Supporting Information for

Chemoselective Organocatalytic Aerobic Oxidation of Primary Amines to Secondary Imines

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1. General Considerations.
All commercially available compounds were purchased from Sigma-Aldrich, and used as received unless otherwise indicated. Solvents were dried over alumina columns prior to use. $^1$H and $^{13}$C NMR spectra were recorded on Bruker AC-300 MHz or Varian Mercury-300 MHz spectrometers. Chemical shift values are given in parts per million relative to residual solvent peaks or TMS internal standard. High-resolution, exact mass measurements were obtained by the mass spectrometry facility at the University of Wisconsin. Melting points were taken on a Mel-Temp II melting point apparatus. Flash chromatography was performed using SilicaFlash® P60 (Silicycle, particle size 40-63 μm, 230-400 mesh) from Sigma Aldrich.

2. Synthesis of TBHBQ.

4-tert-butyl-2-hydroxy-p-benzoquinone, TBHBQ

The quinone catalyst, TBHBQ, was prepared in two steps from commercially available resorcinol. Resorcinol was alkylated to 4-tert-butylresorcinol according to the method of Sayre.⁰ ⁴-tert-butylresorcinol was converted to TBHBQ according to the method of Klinman,² with the following additional detail.

Without further purification, 4-tert-butylresorcinol (2.0 g, 12 mmol) was dissolved in a solution of water (30 mL) containing K$_2$HPO$_4$ (2.1 g, 9.2 mmol). This mixture was added over the course of 5 min to a solution of water (240 mL) containing K$_2$HPO$_4$ (2.1 g, 9.2 mmol) and Fremy’s salt (8.0 g, 30 mmol) at room temperature. The purple solution of Fremy’s salt turns dark red upon addition of the t-butylresorcinol, and is stirred at rt for an additional 5 min. Concentrated sulfuric acid (3 M) is added dropwise (to quench any remaining Fremy’s salt) until a yellow suspension appears and the yellow color of the solution persists. The aqueous mixture is then extracted into Et$_2$O, dried over MgSO$_4$, and concentrated to give dark yellow solids. TBHBQ can be dissolved in hot cyclohexanes, and separated from a red-brown residue. Concentration of the cyclohexanes (or recrystallization) affords pure TBHBQ as a yellow solid (1.45 g, 67% yield). Slow discoloration of the TBHBQ (to red/brown) is observed when the catalyst is left exposed to ambient light for prolonged periods. Therefore, TBHBQ is stored in the dark and is stable for extended periods (at least several months) if protected from the light. Control experiments carried out in both the light and the dark confirmed that catalyst efficiency and stability is not influenced by running amine oxidation reactions in the light. Characterization data matched those previously reported.² $^1$H NMR (300 MHz, CDCl$_3$) δ 6.97 (br s, 1H), 6.62 (s, 1H), 6.03 (s, 1H), 1.29 (s, 9H); $^{13}$C NMR (300 MHz, CDCl$_3$) δ 188.06, 184.58, 159.80, 153.61, 127.48, 110.25, 36.04, 29.71; EMM (ESI) Calc for C$_{10}$H$_{12}$O$_3$ (M+H): 180.0781, found 180.0778.

Fremy’s salt can be prepared from NaNO$_2$ according to the procedure of Cram.³ However authentic material was highly unstable in our hands and could not be dried and stored without decomposition. We found that the most reliable results were obtained by using commercially obtained (Sigma Aldrich) Fremy’s salt, which can be stored for long periods without apparent deleterious effect.

Typical procedure for the oxidation of homo-coupled amines is as follows. A flame-dried 25 mL flask was flushed with O₂ and equipped with an O₂ balloon. Benzylamine (110 µL, 1.0 mmol) was added to the flask followed by a solution of TBHBQ (2.7 mg, 0.015 mmol) in anhydrous MeCN (3.5 mL). The yellow solution immediately became intensely red, which faded to a lighter orange color over the first 20 min of the reaction. The reaction was stirred at room temperature for 20 h or until TLC indicated completion. (At this point internal standard was added, for yield determination). The reaction mixture was then concentrated by rotary evaporation. In cases where purification was necessary, the reaction crude was plugged though a pipette containing Et₃N-washed silica gel using hexanes or 1:10 EtOAc/Hexanes.

