Supporting Information for

A facile synthesis of optically pure 1,2-diaryl (and 1-alkyl-2-aryl) ethyl and propylamines

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General Methods.

Melting points are uncorrected. ^1H NMR spectra were acquired at 300 MHz and ^{13}C NMR were acquired at 75 MHz (unless otherwise indicated). Chemical shifts (δ) are reported in ppm relative to CDCl_3 (7.26 and 77.0 ppm). Mass spectra (MS) were determined at an ionizing voltage of 70 eV. All reactions were carried out in anhydrous solvents and under argon atmosphere. THF and Et_2O were distilled from sodium-benzophenone under argon. CH_2Cl_2 was distilled from P_2O_5 . Flash column chromatography was performed using silica gel Merk-60 (230-400 mesh) and *Varian* SCX column. *n*-BuLi (2.5M solution in hexanes) were purchased from Aldrich.

(*S*)-1-Methyl-2-(*p*-tolylsulfinyl)benzene (**2**).¹

A solution of 1-bromomethylbenzene (4 mL, 28.9 mmol) in 20 mL of dry ether was added over Mg (0.668 g, 27.5 mmol) under argon atmosphere. When all Mg disappeared, the mixture was cooled at 0 °C, and added via cannula over a solution of (*SS*)-menthyl-*p*-toluenesulfinate (8.88 g, 30.2 mmol) in 200 mL of THF cooled at -78 °C. After stirring for 3 h, the mixture was hydrolysed (150 mL of saturated NH_4Cl) at -78 °C, extracted (3x50 mL of Et_2O), washed (2x50 mL NaCl sat.), dried (MgSO_4) and the solvent evaporated. The residue was purified by flash-column chromatography (eluent: Hexane/ EtOAc 6:1). Yield: 59 % or by directed crystallisation of the reaction crude (Et_2O).²; white solid; mp: 76-78 °C; $[\alpha]_{\text{D}}^{20} = -91.0$ (*c* 2, acetone) (Lit: $[\alpha]_{\text{D}}^{20} = -$

¹Mislow, K.; Green, M.M.; Laur, P.; Melillo, J. T.; Simmons T.; Ternay, A. L. *J. Am. Chem. Soc.* **1965**, 87, 1958.

² Separation by crystallisation: in a first crystallisation (Et_2O) starting menthyl-*p*-toluenesulfinate (28%) was recovered. In a second crystallisation, with the same solvent, sulfoxide **2** was obtained with 48% yield.

89.1, (c 2 acetone); ^1H NMR: 7.94 (dd, $J = 9.3, 1.62$ Hz, 1H), 7.40-7.30 (m, 4H), 7.20 (d, $J = 8.5$ Hz, 2H), 7.12 (d, $J = 7.6$ Hz, 1H), 2.32 (s, 3H), 2.28 (s, 3H).

Sulfinilimines.³

(S)-(+)-N-(*o*-Bromobenzylidene)-*p*-toluenesulfinamide (1b). Yield: 65%;

Crystallisation solvents': Hexane/Et₂O (4/1); yellow solid; mp:104-106 °C; $[\alpha]_{\text{D}}^{20} = +279.6$ (c 1.0, CHCl₃); IR (NaCl): 3420, 1637, 1593, 1557, 1490, 1348, 854 cm⁻¹; ^1H NMR: δ 9.15 (s, 1H), 8.03 (d, $J = 9.6$ Hz, 1H), 7.63 (m, 3H), 7.31 (m, 4H), 2.39 (s, 3H); ^{13}C NMR: δ 160.0, 141.8, 141.5, 133.5, 133.4, 132.6, 129.9, 129.8, 127.6, 126.6, 124.7, 21.4; MS (EI) m/z 322 (M⁺); Anal. Calcd for C₁₄H₁₂BrNOS: C, 52.18; H, 3.75; N, 4.35; S, 9.95. Found: C, 51.98; H, 3.63; N, 4.07; S, 10.08.

(S)-(+)-N-(*p*-Cyanobenzylidene)-*p*-toluenesulfinamide (1d). Yield: 60%.

Crystallisation solvent's: Hexane; white solid; mp:158-160 °C; $[\alpha]_{\text{D}}^{20} = +365.0$ (c 2.1, CHCl₃); IR (NaCl): 3300, 2228, 1607, 1594, 1556, 1490, 1102 cm⁻¹; ^1H NMR (300 MHz): δ 8.76 (s, 1H), 7.93 (d, $J = 8.5$ Hz, 2H), 7.74 (d, $J = 8.5$ Hz, 2H), 7.62 (d, $J = 8.3$ Hz, 2H), 7.32 (d, $J = 8.3$ Hz, 2H), 2.40 (s, 3H); ^{13}C NMR: δ 158.8, 142.1, 140.9, 137.3, 132.6, 130.0, 129.8, 124.7, 118.0, 115.6, 21.4; MS (EI) m/z 268 (M⁺); Anal. Calcd for C₁₅H₁₂N₂OS: C, 67.14; H, 4.51; N, 10.44; S, 11.95. Found: C, 67.02; H, 4.48; N, 10.34; S, 11.97.

³ Enantiopure sulfinilimines **1a-i** were prepared in good yields according to Davis' procedures: (a) Davis, F. A.; Reddy, R. E.; Szewczyk, J. M.; Reddy, G. V.; Portonovo, P. S.; Zhang, H.; Fanelli, D.; Reddy, T. R.; Zhou, P.; Carroll, P. J. *J. Org. Chem.* **1997**, 62, 2555; (b) Davis, F. A.; Zhang, Y.; Andemichael, Y.; Fang T.; Fanelli, D. L.; Zhang, H. *J. Org. Chem.* **1999**, 64, 1403.

General procedure for the reactions summarized in Table 2.

A solution of *n*-BuLi (0.60 mmol, 2.3 M in hexane) was added over ⁱPr₂NH (0.89 mmol) in THF (3 mL) at 0 °C. After 30 min stirring, the mixture was cooled at –78 °C. A solution of the sulfoxide **2** (0.50 mmol) in THF (2 mL) was then added. After 1 h stirring, the electrophile [sulfinilimine(**1a-i**), 0.52 mmol] dissolved in THF (4 mL) was added at –78 °C. When the reaction was completed (10 to 20 min), the mixture was hydrolysed (saturated NH₄Cl), extracted (3x10 mL Et₂O), washed (2x10 mL NH₄Cl sat.), dried (MgSO₄) and the solvent evaporated. The residue was purified by flash-column chromatography.

