SUPPORTING INFORMATION

^{1}H- and ^{13}C-NMR data for **5-7**

^{1}H-NMR ($CDCl_3$, 25°C, 400.1 MHz); ^{13}C-NMR ($CDCl_3$, 25°, 100.6 MHz).

5: ^{1}H-NMR, δ = 7.07 (td, $H_{2'}$, $H_{7'}$), 7.12 (td, H_2, H_7), 7.27 (td, $H_{3'}$, $H_{6'}$), 7.36 (td, H_3, H_6), 7.37 (ddd, H_4, H_5), 7.72 (ddd, $H_{4'}$, $H_{5'}$), 7.89 (ddd, $H_{1'}$, $H_{8'}$), 8.13 (ddd, H_1, H_8) ppm. ^{13}C-NMR, δ = 117.63 (C_4, C_5), 119.43 ($C_{4'}$, $C_{5'}$), 122.79 (C_2, C_7), 124.27 ($C_{1'}$, $C_{8'}$), 124.80 (C_{8a}, C_{9a}), 125.85 ($C_{2'}$, $C_{7'}$), 127.44 ($C_{3'}$, $C_{6'}$), 129.93 (C_3, C_6), 130.86 (C_9), 130.99 ($C_{9'}$), 139.34 ($C_{8a'}$, $C_{9a'}$), 140.28 ($C_{4a'}$, $C_{4b'}$), 154.02 (C_{4a}, C_{10a}) ppm.

6: ^{1}H NMR, δ = 1.23 (d, *J* = 6.9 Hz, 6H), 2.90 (heptet, *J* = 6.9 Hz, 1H), 7.04-7.11 (2×td, $H_{2'}$, $H_{7'}$), 7.12 (td, *J* = 8.0 Hz, *J* = 6.7 Hz, H_7), 7.25-7.32 (m, $H_{3'}$, $H_{6'}$, H_3, H_4), 7.36-7.40 (m, H_5, H_6), 7.74 (ddd, *J* = 7.6 Hz, $H_{4'}$, $H_{5'}$), 7.91 (dd, *J* = 8.0 Hz, $H_{1'}$, $H_{8'}$), 8.01 (d, *J* = 2.1 Hz, H_1), 8.14, (ddd, *J* = 8.1 Hz, H_8) ppm. ^{13}C-NMR, δ = 24.08, 33.76, 117.25 (C_4 or C_5), 117.61 (C_5 or C_4), 119.35 ($C_{5'}$ or $C_{4'}$), 119.40 ($C_{4'}$ or $C_{5'}$), 122.58 (C_7), 124.29 ($C_{1'}$ or $C_{8'}$), 124.38, 124.55 ($C_{8'}$or $C_{1'}$), 124.81, 125.62 ($C_{3'}$ or $C_{6'}$), 125.77 ($C_{6'}$ or $C_{3'}$), 127.32 ($C_{7'}$), 127.37 ($C_{2'}$), 127.64 (C_1), 128.54 (C_3), 129.78 (C_6), 129.97 (C_8), 130.43, 131.27, 139.27, 140.18, 140.21, 143.15, 152.21, 154.20 ppm.

7: ^{1}H-NMR, δ = 7.10 (td, *J* = 8.1 Hz, *J* = 7.3 Hz, $H_{3'}$), 7.13-7.17 (m, H_2, H_7), 7.33 (td, *J* = 8.6 Hz, *J* = 7.6 Hz, $H_{2'}$), 7.36-7.45 (m, $H_{7'}$, $H_{8'}$, H_3, H_6, H_4, H_5), 7.62 (ddd, *J* = 7.5 Hz, $H_{6'}$), 7.85-7.91 (m, $H_{1'}$, $H_{4'}$, $H_{9'}$), 8.07 (ddd, *J* = 7.5 Hz, H_1), 8.10 (s, $H_{5'}$), 8.23 (ddd, *J* = 7.5 Hz, H_8), 8.40 (s, $H_{10'}$) ppm. ^{13}C-NMR, δ = 117.09 ($C_{5'}$), 117.64, 117.88, 120.24, 122.61 (C_2 or C_7), 122.70 (C_7 or C_2), 123.48 ($C_{10'}$), 124.62, 125.35, 125.37, 125.37, 125.41, 126.15, 126.49 ($C_{3'}$), 127.93, 127.98, 128.87, 128.87, 128.99 ($C_{6'}$), 129.12 (C_8), 129.26 (C_1), 129.58, 129.70, 130.59, 132.43, 133.21, 137.67, 138.53, 140.25, 140.75, 154.59 (C_{4a}, C_{10a}) ppm.

^{13}C-DNMR results for **6**.

	δ at 295 K ppm	T_c K	$\Delta\nu_c$ Hz	$\Delta G_c^{\ddagger}$ kJ/mol
Inversion process (in $CDFCl_2$)				
CH_3	24.08	134±2	57	26.5±0.5
E, *Z*-Topomerization process (in $CDCl_3$)				
	140.21, 140.19	344	1.3	81.6
	139.37, 139.32	357	3.7	81.8
$C_{2'}$, $C_{7'}$	127.37, 127.33	357.3	3.4	82.1
$C_{4'}$, $C_{5'}$	119.40, 119.35	357.3	3.6	81.8
E, *Z*-Topomerization process (in toluene-d_8)				
	141.14, 141.09	363.5	5.1	82.3
	140.15, 140.12	356	2.9	82.2
$C_{2'}$, $C_{7'}$	126.12, 125.87	381	23	81.6
$C_{4'}$, $C_{5'}$	119.83, 119.80	357	2.6	82.8