Electronic Supplementary Information

Fluoride Free Cross Coupling of Vinyldisiloxanes

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General Experimental Details

General methods and Analysis of Substrates

A – General Method for hydrosilylation of terminal alkynes

(*E*)-β-Distyryltetramethyldisiloxane **(1a)**

(*E*)-β-Di-(4-methylstyryl)-tetramethyldisiloxane **(1b)**

[(*E*)-β-Styryl]-[(*E*)-β-(4-methylstyryl)]-tetramethyldisiloxane **(1c)**

(*E*)-β-Di-(4-nitrostyryl)-tetramethyldisiloxane **(1d)**

(*E*)-β-Di-(4-methoxystyryl)-tetramethyldisiloxane **(1e)**

(*E*)-β-Di-(3-pyridylvinyl)-tetramethyldisiloxane **(1f)**

B – General Method for Cross Coupling of Aryl Iodides

C – General Method for Cross Coupling of Aryl Bromides

D – General Method for 'one-pot' procedure

(*E*)-1-(4-styrylphenyl)ethanone **(3a)**

(*E*)-1-nitro-4-styrylbenzene **(3b)**

(*E*)-1-methoxy-4-styrylbenzene **(3c)**

(*E*)-1-styryl-3-(trifluoromethyl)benzene **(3d)**

(*E*)-1-nitro-2-styrylbenzene **(3e)**

(*E*)-1-bromo-4-styrylbenzene **(3f)**

(*E*)-1-methyl-4-styrylbenzene **(3g)**

(*E*)-3-styrylpyridine **(3h)**

(*E*)-3,5-dimethyl-4-styrylisoxazole **(3i)**

(*E*)-1-(4-(4-methoxystyryl)phenyl)ethanone **(3j)**

(*E*)-1-methoxy-4-(4-nitrostyryl)benzene **(3k)**

(*E*)-1-(4-(4-nitrostyryl)phenyl)ethanone **(3l)**

(*E*)-1-(4-(4-methylstyryl)phenyl)ethanone **(3m)**

(*E*)-1-(4-(2-(pyridin-3-yl)vinyl)phenyl)ethanone **(3n)**

References

Spectra

General Experimental Details

All experiments were carried out in oven-dried glassware under an atmosphere of nitrogen, using anhydrous solvents, unless otherwise stated. All chemicals were purchased from Sigma-Aldrich, Strem or Fluorochem. Reaction temperatures of ~0^{o}C were obtained using an ice-water bath, temperatures of -78^{o}C were obtained using an acetone-dry ice bath. Ambient/room temperature refers to 20-25^{o}C. Analytical thin layer chromatography was carried out on Merck Kieselgel 60 F_{254} plates with visualisation by ultraviolet light or staining with potassium permanganate made using standard procedures. Retention factors (R_f) are quoted to 0.01. Flash column chromatography was performed using Merck Kieselgel 60 (230-400 mesh) or biotage silica columns under a positive pressure of nitrogen.

Infra-red spectra were recorded on a Perkin Elmer Spectrum One FT-IR spectrometer fitted with an Attenuated Total Reflectance (ATR) sampling accessory as neat films. Maximum absorbance (ν_{max}) are quoted in wavenumbers (cm^{-1}) and the abbreviations used to describe the absorbance intensity are: w, weak; m, medium; s, strong.

Proton nuclear magnetic resonance (^{1}H NMR) and carbon nuclear magnetic resonance (^{13}C NMR) were recorded using ambient probe temperatures on the following instruments: Bruker DXP 400 (400 MHz), Bruker Avance DXP 400 (400 MHz), Bruker Avance Cyro 600 (600 MHz). The following deuterated solvents were used: chloroform ($CDCl_3$) and methanol (CD_3OD). Chemical shifts (δ) are quoted in ppm relative to the residual non-deuterated solvent peak and coupling constants (J) are quoted to the nearest 0.1 Hertz (Hz). Spectral data is reported as follows: chemical shift, integration, multiplicity [s, singlet; d, doublet; t, triplet; q, quartet; m, multiplet; br, broad; or as a combination of these eg br s, dd etc.] and coupling constant(s).

High resolution mass spectrometry (HRMS) was carried out using a Micromass Q-TOF or a Micromass LCT premier spectrometer and the calculated mass value relative to found mass value is within the error limits of ±5 ppm mass units.

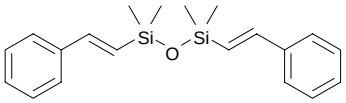
General Methods and Analysis of Substrates

A – General Method for hydrosilylation of terminal alkynes

A solution of tri-*tert*-butylphosphine (0.1 mol%, 1.0 M in toluene) was added to a solution of Platinum(0)-1,3-divinyl-1,1,3,3-tetramethyldisiloxane complex (0.1 mol%, 0.1 M in xylenes) under N_2 and stirred for 5 minutes. On cooling the reaction to 0^{o}C, 1,1,3,3-tetramethyldisiloxane (**6**) (1 equiv) in

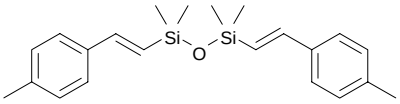
anhydrous toluene was added followed by terminal alkyne (**7**) (2 equiv) in anhydrous toluene. The reaction mixture was stirred at room temperature for 16 hours. Solvent was removed and crude residue purified using flash silica chromatography to yield vinyl disiloxane (**1**).

(*E*)-β-Distyryltetramethyldisiloxane (1a) [1]



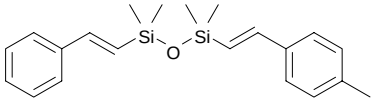
Following general method A, yield (96 %). R_f 0.39 [40-60 petroleum ether (100%)]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.44 (4 H, d, *J*=7.28 Hz), 7.33 (4 H, t, *J*=7.40 Hz), 7.24 - 7.30 (2 H, m), 6.97 (2 H, d, *J*=19.32 Hz), 6.46 (6 H, d, *J*=19.07 Hz), 0.27 (12 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 144.31 (s), 138.15 (s), 128.59 (s), 128.52 (s), 128.16 (s), 126.55 (s), 0.88 (s).