[1*S*,(*S*)]-*N*-{1-Phenyl-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]ethyl}-*p*-toluenesulfinamide (3a**). Chromatography: *n*-hexane-AcOEt 1:2, yield: quant.; white solid; mp: 70-72 °C (Et₂O); [α]_D²⁰ = + 3.7 (*c* 1.0, CHCl₃); IR (NaCl): 3205, 2995, 1595, 1493, 1454, 1058, 755 cm⁻¹; ¹H NMR: δ 7.85 (dd, *J* = 9.8, 2.1 Hz, 2H), 7.50–7.11 (m, 15H), 7.08-6.99 (m, 4H), 5.37 (d, *J* = 6.3 Hz, 1H), 4.54 (ddd, *J* = 9.2, 6.3, 6.2 Hz, 1H), 3.38 (dd, *J* = 14.0, 9.2 Hz, 1H), 2.92 (dd, *J* = 14.0, 6.2 Hz, 1H), 2.32 (s, 3H), 2.31 (s, 3H); ¹³C NMR: δ 142.8, 142.4, 141.5, 141.4, 141.3, 140.7, 137.4, 132.0, 131.7, □ 130.0, □ 129.6, 129.0, 128.3, 127.6, 127.3, 127.0, 125.7, 125.4, 57.8, 39.3, 21.3, 21.2; MS (EI) *m/z* 473 (M⁺); Anal. Calcd for C₂₈H₂₇NO₂S₂: C, 71.00; H, 5.75; N, 2.96, S, 13.54. Found: C, 70.80; H, 5.98; N, 2.56, S, 13.23.**

[1*S*,(*S*)]-*N*-{1-(2-Bromophenyl)-2-[(*S*)-2-*p*-toluenesulfinyl]phenyl]-ethyl}-*p*-toluenesulfinamide (3b**). Chromatography: *n*-hexane-EtAcO 1/1, yield: 91%, white solid; mp: 78-80 °C (Et₂O); [α]_D²⁰ = + 87.0 (*c* 1.3, CHCl₃); IR (KBr): 3462, 3185, 2921,**

1712, 1593, 1568, 1491, 1471, 1438, 1024 cm^{-1} ; ^1H NMR: δ 7.78 (dd, $J = 7.7, 1.3$ Hz, 1H), 7.63–7.50 (m, 2H), 7.50–7.40 (m, 2H), 7.28 (d, $J = 8.3$ Hz, 2H), 7.25–7.08 (m, 6H), 7.00–6.88 (m, 3H), 6.62 (d, $J = 6.5$ Hz, 1H), 4.90 (ddd, $J = 10.7, 6.5, 4.3$ Hz, 1H), 3.12 (dd, $J = 13.9, 10.7$ Hz, 1H), 2.68 (dd, $J = 13.9, 4.26$ Hz, 1H), 2.27 (s, 3H), 2.20 (s, 3H); ^{13}C NMR: δ 142.4, 141.7, 141.1, 140.9, 140.8, 140.3, 138.8, 132.9, 132.6, 132.0, 129.8, 128.9, 128.7, 128.6, 128.1, 127.4, 127.3, 125.6, 124.7, 122.0, 55.4, 37.3, 21.2, 21.1; MS (EI) m/z 565 (M^+); HRMS $[\text{M}^+]$: Calcd. for $\text{C}_{29}\text{H}_{28}\text{N}_1\text{O}_2\text{S}_2\text{Br}$ 565.0744; found, 565.0723.

[1S, S_S]-*N*-{1-(4-Methoxyphenyl)-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]ethyl}-*p*-toluenesulfonamide (3c). Chromatography: *n*-hexane-EtOAc 2/3; yield: quantitative, white solid; mp: 74–76 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = -8.1$ (c 1.8, CHCl_3); IR (KBr): 3455, 3197, 3054, 2921, 2835, 1611, 1513, 1492, 1032 cm^{-1} ; ^1H NMR: δ 7.86 (d, $J = 9.2$, 1H), 7.42–7.24 (m, 5H), 7.20 (d, $J = 8.1$ Hz, 2H), 7.10 (d, $J = 8.1$ Hz, 2H), 7.07 (d, $J = 8.7$ Hz, 2H), 6.99 (d, $J = 8.7$ Hz, 2H), 6.71 (d, $J = 8.7$ Hz, 2H), 5.11 (d, $J = 5.1$ Hz, 1H), 4.54 (ddd, $J = 8.9, 6.5, 5.1$ Hz, 1H), 3.73 (s, 3H), 3.38 (dd, $J = 14.1, 8.9$ Hz, 1H), 2.95 (dd, $J = 14.1, 6.5$ Hz, 1H), 2.31 (s, 3H), 2.30 (s, 3H); ^{13}C NMR: δ 158.8, 142.9, 141.7, 141.4, 141.4, 140.8, 137.4, 134.3, 131.8, 131.5, 130.0, 129.0, 127.9, 127.5, 126.7, 125.7, 125.5, 113.8, 57.6, 55.2, 39.3, 21.3, 21.2; MS (EI) m/z 503 (M^+); Anal. Calcd for $\text{C}_{29}\text{H}_{29}\text{NO}_3\text{S}_2$: C, 69.15; H, 5.80; N, 2.78; S, 12.73. Found: C, 68.80; H, 5.92; N, 2.41; S, 12.04.

