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**General Remarks:** Melting Points were recorded on a Electrothermal IA9100 capillary melting point apparatus. Infrared spectra were recorded on a Thermo Electron Corporation IR300 spectrophotometer. Solid samples were recorded as KBr Merck® wafers. The intensity of the bands is denoted as follows: w, weak; s, strong; m, medium. Proton magnetic resonance spectra and carbon-13 magnetic resonance spectra were recorded on a Bruker Advanced spectrometer. \(^1\)H NMR (500 MHz) spectra for all the samples were measured in chloroform-d, with TMS (δ = 0 ppm) as an internal standard. \(^{13}\)C NMR (125 MHz) spectra for all the samples were measured in chloroform-d with middle peak of the triplet (δ = 77.10 ppm) of chloroform-d as an internal standard.

**General procedure for cycloadditions between **\(N\)-phenyl- or \(N\)-ethylmaleimides 5a-b and furans 6a-c

A) In a 10 mL round bottom flask was prepared a solution of maleimide (c.a. 0.5 g) in the minimum quantity of furans 6a-c (0.5-1.7 mL); water (3 mL) was added, and the resulting mixture was subjected to magnetic vigorous stirring at 25 ºC. After time specified in Table 1, \(^1\)H NMR spectra and TLC (ethyl acetate-hexane, 1:1) revealed absence of starting materials and appearance of the respective cycloadducts. The products immediately precipitated,\(^1\) either into the reaction media or after overnight at refrigerator, and then they were filtered and washed on the filter with cold water. Yields were quantitative and, in all cases, analytical samples on each one of the adducts could be isolated by preparative thin layer chromatography.\(^2\)

B) Following the same procedure above described, reactions were completed after stirring at 65 ºC for times specified in Table 1. Then, the adducts, which had precipitated in the reaction mixture were filtered and collected as indicated above.

**General procedure for cycloadditions between **\(N\)-tert-butylmaleimide 5c and furans 6a-c

In a 10 mL round bottom flask was prepared a solution of \(N\)-tert-butylmaleimide 5c (0.2 mL, 1.38 mmol) and an equimolar quantity of the furans 6a-c (0.10-0.15 mL); then, water was added (3 mL), and the resulting suspension was subjected to magnetic vigorous stirring at 25 ºC. After time specified in Table 1, \(^1\)H NMR spectra and TLC (ethyl acetate-hexane, 1:2) showed stabilization of the reaction mixture, still containing some unreacted starting material. Except for the reaction between 5c and 6a,\(^3\) the products precipitated and were collected by filtration and washed on the filter with cold water.

**1-[(\(E\))-2,2-Dimethylhydrazono]-7-oxabicyclo[2.2.1]hept-5-ene-2,3-exo-dicarboxy-\(N\)-phenylimide 16a and 4-[(\(E\))-2,2-dimethylhydrazono]-2-phenylisoindoline-1,3-dione 17a

Following the two methods A) and B) as described above, cycloaddition of \(N\)-phenylmaleimide 5a and furfural \(N,N\)-dimethylhydrazone 9 led quantitatively to
phenylimide \(16a\) as a yellow solid that was filtered and washed on the filter with cold water.

By refluxing a suspension of \(16a\) (0.85 g) in water (25 mL) for 50 minutes, this compound was converted quantitatively into phenylisoindoline \(17a\), and isolated by filtration as an yellow-orange solid which was recrystallized from ethanol.

4-\([(E)-2,2\text{-Dimethylhydrazono}]-2\text{-ethylisoindoline-1,3-dione} \ 19b\)

Following the two methods A) and B) as described above, treatment of \(N\text{-ethylmaleimide} \ 5b\) (0.4 g, 3.20 mmol) and furfural \(N,N\text{-dimethylhydrazone} \ 9\) (0.5 mL, 3.77 mmol) led quantitatively to ethylisoindoline \(19b\) as a solid that was filtered and washed on the filter with cold water.

1-\([(E)-2,2\text{-Dimethylhydrazono}]-7\text{-oxabicyclo[2.2.1]hept-5-ene-2,3-exo-dicarboxy-N-tert-butylimide} \ 20c\) and 4-\([(E)-2,2\text{-dimethylhydrazono}]-2\text{-tert-butylisoindoline-1,3-dione} \ 21c\)

Following the general procedure above described for the reactions of furans with \(N\text{-tert-butylmaleimide} \ 5c\), treatment of the latter compound (0.2 mL, 1.38 mmol) with furfural \(N,N\text{-dimethylhydrazone} \ 9\) (0.185 mL, 1.39 mmol) led to an equilibrium mixture (see Table 1) from which 37% yield of the title compounds were isolated by filtration and washed on the filter with cold water.
**IR:** $\nu_{\text{max.}}$ (KBr) 3094 w (=C-H), 3021 w (-CH), 1776 m, 1713 s (C=O, cyclic imide 5 membered), 1596 m, 1508 s (C=C$_{\text{arom.}}$), 1380 s (N-$\text{C}_{\text{arom.}}$), 1158 m, 1088 m (C=O-C) cm$^{-1}$.

