Supporting Information for:

A Convenient Quick Synthesis of $SnBu_2RCl$ Derivatives

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*Characterization data for compounds **1** and **3**.*

General considerations. ^{1}H, $^{13}C\{^{1}H\}$ ^{19}F and ^{119}Sn NMR spectra were recorded on Bruker AC–300, ARX–300 and AV400 instruments. Chemical shifts are reported in δ (ppm) and referenced to Me_4Si (^{1}H and ^{13}C), $CFCl_3$ (^{19}F) or $SnMe_4$ (^{119}Sn). All of the NMR spectra were recorded at 293 K. Mass spectra of the products were recorded on Agilent Tech. 5973 MS system ($SnBu_2RCl$) as well as on HP 5890 serie II/5971 A GC-MS ($SnBu_2R_2$). C and H elemental analyses were performed on a Perkin-Elmer 2400 CHN microanalyzer. Most compounds are known and, in these cases, the relevant reference is given for each one.

Dimethyldi(*n*-butyl)tin[i] (1a): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 1.48 (m, 4H, CH_2), 1.31 (m, 4H, CH_2), 0.91 (t, 6H, CH_3), 0.83 (m, 4H, CH_2-Sn), 0.02 (s, J_{HSn} = 50.0 Hz, 3H, CH_3). $^{13}C\{^{1}H\}$ NMR (100.61 MHz, $CDCl_3$) δ 29 (s, $^{2}J_{CSn}$ = 21.0 Hz, 2C, *C*H_2), 27.1 (s, $^{3}J_{CSn}$ = 54.3 Hz, 2C, *C*H_2), 13.7 (s, 2C, *C*H_3), 10.1 (s, $^{1}J_{CSn}$ = 349.2 Hz, 2C, *C*H_2-Sn), -11.5 (s, $^{1}J_{CSn}$ = 298.9 Hz, 2C, *C*H_3). $^{119}Sn\{^{1}H\}$ NMR (149.21 MHz, $CDCl_3$): δ -2.60 (s). MS (EI, *m/z* (%)): 206 (58) [M^+–Bu], 151 (100) [M^+–2Bu], 135 (36) [M^+–2Bu–1R], 119 (11) [Sn^+].

Chloromethyldi(*n*-butyl)tin[ii] (3a): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 1.65 (m, 4H, CH_2), 1.35 (m, 8H, CH_2), 0.92 (t, 6H, CH_3), 0.58 (s, $^{2}J_{HSn}$ = 51.2 Hz, 3H, CH_3). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 27.7 (s, $^{2}J_{CSn}$ = 20.7 Hz, 2C, *C*H_2), 26.7 (s, $^{3}J_{CSn}$ = 65.8 Hz, 2C, *C*H_2), 18.1 (s, $^{1}J_{CSn}$ = 369.0 Hz, 2C, *C*H_2-Sn), 13.6 (s, 2C, *C*H_3), -2.9 (s, $^{1}J_{CSn}$ = 312.6 Hz, 2C, *C*H_3). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 163.7 (s). MS (CI, *m/z* (%)): 269 (6) [M^+ – R], 249 (100) [M^+ – Cl], 227 (24) [M^+ – Bu].

Diphenyldi(*n*-butyl)tin[iii] (1b): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.62 (m, 4H), 7.44 (m, 6H), 1.72 (m, 4H, CH_2), 1.44 (m, 8H, CH_2), 0.99 (t, 6H, CH_3). ^{13}C{^{1}H} NMR (100.61 Mz, $CDCl_3$) δ 140.6 (s, $^{1}J_{CSn}$ = 433.5 Hz, 2C, C_{ipso}-Sn), 136.9 (s, $^{2}J_{CSn}$ = 32.3 Hz, 4C, C_{ortho}), 128.4 (s, $^{4}J_{CSn}$ = 10.3 Hz, 2C, C_{para}), 128.3 (s, $^{3}J_{CSn}$ = 44.0 Hz, 4C, C_{meta}) 29.0 (s, $^{2}J_{CSn}$ = 21.3 Hz, 2C, CH_2), 27.5 (s, $^{3}J_{CSn}$ = 61.6 Hz, 2C, CH_2), 13.8 (s, 2C, CH_3), 10.3 (s, $^{1}J_{CSn}$ = 367.5 Hz, 2C, CH_2-Sn). ^{119}Sn{^{1}H} NMR (111.92 MHz, $CDCl_3$): δ -73.1 (s). MS (EI, *m/z* (%)): 331 (100) [M^+–Bu], 275 (85) [M^+–2Bu], 197 (42) [M^+–2Bu–1R], 119 (10) [Sn^+].