(*E*)-β-Di-(4-methylstyryl)-tetramethyldisiloxane (1b)



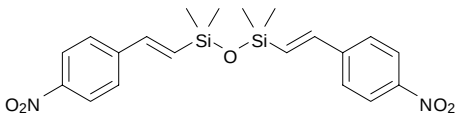
Following general method A, yield (91 %). R_f 0.36 [10% Dichloromethane/cyclohexane]. ν_{max} (neat)/ cm^{-1} 2956.4 (m), 1605.6 (m), 1567.0 (w), 1509.5 (m), 1250.3 (s), 1038.8 (s). δ_H (400 MHz, $CDCl_3$) δ ppm 7.34 (4 H, d, *J*=8.03 Hz), 7.14 (4 H, d, *J*=8.03 Hz), 6.93 (2 H, d, *J*=19.07 Hz), 6.39 (2 H, d, *J*=19.32 Hz), 2.36 (6 H, s), 0.26 (12 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 144.17 (s), 138.04 (s), 135.51 (s), 129.21 (s), 127.30 (s), 126.48 (s), 21.26 (s), 0.90 (s). HRMS no ions found.

[(*E*)-β-Styryl]-[(*E*)-β-(4-methylstyryl)]-tetramethyldisiloxane **(1c)**



Isolated from exchange experiments. ν_{max} (neat)/ cm^{-1} 2957.2 (m), 1606.5 (m), 1574.2 (w), 1509.9 (m), 1494.6 (w), 1251.3 (s), 1035.5 (s). δ_H (400 MHz, $CDCl_3$) δ ppm 7.42 - 7.47 (2 H, m), 7.31 - 7.37 (4 H, m), 7.25 - 7.31 (1 H, m), 7.14 (2 H, d, *J*=8.03 Hz), 6.97 (1H, d, *J*=19.07 Hz), 6.94 (1H, d, *J*=19.32 Hz), 6.47 (1 H, d, *J*=19.32 Hz), 6.40 (1 H, d, *J*=19.32 Hz), 2.36 (3 H, s), 0.27 (6 H, s), 0.27 (6 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 144.27 (s), 144.22 (s), 138.18 (s), 138.06 (s), 135.49 (s), 129.22 (s), 128.65 (s), 128.50 (s), 128.14 (s), 127.24 (s), 126.55 (s), 126.48 (s), 21.26 (s), 0.89 (s). HRMS no ions found.

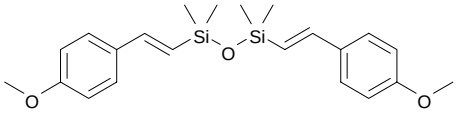
(*E*)-β-Di-(4-nitrostyryl)-tetramethyldisiloxane (1d)



Following general method A, yield (90 %). R_f 0.13 [30% Dichloromethane/cyclohexane]. ν_{max} (neat)/ cm^{-1} 2961.5 (w), 1589.3 (m), 1512.2 (s), 1489.5 (m), 1409.0 (w), 1339.8 (s), 1252.7 (s), 1046.1 (s). δ_H (400 MHz, $CDCl_3$) δ ppm 8.20 (4 H, d, *J*=8.78 Hz), 7.56 (4 H, d, *J*=8.78 Hz), 7.00 (2 H, d, *J*=19.07

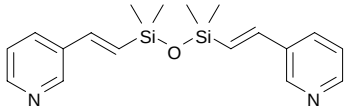
Hz), 6.65 (2 H, d, *J*=19.07 Hz), 0.31 (12 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 147.76 (s), 144.38 (s), 142.33 (s), 134.79 (s), 127.39 (s), 124.34 (s). HRMS found 429.1314, (MH+) requires 429.1302 (Δ = 2.8 ppm).

(*E*)-β-Di-(4-methoxystyryl)-tetramethyldisiloxane (1e)



Following general method A, yield (82 %). R_f 0.30 [40% dichloromethan/40-60 petroleum ether]. ν_{max} (neat)/ cm^{-1} 3015 (m), 2958 (w), 2900 (w), 2839 (w), 1603 (s), 1571 (w), 1507 (s). δ_H (400 MHz, $CDCl_3$) δ ppm 7.37 (4 H, d, *J*=8.7 Hz), 6.90 (2 H, d, *J*=8.7 Hz), 6.85 (4 H, d, *J*=19.2 Hz), 6.28 (2 H, d, *J*=19.2 Hz), 3.82 (6 H, s), 0.24 (12 H, s). δ_C (100 MHz, $CDCl_3$) δ ppm 158.74 (s), 142.79 (s), 130.27 (s), 126.89 (s), 125.01 (s), 112.98 (s), 54.40 (s), 0.00 (s). HRMS found, 421.1638 (MNa+) requires 421.1631 (Δ = 1.7 ppm).

(*E*)-β-Di-(3-pyridylvinyl)-tetramethyldisiloxane (1f)



Following general method A, yield (94 %). R_f 0.21 [Ethyl Acetate]. ν_{max} (neat)/ cm^{-1} 2957.3 (w), 1606.0 (m), 1565.7 (w), 1473.9 (w), 1409.9 (m), 1252.0 (m), 1034.4 (s), 1022.4 (s). δ_H (400 MHz, $CDCl_3$) δ ppm 8.63 (3 H, d, *J*=2.01 Hz), 8.49 (3 H, dd, *J*=4.77, 1.51 Hz), 7.74 (4 H, ddd, *J*=7.91, 2.01, 1.88 Hz), 7.23 - 7.28 (2 H, m), 6.94 (2 H, d, *J*=19.07 Hz), 6.54 (2 H, d, *J*=19.32 Hz), 0.28 (12 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 149.21 (s), 148.70 (s), 140.77 (s), 133.45 (s), 132.77 (s), 131.49 (s), 123.45 (s), 0.78 (s). HRMS found 341.1494, (MH+) requires 341.1505 (Δ = -3.2 ppm).

B – General Method for Cross Coupling of Aryl Iodides

Vinyldisiloxane (**1**, 1 equiv), aryl iodide (**2**, 1.5 equiv), potassium hydroxide (3 equiv) and $Pd(dba)_2$ (2.5 mol%) in methanol were stirred for 2-16 hrs. Reaction mixture was partitioned between water and dichloromethane, separated, aqueous extracted further with dichloromethane. Organic extracts were combined, dried ($MgSO_4$), concentrated and crude residues purified by flash silica chromatography to yield coupled products (**3**).

