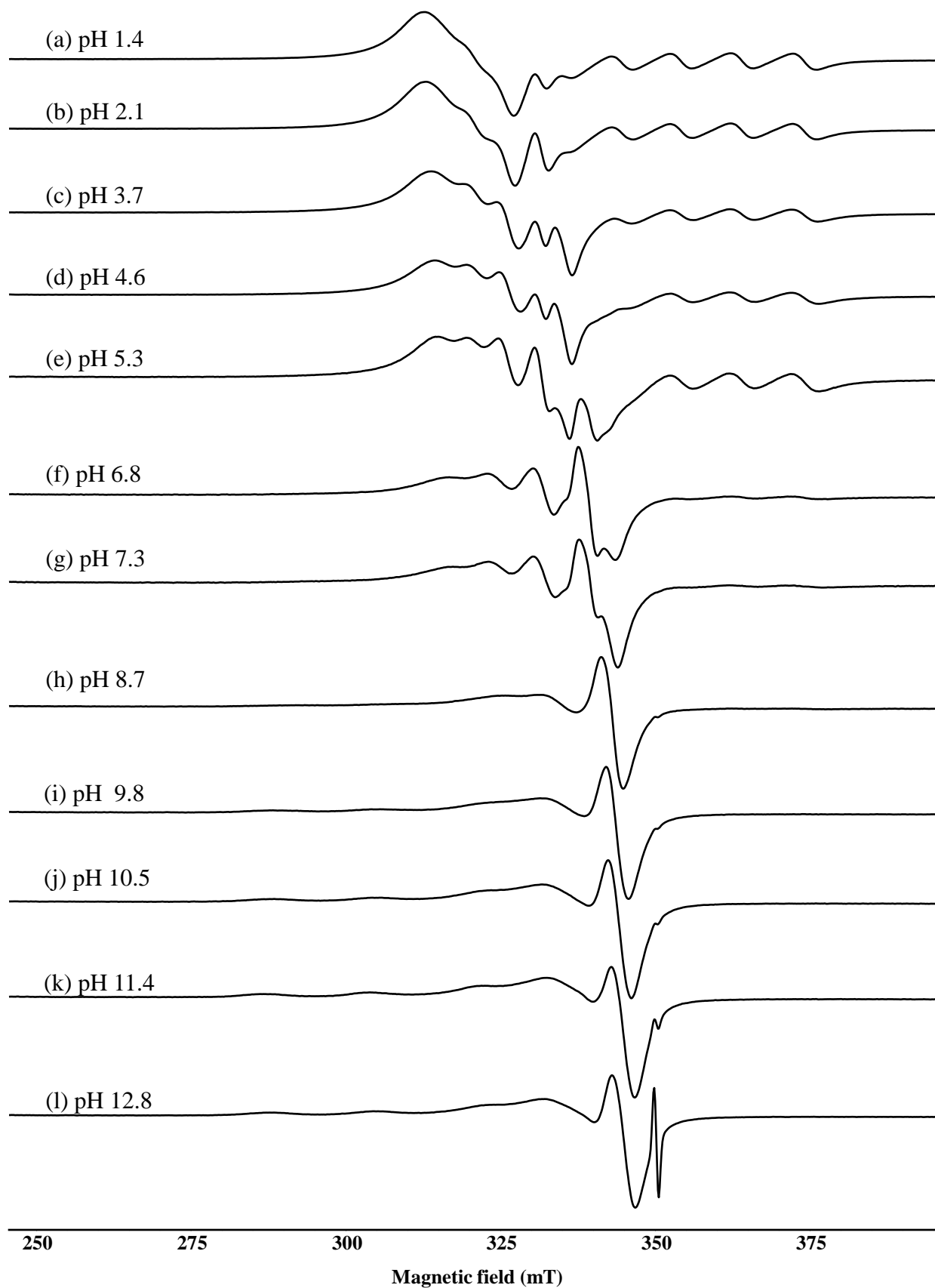


Figure S2

Cu/GT (1:5) 50% MeOH RT

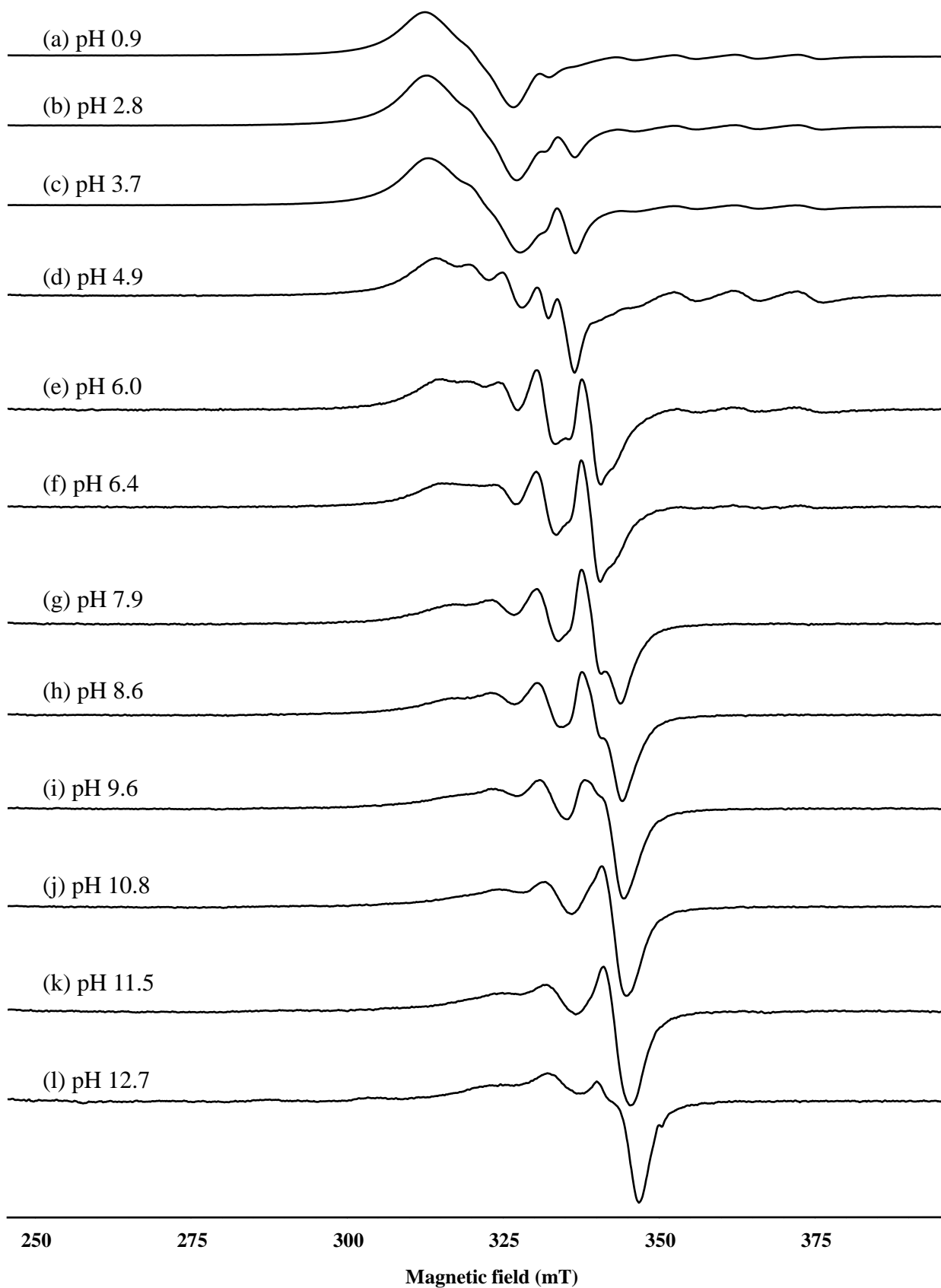


Figure S3

Cu/BT (1:1) 50% MeOH RT

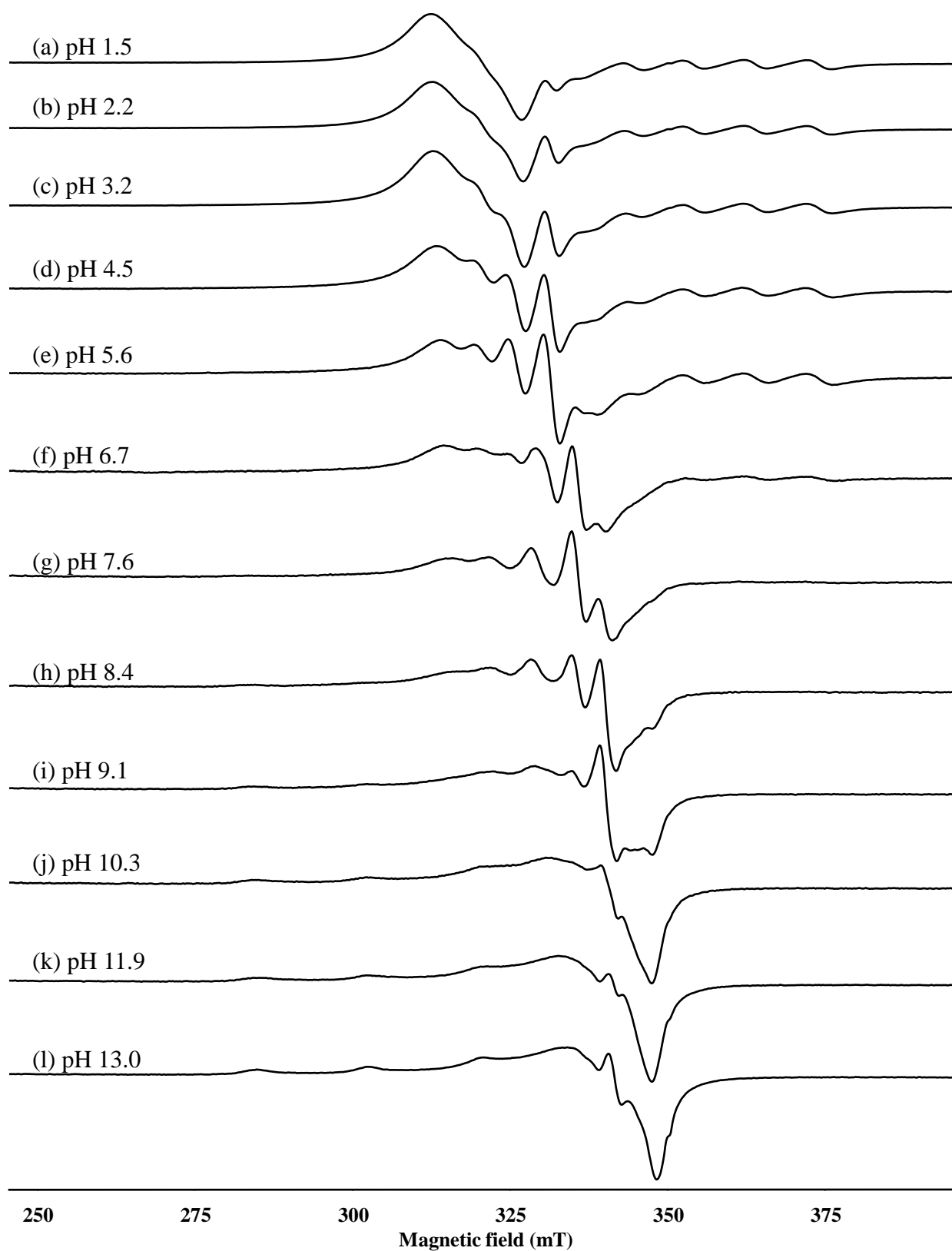


Figure S4

Cu/BT (1:5) 50% MeOH RT

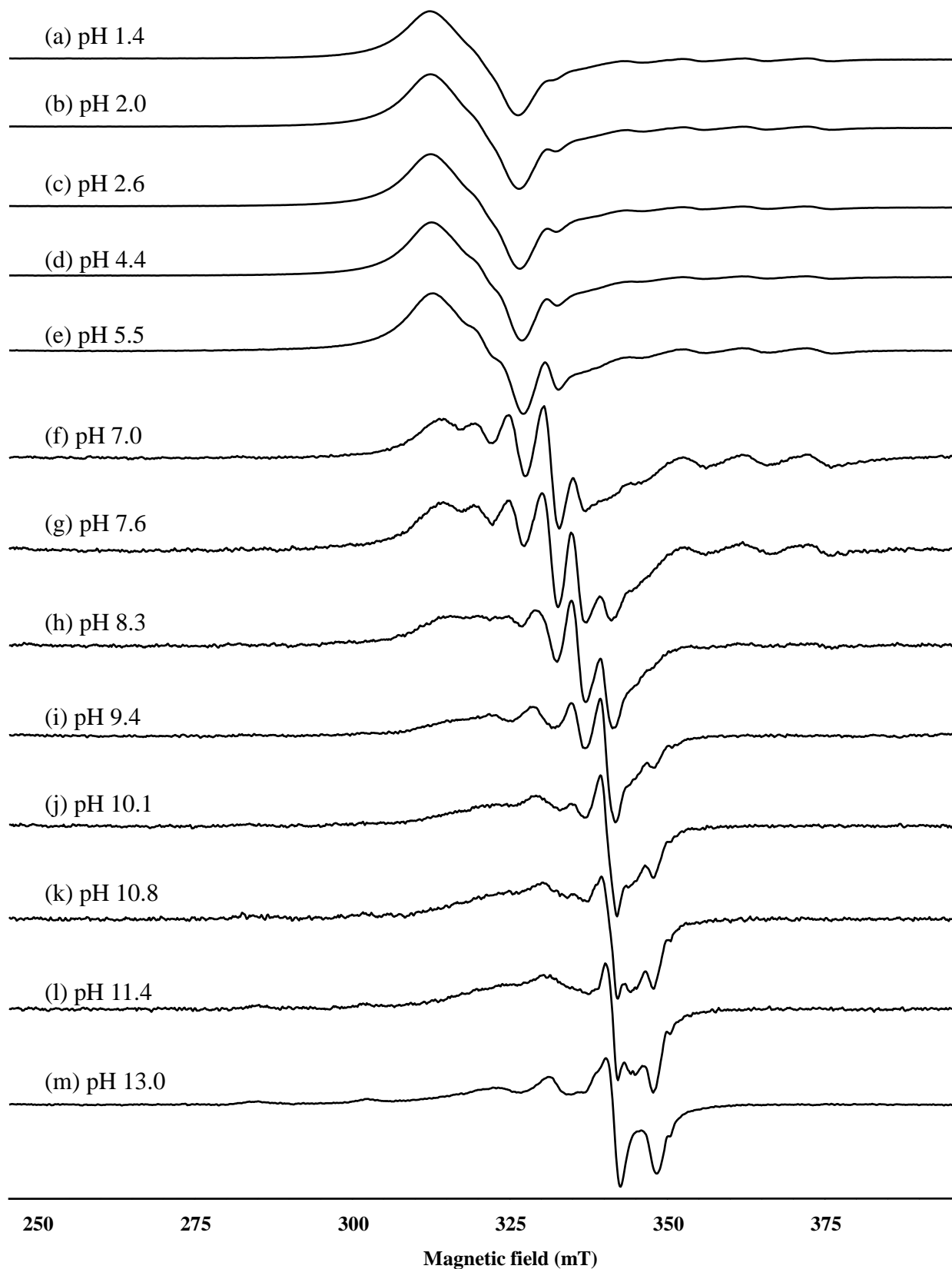


Figure S5

Cu/GT (1:1) 50% MeOH 77K

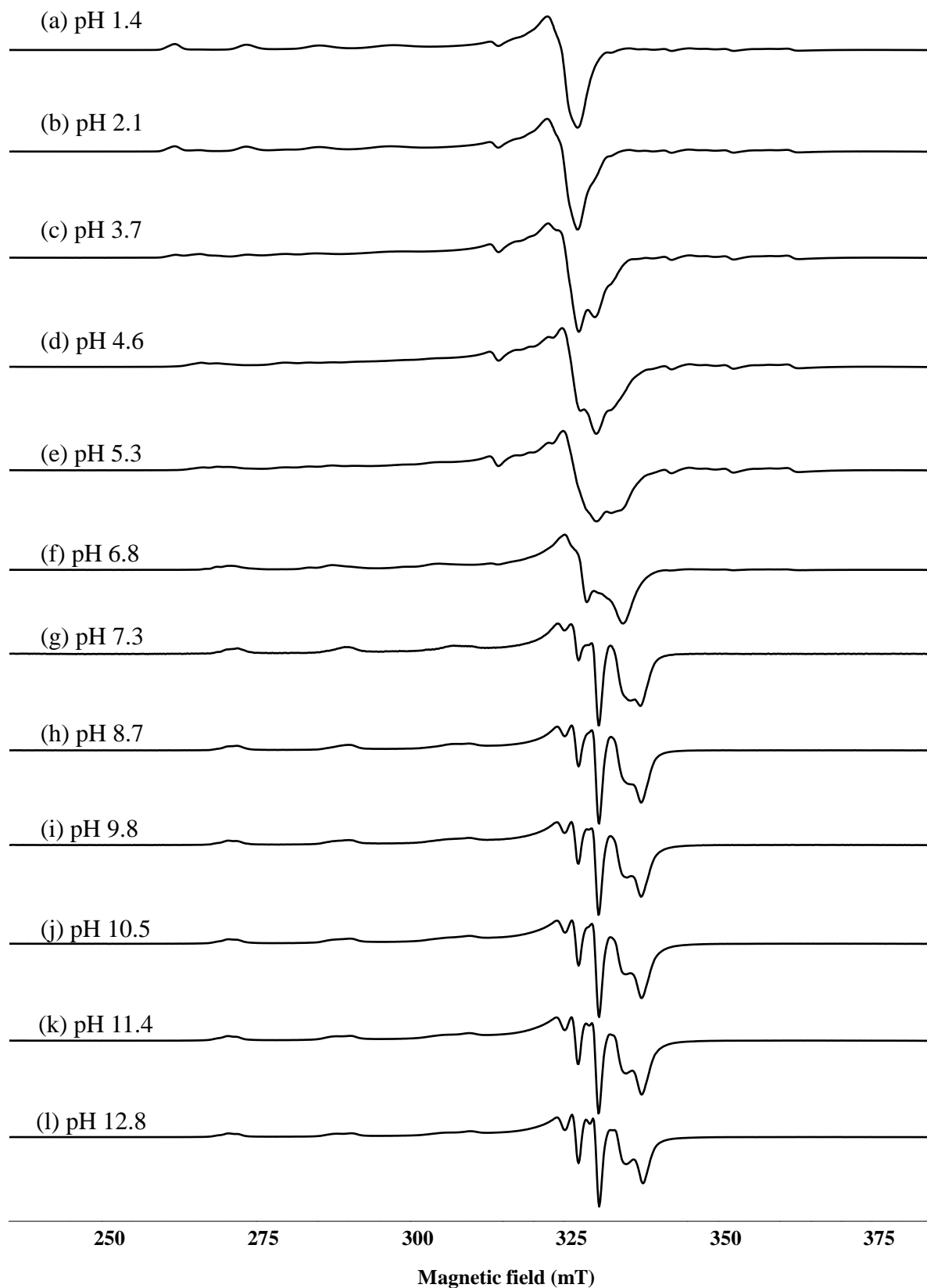


Figure S6

Cu/GT (1:5) 50% MeOH 77K