Typical procedure for the oxidation of cross-coupled amines is as follows. A flame-dried 25 mL flask was flushed with O₂ and equipped with an O₂ balloon. Benzylamine (110 µL, 1.0 mmol) and methylbenzylamine (260 µL, 2.0 mmol) was added to the flask followed by a solution of TBHBQ (9.0 mg, 0.05 mmol) in anhydrous MeCN (3.5 mL). The yellow solution immediately became intensely red, which either faded or persisted during the course of the reaction depending on the substrates. The reaction was stirred at room temperature for 24 h, at which point the reaction was either concentrated as above, or a second aliquot (9.0 mg, 0.05 mmol) or TBHBQ was added to the reaction mixture and the reaction allowed to stir for an additional 24 h. In cases where purification was necessary, the reaction crude could be (A) plugged though a pipette containing Et₃N-washed silica gel using hexanes or EtOAc/Hexanes, (B) rapidly chromatographed by Et₃N-washed silica column, or (C) purified by preparative TLC on plates which had been previously run with Hexanes/Et₃N.

Procedure for the oxidation of methylbenzylamine to N-(1-phenylethyl-1-phenylethanimine). A flame-dried 25 mL flask was flushed with O₂ and equipped with an O₂ balloon. NaOCHO (65 mg, 1.0 mmol) and TBHBQ (18.0 mg, 0.10 mmol) were dissolved in anhydrous DMF (0.5 mL). Methylbenzylamine was added (130 µL, 1.0 mmol) and the reaction was stirred at RT for 48 h. DMF was removed by vacuum and the material re-suspended in chloroform and the precipitates were removed by filtration. The crude filtrate was concentrated, suspended in chloroform, and pushed through a short pipette containing Et₃N-washed Silica gel using 1:10 EtOAc/Hexanes to give N-(1-phenylethyl-1-phenylethanimine) in high purity; characterization data matched those previously reported.⁴

³
4. Hammett Correlation.

Gas Uptake Kinetic Studies:
A standard procedure was as follows: A series of volume-calibrated 25mL round bottom flasks equipped with stirbars were attached to a gas-uptake apparatus. The flasks were alternately evacuated and then re-filled with O₂ (to 500 Torr) 5 times, and then final pressure was set to 550 Torr. A solution of amine in MeCN (0.3 M, 1.0 mmol, 3.25 mL) was added by syringe into each flask, and the pressure was allowed to equilibrate at 27 °C for 3-4 h. The reactions were initiated by the addition of TBHBQ in MeCN (0.015 mmol, 0.25 mL), and the instantaneous pressure of each flask was collected using a LabVIEW software program for 16 h. Initial rates were measured in Excel.

*N-benzylidenebenzylamine, 1b*
Spectroscopic data match those previously reported. $^5$ $^1$H NMR (300 MHz, CDCl$_3$) $\delta$ 8.37 (s, 1H), 7.78 (m, 2H), 7.21-7.41 (m, 8H), 4.81 (s, 2H); $^{13}$C NMR (300 MHz, CDCl$_3$) $\delta$ 162.21, 139.56, 136.42, 131.00, 128.83, 128.73, 128.52, 128.22, 127.22, 65.29; EMM (ESI) Calc for C$_{14}$H$_{13}$N (M+H): 196.1121, found 196.1111.