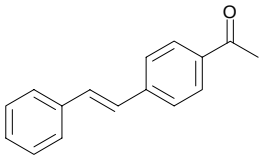
C – General Method for Cross Coupling of Aryl Bromides

Vinyldisiloxane (**1**, 1 equiv), aryl bromide (**2**, 1.5 equiv), potassium hydroxide (3 equiv) and $Pd(dba)_2$ (2.5 mol%) in methanol were stirred at 50°C for 2-16 hrs. Reaction mixture was partitioned between water and dichloromethane, separated, aqueous extracted further with dichloromethane. Organic extracts were combined, dried ($MgSO_4$), concentrated and crude residues purified by flash silica chromatography to yield coupled products (**3**).

D – General Method for 'one-pot' procedure

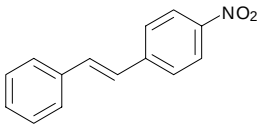
A solution of tri-*tert*-butylphosphine (0.1 mol%, 1.0 M in toluene) was added to a solution of Platinum(0)-1,3-divinyl-1,1,3,3-tetramethyldisiloxane complex (0.1 mol%, 0.1 M in xylenes) under N_2 and stirred for 5 minutes. On cooling the reaction to 0°C, 1,1,3,3-tetramethyldisiloxane (**6**) (1 equiv) in anhydrous toluene was added followed by terminal alkyne (**7**) (2 equiv) in anhydrous toluene. The reaction mixture was stirred at room temperature for 16 hours to yield intermediate vinyldisiloxane (**1**). To this reaction mixture was added aryl iodide or aryl bromide (**2**, 1.5 equiv), potassium hydroxide (3 equiv) in methanol and $Pd(dba)_2$ (2.5 mol%). The reaction was stirred for 2-16 hrs. Reaction mixture was partitioned between water and dichloromethane, separated, aqueous extracted further with dichloromethane. Organic extracts were combined, dried ($MgSO_4$), concentrated and crude residues purified by flash silica chromatography to yield coupled products (**3**).

(*E*)-1-(4-styrylphenyl)ethanone (3a) [2]



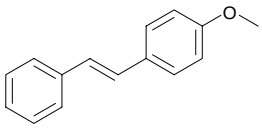
Yield (96%). R_f 0.17 [70% dichloromethane/hexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.95 (2 H, d, *J*=8.4 Hz), 7.58 (2 H, d, *J*=8.4 Hz), 7.55-7.53 (2 H, m), 7.40-7.37 (2 H, m), 7.32-7.29 (1 H, m), 7.22 (1 H, d, *J*=16.3 Hz), 7.12 (1 H, d, *J*=16.3 Hz), 2.60 (3 H, s). δ_C (100 MHz, $CDCl_3$) δ ppm 197.83, 142.41, 137.12, 136.38, 131.87, 129.28, 129.22, 128.73, 127.86, 127.24, 126.91, 30.13.

(*E*)-1-nitro-4-styrylbenzene (3b) [2]



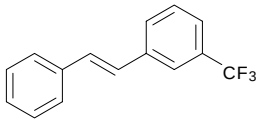
Yield (94%). R_f 0.35 [50% dichloromethane/hexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 8.24-8.20 (2 H, m), 7.65-7.62 (2 H, m), 7.57-7.55 (2 H, m), 7.42-7.39 (2 H, m), 7.36-7.32 (1 H, m), 7.27 (1 H, d, *J*=16.3 Hz), 7.14 (1 H, d, *J*=16.3 Hz). δ_C (100 MHz, $CDCl_3$) δ ppm 146.76, 143.82, 136.16, 133.29, 128.87, 128.82, 127.00, 126.83, 126.27, 124.12.

(*E*)-1-methoxy-4-styrylbenzene (3c) [2]



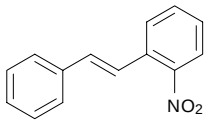
Yield (56%). R_f 0.40 [40% dichloromethane/40-60 petroleum ether]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.41 (2 H, d, *J*=7.4 Hz), 7.38 (2 H, d, *J*=8.7 Hz), 7.28-7.24 (2 H, m), 7.17-7.13 (1 H, m), 6.99 (1 H, d, *J*=16.3 Hz), 6.89 (1 H, d, *J*=16.3 Hz), 6.82 (2 h, d, *J*=8.7 Hz), 3.75 (3 H, s). δ_C (100 MHz, $CDCl_3$) δ ppm 159.73, 138.08, 130.58, 129.05, 128.64, 128.13, 127.62, 127.05, 126.67, 114.56, 55.74.

(*E*)-1-styryl-3-(trifluoromethyl)benzene (3d) [2]



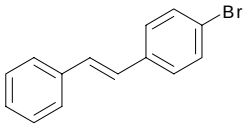
Yield (78 %). R_f 0.45 [cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.84 (1 H, s), 7.73 (1 H, d, *J*=7.78 Hz), 7.61 (3 H, t, *J*=7.28 Hz), 7.51 - 7.57 (1 H, m), 7.48 (2 H, t, *J*=7.53 Hz), 7.36 - 7.43 (1 H, m), 7.25 (1 H, d, *J*=16.01 Hz), 7.18 (1 H, d, *J*=16.01 Hz). δ_C (101 MHz, $CDCl_3$) δ ppm 138.11 (s), 136.66 (s), 131.08 (q, *J*=31.96 Hz), 130.50 (s), 129.53 (s), 129.08 (s), 128.77 (s), 128.16 (s), 127.07 (s), 126.70 (s), 124.00 (q, *J*=3.99 Hz), 123.07 (q, *J*=3.73 Hz), 124.20 (d, *J*=273.71 Hz).