Chlorophenyldi(*n*-butyl)tin[iv] (3b): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 7.56 (m, 2H,), 7.42 (m, 3H), 1.71 (m, 4H, CH_2), 1.5 (m, 4H, CH_2), 1.41 (m, 4H, CH_2), 0.93 (t, 6H, CH_3). ^{13}C{^{1}H} NMR (100.61 Mz, $CDCl_3$) δ 140.7 (s, $^{1}J_{CSn}$ = 467.3 Hz, 1C, C_{ipso}-Sn), 135.5 (s, $^{2}J_{CSn}$ = 45.5 Hz, 2C, C_{ortho}), 129.7 (s, $^{4}J_{CSn}$ = 12.5 Hz, 1C, C_{para}), 128.8 (s, $^{3}J_{CSn}$ = 52.8 Hz, 2C, C_{meta}), 27.8 (s, $^{2}J_{CSn}$ = 24.2 Hz, 2C, CH_2), 26.8 (s, $^{3}J_{CSn}$ = 69.7 Hz, 2C, CH_2), 17.7 (s, $^{1}J_{CSn}$ = 379.3 Hz, 2C, CH_2-Sn), 13.6 (s, 2C, CH_3). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 82.6 (s). MS (CI, *m/z* (%)): 345 (1) [M^+], 311 (100) [M^+–Cl], 289 (35) [M^+–Bu], 269 (32) [M^+–R].

Di(*p*-fluorophenyl)di(*n*-butyl)tin[v] (1c): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.43 (dd, $^{3}J_{HH}$ = 6.4 Hz, $^{4}J_{HF}$ = 4.8 Hz, 4H, H_{ortho}), 7.07 (dd, $^{3}J_{HH}$ = 6.4 Hz, $^{3}J_{HF}$ = 7.2 Hz, 4H, H_{meta}), 1.6 (m, 4H, CH_2), 1.35 (m, 4H, CH_2), 1.3 (m, 4H, CH_2-Sn), 0.92 (t, 6H, CH_3). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 163.5 (s, $^{1}J_{CF}$ = 251 Hz, $^{4}J_{CSn}$ = 11.8 Hz, 2C, C_{para}-F), 138.2 (s, $^{3}J_{CF}$ = 8.5 Hz, $^{2}J_{CSn}$ = 44.9 Hz, 4C, C_{ortho}), 135.1 (s, $^{4}J_{CF}$ = 4.8 Hz, $^{1}J_{CSn}$ = 434.4 Hz, 2C, C_{ipso}-Sn), 115.5 (d, $^{2}J_{CF}$ = 20.5 Hz, $^{3}J_{CSn}$ = 66.7 Hz 4C, C_{meta}), 28.9

(s, $^{2}J_{CSn}$ = 20.4 Hz, 2C, *C*H_2), 27.3 (s, $^{3}J_{CSn}$ = 61.8 Hz, 2C, *C*H_2), 13.6 (s, 2C, *C*H_3), 10.5 (s, $^{1}J_{CSn}$ = 378.4 Hz, 2C, *C*H_2-Sn). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ -67.96 (s). MS (EI, *m/z* (%)): 367 (100) [M^+–Bu], 311 (83) [M^+–2Bu], 215 (33) [M^+–2Bu–1R], 119 (4) [Sn^+].