*N-(4-aminobenzylidene)-4-aminobenzylamine, 2b*
Isolated as a white solid mp: 185-188 °C; $^1$H NMR (300 MHz, DMSO-d$_6$) $\delta$ 8.11 (s, 1H), 7.37 (d, 2H, $J$ = 8.4 Hz), 6.89 (d, 2H, $J$ = 8.1 Hz), 6.52 (m, 4H), 4.88 (br s, 2H), 4.43 (s, 2H); $^{13}$C NMR (300 MHz, DMSO-d$_6$) $\delta$ 160.82, 151.87, 147.97, 130.06, 129.34, 127.89, 124.81, 114.44, 113.95, 64.64; EMM (ESI) Calc for C$_{14}$H$_{15}$N$_3$ (M+H): 226.1339, found 226.1333.

*N-(4-methoxybenzylidene)-4-methoxybenzylamine, 3b*
Spectroscopic data match those previously reported. $^5$ $^1$H NMR (300 MHz, CDCl$_3$) $\delta$ 8.30 (s, 1H), 7.73 (d, 2H, $J$ = 8.4 Hz), 7.25 (d, 2H, $J$ = 8.4 Hz), 6.8-6.9 (m, 4H), 4.73 (s, 2H), 3.83 (s, 3H), 3.79 (s, 3H); $^{13}$C NMR (300 MHz, CDCl$_3$) $\delta$ 161.90, 161.12, 158.87, 131.92, 130.02, 129.39, 114.19, 114.12, 64.62, 55.56, 55.51; EMM (ESI) Calc for C$_{16}$H$_{17}$NO$_2$ (M+H): 256.1333, found 256.1323.

*N-(4-chlorobenzylidene)-4-chlorobenzylamine, 4b*
Spectroscopic data match those previously reported. $^5$ $^1$H NMR (300 MHz, CDCl$_3$) $\delta$ 8.33 (s, 1H), 7.71 (m, 2H), 7.2-7.4 (m, 6H), 4.76 (s, 2H); $^{13}$C NMR (300 MHz, CDCl$_3$) $\delta$ 161.16, 137.78, 137.15, 134.62, 133.08, 129.70, 129.50, 120.17, 128.87, 64.36; EMM (ESI) Calc for C$_{14}$H$_{11}$Cl$_2$N (M+H): 264.0342, found 264.0344.

*N-(4-fluorobenzylidene)-4-fluorobenzylamine, 5b*
Spectroscopic data match those previously reported. $^5$ $^1$H NMR (300 MHz, CDCl$_3$) $\delta$ 8.32 (s, 1H), 7.75 (m, 2H), 7.27 (m, 2H), 7.01-7.11 (m, 2H), 4.74 (s, 2H); $^{13}$C NMR (300 MHz, CDCl$_3$) $\delta$ 165.07 (d, $J_{C,F} = 185$ Hz), 161.77 (d, $J_{C,F} = 178$ Hz) 163.83, 162.96, 160.73, 160.58, 135.20 (d,

5
J_{C,F} = 2.5 \text{ Hz}) 132.59 (d, J_{C,F} = 2.7 \text{ Hz}), 130.39 (d, J_{C,F} = 8.8 \text{ Hz}) 129.69 (d, J_{C,F} = 7.7 \text{ Hz}), 115.95 (d, J_{C,F} = 21.9 \text{ Hz}) 115.50 (d, J_{C,F} = 21.7 \text{ Hz}), 64.36; \text{ EMM (ESI) Calc for C}_{14}\text{H}_{11}\text{F}_{2}\text{N (M+H)}: 232.0933, \text{ found } 232.0939.

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\textit{N-(4-trifluoromethylbenzylidene)-4-trifluoromethylbenzylamine, 6b}
Spectroscopic data match those previously reported.\textsuperscript{6} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.47 (s, 1H), 7.91 (d, 2H, J = 8.1 Hz) 7.69 (d, 2H, J = 8.4 Hz), 7.62 (d, 2H, J = 7.8 Hz), 4.90 (s, 2H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 161.42, 143.25, 139.21, 132.75 (q, J_{C,F} = 32.5 Hz), 129.6 (q, J_{C,F} = 32.1 Hz), 128.75, 128.34, 125.83 (q, J_{C,F} = 3.8 Hz), 125.68 (q, J_{C,F} = 3.9 Hz), 124.5 (q, J_{C,F} = 270 Hz) 124.14 (q, J = 270 Hz), 64.53; \text{ EMM (ESI) Calc for C}_{16}\text{H}_{11}\text{F}_{2}\text{N (M+H)}: 332.0869, \text{ found } 332.0857.