(*E*)-1-nitro-2-styrylbenzene (3e) [3]



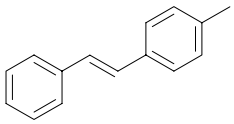
Yield (75 %). R_f 0.45 [dichloromethane/cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.98 (1 H, d, *J*=8.78 Hz), 7.78 (1 H, d, *J*=7.78 Hz), 7.58 - 7.65 (2 H, m), 7.56 (2 H, d, *J*=7.53 Hz), 7.37 - 7.45 (3 H, m), 7.31 - 7.36 (8 H, m), 7.10 (1 H, d, *J*=16.06 Hz). δ_C (101 MHz, $CDCl_3$) δ ppm 148.02 (s), 136.49 (s), 133.87 (s), 133.05 (s), 133.02 (s), 128.80 (s), 128.60 (s), 128.15 (s), 127.94 (s), 127.07 (s), 124.75 (s), 123.50 (s).

(*E*)-1-bromo-4-styrylbenzene (3f) [4]



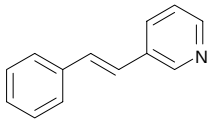
Yield (61 %). R_f 0.45 [cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.46 - 7.55 (4 H, m), 7.25 - 7.43 (5 H, m), 7.11 (1 H, d, *J*=16.01 Hz), 7.04 (1 H, d, *J*=16.01 Hz). δ_C (101 MHz, $CDCl_3$) δ ppm 136.95 (s), 136.29 (s), 131.79 (s), 129.43 (s), 128.75 (s), 127.98 (s), 127.91 (s), 127.41 (s), 126.57 (s), 121.32 (s).

(*E*)-1-methyl-4-styrylbenzene (3g) [2]



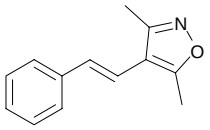
Yield (72 %). R_f 0.38 [cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.60 (2 H, d, *J*=7.53 Hz), 7.51 (2 H, d, *J*=8.03 Hz), 7.44 (2 H, t, *J*=7.53 Hz), 7.31 - 7.36 (1 H, m), 7.26 (2 H, d, *J*=8.03 Hz), 7.19 (1 H, d, *J*=16.01 Hz), 7.14 (1 H, d, *J*=16.01 Hz), 2.45 (3 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 137.51 (s), 134.55 (s), 129.39 (s), 128.65 (s), 128.61 (s), 127.69 (s), 127.40 (s), 126.42 (s), 126.39 (s), 21.27 (s).

(*E*)-3-styrylpyridine (3h) [2]



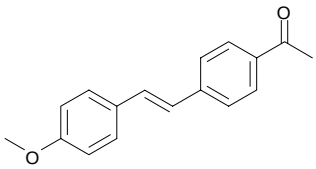
Yield (56 %). R_f 0.20 [ethyl acetate/cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 8.73 (1 H, s), 8.50 (7 H, d, *J*=4.02 Hz), 7.85 (1 H, dt, *J*=7.53, 4.02 Hz), 7.54 (2 H, d, *J*=7.53 Hz), 7.39 (2 H, t, *J*=7.53 Hz), 7.25 - 7.34 (2 H, m), 7.18 (1 H, d, *J*=16.01 Hz), 7.08 (1 H, d, *J*=16.01 Hz). δ_C (101 MHz, $CDCl_3$) δ ppm 148.55 (s), 136.64 (s), 132.99 (s), 132.66 (s), 130.83 (s), 128.79 (s), 128.22 (s), 126.66 (s), 124.89 (s), 123.53 (s).

(*E*)-3,5-dimethyl-4-styrylisoxazole (3i) [5]



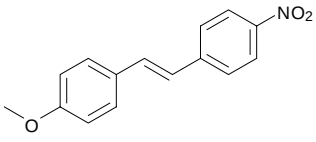
Yield (53 %). R_f 0.36 [dichloromethane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.46 (2 H, d, *J*=7.53 Hz), 7.32 - 7.40 (2 H, m), 7.23 - 7.30 (1 H, m), 6.78 (1 H, d, *J*=16.01 Hz), 6.73 (1 H, d, *J*=16.01 Hz), 2.50 (3 H, s), 2.41 (3 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 165.69 (s), 158.32 (s), 137.19 (s), 130.11 (s), 128.74 (s), 127.77 (s), 126.09 (s), 116.51 (s), 113.02 (s), 11.89 (s), 11.58 (s).

(*E*)-1-(4-(4-methoxystyryl)phenyl)ethanone (3j)



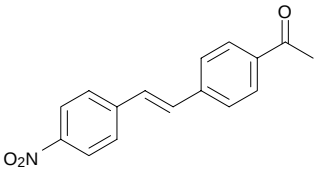
Yield (78 %). R_f 0.49 [50% ethylacetate/40-60 petroleum ether]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.93 (2 H, d, *J*=8.4 Hz), 7.54 (2 H, d, *J*=8.3 Hz), 7.47 (2 H, d, *J*=8.7 Hz), 7.17 (1 H, d, *J*=16.3 Hz), 6.99 (1 H, d, *J*=16.3 Hz), 6.91 (2 H, d, *J*=8.7 Hz), 3.83 (3 H, s), 2.59 (3 H, s). δ_C (100 MHz, $CDCl_3$) δ ppm 197.85, 160.27, 142.82, 136.00, 131.44, 129.91, 129.28, 128.76, 126.60, 125.70, 114.61, 55.74, 26.94.

(*E*)-1-methoxy-4-(4-nitrostyryl)benzene (3k)



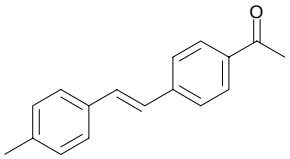
Yield (79%). R_f 0.18 [50% dichloromethane/40-60 petroleum ether]. δ_H (400 MHz, $CDCl_3$) δ ppm 8.19 (2 H, d, *J*=8.8 Hz), 7.58 (2 H, d, *J*=8.8 Hz), 7.49 (2 H, d, *J*=8.7 Hz), 7.21 (1 H, d, *J*=16.3 Hz), 6.99 (1 H, d, *J*=16.3 Hz), 6.93 (2 H, d, *J*=8.7 Hz), 3.85 (3 H, s). δ_C (100 MHz, $CDCl_3$) δ ppm 160.23, 146.37, 144.25, 132.87, 128.92, 128.38, 126.44, 124.09, 124.04, 114.31, 55.33.