Chloro(*p*-fluorophenyl)di(*n*-butyl)tin[vi] **(3c):** ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.54 (dd, $^{3}J_{HH}$ = 8.6 Hz, $^{4}J_{HF}$ = 6.0 Hz, 2H, H_{ortho}), 7.14 (dd, $^{3}J_{HH}$ = 8.6 Hz, $^{3}J_{HF}$ = 9.3 Hz, 4H, H_{meta}), 1.70 (m, 4H, C*H*$_2$), 1.52 (m, 4H, C*H*$_2$), 1.37 (m, 4H, C*H*$_2$-Sn), 0.91 (t, 6H, C*H*$_3$). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 163.9(s, $^{1}J_{CF}$ = 251.5 Hz, $^{4}J_{CSn}$ = 15.2 Hz, 1C, C_{para}-F), 137.1 (d, $^{3}J_{CF}$ = 7.5 Hz, $^{2}J_{CSn}$ = 57.8 Hz, 2C, C_{ortho}), 135.7 (s, $^{4}J_{CF}$ = 4.3 Hz, $^{1}J_{CSn}$ = 448.8 Hz, 1C, C_{ipso}-Sn), 115.9 (d, $^{2}J_{CF}$ = 20.4 Hz, $^{3}J_{CSn}$ = 77.4 Hz, 2C, C_{meta}), 27.8 (s, $^{2}J_{CSn}$ = 27.8 Hz, 2C, *C*H_2), 26.8 (s, $^{3}J_{CSn}$ = 69.9 Hz, 2C, *C*H_2), 17.8 (s, $^{1}J_{CSn}$ = 387 Hz, 2C, *C*H_2-Sn), 13.6 (s, 2C, *C*H_3). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 84.83 (s). MS (CI, *m/z* (%)): 364 (9) [M^+], 329 (100) [M^+–Cl], 305 (32) [M^+–Bu], 269 (48) [M^+–R].

Dianisyldi(*n*-butyl)tin (1d): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.45 (d, $^{3}J_{HH}$ = 8.4 Hz, $^{3}J_{HSn}$ = 31.2 Hz, 4H, H_{ortho}), 6.97 (d, $^{3}J_{HH}$ = 8.4 Hz, 4H, H_{meta}), 3.84 (s, 6H, OC*H*$_3$), 1.64 (m, 4H, C*H*$_2$), 1.4 (m, 4H, C*H*$_2$), 1.3 (m, 4H, C*H*$_2$-Sn), 0.92 (t, 6H, C*H*$_3$). ^{13}C{^{1}H} NMR (75.4 MHz, $CDCl_3$) δ 160.1 (s, 2C, C_{para}-OCH_3), 137.9 (s, $^{2}J_{CSn}$ = 36.8 Hz, 4C, C_{ortho}), 130.6 (s, $^{1}J_{CSn}$ = 451.6 Hz, 2C, C_{ipso}-Sn), 114.1 (s, $^{3}J_{CSn}$ = 49.8Hz, 4C, C_{meta}), 54.8 (s, 2C, O*C*H$_3$), 28.9 (s, $^{2}J_{CSn}$ = 17.8 Hz, 2C, *C*H_2), 27.3 (s, $^{3}J_{CSn}$ = 58.2 Hz, 2C, *C*H_2), 13.6 (s, 2C, *C*H_3), 10.6 (s, $^{1}J_{CSn}$ = 371.7 Hz, 2C, *C*H_2-Sn). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ -69.23 (s). MS (EI, *m/z* (%)): 391 (100) [M^+–Bu], 335 (69) [M^+–2Bu], 227 (40) [M^+–2Bu–R], 119 (4) [Sn^+]. Anal. Calcd. for $C_{22}H_{32}O_2Sn$: C, 50.09; H, 7.21; Found: C, 59.05; H, 7.01.

Chloroanisyldi(*n*-butyl)tin (3d): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.48 (d, $^{3}J_{HH}$ = 8.8 Hz, $^{3}J_{HSn}$ = 57.5 Hz, 2H, H_{ortho}), 6.97 (d, $^{3}J_{HH}$ = 8.8 Hz, 4H, H_{meta}), 3.82 (s, 6H, OC*H*$_3$), 1.70 (m, 4H, C*H*$_2$), 1.52 (m, 4H, C*H*$_2$), 1.43 (m, 4H, C*H*$_2$-Sn), 0.94 (t, 6H, C*H*$_3$). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 160.9 (s, $^{4}J_{CSn}$ = 12.3 Hz, 1C, C_{para}-OCH_3), 136.7 (s, $^{2}J_{CSn}$ = 52.2 Hz, 2C, C_{ortho}), 131.0 (s, $^{1}J_{CSn}$ = 492.0 Hz, 1C, C_{ipso}-Sn), 114.6 (s, $^{3}J_{CSn}$ = 58.6 Hz, 2C, C_{meta}), 55.0 (s, 1C, O*C*H$_3$), 27.8 (s, $^{2}J_{CSn}$ = 24.8 Hz, 2C, *C*H_2),

26.5 (s, $^{3}J_{CSn}$ = 69.1 Hz, 2C, *C*H_2), 17.7 (s, $^{1}J_{CSn}$ = 383.4 Hz, 2C, *C*H_2-Sn), 13.6 (s, 2C, *C*H_3). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 87.6 (s). MS (CI, *m/z* (%)): 376 (15) [M^+], 341 (100) [M^+–Cl], 319 (33) [M^+–Bu], 269 (27) [M^+–R]. Anal. Calcd. for $C_{15}H_{25}ClOSn$: C, 47.98; H, 6.71; Found: C, 48.18; H, 6.32.