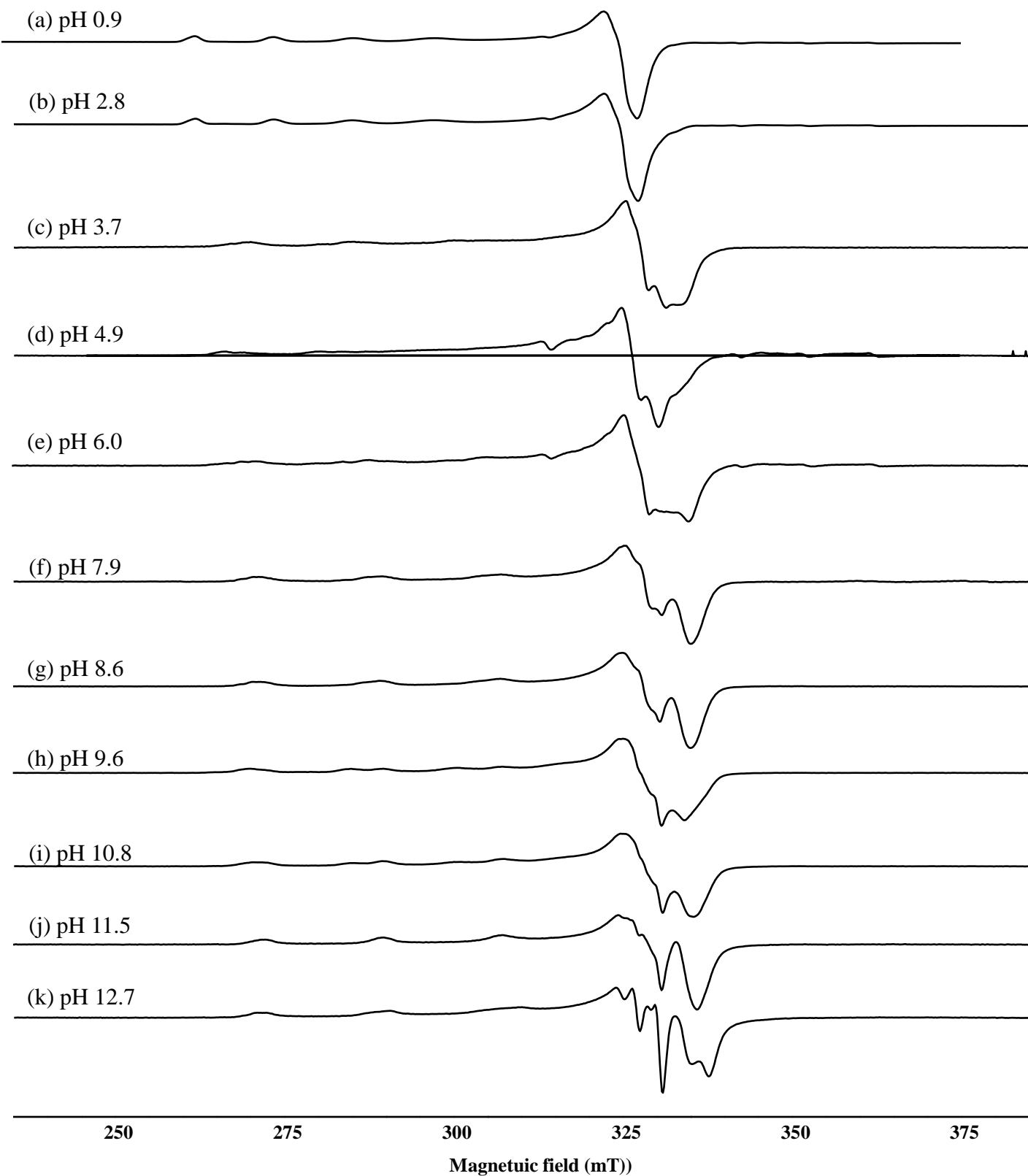


Figure S7

Cu/BT (1:1) 50% MeOH 77K

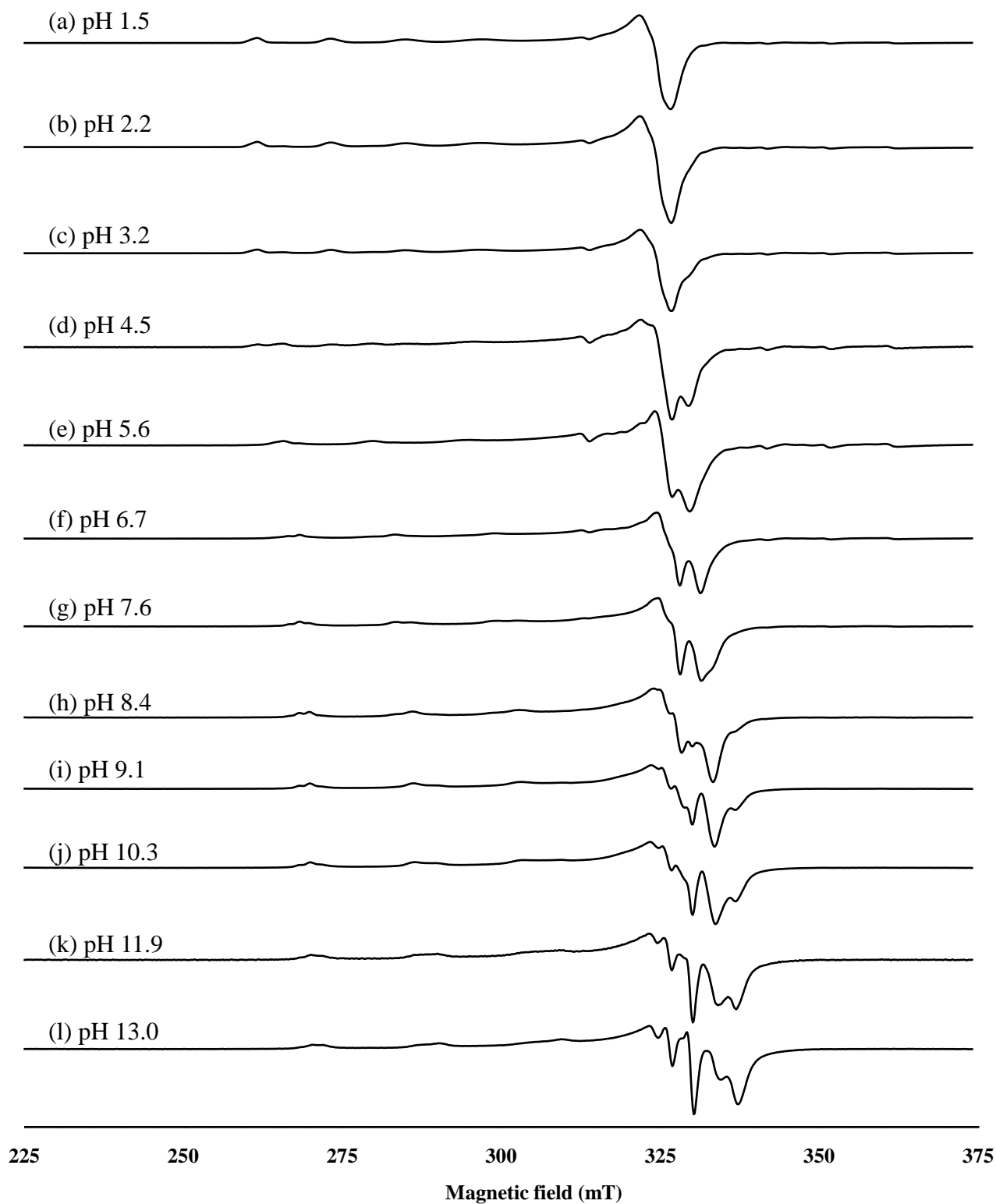


Figure S8

Cu/BT (1:5) 50% MeOH 77K

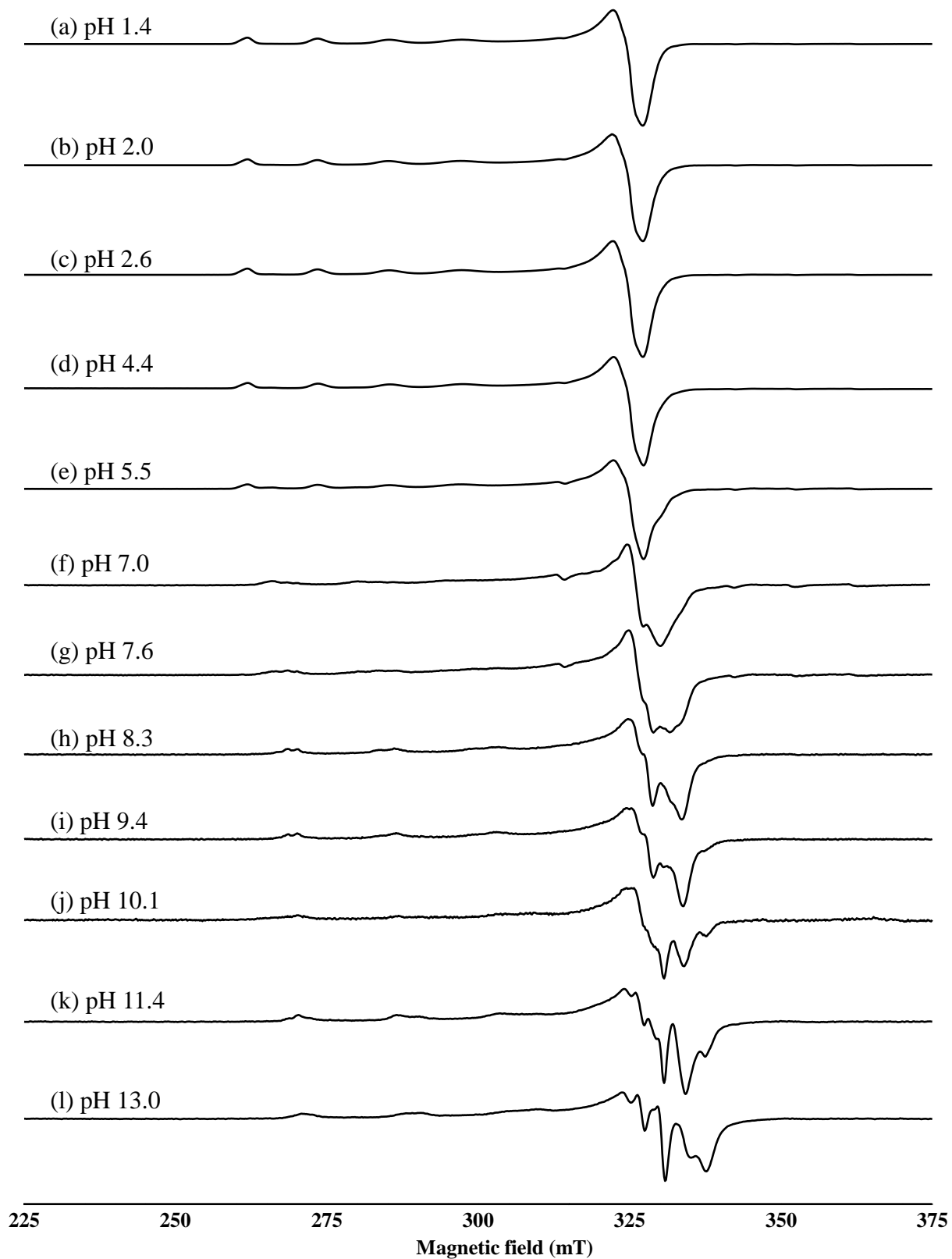


Figure S9

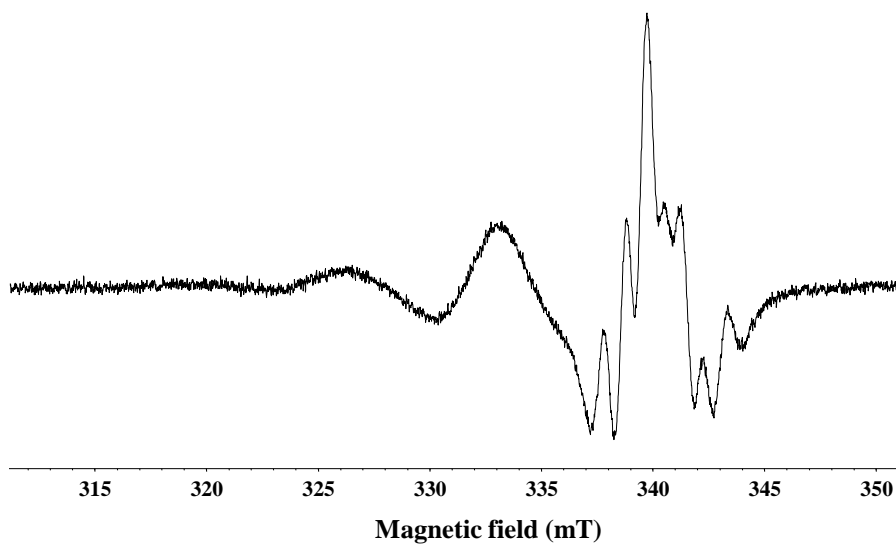


Figure S10

Supplementary Figures

Figure S1. (a) Fluid solution EPR spectrum at room temperature of 5% glycerol solution of green tea containing 2 mM Cu(II) at pH 