**$^{1}$H-RMN** (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.44 (t, 2H, H$_{\text{meta}}$), 7.38 (t, 1H, H$_{\text{para}}$), 7.11 (d, 2H, H$_{\text{orto}}$), 6.57 (bs, 2H, H$_{5}$ and H$_{6}$), 5.44 (d, 2H, $J_{1,6}=2.8$ Hz; $J_{4,5}=1.9$ Hz, H$_{1}$ and H$_{4}$), 3.69 (dd, 2H, $J_{2,1}=1.7$ Hz; $J_{3,4}=3.5$ Hz, H$_{2}$ and H$_{3}$).

**$^{13}$C-RMN** (CDCl$_3$, 125 MHz): $\delta$ (ppm) 173.6 (2 C=O), 134.3 (C$_{5}$ and C$_{6}$), 131.0 (C$_{N}$(-Ph)), 128.9 (2 C$_{\text{meta}}$), 128.5 (C$_{\text{para}}$), 126.0 (2 C$_{\text{orto}}$), 79.4 (C$_{1}$ y C$_{4}$), 45.6 (C$_{2}$ and C$_{3}$).

**IR:** $\nu_{\text{max.}}$ (KBr) 3096 w, 3068 w (=C-H), 3023 w, 2999 w (-CH), 1776 m, 1711 s (C=O, cyclic imide 5 membered), 1593 m, 1496 s (C=C$_{\text{arom.}}$), 1380 s (N-$\text{C}_{\text{arom.}}$), 1145 m, 1088 m (C=O-C) cm$^{-1}$.

**$^{1}$H-RMN** (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.47 (t, 2H, H$_{\text{meta}}$), 7.40 (t, 1H, H$_{\text{para}}$), 7.27 (d, 2H, H$_{\text{orto}}$), 6.57 (bs, 2H, H$_{5}$ and H$_{6}$), 5.40 (bs, 2H, H$_{1}$ and H$_{4}$), 3.02 (s, 2H, H$_{2}$ and H$_{3}$).

**$^{13}$C-RMN** (CDCl$_3$, 125 MHz): $\delta$ (ppm) 175.4 (2 C=O), 136.7 (C$_{5}$ and C$_{6}$), 131.7 (C$_{N}$(-Ph)), 129.1 (2 C$_{\text{meta}}$), 128.8 (C$_{\text{para}}$), 126.6 (2 C$_{\text{orto}}$), 81.4 (C$_{1}$ y C$_{4}$), 47.5 (C$_{2}$ and C$_{3}$).
**IR:** $\nu_{\text{max.}}$ (KBr) 3097 w, 3077 w (=C-H), 2983 w (-CH$_3$), 1776 m, 1714 s (C=O, cyclic imide 5 membered), 1598 m, 1501 s (C=C$_{arom.}$), 1388 s (N-C$_{arom.}$), 1144 m, 1070 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.43 (t, 2H, H$_{\text{meta}}$), 7.37 (t, 1H, H$_{\text{para}}$), 7.11 (t, 2H, H$_{\text{ortho}}$), 6.54 (dd, 1H, $J_{5,6,7} = 5.7$ Hz, $J_{5,7} = 1.3$ Hz, H5), 6.57 (d, 1H, $J_{6,7} = 5.7$ Hz, H6), 5.32 (dd, 1H, $J_{4,5,6} = 5.6$ Hz, $J_{4,6} = 1.7$ Hz, H4), 3.76 (dd, 1H, $J_{3,4,5} = 5.6$ Hz, $J_{3,5} = 7.7$ Hz, H3), 1.87 (s, 3H, Me-1).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 174.0 (2 C=O), 137.7 (C5), 135.1 (C-N (-Ph)), 131.4 (C-6), 129.1, 128.7, 126.3 (C-Ph), 88.9 (C1), 79.4 (C4), 50.8 (C3), 48.5 (C2), 18.4 (Me-1).