Di(*p*-tolyl)di(*n*-butyl)tin[vii] (1e): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.43 (d, $^{3}J_{HH}$ = 7.7 Hz, $^{3}J_{HSn}$ = 47.4 Hz, 4H, H_{ortho}), 7.20 (d, $^{3}J_{HH}$ = 7.7 Hz, 4H, H_{meta}), 2.38 (s, 6H, C*H*$_3$-aryl), 1.64 (m, 4H, C*H*$_2$), 1.40 (m, 4H, C*H*$_2$), 1.30 (m, 4H, C*H*$_2$-Sn), 0.92 (t, 6H, C*H*$_3$). ^{13}C{^{1}H} NMR (75.4 MHz, $CDCl_3$) δ 137.9 (s, $^{4}J_{CSn}$ = 11 Hz, 2C, C_{para}-CH_3), 136.8 (s, $^{2}J_{CSn}$ = 34.1 Hz, 4C, C_{ortho}), 136.5 (s, $^{1}J_{CSn}$ = 443.0 Hz, 2C, C_{ipso}-Sn), 129 (s, $^{3}J_{CSn}$ = 45.1 Hz, 4C, C_{meta}), 28.9 (s, $^{2}J_{CSn}$ = 20.7 Hz, 2C, *C*H_2), 27.4 (s, $^{3}J_{CSn}$ = 59.8 Hz, 2C, *C*H_2), 21.4 (s, 2C, *C*H_3-aryl), 13.6 (s, 2C, *C*H_3), 10.2 (s, $^{1}J_{CSn}$ = 365.9 Hz, 2C, *C*H_2-Sn). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ -72.28 (s). MS (EI, *m/z* (%)): 359 (100) [M^+–Bu], 303 (82) [M^+–2Bu], 211 (35) [M^+–2Bu–1R], 119 (7) [Sn^+].

Chloro(*p*-tolyl)di(*n*-butyl)tin[viii] (3e): ^{1}H NMR (300.13 MHz, $CDCl_3$): δ 7.46 (d, $^{3}J_{HH}$ = 7.8 Hz, $^{3}J_{HSn}$ = 59.3 Hz, 2H, H_{ortho}), 7.25 (d, $^{3}J_{HH}$ = 7.8 Hz, 4H, H_{meta}), 2.49 (s, 6H, C*H*$_3$-aryl), 1.70 (m, 4H, C*H*$_2$), 1.52 (m, 4H, C*H*$_2$), 1.43 (m, 4H, C*H*$_2$-Sn), 0.94 (t, 6H, C*H*$_3$). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 139.7 (s, $^{4}J_{CSn}$ = 12.1 Hz, 1C, C_{para}-CH_3), 135.5 (s, $^{2}J_{CSn}$ = 47 Hz, 2C, C_{ortho}), 129.7 (s, $^{3}J_{CSn}$ = 56.4 Hz, 2C, C_{meta}), 126.8 (s, 1C, C_{ipso}-Sn), 27.8 (s, $^{2}J_{CSn}$ = 24.5 Hz, 2C, *C*H_2), 26.9 (s, $^{3}J_{CSn}$ = 68.4 Hz, 2C, *C*H_2), 21.5 (s, 1C, *C*H_3-aryl), 17.8 (s, $^{1}J_{CSn}$ = 380.2 Hz, 2C, *C*H_2-Sn) 13.7 (s, 2C, *C*H_3), ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 85.46 (s). MS (CI, *m/z* (%)): 360 (5) [M^+], 325 (100) [M^+–Cl], 301 (33) [M^+–Bu], 269 (30) [M^+–R].