10.5, (b) simulation of the anisotropic component in (a), (c) residual spectrum after subtracting spectrum (b) from (a).

Figure S2. Dependence on pH of the fluid solution EPR spectra of 4 mM Cu(II) in aqueous green tea extract diluted 1:1 in methanol, (a) pH 1.4, (b) pH 2.1, (c) pH 3.7, (d) pH 4.6, (e) pH 5.3, (f) pH 6.8, (g) pH 7.3, (h) pH 8.7, (i) pH 9.8, (j) pH 10.5, (k) pH 11.4, (l) pH 12.8

Figure S3. Dependence on pH of the fluid solution EPR spectra of 4 mM Cu(II) in aqueous green tea extract diluted 1:5 in (1:1) aqueous methanol, (a) pH 0.9, (b) pH 2.8, (c) pH 3.7, (d) pH 4.9, (e) pH 6.0, (f) pH 6.4, (g) pH 7.9, (h) pH 8.6, (i) pH 9.65, (j) pH 10.8, (k) pH 11.5, (l) pH 12.7.

Figure S4. Dependence on pH of the fluid solution EPR spectra 4 mM Cu(II) in aqueous Pu'er tea extract diluted 1:1 in methanol, (a) pH 1.5, (b) pH 2.2, (c) pH 3.2, (d) pH 4.5, (e) pH 5.6, (f) pH 6.7, (g) pH 7.6, (h) pH 8.4, (i) pH 9.1, (j) pH 10.3, (k) pH 11.9, (l) pH 13.0.

Figure S5. Dependence on pH of the fluid solution EPR spectra of 4 mM Cu(II) in aqueous Pu'er tea extract diluted 1:5 in (1:1) aqueous methanol, (a) pH 1.4, (b) pH 2.0, (c) pH 2.6, (d) pH 4.4, (e) pH 5.5, (f) pH 7.0, (g) pH 7.6, (h) pH 8.3, (i) pH 9.4, (j) pH 10.1, (k) pH 10.8, (l) pH 11.4, (m) pH 13.0