[1S,(*S*),*S*]-*N*-{1-(4-Cyanophenyl)-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]-ethyl}-*p*-toluenesulfonamide (3d). Chromatography: *n*-hexane-EtOAc 2/1; yield: 88%, white solid; mp: 68–70 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = +17.6$ (c 1.2, CHCl_3); IR (KBr): 3197, 3054, 2923, 2228, 1595, 1492, 1086, 1059 cm^{-1} ; ^1H NMR: δ 7.59 (d, $J = 7.8$ Hz, 1H), 7.61–7.01 (m, 13H), 6.92 (d, $J = 8.4$ Hz, 2H), 6.42 (d, $J = 6.4$ Hz, 1H), 4.52 (ddd, $J = 10.2, 6.3, 5.3$

Hz, 1H), 3.27 (dd, $J = 13.8, 10.2$ Hz, 1H), 2.68 (dd, $J = 13.8, 5.3$ Hz, 1H), 2.27 (s, 3H), 2.23 (s, 3H).; ^{13}C NMR: δ 148.7, 142.1, 141.1, 140.1, 140.7, 137.4, 132.5, 132.2, 131.8, 130.0, 129.9, 129.8, 120.2, 127.6, 127.3, 124.8, 118.6, 110.4, 55.8, 38.7, 21.1, 21.0; MS (EI) m/z 498 (M^+); HRMS $[\text{M}^+]$: Calcd. for $\text{C}_{29}\text{H}_{26}\text{N}_2\text{O}_2\text{S}_2$ 498.1435; found, 498.1440.

[1S,(S,S)]-N-{1-(2-Naphtyl)-2-[(S)-(2-*p*-toluenesulfinyl)phenyl]ethyl}-*p*-toluene

sulfinamide (3e). Chromatography: *n*-hexane-EtOAc; 1/1 Yield: quantitative, yellow solid. mp.: 103-105 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = +25.9$ (c 1.1, CHCl_3); IR (KBr): 3402, 3199, 2920, 1595, 1511, 1491, 1179, 1058 cm^{-1} ; ^1H NMR: δ 7.85 (dd, $J = 9.1, 1.5$ Hz, 1H), 7.75 (d, $J = 9.6$ Hz, 1H), 7.65 (d, $J = 8.2$ Hz, 1H), 7.53–7.30 (m, 11H), 7.14–7.10 (m, 4H), 6.79 (d, $J = 5.4$ Hz, 1H), 5.96 (m, 1H), 5.29 (m, 1H), 3.51 (dd, $J = 14.2, 10.4$ Hz, 1H), 3.01 (dd, $J = 14.2, 5.0$ Hz, 1H), 2.27 (s, 3H), 2.11 (s, 3H); ^{13}C NMR: δ 142.4, 141.1, 141.0, 140.2, 138.3, 137.8, 133.4, 132.2, 131.9, 129.9, 120.7, 128.6, 128.5, 127.5, 127.3, 125.6, 125.4, 125.2, 125.1, 124.9, 61.5, 38.5, 21.1, 20.9; MS (EI) m/z 523 (M^+); HRMS $[\text{M}^+]$: Calcd. for $\text{C}_{32}\text{H}_{29}\text{N}_1\text{O}_2\text{S}_2$ 523.1639; found, 523.1621

[1R,(S,S)]-N-[(S)-2-(*p*-Toluenesulfinyl)benzyl]pentyl]-*p*-toluenesulfinamide (3f).

Chromatography: *n*-hexane-EtOAc 3:1; yield: 95%., white solid; mp: 126-128 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = -34.4$ (c 0.5, CHCl_3); IR (KBr): 3197, 2953, 2928, 2861, 1595, 1492, 1452, 1045 cm^{-1} ; ^1H NMR: δ 7.82 (d, $J = 7.82$ Hz, 1H), 7.45–7.00 (m, 11H), 4.33 (d, $J = 8.49$ Hz, 1H), 3.47 (m, 1H), 2.96 (dd, $J = 14.0, 8.1$ Hz, 1H), 2.87 (dd, $J = 14.0, 6.7$ Hz, 1H), 2.26 (s, 3H), 2.20 (s, 3H), 1.55–1.05 (m, 4H), 0.75 (t, $J = 6.69$ Hz, 3H); ^{13}C NMR: δ 142.8, 141.9, 141.2, 141.1, 140.5, 137.5, 130.9, 130.8, 129.6, 128.9, 127.2, 125.4, 125.3, 125.2, 56.4, 38.1, 35.6, 27.5, 22.0, 21.0, 20.9, 13.6.; MS (EI) m/z 453 (M^+); Anal. Calcd for $\text{C}_{26}\text{H}_{31}\text{NO}_2\text{S}_2$: C, 68.84; H, 6.89; N, 3.09; S, 14.14. Found: C, 68.25; H, 6.80; N, 2.93; S, 14.57.

[1*R*,(*S*)*S*)]-*N*-{1-Benzyl-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]ethyl}-*p*-toluene

sulfinamide (3g). Chromatography: *n*-hexane-EtOAc 3:2; yield: 93%; white solid. mp.:150-152 °C (Et₂O). $[\alpha]_D^{20} = -62.0$ (c 0.35, CHCl₃); IR (KBr): 3421, 2922, 1595, 1492, 1085, 1057 cm⁻¹; ¹H NMR: δ 7.94 (t, *J* = 5.64 Hz, 1H), 7.55-7.92 (m 16H), 4.22 (d, *J* = 11.5 Hz, 1H), 3.93 (m, 1H), 3.01 (dd, *J* = 13.7, 5.2 Hz, 1H), 2.9-2.7 (m, 3H), 2.32 (s, 3H), 2.22 (s, 3H); ¹³C NMR: δ 143.3, 142.2, 141.5, 141.2, 140.9, 137.3, 137.2, 131.4, 131.1, 129.9, 129.8, 129.2, 128.6, 127.6, 126.7, 125.7, 125.6, 125.5, 125.4, 57.5, 43.3, 36.9, 21.3, 21.2; MS (EI) *m/z* 487 (M⁺); HRMS [M⁺]: Calcd. for C₂₉H₂₉N₁O₂S₂ 487.1639; found, 487.1634.

[1*S*,(*S*)*S*)]-*N*-{2-Methyl-1-[2-(*S*)-(p-toluenesulfinyl)benzyl]propyl}-*p*-toluene-

sulfinamide (3h). Chromatography: *n*-hexane-EtOAc 3:1; yield: 94% ; white solid; mp:168-170 °C (Et₂O); $[\alpha]_D^{20} = -34.4$ (c 0.5, CHCl₃); IR (KBr): 3181, 2979, 2955, 2935, 1595, 1492, 1471, 1063 cm⁻¹; H NMR: δ 7.81 (d, *J* = 7.8 Hz, 1H), 7.50-6.98 (m, 11H), 4.50 (d, *J* = 9.2 Hz, 1H), 3.47 (m, 1H), 2.87 (dd, *J* = 14.1, 9.9 Hz, 1H), 2.58 (dd, *J* = 14.1, 5.5 Hz, 1H), 2.25 (s, 3H), 2.20 (s, 3H), 0.88 (d, *J* = 6.9 Hz, 3H), 0.79 (d, *J* = 6.8 Hz, 3H); ¹³C NMR: δ 142.6, □ 142.2, 141.1, 141.0, 140.4, 138.3, 131.1, 131.0, 129.6, 128.8, 127.0, 126.0, 125.2, 125.2, 62.1, 33.4, 32.3, 21.0, 20.9, 17.9, 17.6. MS (EI) *m/z* 439 (M⁺); HRMS [M⁺]: Calcd. for C₂₅H₂₉N₁O₂S₂: 439.1639; found, 439.1638.