Di(*o*-tolyl)di(*n*-butyl)tin[vii] (1f): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 7.45 (dd, 2H), 7.24 (m, 6H), 2.38 (s, 6H, CH_3-aryl), 1.62 (m, 4H, CH_2), 1.41 (m, 8H, CH_2), 0.94 (t, 6H, CH_3). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 144.8 (s, $^{2}J_{CSn}$ = 30.1 Hz, 2C, C_{ortho}-CH_3), 141.2 (s, $^{1}J_{CSn}$ = 438.7 Hz, 2C, C_{ipso}-Sn), 136.9 (s, $^{2}J_{CSn}$ = 35.2 Hz, 2C, C_{ortho}), 129.2 (s, $^{3}J_{CSn}$ = 37.4 Hz, 2C, C_{meta}), 128.7 (s, $^{4}J_{CSn}$ = 9.5 Hz, 2C,

C_{para}), 125.3 (s, $^{3}J_{CSn}$ = 45.5 Hz, 2C, C_{meta}), 29.2 (s, $^{2}J_{CSn}$ = 19.1 Hz, 2C, CH_2), 27.5 (s, $^{3}J_{CSn}$ = 66.0 Hz, 2C, CH_2), 25.2 (s, 2C, CH_3-aryl), 13.8 (s, 2C, CH_3), 11.3 (s, $^{1}J_{CSn}$ = 362.4 Hz, 2C, CH_2-Sn). $^{119}Sn\{^{1}H\}$ NMR (149.21 MHz, $CDCl_3$): δ -68.3 (s). MS (EI, *m/z* (%)): 359 (86) [M^+–Bu], 303 (100) [M^+–2Bu], 211 (51) [M^+–2Bu–1R], 119 (10) [Sn^+]. Redistillation yielded a colorless liquid, b.p. 160º/0.5 mmHg.

Chloro(*o*-tolyl)di(*n*-butyl)tin (3f): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 7.63 (m, 1H), 7.30 (m, 3H), 2.46 (s, 3H, CH_3-aryl), 1.70 (m, 4H, CH_2), 1.53 (m, 4H, CH_2), 1.40 (septet, 4H, CH_2), 0.93 (t, 6H, CH_3). $^{13}C\{^{1}H\}$ NMR (100.61 MHz, $CDCl_3$) δ 143.3 (s, $^{2}J_{CSn}$ = 48.4 Hz, 1C, C_{ortho}-CH_3), 140.7 (s, $^{1}J_{CSn}$ = 468.0 Hz, 1C, C_{ipso}-Sn), 135.8 (s, $^{2}J_{CSn}$ = 38.9 Hz, 2C, C_{ortho}), 129.9 (s, $^{4}J_{CSn}$ = 11.0 Hz, 1C, C_{para}), 129.6 (s, 1C, C_{meta}), 125.82 (s, $^{3}J_{CSn}$ = 52.8 Hz, 1C, C_{meta}), 27.8 (s, $^{2}J_{CSn}$ = 24.9 Hz, 2C, CH_2), 26.7 (s, $^{3}J_{CSn}$ = 72.6 Hz, 2C, CH_2), 24.7 (s, $^{3}J_{CSn}$ = 36.7 Hz, 3C, $C$$H_3$-aryl), 18.7 (s, $^{1}J_{CSn}$ = 375.6 Hz, 2C, CH_2-Sn), 13.6 (s, 2C, CH_3). $^{119}Sn\{^{1}H\}$ NMR (149.21 MHz, $CDCl_3$): δ 90.1 (s). MS (CI, *m/z* (%)): 359 (2) [M^+], 325 (100) [M^+–Cl], 303 (35) [M^+–Bu], 269 (33) [M^+–R]. Anal. Calcd. for $C_{15}H_{25}ClSn$: C, 50.11; H, 7.01; Found: C, 49.74; H, 7.34.

Dimesityldi(*n*-butyl)tin (1g): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 6.91 (s, 4H, *J* = 14.9 Hz, aromatic), 2.39 (s, 12H, C_{ortho}-CH_3), 2.36 (s, 6H, C_{para}-CH_3), 1.52 (m, 12H, CH_2), 0.98 (t, *J* = 7.2 Hz, 6H, CH_3). $^{13}C\{^{1}H\}$ NMR (100.61 MHz, $CDCl_3$) δ 144.5 (s, $^{2}J_{CSn}$ = 31.5 Hz, 4C, C_{ortho}), 140.1 (s, $^{1}J_{CSn}$ = 456.3 Hz, 2C, C_{ipso}-Sn), 137.7 (s, $^{4}J_{CSn}$ = 8.8 Hz, 2C, C_{para}), 127.8 (s, $^{3}J_{CSn}$ = 39.6 Hz, 4C, C_{meta}), 29.3 (s, $^{2}J_{CSn}$ = 16.9 Hz, 2C, $C$$H_2$), 27.4 (s, $^{3}J_{CSn}$ = 71.2 Hz, 2C, $C$$H_2$), 25.5 (s, 4C, C_{ortho}-$C$$H_3$), 21.1 (s, 2C, C_{para}-$C$$H_3$), 16.6 (s, $^{1}J_{CSn}$ = 349.9 Hz, 2C, CH_2-Sn), 13.6 (s, 2C, CH_3). $^{119}Sn\{^{1}H\}$ NMR (149.21 MHz, $CDCl_3$): δ -89.32 (s). MS (EI, *m/z* (%)): 415 (100) [M^+–Bu], 359 (69) [M^+–2Bu], 237 (36) [M^+–2Bu–R], 119 (29) [Sn^+]. Anal. Calcd. for $C_{26}H_{40}Sn$: C, 66.26; H, 8.55; Found: C, 66.63; H, 8.08.

