

Metathesis Reactions of Tris(adamantylimido)methylrhenium and Aldehydes and Imines

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Supporting Information

Selected $^1\text{H-NMR}$ data for imines in C_6D_6 .

Imine	CH=N	Ar-H	R-H
PhCH=NPh	8.13 (s, 1H)	7.83 (m, 2H) 7.2 - 7.0 (m, 8H)	
(4-MeO) $\text{C}_6\text{H}_4\text{CH}=\text{NC}_6\text{H}_4(4\text{-}^t\text{Bu})$	8.30 (s, 1H)	7.86 (d, $J = 8.8$ Hz, 2H) 7.30 (m, 4H) 6.75 (d, 2H)	3.20 (s, 3H) 1.26 (s, 9H)
(4-Me ₂ N) $\text{C}_6\text{H}_4\text{CH}=\text{NC}_6\text{H}_4(4\text{-OMe})$	8.40 (s, 1H)	7.98 (d, $J = 8.8$ Hz, 2H) 7.31 (d, 2H) 6.84 (d, 2H) 6.51 (d, 2H)	3.34 (s, 3H) 2.40 (s, 6H)
PhCH=NAd	8.18 (s, 1H)	7.88 (d, $J = 8.8$ Hz, 2H) 7.15 (m, 3H)	2.04 (3H) ^{Ad} 1.83 (6H) ^{Ad} 1.62 (6H) ^{Ad}
(4-O ₂ N) $\text{C}_6\text{H}_4\text{CH}=\text{NAd}$	7.89 (s, 1H)	7.87 (d, $J = 8.8$ Hz, 2H) 7.47 (d, 2H)	2.04 (3H) ^{Ad} 1.74 (6H) ^{Ad} 1.62 (6H) ^{Ad}
(4-Me ₂ N) $\text{C}_6\text{H}_4\text{CH}=\text{NAd}$	8.28 (s, 1H)	7.97 (d, $J = 8.8$ Hz, 2H) 6.56 (d, 2H)	2.41 (s, 6H)

(4-MeO)C ₆ H ₄ CH =NAd	8.21 (s, 1H)	7.87 (d, J = 8.8 Hz, 2H) 6.80 (d, 2H)	3.23 (s, 3H) 2.06 (3H) ^{Ad} 1.88 (6H) ^{Ad} 1.64 (6H) ^{Ad}
(2-MeO)C ₆ H ₄ CH =NAd	9.01 (s, 1H)	8.54 (m, 1H) 7.04 (m, 1H) 6.89 (m, 1H) 6.52 (m, 1H)	3.31 (s, 3H) 2.02 (3H) ^{Ad} 1.90 (6H) ^{Ad} 1.61 (6H) ^{Ad}
2,6- (MeO) ₂ C ₆ H ₃ CH =NAd	8.77 (s, 1H)	7.05 (t, J = 8.4 Hz, 1H) 6.34 (d, 2H)	3.40 (s, 6H) 2.06 (3H) ^{Ad} 1.88 (6H) ^{Ad} 1.64 (6H) ^{Ad}
(4-CHO)C ₆ H ₄ CH =NAd	9.64(s, 1H) ^{CH=O} 8.04 (s, 1H)	7.74 (d, J = 8.2 Hz, 2H) 7.57(d, 2H)	
AdN= CHC ₆ H ₄ CH=NAd	8.16 (s, 2H)	7.93 (s, 4H)	
3,4,5- (MeO) ₃ C ₆ H ₂ CH =NAd	8.20 (s, 1H)	7.20 (s, 2H)	3.85 (s, 3H) 3.42 (s, 6H) 2.07 (3H) ^{Ad} 1.92 (6H) ^{Ad} 1.65 (6H) ^{Ad}
CH ₃ (CH ₂) ₂ CH =NAd	7.47 (t, J = 4.8 Hz, 1H)		0.88 (t, J = 7.6 Hz, 3H) 2.17 (dt, 2H) 1.50 (m, 2H) 1.94 (3H) ^{Ad} 1.75 (6H) ^{Ad} 1.61 (6H) ^{Ad}
(CH ₃) ₃ CCH=NAd	7.45 (s, 1H)		1.10 (s, 9H) 2.02 (3H) ^{Ad} 1.73 (6H) ^{Ad} 1.61 (6H) ^{Ad}

Selected ^{13}C -NMR data in C_6D_6 for imines

	CH=N	Ar-C	Ad-C or CH_3 -
$(4\text{-O}_2\text{N})\text{C}_6\text{H}_4\text{CH}=\text{NAd}$	152.7	149.4	58.9Ad
		143.0	43.5Ad
		128.9	37.1Ad
		124.1	30.2Ad
$(4\text{-MeO})\text{C}_6\text{H}_4\text{CH}=\text{NAd}$	153.9		54.9MeO
$(2\text{-MeO})\text{C}_6\text{H}_4\text{CH}=\text{NAd}$	150.4		55.0MeO
2,6- $(\text{MeO})_2\text{C}_6\text{H}_3\text{CH}=\text{NAd}$	149.9		56.0MeO
$(\text{CH}_3)_3\text{CCH}=\text{NAd}$	164.4		44.0Ad 37.3Ad 30.4Ad 27.6Me