[1*S*,(*S*)*S*)]-*N*-{2,2-Dimethyl-1-[(*S*)-2-(p-toluenesulfinyl)benzyl]propyl}-*p*-toluene-

sulfinamide (3i). Chromatography: *n*-hexane-EtOAc 3:1; yield: 91%, white solid. mp:120-122 °C (Et₂O); $[\alpha]_D^{20} = -36.2$ (c 0.5, CHCl₃); IR (KBr): 3202, 2960, 1593, 1491, 1455, 1057, 1043 cm⁻¹; ¹H NMR : δ 7.74 (d, *J* = 9.2 Hz, 1H), 7.43-6.94 (m, 9H), 6.67 (d, *J* = 8.1 Hz, 2H), 4.49 (d, *J* = 4.5 Hz, 1H), 3.38 (ddd, *J* = 13.7, 9.2, 4.5 Hz, 1H), 2.72 (m, 2H), 2.25 (s, 3H), 2.20 (s, 3H), 0.94 (s, 9H); ¹³C NMR: δ 143.1, 142.4, 141.0, 140.7, 140.2, 139.5, 131.4, 131.4, 129.5, 128.7, 127.0, 126.7, 125.0, 124.4, 68.1, 34.9, 32.0,

26.7, 26.7, 21.0. MS (EI) m/z 453 (M^+); HRMS $[M+]$: Calcd. for $C_{26}H_{31}N_1O_2S_2$ 453.1796; found, 453.1790.

General procedure for the reactions summarized in Table 3.

A solution of *n*-BuLi (0.60 mmol, 2.3 M in hexane) was added over i Pr₂NH (0.89 mmol) in THF (3 mL) at 0 °C. After stirring for 30 min, the mixture was cooled at -78 °C. A solution of the sulfoxide **4**⁴ (0.50 mmol) in THF (2 mL) was then added. After stirring for 1 h stirring, the electrophile [sulfinilimine(**1a-i**), 0.50 mmol] dissolved in THF (4 mL) was added at -78 °C. When the reaction was completed (20 to 30 min), the mixture was hydrolysed (saturated NH₄Cl), extracted (3x10 mL Et₂O), washed (2x10 mL NH₄Cl sat.), dried (MgSO₄) and the solvent evaporated. The residue was purified by flash-column chromatography.

[1S,2S,(S)S]-N-[1-Phenyl-2-[(S)-2-(*p*-toluenesulfinyl)phenyl]propyl]-*p*-toluene

sulfonamide (5a). Chromatography: *n*-hexane-EtOAc 2:1; yield: 82%, white solid. mp: 88-91 °C (Et₂O); $[\alpha]_D^{20} = +51.3$ (*c* 2.9, CHCl₃); IR (KBr): 3215, 3057, 2972, 2924, 1595, 1492, 1454, 1087 cm⁻¹; mp= 89-91 °C; ¹H NMR: δ 7.88 (dd, *J* = 7.6, 1.2 Hz, 1H), 7.56 (m, 2H), 7.46 (td, *J* = 7.5, 1.4 Hz, 1H), 7.34 (d, *J* = 8.3 Hz, 2H), 7.13 (m, 2H), 7.01 (m, 4H), 6.82 (m, 4H), 5.29 (d, *J* = 7.7 Hz, 1H), 4.20 (dd, *J* = 10.7, 7.7 Hz, 1 H), 3.60 (dc, *J* = 10.7, 6.9 Hz, 1H), 2.22 (s, 3H), 2.21 (s, 3H), 0.52 (d, *J* = 6.9 Hz, 3H); ¹³C NMR: δ 144.9, 142.5, 141.5, 141.3, 141.2, 140.9, 140.1, 132.6, 129.6, 128.9, 128.5, 128.1, 128.0, 127.0, 126.9, 116.8, 125.6, 125.0, 62.4, 39.6, 21.0, 20.9, 18.7; MS (EI)

⁴ Synthesis of compound **4** was described by: García Ruano, J. L.; Aranda, M.; Carreño, M. C.; Toledo, M. A. *Angew. Chem. Int. Ed.* **2000**, 39, 2376-2377.

m/z 487 (M^+); Anal. Calcd for $C_{29}H_{29}N_2O_2S_2$: C, 71.42; H, 5.99; N, 2.87; S, 13.15. Found: C, 71.16; H, 5.90; N, 2.58; S, 13.09.

[1*S*,2*S*,(*S*)*S*]-*N*-{1-(2-Bromophenyl)-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]propyl}-*p*-toluenesulfinamide (5b**). Chromatography: *n*-hexane-EtOAc 2:1; yield: 87%; white solid, mp:154-156 °C (Et_2O); $[\alpha]_D^{20} = +123.7$ (*c* 1.1, $CHCl_3$); IR (KBr): 3416, 3201, 2923, 1592, 1567, 1490, 1438, 1067, 1023 cm^{-1} ; 1H NMR: δ 7.84 (d, $J = 7.6$ Hz, 1H), 7.73 (d, $J = 4.0$ Hz, 1H), 7.52-7.44 (m, 2H), 7.32 (d, $J = 8.2$ Hz, 2H), 7.25 (d, $J = 8.2$ Hz, 1H), 7.20 (d, $J = 7.26$ Hz, 2H), 7.12 (d, $J = 8.2$ Hz, 2H), 6.95 (m, 3H), 6.86 (d, $J = 8.20$ Hz, 2H), 5.98 (d, $J = 6.87$ Hz, 1 H), 4.93 (dd, $J = 6.87, 10.71$ Hz, 1H), 3.60 (dc, $J = 10.71, 6.96$ Hz, 1H), 2.28 (s, 3H), 2.23 (s, 3H), 0.49 (d, $J = 6.96$ Hz, 3H); ^{13}C NMR: δ 145.3, 142.6, 141.4, 141.1, 140.8, 140.7, 140.0, 133.2, 131.7, 129.8, 129.7, 129.1, 128.7, 128.5, 128.0, 127.7, 127.1, 125.8, 124.7, 124.2, 58.4, 40.6, 21.2, 21.1, 17.2; MS (EI) m/z 553 (M^+); Anal. Calcd for $C_{29}H_{28}BrN_1O_2S_2$: C, 61.48; H, 4.98; N, 2.47; S, 11.32. Found: C, 61.53; H, 5.26; N, 2.31; S 11.71.**

