

Supplementary Tables. Metal-to-metal charge-transfer data.

trans-[(dppm)(CO)₂{(PhO)₃P}Mn(μ-NC)Mn{P(OPh)₃}(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**2**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm ⁻¹	ϵ / dm ³ mol ⁻¹ cm ⁻¹	$\nu_{1/2}$ / cm ⁻¹	J / cm ⁻¹	α^2 / %
CH ₂ Cl ₂	1.0	852	11737	2930	3530	1403	1.43
MeCN	14.1	848	11792	2550	3501	1302	1.22
acetone	17.0	855	11692	2834	3650	1395	1.42
thf	20.0	870	11494	2725	3642	1355	1.39

trans-[(dppm)(CO)₂{(PhO)₃P}Mn(μ-NC)Mn(CN*i*Bu^t)(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**3**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm ⁻¹	ϵ / dm ³ mol ⁻¹ cm ⁻¹	$\nu_{1/2}$ / cm ⁻¹	J / cm ⁻¹	α^2 / %
CH ₂ Cl ₂	1.0	972	10288	2633	2487	1041	1.02
CHCl ₃	4.0	968	10330	5381	2427	2194	0.45
MeCN	14.1	976	10246	2839	2118	996	0.94
acetone	17.0	972	10288	2158	2222	891	0.75
thf	20.0	982	10183	2193	2252	900	0.78

trans-[(dppm)(CO)₂{(PhO)₃P}Mn(μ-NC)Mn(CNXyl)(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**4**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm ⁻¹	ϵ / dm ³ mol ⁻¹ cm ⁻¹	$\nu_{1/2}$ / cm ⁻¹	J / cm ⁻¹	α^2 / %
CH ₂ Cl ₂	1.0	948	10548	2096	2924	1020	0.94
CHCl ₃	4.0	944	10593	2400	3030	1113	1.10
MeCN	14.1	968	10330	2134	2577	956	0.86
acetone	17.0	942	10615	1260	2381	715	0.45
thf	20.0	956	10460	1462	2674	811	0.60
dmf	29.8	967	10341	1435	2688	801	0.60

trans-[(dppm)(CO)₂{(EtO)₃P}Mn(μ-NC)Mn{P(OPh)₃}(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**6**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm^{-1}	$\epsilon / \text{dm}^3 \text{mol}^{-1} \text{cm}^{-1}$	$\nu_{1/2} / \text{cm}^{-1}$	J / cm^{-1}	$\alpha^2 / \%$
CH ₂ Cl ₂	1.0	811	12329	2909	3968	1513	1.50
CHCl ₃	4.0	788	12690	1809	3205	1088	0.74
MeCN	14.1	798	12531	1337	3906	1026	0.67
acetone	17.0	798	12531	1752	4032	1193	0.91
thf	20.0	789	12674	2771	3937	1491	1.39

trans-[(dppm)(CO)₂{(EtO)₃P}Mn(μ-NC)Mn(CN*i*Bu)(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**7**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm^{-1}	$\epsilon / \text{dm}^3 \text{mol}^{-1} \text{cm}^{-1}$	$\nu_{1/2} / \text{cm}^{-1}$	J / cm^{-1}	$\alpha^2 / \%$
CH ₂ Cl ₂	1.0	877	11402	2685	3425	1300	1.30
CHCl ₃	4.0	860	11627	2137	3636	1206	1.08
MeCN	14.1	875	11428	3024	3425	1380	1.46
acetone	17.0	872	11467	3565	3436	1504	1.72
thf	20.0	868	11520	2748	3378	1312	1.30
dmf	29.8	870	11494	2408	3367	1225	1.14

trans-[(dppm)(CO)₂{(EtO)₃P}Mn(μ-NC)Mn(CN*Xyl*)(NO)(η⁵-C₅H₄Me)]²⁺ *trans*-**8**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm^{-1}	$\epsilon / \text{dm}^3 \text{mol}^{-1} \text{cm}^{-1}$	$\nu_{1/2} / \text{cm}^{-1}$	J / cm^{-1}	$\alpha^2 / \%$
CH ₂ Cl ₂	1.0	856	11682	1409	3533	967	0.69
MeCN	14.1	861	11614	1312	3533	931	0.64
acetone	17.0	850	11765	892	3649	785	0.44
thf	20.0	841	11890	1342	3636	966	0.66

trans-[(dppm)(CO)₂{(EtO)₃P}Mn(μ-NC)Mn(CN*l*Bu)(NO)(η⁵-C₅Me₅)]²⁺ *trans*-**10**²⁺.

Solvent	DN ^a	λ_{\max} / nm	E / cm ⁻¹	ϵ / dm ³ mol ⁻¹ cm ⁻¹	$\nu_{1/2}$ / cm ⁻¹	J / cm ⁻¹	α^2 / %
CH ₂ Cl ₂	1.0	1021	9794	3460	2183	1140	1.36
CHCl ₃	4.0	966	10351	3365	2222	1116	1.16
MeCN	14.1	1024	9765	3926	2164	1155	1.40
acetone	17.0	1002	9980	3624	2058	1094	1.28
thf	20.0	986	10141	3450	2174	1106	1.19
dmf	29.8	1002	9980	3345	2083	1057	1.12

^a DN = Gutmann Donor Number.