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\textit{N-(3-chlorobenzylidene)-3-chlorobenzylamine, 7b}
Spectroscopic data match those previously reported.\textsuperscript{7} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.32 (s, 1H), 7.80 (s, 1H), 7.6–7.7 (m, 6H), 4.77 (s, 2H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 161.23, 141.20, 137.86, 135.10, 134.62, 131.15, 130.13, 130.01, 128.26, 128.21, 127.49, 126.88, 126.27, 64.45; \text{ EMM (ESI) Calc for C}_{14}\text{H}_{11}\text{Cl}_{2}\text{N (M+H)}: 264.0342, \text{ found } 264.0348.

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\textit{N-(3-iodobenzylidene)-3-iodobenzylamine, 8b}
Spectroscopic data match those previously reported.\textsuperscript{7} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.26 (s, 1H), 8.15 (s, 1H), 7.6–7.7 (m, 3H), 7.59 (d, 1H, J = 7.8 Hz), 7.29 (d, 1H, J = 7.5 Hz), 7.123 (t, 1H, J = 7.8 Hz) 7.07 (t, 1H, J = 7.8 Hz), \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 160.89, 141.56, 139.97, 138.13, 137.12, 137.09, 136.42, 130.53, 130.51, 127.95, 127.46, 94.80, 64.40; \text{ EMM (ESI) Calc for C}_{14}\text{H}_{11}\text{I}_{2}\text{N (M+H)}: 447.9054, \text{ found } 447.9068.

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\textit{N-(2-methylbenzylidene)-2-methylbenzylamine, 9b}
Spectroscopic data match those previously reported.\textsuperscript{5} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.65 (s, 1H), 7.90 (d, 1H, J = 7.5 Hz), 7.1–7.3 (m, 7H), 4.81 (s, 2H), 2.48 (s, 3H), 2.37 (s, 3H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 160.97, 137.89, 137.85, 136.37, 134.41, 131.05, 130.57, 130.38, 128.58, 127.92, 127.34, 126.45, 126.33, 63.43, 19.59, 19.52; \text{ EMM (ESI) Calc for C}_{16}\text{H}_{17}\text{N (M+H)}: 224.1434, \text{ found } 224.1431.
**N-(2-methoxybenzylidene)-2-methoxybenzylamine, 10b**
Spectroscopic data match those previously reported.\(^8\)\(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.87 (s, 1H), 8.06 (d, 1H, \(J = 7.5\) Hz), 7.2-7.4 (m, 3H), 6.8-7.0 (m, 4H), 4.86 (s, 2H), 3.87 (s, 3H), 3.86 (s, 3H); \(^13\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 159.02, 158.53, 157.30, 132.00, 129.37, 128.44, 128.15, 127.74, 125.18, 120.99, 120.76, 11.24, 110.43, 59.90, 55.76, 55.59; EMM (ESI) Calc for C\(_{16}\)H\(_{17}\)NO\(_2\) (M+H): 256.1333, found 256.1337.

**N-(1-naphthalenylmethylene)-1-naphthalenemethanamine, 11b**
Spectroscopic data match those previously reported.\(^5\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 9.09 (s, 1H), 8.89 (d, 1H, \(J = 8.1\) Hz), 8.24 (d, 1H, \(J = 8.4\) Hz); 7.8-7.9 (m, 5H), 7.4-7.6 (m, 7H), 5.42 (s, 2H); \(^13\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 161.94, 135.49, 133.83, 133.78, 133.78, 131.64, 131.32, 131.12, 129.16, 128.67, 128.59, 127.78, 127.18, 126.10, 126.01, 125.84, 125.68, 125.60, 125.20, 124.43, 123.94, 63.24; EMM (ESI) Calc for C\(_{22}\)H\(_{17}\)N (M+H): 296.1434, found 296.1427.