[1*S*,2*S*,(*S*)*S*]-*N*-{1-(4-Methoxyphenyl)-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]propyl}-*p*-toluenesulfinamide (5c**). Chromatography: *n*-hexane-EtOAc 1:1; yield: 84%, yellow oil; $[\alpha]_D^{20} = +58.10$ (*c* 0.74, $CHCl_3$); IR (NaCl): 3209, 3053, 2972, 2929, 2836, 1611, 1512, 1492, 1030 cm^{-1} ; 1H NMR: δ 7.89 (dd, $J = 7.7, 1.3$ Hz, 1H), 7.68–7.56 (m, 2H), 7.50 (td, $J = 7.3, 1.4$ Hz, 1H), 7.34 (d, $J = 8.3$ Hz, 2H), 7.03 (d, $J = 8.01$ Hz, 1H), 6.91-6.98 (m, 4H), 6.82 (d, $J = 6.3$ Hz, 2H), 6.72 (d, $J = 8.7$ Hz, 2H), 4.98. (d, $J = 7.9$ Hz, 1 H), 4.22 (dd, $J = 10.7, 7.9$ Hz, 1H), 3.75 (s, 3H), 3.59 (dc, $J = 10.7, 6.9$ Hz, 1H), 2.27 (s, 3H), 2.24 (s, 3H), 0.59 (d, $J = 6.9$ Hz, 3H); ^{13}C NMR: δ 158.5, 145.1, 141.7, 141.5, 141.4, 141.0, 140.1, 134.8, 132.5, 129.7, 128.7, 128.6, 128.1, 127.9; 126.9, 125.6, 125.2, 113.6, 62.4, 55.1, 39.8, 21.2, 21.0, 18.9; MS (EI) m/z 517 (M^+); HRMS [M]: Calcd. for $C_{16}H_{31}N_1O_3S_2$; 517.1745; found, 517.1730.**

[1S,2S,(S)S]-N-[1-(4-Cyanophenyl)-2-[(S)-2-toluenesulfinyl]phenyl]propyl}-p-toluenesulfinamide (5d). Chromatography: *n*-hexane-EtOAc 1:1; yield: 60%, yellow oil; $[\alpha]_D^{20} = +44.5$ (*c* 0.8, CHCl₃); IR (NaCl): 3012, 3055, 2973, 2227, 1662, 1608, 1492, 1440, 1086 cm⁻¹; ¹H NMR: δ 7.79 (d, *J* = 7.7 Hz, 1H), 7.67 (t, *J* = 7.7 Hz, 1H), 7.58–7.20 (m, 6H), 7.12 (d, *J* = 8.4 Hz, 2H), 7.07 (d, *J* = 7.98 Hz, 2H), 6.85 (s, 4H), 6.21 (d, *J* = 6.9 Hz, 1H), 4.16 (dd, *J* = 10.5, 6.9 Hz, 1H), 3.61 (dc, *J* = 10.5, 6.9 Hz, 1H), 2.26 (s, 3H), 2.22 (s, 3H), 0.33 (d, *J* = 6.9 Hz, 3H); ¹³C NMR: δ 148.6, 144.7, 141.1, 140.8, 140.7, 140.6, 133.3, 132.1, 131.7, 129.8, 129.7, 129.6, 129.4, 128.6, 127.9, 127.2, 125.6, 124.4, 122.8, 110.3, 60.4, 38.8, 21.1, 21.0, 18.0; MS (EI) *m/z* 453 (M⁺), HRMS [M⁺]: Calcd. for C₃₀H₂₈N₂O₂S₂: 512.1592; found, 512.1578.

[1S,2S,(S)S]-N-[1-(2-Naphtyl)-2-[(S)-2-toluenesulfinyl]phenyl]propyl}-p-toluene sulfinamide (5e)⁵. Chromatography: *n*-hexane-EtOAc 1:1; yield: 70%; ¹H NMR (200 MHz): 8.00–6.40 (m, 19 H), 5.92 (d, *J* = 6.1 Hz, 1H), 5.21 (dd, *J* = 10.2, 6.1 Hz, 1H), 4.2 (m, 1H), 2.27 (s, 3H), 1.93 (s, 3H), 0.42 (d, *J* = 6.84 Hz, 3H); ¹³C NMR: δ 145.9, 145.4, 141.5, 140.8, 140.4, 139.7, 133.5, 133.1, 132.9, 131.3, 129.9, 129.7, 129.6, 128.9, 128.2, 128.1, 127.1, 127.0, 125.7, 125.3, 124.9, 124.5, 124.3, 122.3, 53.13, 41.17, 21.2, 19.1, 18.3; Anal. Calcd for C₃₃H₃₁NO₂S₂: C, 73.71; H, 5.81; N, 2.60; S, 11.93. Found: C, 73.46; H, 6.02; N, 2.48; S, 12.19.

[1R,2S,(S)S]-N-[1-[(S)-2-(*p*-Toluenesulfinyl)phenyl]ethyl]pentyl}-p-toluene-sulfinamide (5f). Chromatography: *n*-hexane-EtOAc 3:1; yield: 85%; white solid; mp: 64–66 °C (Et₂O); $[\alpha]_D^{20} = +75.2$ (*c* 0.5, CHCl₃); IR (KBr): 3214, 2958, 2930, 2871, 1595, 1492, 1470, 1086, 1042 cm⁻¹; ¹H NMR: δ 7.93 (dd, *J* = 9.3, 1.7 Hz, 1H), 7.54–7.36 (m, 3H), 7.22 (d, *J* = 8.2 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 2H), 6.79 (d, *J* = 8.4

⁵ ¹H NMR and ¹³C NMR of mayor diastereoisomer.