(*E*)-1-(4-(4-nitrostyryl)phenyl)ethanone (3l) [6]



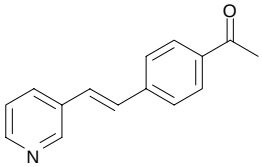
Yield (70 %). R_f 0.25 [dichloromethane]. δ_H (400 MHz, $CDCl_3$) δ ppm 8.26 (2 H, d, *J*=8.81 Hz), 8.00 (2 H, d, *J*=8.31 Hz), 7.69 (2 H, d, *J*=8.81 Hz), 7.65 (2 H, d, *J*=8.31 Hz), 7.32 (1 H, d, *J*=16.01 Hz), 7.26 (1 H, d, *J*=16.01 Hz), 2.64 (3 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 197.01 (s), 146.86 (s), 142.77 (s), 140.33 (s), 136.55 (s), 131.60 (s), 128.65 (s), 128.55 (s), 126.90 (s), 126.74 (s), 123.89 (s), 26.33 (s).

(*E*)-1-(4-(4-methylstyryl)phenyl)ethanone (3m) [7]



Yield (73 %). R_f 0.18 [dichloromethane/cyclohexane]. δ_H (400 MHz, $CDCl_3$) δ ppm 7.96 (2 H, d, *J*=8.53 Hz), 7.59 (2 H, d, *J*=8.28 Hz), 7.45 (2 H, d, *J*=8.03 Hz), 7.22 (1 H, d, *J*=16.01 Hz), 7.20 (2 H, d, *J*=8.03 Hz), 7.10 (1 H, d, *J*=16.01 Hz), 2.62 (3 H, s), 2.38 (3 H, s). δ_C (101 MHz, $CDCl_3$) δ ppm 197.11 (br. s.), 141.88 (br. s.), 138.01 (s), 135.40 (br. s.), 133.56 (s), 131.06 (s), 129.15 (s), 128.50 (s), 126.38 (s), 126.07 (s), 125.99 (s), 26.23 (s), 20.96 (s).

(*E*)-1-(4-(2-(pyridin-3-yl)vinyl)phenyl)ethanone (3n) [8]



Yield (61 %). R_f 0.30 [ethyl acetate]. δ_H (600 MHz, $CDCl_3$) δ ppm 8.83 (1 H, d, *J*=1.83 Hz), 8.60 (1 H, dd, *J*=4.77, 1.47 Hz), 8.05 (2 H, d, *J*=8.44 Hz), 7.93 (1 H, ddd, *J*=8.07, 1.83, 1.47 Hz), 7.68 (2 H, d, *J*=8.44 Hz), 7.39 (1 H, dd, *J*=8.07, 4.77 Hz), 7.27 (2 H, s), 2.69 (3 H, s). δ_C (151 MHz, $CDCl_3$) δ ppm 197.40 (s), 149.17 (s), 148.78 (s), 141.21 (s), 136.46 (s), 132.95 (s), 132.42 (s), 129.57 (s), 128.93 (s), 127.64 (s), 126.71 (s), 123.63 (s), 26.62 (s).

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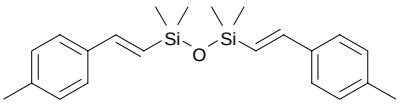
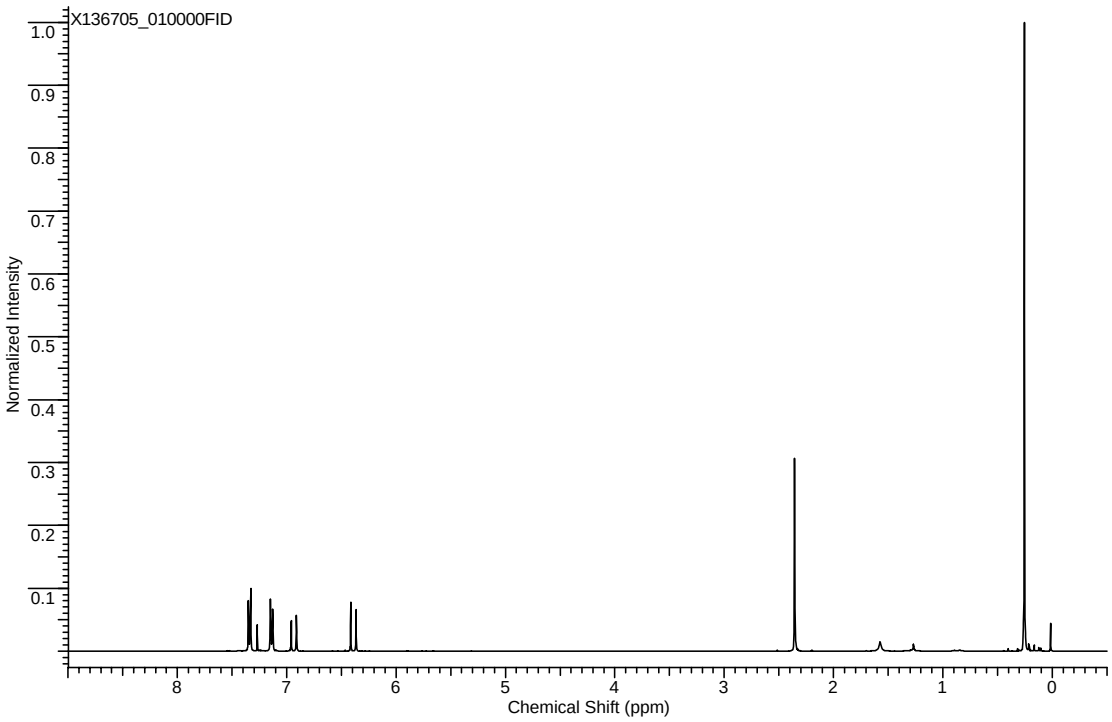
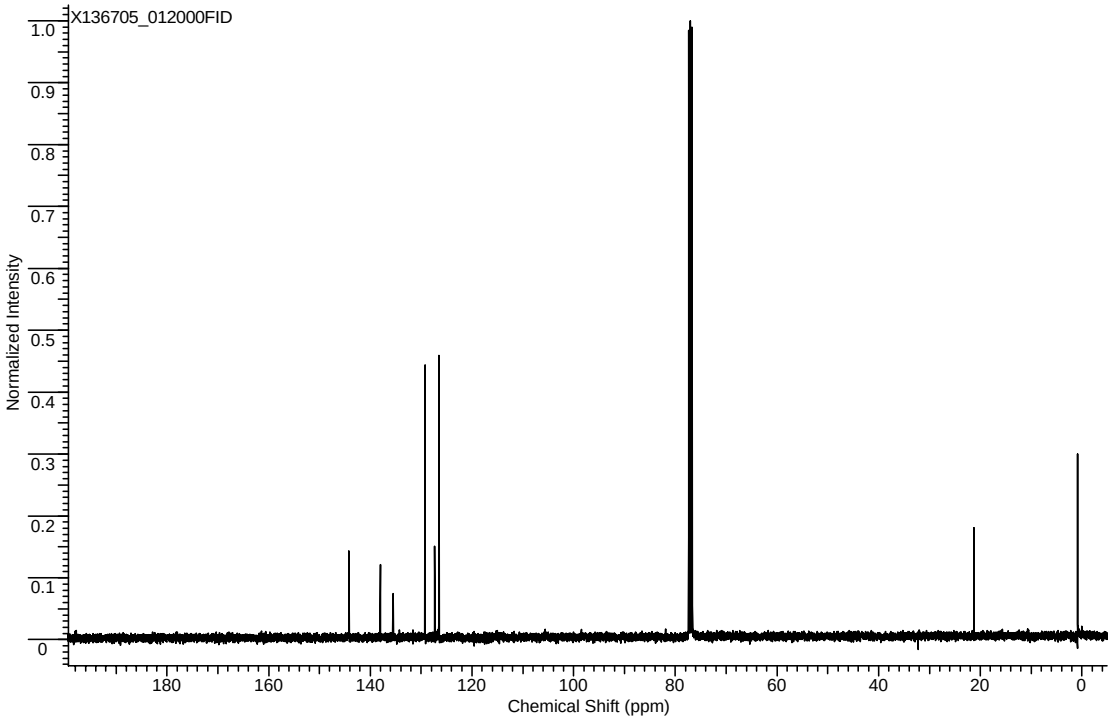
Spectra of novel compounds