**N-(1,3-benzodioxol-5-ylmethylene)-1,3-benzodioxole-5-methanamine, 12b**
Spectroscopic data match those previously reported.\(^9\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.24 (s, 1H), 7.37 (s, 1H), 7.14 (dd, 1H, \(J = 8.4, 1.8\) Hz), 6.7-6.8 (m, 4H), 5.99 (s, 2H), 5.93 (s, 2H), 4.67 (s, 2H); \(^13\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 160.96, 150.04, 148.35, 147.81, 146.59, 133.46, 131.04, 124.67, 131.09, 108.66, 108.27, 108.13, 106.67, 101.55, 100.98, 64.52; EMM (ESI) Calc for C\(_{16}\)H\(_{13}\)NO\(_4\) (M+H): 284.0918, found 284.0907.

**N-(2-furanymethylene)-2-furanylmethanamine, 13b**
Spectroscopic data match those previously reported.\(^9\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.11 (s, 1H), 7.51 (s, 1H), 7.37 (s, 1H), 6.78 (d, 1H, \(J = 3.3\) Hz), 6.47 (m, 1H), 6.33 (d, 1H, \(J = 1.8\) Hz) 6.26 (d, \(J = 1.5\) Hz), 4.75 (s, 2H); \(^13\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 152.02, 151.64, 151.51, 145.17, 142.52, 114.77, 111.89, 110.59, 108.15, 56.99; EMM (ESI) Calc for C\(_{10}\)H\(_9\)NO\(_2\) (M+H): 176.0707, found 176.0709.

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\text{N-benzylidenemethylbenzylamine, 19}
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Spectroscopic data match those previously reported.\(^\text{10}\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.34 (s, 1H), 7.77 (m, 2H), 7.2-7.4 (m, 8H), 4.51 (q, 1H, \(J = 6.6\) Hz), 1.58 (d, 3H, \(J = 6.9\) Hz); \(^1\)\(^3\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 159.37, 145.18, 136.40, 130.52, 128.49, 128.22, 126.78, 126.59, 69.69, 24.86; EMM (ESI) Calc for C\(_{15}\)H\(_{15}\)N (M+H): 209.1199, found 209.1194.

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\text{N-benzylidenecyclohexanamine, 20}
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Spectroscopic data match those previously reported.\(^\text{11}\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.31 (s, 1H), 7.72 (m, 2H), 7.38 (m, 3H), 3.19 (m, 1H), 1.2-1.8 (m, 10H); \(^1\)\(^3\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 158.55, 136.64, 130.29, 128.50, 128.04, 69.99, 34.37, 25.65, 24.81; EMM (ESI) Calc for C\(_{13}\)H\(_{17}\)N (M+H): 188.1444, found 188.1442.

\[
\text{N-benzylidene-N',N'-dimethyl-1,3-propanediamine, 21}
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Spectroscopic data match those previously reported.\(^\text{12}\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.29 (s, 1H), 7.72 (m, 2H), 7.40 (m, 3H), 3.64 (t, 2H, \(J = 7.2\) Hz), 2.35 (t, 2H, \(J = 7.2\) Hz), 2.23 (s, 6H), 1.87 (pent, 2H, \(J = 7.2\) Hz); \(^1\)\(^3\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 161.30, 136.53, 130.70, 128.78, 128.24, 59.85, 57.79, 45.74, 29.18; EMM (ESI) Calc for C\(_{12}\)H\(_{18}\)N\(_2\) (M+H): 191.1543, found 191.1542.