Hz, 2H), 6.59 (d, $J = 8.2$ Hz, 2H), 3.45 (m, 1H), 3.21 (m, 1H), 2.30 (s, 3H), 2.16 (s, 3H), 1.70-1.20 (m, 6H), 1.05 (d, $J = 6.7$ Hz, 3H), 0.87 (m, 3H); ^{13}C NMR: δ 145.0, 142.4, 142.1, 141.5, 141.0, 140.5, 131.7, 129.5, 128.9, 127.7, 126.9, 126.0, 126.0, 125.1, 61.9, 38.3, 33.7, 25.7, 22.6, 21.2, 21.1, 19.3, 13.9; MS (EI) m/z 467 (M^+); Anal. Calcd for $\text{C}_{27}\text{H}_{33}\text{NO}_2\text{S}_2$: C, 69.34; H, 7.11; N, 2.99; S, 13.71. Found: C, 68.86; H, 7.27; N, 2.76; S, 13.49.

[1R,2S,(S)S]-N-{1-Benzyl-2-[(S)-2-(*p*-toluenesulfinyl)phenyl]propyl}-*p*-toluenesulfonamide (5g). Chromatography: *n*-hexane-EtOAc: 2:1; yield: 88%; white solid; mp: 112-114 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = -34.4$ (c 0.50, CHCl_3); IR (KBr): 3417, 2923, 2870, 1595, 1493, 1088, 1062 cm^{-1} ; ^1H NMR: δ 8.03 (d, $J = 8.0$ Hz, 1H), 7.50–7.30 (m, 10 H), 6.87 (d, $J = 8.1$ Hz, 2H), 6.51 (d, $J = 8.2$ Hz, 2H), 6.39 (d, $J = 7.5$ Hz, 4H), 3.85 (m, 1H), 3.20-3.12 (m, 3H), 2.97 (d, $J = 11.1$ Hz, 1H), 2.27 (s, 3H), 1.95 (s, 3H), 1.36 (d, $J = 6.7$ Hz, 3H); ^{13}C NMR: δ 144.0, 142.8, 142.1, 141.0, 140.8, 140.3, 135.2, 131.4, 131.2, 129.8, 129.4, 128.9, 128.6, 127.0, 127.0, 126.8, 125.1, 125.0, 62.1, 38.5, 36.7, 21.1, 21.0, 20.2; MS (EI) m/z 501 (M^+), HRMS $[\text{M}^+]$: Calcd. for $\text{C}_{30}\text{H}_{31}\text{N}_1\text{O}_2\text{S}_2$ 501.1796; found, 501.1789.

[1R,2S,(S)S]-N-{2-[(S)-2-(*p*-Toluenesulfinyl)phenyl]-1-isopropylpropyl}-*p*-toluenesulfonamide (5h). Chromatography: *n*-hexane-EtOAc 3:2; yield: 88%, white solid; mp: 130-132 °C (Et_2O); $[\alpha]_{\text{D}}^{20} = +47.4$ (c 0.5, CHCl_3); IR (KBr): 3344, 2965, 2929, 1595, 1492, 1469, 1086, 1062 cm^{-1} ; ^1H NMR: δ 7.86 (dd, $J = 7.6, 1.4$ Hz, 1H), 7.56–7.39 (m, 3H), 7.16 (d, $J = 8.2$ Hz, 2H), 6.91 (d, $J = 7.9$ Hz, 2H), 6.82 (d, $J = 7.9$ Hz, 2H), 6.39 (d, $J = 8.2$ Hz, 2H), 3.52 (d, $J = 9.8$ Hz, 1 H), 3.36 (td, $J = 10.7, 1.9$ Hz, 1H), 3.28 (dc, $J = 10.7, 6.6$ Hz, 1H), 2.28 (s, 3H), 2.16 (s, 3H), 2.05 (m, 1H), 1.10 (d, $J = 6.9$ Hz, 3H), 0.95 (d, $J = 6.6$ Hz, 3H), 0.71 (d, $J = 6.9$ Hz, 3H); ^{13}C NMR: δ 146.0, 142.9, 141.9, 141.3, 140.8, 140.3, 132.1, 129.4, 128.8, 127.7, 126.9, 126.7, 125.5,

124.8, 68.6, 37.2, 28.3, 21.1, 21.1, 21.0, 19.7, 14.6; MS (EI) m/z 512 (M^+); Anal. Calcd for $C_{26}H_{31}NO_2S_2$: C, 68.84; H, 6.89; N, 3.09; S, 14.14. Found: C, 68.85; H, 6.89; N, 2.96, S, 14.38.

[1*S*,2*S*,(*S*)*S*]-*N*-{1-[1-(*S*)-2-(Toluenesulfinyl)phenyl]ethyl}-2,2-dimethylpropyl}-*p*-toluenesulfonamide (5i). Chromatography: *n*-hexane-EtOAc 3:2; yield: 89%; white solid; mp: 120-122 °C (Et₂O);. $[\alpha]_D^{20} = +66.60$ (*c* 0.50, CHCl₃); IR (KBr): 3221, 3053, 2959, 2870, 1590, 1491, 1089, 1014 cm⁻¹; ¹H NMR: δ 7.55 (d, *J* = 8.0 Hz, 1H), 7.48–7.42 (m, 2H), 7.38–7.28 (m, 1H), 7.20 (d, *J* = 8.2 Hz, 2H), 6.99 (d, *J* = 8.4 Hz, 4H), 6.70 (d, *J* = 8.2 Hz, 2H), 4.03 (d, *J* = 9.0 Hz, 1H), 3.63 (cd, *J* = 9.0, 6.9 Hz, 1 H), 3.30 (t, *J* = 9.0 Hz, 1H), 2.29 (s, 3H), 2.24 (s, 3H), 1.06 (d, *J* = 6.9 Hz, 3H), 0.97 (s, 9H).; ¹³C NMR: δ 147.9, 143.3, 141.2, 140.9, 140.6, 140.5, 132.1, 129.5, 129.1, 128.6, 128.0, 126.6, 125.1, 124.2, 70.9, 37.4, 35.3, 28.6, 22.6, 21.2, 21.1; MS (EI) m/z 467 (M^+); Anal. Calcd for $C_{27}H_{33}NO_2S_2$: C, 69.34; H, 7.11; N, 2.99, S, 13.71. Found: C, 68.92; H, 7.09; N, 2.87, S, 14.03.