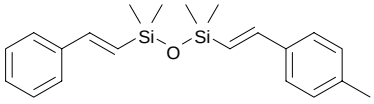
(*E*)-β-Di-(4-methylstyryl)-tetramethyldisiloxane (1b)

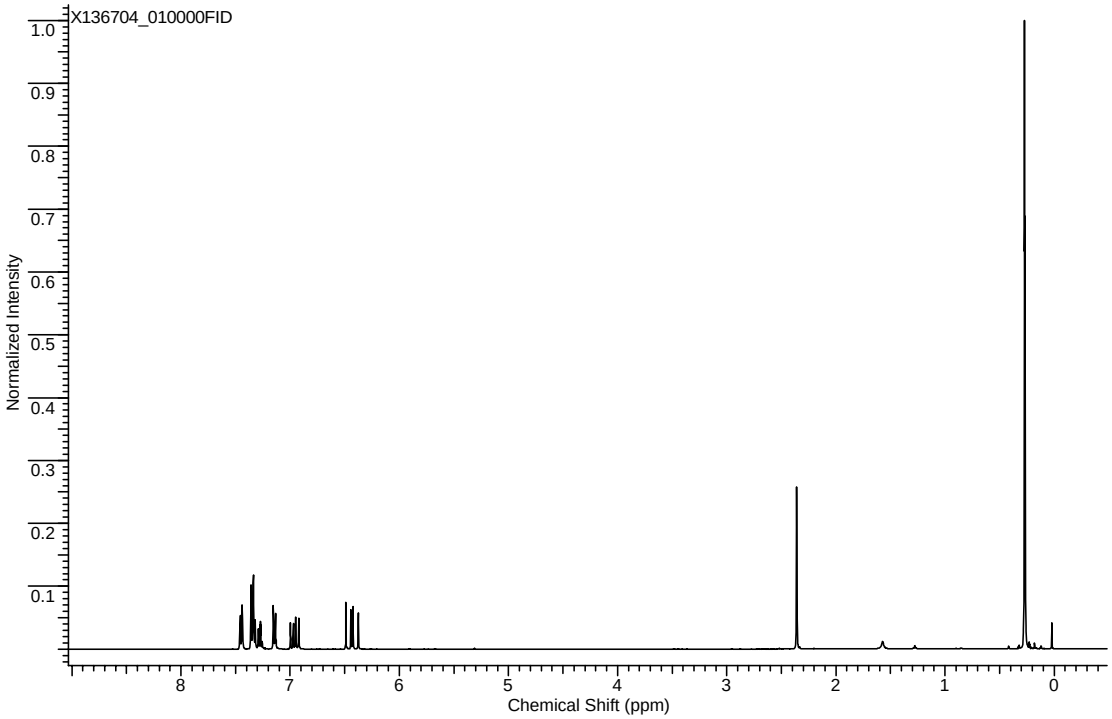


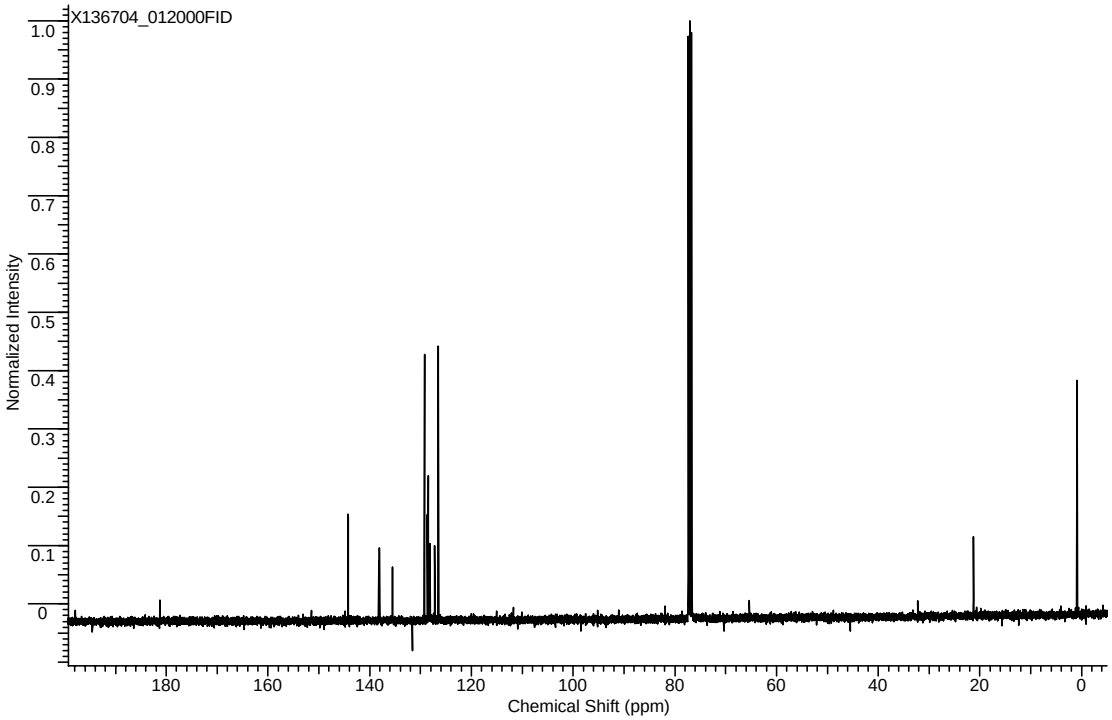




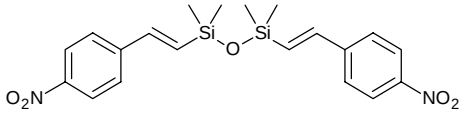
[(*E*)-β-Styryl]-[(*E*)-β-(4-methylstyryl)]-tetramethyldisiloxane **(1c)**