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\text{β-(phenylmethylene)amino]-benzeneethanol, 22}
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Spectroscopic data match those previously reported.\(^\text{8}\) \(^1\)H NMR (300 MHz, CDCl\(_3\)) \(\delta\) 8.23 (s, 1H), 6.64 (m, 2H), 7.16-7.37 (m, 8H), 4.42 (dd, 1H, \(J = 8.7, 4.5\) Hz), 3.95 (dd, 1H, \(J = 11.4, 8.7\) Hz) 3.82 (dd, 1H, \(J = 11.4, 3.9\) Hz), 3.11 (br s, 1H); \(^1\)\(^3\)C NMR (300 MHz, CDCl\(_3\)) \(\delta\) 162.99, 140.89, 136.13, 131.21, 128.92, 128.81, 128.68, 127.71, 127.61, 76.91, 67.96; EMM (ESI) Calc for C\(_{15}\)H\(_{15}\)NO (M+H): 226.1227, found 226.1221.

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\text{N-benzylidene-1-hexanamine, 23}
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Spectroscopic data match those previously reported.\textsuperscript{5} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.27 (s, 1H), 7.73 (m, 2H), 7.40 (m, 3H), 3.61 (td, 2H, \(J = 6.9, 1.2\) Hz), 1.70 (m, 2H), 1.2-1.4 (m, 6H), 0.89 (br t, 3H, \(J = 6.9\) Hz); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 160.87, 136.63, 130.62, 128.77, 128.22, 62.05, 31.90, 31.12, 27.26, 22.84, 14.29; EMM (ESI) Calc for C\textsubscript{13}H\textsubscript{19}N (M+H): 190.1591, found 190.1591.

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\textit{N-benzylidene-2-ethyl-1-hexanamine, 24}
Spectroscopic data match those previously reported.\textsuperscript{13} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.26 (s, 1H), 7.74 (m, 2H), 7.40 (m, 3H), 3.54 (m, 2H), 1.70 (m, 1H), 1.2-1.4 (m, 8H), 0.8-0.9 (m, 6H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 160.92, 136.74, 130.54, 128.75, 128.21, 65.38, 40.75, 31.60, 29.20, 24.79, 23.28, 14.33, 11.20; EMM (ESI) Calc for C\textsubscript{15}H\textsubscript{23}N (M+H): 218.1904, found 218.1908.

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\textit{N-benzylidene-\(\alpha,\alpha\)-diphenylbenzylamine, 25}
Spectroscopic data match those previously reported.\textsuperscript{14} Highly crystalline white solid, mp: 147-150 °C (lit. 153-159 °C); \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 7.85 (m, 3H), 7.43 (m, 3H), 7.2-7.3 (m, 15H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 159.87, 146.07, 137.00, 130.97, 130.04, 128.85, 128.80, 128.37, 128.14, 127.98, 127.01, 78.52; EMM (ESI) Calc for C\textsubscript{16}H\textsubscript{13}NO\textsubscript{4} (M+H): 348.1747, found 348.1748.

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\textit{N-benzylideneaniline, 26}
Spectroscopic data match those previously reported.\textsuperscript{5} \textsuperscript{1}H NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 8.46 (s, 1H), 7.92 (m, 2H), 7.26-7.5 (m, 5H), 7.23 (m, 3H); \textsuperscript{13}C NMR (300 MHz, CDCl\textsubscript{3}) \(\delta\) 160.62, 152.34, 136.47, 131.60, 129.37, 12905, 129.00, 126.16, 121.10; EMM (ESI) Calc for C\textsubscript{13}H\textsubscript{11}N (M+H): 182.0965, found 182.0964.
7. $^1$H and $^{13}$C NMR Spectra of Homo-coupled imine products (Table 1).
8. $^1$H and $^{13}$C NMR Spectra of Cross-coupled imine products (Table 2).
9. $^1$H and $^{13}$C NMR of TBHBQ.
10. References.