Representative procedure for *N*-*S* desulfinylation

To a stirred solution of **3** or **5** (0.2 mmol) in methanol (3 mL) was added TFA (0.6 mmol, 50 μ L). After the mixture was stirred for 3 h at 0 °C, the solvent was evaporated, and the residue was chromatography by SCX column, affording the corresponding amine.

(1*S*)-1-Phenyl-2-[(*S*)-2-(*p*-toluenesulfinyl)phenyl]ethylamine (6a). This product was obtained from **3a**. Yield: quantitative; yellow oil; $[\alpha]_D^{20} = -103.7$ (*c* 1.1, CHCl₃); IR (NaCl): 3583, 3361, 3057, 1686, 1595, 1493, 1200 cm⁻¹; ¹H NMR: δ 7.79 (d, *J* = 7.8

Hz, 1H), 7.5-7.1 (m, 12H), 4.2 (m, 1H), 3.79 (bs, 2H), 3.10 (dd, $J = 13.9, 6.1$ Hz, 1H), 3.01 (dd, $J = 13.9, 8.2$ Hz, 1H), 2.27 (s, 3H); ^{13}C NMR: δ 143.1, 142.7, 141.5, 141.0, 136.6, 131.2, 131.1, 129.8 (2C), 128.4, 127.8, 127.5, 126.2, 125.6, 125.5, 56.5, 40.7, 21.1; MS (*FAB* +) m/z 336 (M^+H); HRMS [M^+H]: Calcd. for $\text{C}_{21}\text{H}_{22}\text{N}_1\text{O}_1\text{S}_1$ 336.1422; found: 336.1419.

(1R)-1-[(S)-2-(*p*-Toluenesulfinyl)benzyl]pentylamine (6f). This product was obtained from **3f**. Yield: 90%; yellow oil; $[\alpha]_{\text{D}}^{20} = -61.1$ (c 1.5, MeOH); IR (NaCl): 3500, 3053, 2873, 1674, 1596, 1493, 1202, 11235, 1026 cm^{-1} ; ^1H NMR (200 MHz): δ 7.76 (dd, $J = 7.1, 0.5$ Hz, 1H), 7.5-7.2 (m, 7H), 3.4 (m, 1H), 3.0 (m, 2H), 2.3 (s, 3H), 1.6-1.3 (m, 6H), 0.84 (t, $J = 6.32$ Hz, 3H); ^{13}C NMR (200 MHz): δ 142.4, 141.7, 139.9, 135.5, 132.2, 131.9, 130.0, 128.2, 126.9, 125.2, 52.7, 34.6, 32.2, 27.0, 22.1, 21.1, 13.5; MS (*FAB* +) m/z 316 (M^+H); HRMS [M^+H]: Calcd. for $\text{C}_{19}\text{H}_{26}\text{N}_1\text{O}_1\text{S}_1$ 316.1735; found: 316.1737.

(1S,2S)-1-Phenyl-2-[(S)-2-(*p*-toluenesulfinyl)phenyl]propylamine (7a). This product was obtained from **5a**. Yield: 95%; yellow oil; $[\alpha]_{\text{D}}^{20} = -122.5$ (c 0.7, CHCl_3); IR (NaCl): 3371, 3059, 2928, 1678, 1595, 1493, 1027 cm^{-1} ; ^1H NMR: δ 7.74 (d, $J = 7.7$ Hz, 1H), 7.5-7.1 (m, 12H), 3.85 (d, $J = 9.8$ Hz, 1H), 3.60 (m, 1H), 2.23 (s, 3H), 0.68 (d, $J = 6.8$ Hz, 3H); ^{13}C NMR: δ 144.2, 142.9, 142.6, 141.2, 140.7, 132.1, 129.4, 128.2, 127.3, 127.3, 127.2, 127.1, 126.8, 124.9, 61.3, 40.9, 20.8, 19.0; MS (*FAB* +) m/z 336 (M^+H); HRMS [M^+H]: Calcd. for $\text{C}_{22}\text{H}_{24}\text{N}_1\text{O}_1\text{S}_1$ 350.1578; found: 336.1570.

(1R)-1-[(S)-1-[(S)-2-(*p*-toluenesulfinyl)phenyl]ethyl]pentylamine (7f). This product was obtained from **5f**. Yield: 91%; yellow oil; $[\alpha]_{\text{D}}^{20} = -34.0$ (c 1.2, HCCl_3); IR (NaCl): 3371, 3053, 2957, 1688, 1595, 1493, 1201, 1013 cm^{-1} ; ^1H NMR (200 MHz): δ 7.7 (d, $J = 7.5$ Hz, 1H), 7.58-7.30 (m, 5H), 7.20 (d, $J = 7.9$ Hz, 2H), 3.74 (bs, 2H), 3.29 (pent, $J = 6.72$ Hz, 1H), 2.92 (m, 1H), 2.31 (s, 3H), 1.6-1.2 (m, 6H), 0.96 (d, $J = 6.9$ Hz, 3H),

0.85 (m, 3H); ^{13}C NMR (200 MHz): δ 145.0, 144.2, 142.2, 141.2, 132.4, 129.7, 128.2, 127.6, 127.4, 125.3, 55.9, 38.2, 32.4, 26.6, 22.5, 21.1, 18.3, 13.8; MS (FAB +) m/z 330 (M^+H);

Representative procedure for C-S desulfinylation

A solution of compound **6** or **7** (0.18 mmol) in THF (2 mL) was added to a suspension of activated Raney nickel (1.2 g) in THF (3 mL). The reaction was stirred 2 hours, filtered, and the residue was purified by SCX column to afford the amine.

(1S)-1,2-Diphenylethylamine⁶ (8a). This product was obtained from **6a**. Yield: 73% pale solid; $[\alpha]_{\text{D}}^{20} = +120.0$ (c 0.4, MeOH/0.1N HCl: 50/50) {Lit. *ent*-**8a**,⁶ $[\alpha]_{\text{D}}^{20} = -118.0$ (c 1.0, MeOH/0.1N HCl: 50/50)}; ^1H NMR: δ 7.40-7.20 (m, 10H), 5.00 (bs, 2H), 4.30 (dd, $J = 9.6, 5.2$ Hz, 1H), 3.30 (dd, $J = 13.5, 5.2$ Hz, 1H), 3.12 (dd, $J = 13.5, 9.6$ Hz, 1H).