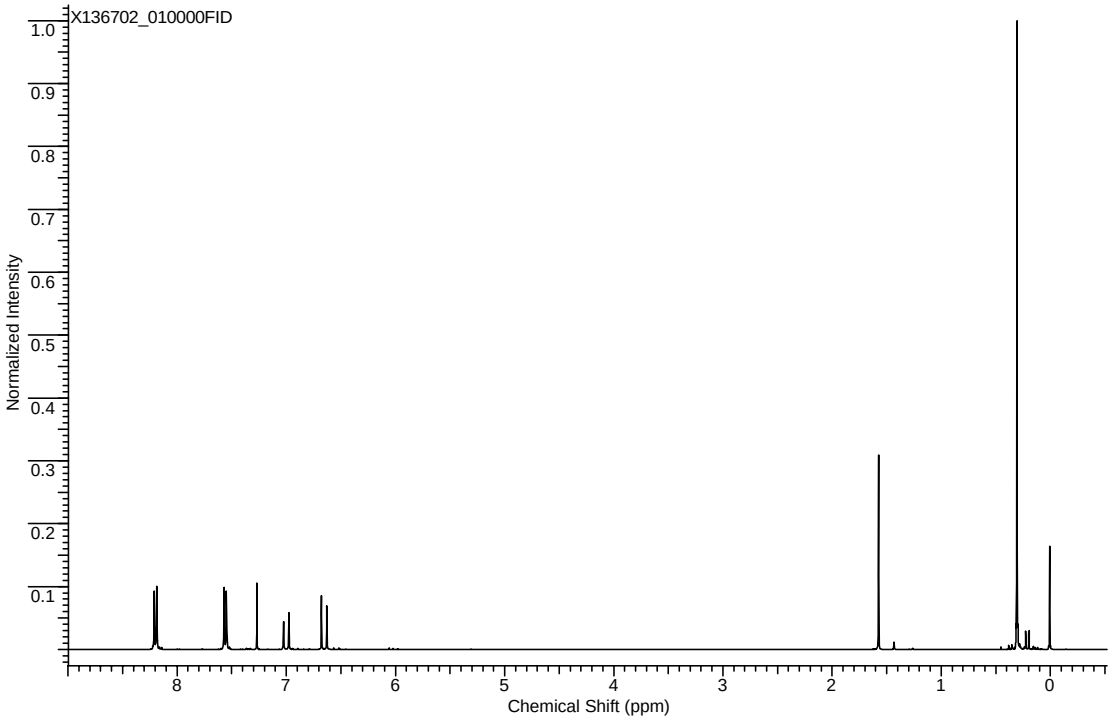


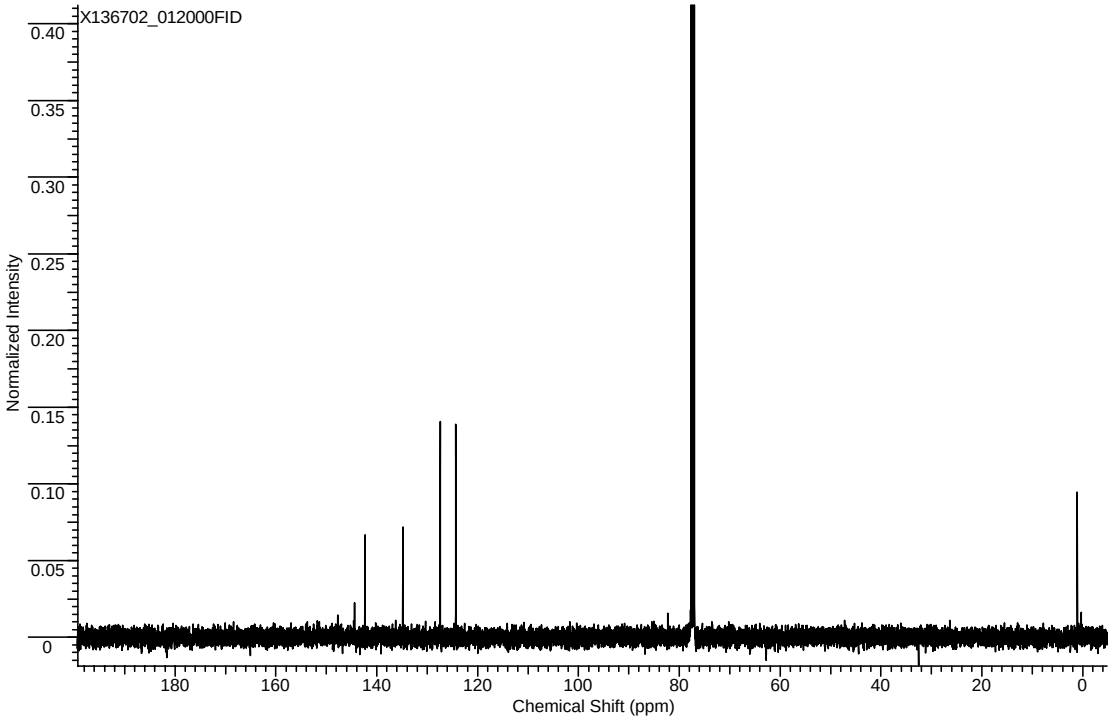




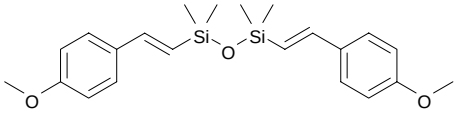
(*E*)-β-Di-(4-nitrostyryl)-tetramethyldisiloxane (1d)

