SUPPORTING INFORMATION

Reductive Labilization of a Cyclometalating Ligand Applied to Auxiliary-Mediated Asymmetric Coordination Chemistry

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Table S1. Crystallographic Data and Structure Refinement for (*S*)-2, (*S*)-5, and Λ-(*S*)-7.

	(*S*)-**2**	(*S*)-**5**	Λ-(*S*)-**7**
Chemical formula	$C_{20}H_{25}F_6N_6O_3PRu$, $0.5(CH_3CN)$	$C_{36}H_{37}F_6N_5O_3P_2Ru$, CH_2Cl_2	$C_{64}H_{57}BN_6O_3Ru$, Et_2O
M_r	664.03	949.64	1144.15
Crystal system	orthorhombic	orthorhombic	orthorhombic
Space group	$P2_12_12$	$P2_12_12_1$	$P2_12_12_1$
a (Å)	13.6445(5)	10.124(2)	13.6846(14)
b (Å)	24.8208(7)	17.374(3)	14.8157(18)
c (Å)	8.2145(3)	22.971(5)	28.691(4)
V (Å^3)	2781.98(16)	4040.4(14)	5817.0(13)
Z	4	4	4
μ (mm^{-1})	0.70	0.67	0.32
Crystal size (mm)	0.38 × 0.10 × 0.08	0.15 × 0.15 × 0.05	0.41 × 0.04 × 0.03
T_{min}, T_{max}	0.928, 0.990	0.92, 0.97	0.888, 1.136
No. of measured, independent and observed [$I > 2\sigma(I)$] reflections	23795, 5886, 5146	23033, 9203, 7823	30855, 10543, 2506
R_{int}	0.054	0.058	0.306
$R[F^2 > 2\sigma(F^2)]$, $wR(F^2)$, *S*	0.023, 0.048, 0.88	0.035, 0.063, 1.00	0.057, 0.142, 0.59
No. of reflections	5886	9203	10543
No. of parameters	356	520	729
No. of restraints	0	0	558
$\Delta\rho_{max}$, $\Delta\rho_{min}$ (e Å^{-3})	0.57, –0.52	0.37, –0.39	0.72, –0.63
Flack parameter[S1]	–0.045(19)	–0.049(17)	0.02(8)
CCDC number	947534	947535	947536

Reference

(S1) Flack, H. D. *Acta Cryst.* **1983**, *A39*, 876–881.