(1S)-1-Benzylpentylamine (8f). This product was obtained from **6f**. Yield: 78% yellow solid; $[\alpha]_{\text{D}}^{20} = -4.5$ (c 0.7, MeOH); ^1H NMR (CD_3OD): δ 7.48-7.25 (m, 5H), 3.49 (pent, $J = 6.7$ Hz, 1H), 2.99 (d, $J = 6.9$ Hz, 2H), 1.70-1.60 (m, 2H), 1.55-1.33 (m, 4H), 0.97 (t, $J = 6.9$ Hz, 3H); ^{13}C NMR (CD_3OD): δ 137.3, 130.4, 129.9, 128.4, 54.3, 39.9, 33.0, 28.2, 23.4, 14.1.

(1S,2S)-1,2-Diphenylpropylamine⁷ (9a). This product was obtained from **7a**. Yield: 72% yellow solid; $[\alpha]_{\text{D}}^{20} = -50.2$ (c 0.2, HCCl_3) {Lit. *ent*-**9a**,⁷ $[\alpha]_{\text{D}}^{20} = +48.0$ (c 0.2, HCCl_3)}; ^1H NMR (CD_3OD): δ 7.40-7.05 (m, 10H), 4.24 (d, $J = 10.5$ Hz, 1H), 3.13 (m, 2H), 0.87 (d, $J = 7.0$ Hz, 3H); ^{13}C NMR (CD_3OD): δ 142.9, 138.2, 130.4, 130.3 (2C), 128.9 (2C), 128.8, 62.4, 46.0, 19.9;

⁶ Moreau, P.; Essiz, M.; Merour, J. Y.; Bouzard, D. *Tetrahedron Asymmetry*, **1997**, 8, 591.

(1R)-1-[(S)-1-(Phenyl)ethyl]pentylamine (9f). This product was obtained from **7f**. Yield: 74 % yellow gum; $[\alpha]_D^{20} = -2.7$ (c 0.4, MeOH); IR (NaCl): 3400, 3028, 2958, 1675, 1601, 1518, 1453 cm^{-1} ; ^1H NMR (CD_3OD): δ 7.44-7.20 (m, 5H), 3.40 (m, 1H), 3.10 (pent, $J = 7.3$ Hz, 1H), 1.90-1.55 (m, 2H), 1.37 (d, $J = 7.1$ Hz, 3H), 1.50-1.10 (m, 4H), 0.96 (t, $J = 6.8$ Hz, 3H); ^{13}C NMR: δ 142.5, 130.1, 129.0, 128.9, 128.6, 58.1, 42.9, 30.4, 28.0, 23.5, 17.1, 14.1.

MTPA amides⁸ of 8f and 9f

A solution of compound **8f** or **9f** (0.05 mmol) in CH_2Cl_2 (1 mL) was added 0.1 mmol of Et_3N (14 μL) and 0.1 mmol of (*S*)-MTPA-Cl or (*R*)-MTPA-Cl under argon atmosphere. When the reaction was completed, the mixture was hydrolysed (HCl 5%, 1 mL), extracted (3x1 mL, CH_2Cl_2), washed (2x2 mL NaHCO_3 sat), dried (Na_2SO_4) and the solvent evaporated. The residue was purified by flash-column chromatography (AcOEt: Hex 1:10).

(1S)-1-Benzylpentylamine N-(R)-MTPA Amide (10f). This product was obtained from **8f**. Yield: 75 % yellow oil; ^1H -RMN (200 Mhz): δ 7.48-7.05 (m, 10H), 6.42 (d, $J = 10.1$ Hz, 1H), 4.24 (m, 1H), 3.5 (s, 3H), 2.82 (t, $J = 6.6$ Hz, 2H), 1.5-1.2 (m, 6H), 0.96 (m, 3H);

(1S)-1-Benzylpentylamine N-(S)-MTPA Amide (10f'). This product was obtained from **8f**. Yield: 70 % yellow oil; ^1H -RMN (200 Mhz): δ 7.40-7.05 (m, 10H), 6.60 (d, $J = 10.0$ Hz, 1H), 4.26 (m, 1H), 3.28 (s, 3H), 2.86 (dd, $J = 14.0, 8.8$ Hz, 1H), 2.75 (dd, $J = 14.0, 7.8$ Hz, 1H), 2.82 (t, $J = 6.6$ Hz, 1H), 1.8-1.4 (m, 6H), 0.96 (m, 3H);

⁷ Berova, N. D.; Kurtev, B.J. *Tetrahedron*, **1969**, 25, 2301.

⁸ Kusumi, T.; Fukushima, T.; Ohtani, I.; Kakisawa, H. *Tetrahedron Lett.* **1991**, 32, 2939.

(1*R*)-1-[(*S*)-1-(Phenyl)ethyl]pentylamine *N*-(*R*)-MTPA Amide (11f). This product was obtained from **9f**. Yield: 72 % yellow oil; H-RMN (200 Mhz): δ 7.48- 7.2 (m, 10 H), 6.35 (d, J = 9.6 Hz, 1H), 4.19 (m, 1H), 3.15 (s, 3H), 2.93 (quintuplet, J = 6.6 Hz, 1H), 1.30 (d, J = 7.1 Hz, 3H), 1.26-1.05 (m, 6H), 0.96 (t, J = 7.1 Hz, 3H);

(1*R*)-1-[(*S*)-1-(Phenyl)ethyl]pentylamine *N*-(*S*)-MTPA Amide (11f'). This product was obtained from **9f**. Yield: 69 % yellow oil; H-RMN : δ 7.69 (d, J = 8.2, 1H), 7.4-7.2 (m, 7 H), 7.05 (d, J = 4.3, 2H), 6.42 (d, J = 10.0 Hz, 1H), 4.17 (m, 1H), 3.23 (s, 3H), 2.89 (quintuplet, J = 7.0 Hz, 1H), 1.22 (d, J = 7.2 Hz, 3H), 1.40-1.20 (m, 6H), 0.96 (m, 3H);