Chloromesityldi(*n*-butyl)tin (3g): ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 6.90 (s, 2H, *J* = 20.6 Hz), 2.48 (s, 6H, C_{ortho}-CH_3), 2.29 (s, 3H, C_{para}-CH_3), 1.71 (m, 4H, CH_2), 1.54 (m, 4H, CH_2), 1.42 (septet, 4H, CH_2), 0.94 (t, *J* = 7.30 Hz, 6H, CH_3). $^{13}C\{^{1}H\}$ NMR (100.61 MHz, $CDCl_3$) δ 144.5 (s, $^{2}J_{CSn}$ = 44.7 Hz,

2C, C_{ortho}), 139.9 (s, $^4J_{CSn}$ = 10.3 Hz, 1C, C_{para}), 137.5 (s, $^1J_{CSn}$ = 495.9 Hz, 1C, C_{ipso}-Sn), 128.5 (s, $^3J_{CSn}$ = 49.1 Hz, 2C, C_{meta}), 27.9 (s, $^2J_{CSn}$ = 22.7 Hz, 2C, *C*H_2), 26.9 (s, $^3J_{CSn}$ = 78.5 Hz, 2C, *C*H_2), 25.3 (s, 2C, C_{ortho}-*C*H_3), 21.3 (s, $^1J_{CSn}$ = 371.9 Hz, 2C, CH_2-Sn), 21.1 (s, 1C, C_{para}-*C*H_3), 13.6 (s, $^4J_{CSn}$ = 8.8 Hz, 2C, CH_3). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ 79.46 (s). MS (CI, *m/z* (%)): 353 (100) [M^+–Cl], 331 (39) [M^+–Bu], 269 (21) [M^+–R]. Anal. Calcd. for $C_{17}H_{29}ClSn$: C, 52.68; H, 7.54; Found: C, 53.05; H, 7.33.

Dicyclohexyldi(*n*-butyl)tin[ix] **(1h):** ^{1}H NMR (400.13 MHz, $CDCl_3$): δ 1.81 (m, 4H, CH_2), 1.66 (m, 8H, CH_2), 1.37 (m, 18H, CH_2), 0.90 (t, *J* = 7.2 Hz, 6H, CH_3), 0.79 (dd, $^2J_{HSn}$ = 47.1 Hz, 4H, Sn-C*H*$_2$). ^{13}C{^{1}H} NMR (100.61 MHz, $CDCl_3$) δ 32.1 (s, $^2J_{CSn}$ = 15.5 Hz, 4C, $C_{cyclohexyl}$), 29.5 (s, $^2J_{CSn}$ = 19.2 Hz, 2C, *C*$H_{2(Bu)}$), 29.2 (s, $^3J_{CSn}$ = 54.0 Hz, 4C, $C_{cyclohexyl}$), 27.8 (s, $^3J_{CSn}$ = 53.0 Hz, *C*$H_{2(Bu)}$), 27.2 (s, $^4J_{CSn}$ = 5.7 Hz, 2C, $C_{cyclohexyl}$), 25.8 (s, $^1J_{CSn}$ = 335.9 Hz, 2C, CH-Sn), 13.7 (s, 2C, CH_3), 7.0 (s, $^1J_{CSn}$ = 284.2 Hz, 2C, CH_2-Sn). ^{119}Sn{^{1}H} NMR (149.21 MHz, $CDCl_3$): δ -42.01 (s). MS (EI, *m/z* (%)): 343 (20) [M^+–Bu], 317 (100) [M^+–Cy], 261 (86) [M^+–Bu–Cy], 205 (58) [M^+–2Bu–R], 179 (47)[M^+–Bu–2R], 119 (24) [Sn^+].

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