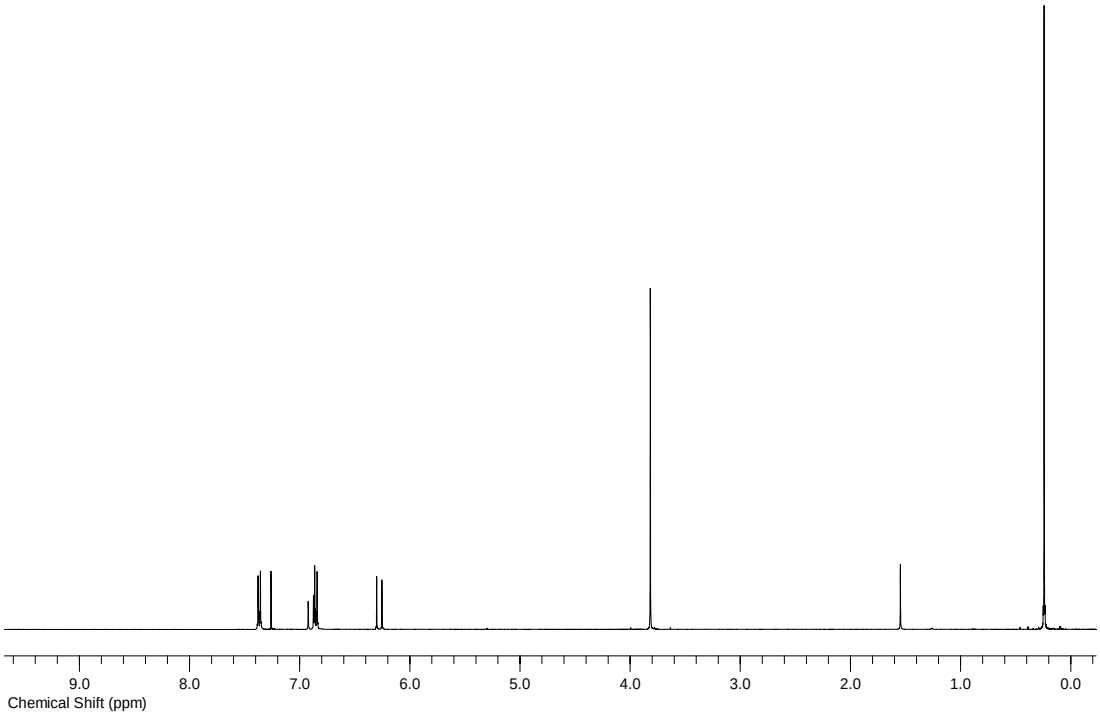


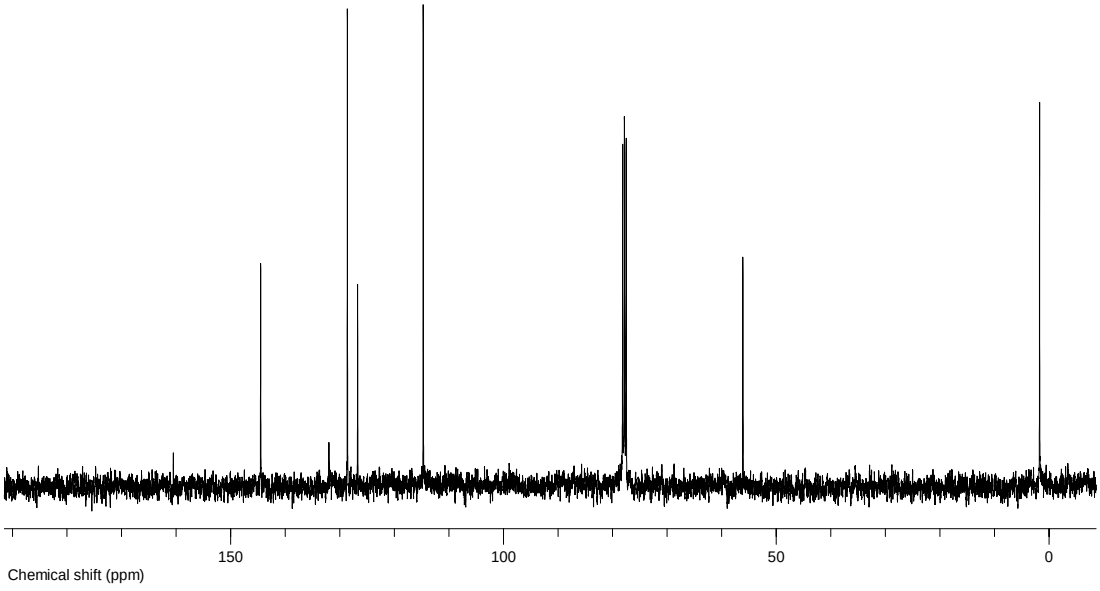




(*E*)-β-Di-(4-methoxystyryl)-tetramethyldisiloxane (1e)







(*E*)-β-Di-(3-pyridylvinyl)-tetramethyldisiloxane (1f)