

H, 5.49; N, 3.74.  $^1\text{H}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  8.12 (s), 7.85-8.12 (m), 7.44 (d), 7.29 (d), 7.10-7.16 (m), 6.86-6.97 (m, aromatics); 2.70 (s,  $\text{NMe}_2$ ); 1.79 (s,  $\text{NHMe}_2$ ).  $^{13}\text{C}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  165.7 (Ta-O-C); 46.1 ( $\text{NMe}_2$ ); 40.0 ( $\text{NHMe}_2$ ).

$[\text{Ta}(\text{O}_2\text{C}_{20}\text{H}_{10}-3,3'-\{\text{SiMe}_3\}_2)(\text{NMe}_2)_3]$  (S)-8

A flask was charged with  $[\text{Ta}(\text{NMe}_2)_5]$  (1.0 g, 2.5 mmol) and benzene (20 mL). This mixture was stirred as (S)-3,3'-bis(trimethylsilyl)-2,2'-dihydroxy-1,1-dinaphthyl (1.1 g, 2.6 mmol) dissolved in benzene was slowly added. The mixture was stirred for 20 minutes and evacuated to dryness. The resulting solid was heated gently under vacuum for several minutes affording 1.7 g of **8** (92%).  $^1\text{H}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  8.14 (s), 7.78 (d), 7.28 (d), 7.08 (t), 6.89 (t, aromatics); 3.07 (s,  $\text{NMe}_2$ ); 0.48 (s,  $\text{SiMe}_3$ ).  $^{13}\text{C}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  164.9 (Ta-O-C); 45.6 ( $\text{NMe}_2$ ); -0.1 ( $\text{SiMe}_3$ ).

$[\text{Ta}(\text{O}_2\text{C}_{20}\text{H}_{10}-3,3'-\{\text{SiMe}_3\}_2)(\text{NHMe}_2)\text{Cl}_3]$  (S)-9 and  $[\text{Ta}(\text{O}_2\text{C}_{20}\text{H}_{10}-3,3'-\{\text{SiMe}_3\}_2\text{Cl}_4)[\text{Me}_2\text{NH}_2]$  (S)-10

A flask was charged with  $[\text{Ta}(\text{NMe}_2)_5]$  (1.0 g, 2.5 mmol) and benzene (50 mL). This mixture was stirred as (S)-3,3'-bis(trimethylsilyl)-2,2'-dihydroxy-1,1-dinaphthyl (1.1 g, 2.6 mmol) dissolved in benzene was slowly added. The reaction was stirred for 30 minutes and  $[\text{SiCl}_4]$  (1.4 mL, 12.2 mmol) added under a nitrogen flush. The resulting red solution was stirred for 30 minutes and evacuated to dryness affording a red solid which was washed with  $\text{CHCl}_3$  and pentane successively and dried in vacuo (1.8 g, 95%). Micro- and X-ray analysis lead to the assumption that a mixture of **9** and **10** were formed. Anal. Calcd. for **9**,  $\text{C}_{28}\text{H}_{35}\text{Cl}_3\text{NO}_2\text{Si}_2\text{Ta}$ : C, 44.19; H, 4.64; N, 1.84. **10**,  $\text{C}_{28}\text{H}_{36}\text{Cl}_4\text{NO}_2\text{Si}_2\text{Ta}$ : C, 42.17; H, 4.55; N, 1.76. Found: C, 37.87; H, 4.06; N, 1.58.  $^1\text{H}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  8.23 (s), 7.65 (d), 6.65-7.16 (m, aromatics); 6.77 (br,  $\text{NH}$ ); 2.07 (br,  $\text{NMe}_2$ ); 0.77 (s,  $\text{SiMe}_3$ ).  $^{13}\text{C}$  NMR ( $\text{C}_6\text{D}_6$ ,  $30^\circ\text{C}$ ):  $\delta$  163.0 (Ta-O-C); 35.8 ( $\text{NMe}_2$ ); 0.4 ( $\text{SiMe}_3$ ). Attempts at separation/purification have thus far failed.