Figure S6. Dependence on pH of the EPR spectra at 77K of 4 mM Cu(II) in aqueous green tea extract diluted 1:1 in methanol, (a) pH 1.4, (b) pH 2.1, (c) pH 3.7, (d) pH 4.6, (e) pH 5.3, (f) pH 6.8, (g) pH 7.3, (h) pH 8.7, (i) pH 9.8, (j) pH 10.5, (k) pH 11.4, (l) pH 12.8

Figure S7. Dependence on pH of the EPR spectra at 77K of 4 mM Cu(II) in aqueous green tea extract diluted 1:5 in (1:1) aqueous methanol, (a) pH 0.94, (b) pH 2.80, (c) pH 3.67, (d) pH 4.92, (e) pH 6.02, (f) pH 7.87, (g) pH 8.57, (h) pH 9.55, (i) pH 10.80, (j) pH 11.51, (k) pH 12.74.

Figure S8. Dependence on pH of the EPR spectra at 77K of 4 mM Cu(II) in aqueous Pu'er tea extract diluted 1:1 in methanol, (a) pH 1.5, (b) pH 2.2, (c) pH 3.2, (d) pH 4.5, (e) pH 5.6, (f) pH 6.7, (g) pH 7.6, (h) pH 8.4, (i) pH 9.1, (j) pH 10.3, (k) pH 11.9, (l) pH 13.0.

Figure S9. Dependence on pH of the EPR spectra at 77K of 4 mM Cu(II) in aqueous Pu'er tea extract diluted 1:5 in (1:1) aqueous methanol, (a) pH 1.4, (b) pH 2.0, (c) pH 2.6, (d) pH 4.4, (e) pH 5.5, (f) pH 7.0, (g) pH 7.6, (h) pH 8.3, (i) pH 9.4, (j) pH 10.1, (k) pH 11.4, (m) pH 13.0

Figure S10. 2nd derivative recording of the ⁶³Cu *bis* complex with theanine in NaOD at pH 10