**IR:** $\nu_{\text{max.}}$ (KBr) 3080 w (=C-H), 2999 m (-CH$_3$), 1773 m, 1708 s (C=O, cyclic imide 5 membered), 1593 w, 1494 m (C=C$_{arom.}$), 1393 s (N-C$_{arom.}$), 1161 m, 1074 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.46 (t, 2H, H$_{\text{meta}}$), 7.39 (t, 1H, H$_{\text{para}}$), 7.26 (t, 2H, H$_{\text{ortho}}$), 6.55 (dd, 1H, $J_{5,6,7} = 5.6$ Hz, $J_{5,7} = 1.5$ Hz, H5), 6.36 (d, 1H, $J_{6,7} = 5.6$ Hz, H6), 5.30 (d, 1H, $J_{4,5,6} = 1.7$ Hz, H4), 3.12 (d, 1H, $J_{3,4,5} = 6.5$ Hz, H3), 2.86 (d, 1H, $J_{2,3,4} = 6.5$ Hz, H2), 1.79 (s, 3H, Me-1).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 175.3 y 174.0 (C=O), 140.7 (C5), 137.0 (C-N (-Ph)), 131.7 (C6), 129.0, 128.7, 128.6, 126.5, (C-Ph), 88.5 (C1), 81.1 (C4), 50.6 (C3), 49.4 (C2), 15.7 (Me-1).
**IR:** $\nu_{\text{max}}$ (KBr) 3093 w, 3068 w (=C-H), 2983 m, 2864 w (-CH$_3$), 1769 m, 1704 s (C=O, cyclic imide 5 membered), 1593 m, 1497 m (C=C$_{\text{arom.}}$), 1384 s (N-C$_{\text{arom.}}$), 1183 m, 1078 m (C-O-C) cm$^{-1}$.

**$^1$H-RMN** (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.43 (t, 2H, H$_{\text{meta}}$), 7.36 (t, 1H, H$_{\text{para}}$), 7.12 (d, 2H, H$_{\text{ortho}}$), 6.35 (bs, 2H, H$_5$ and H$_6$), 3.37 (bs, 2H, H$_2$ and H$_3$), 1.83 (s, 6H, Me-1 and Me-4).

**$^{13}$C-RMN** (CDCl$_3$, 125 MHz): $\delta$ (ppm) 174.2 (2 C=O), 138.3 (C$_5$ and C$_6$), 131.6 (C-N (-Ph)), 129.1 (2 C$_{\text{meta}}$), 128.7 (C$_{\text{para}}$), 126.3 (2 C$_{\text{ortho}}$), 88.4 (C$_1$ and C$_4$), 53.4 (C$_2$ and C$_3$), 18.7 (Me-1 and Me-4).

**IR:** $\nu_{\text{max}}$ (KBr) 3089 w, 3068 w (=C-H), 2987 m (-CH$_3$), 1771 m, 1705 s (C=O, cyclic imide 5 membered), 1596 m, 1503 m (C=C$_{\text{arom.}}$), 1384 s (N-C$_{\text{arom.}}$), 1185 m, 1077 m (C-O-C) cm$^{-1}$.

**$^1$H-RMN** (CDCl$_3$, 500 MHz): $\delta$ (ppm) 7.45 (t, 2H, H$_{\text{meta}}$), 7.37 (t, 1H, H$_{\text{para}}$), 7.25 (t, 2H, H$_{\text{ortho}}$), 6.34 (bs, 2H, H$_5$ and H$_6$), 2.97 (bs, 2H, H$_2$ and H$_3$), 1.75 (s, 6H, Me-1 and Me-4).

**$^{13}$C-RMN** (CDCl$_3$, 125 MHz): $\delta$ (ppm) 173.9 (2 C=O), 141.1 (C$_5$ and C$_6$), 131.8 (C-N (-Ph)), 129.1 (2 C$_{\text{meta}}$), 128.5 (C$_{\text{para}}$), 126.6 (2 C$_{\text{ortho}}$), 88.1 (C$_1$ and C$_4$), 52.6 (C$_2$ and C$_3$), 16.0 (Me-1 and Me-4).
IR: $\nu_{\text{max}}$ (KBr) 3093 w, 3081 w (\(-\text{C-H}\)), 3026 w (\(-\text{CH}\)), 2978 m, 2938 w (\(-\text{CH}_3\)), 2884 w (\(-\text{CH}_2\)-), 1769 m, 1705 s (\(\text{C=O}\), cyclic imide 5 membered), 1347 s (\(\text{C-N}\)), 1192 m, 1090 m (\(\text{C-O-C}\) cm\(^{-1}\)).

\(^1\)H-RMN (CDCl\(_3\), 500 MHz): \(\delta\) (ppm) 6.37 (bs, 2H, H5 and H6), 5.30 (dd, 2H, \(J_{1,2}\approx J_{4,3}\approx 1.7\) Hz; H1 and H4), 3.47 (dd, 2H, \(J_{3,4}\approx 1.7\) Hz, \(J_{3,2}\approx 3.6\) Hz, H2 and H3), 3.35 (c, 2H, \(-\text{CH}_2\)-), 1.01 (t, 3H, Me).

\(^1\)H-RMN (CDCl\(_3\), 500 MHz): \(\delta\) (ppm) 6.52 (bs, 2H, H5 and H6), 5.26 (s, 2H, H1 and H4), 3.53 (c, 2H, \(-\text{CH}_2\)-), 2.83 (s, 2H, H2 and H3), 1.16 (t, 3H, Me).

\(^1\)H-RMN (CDCl\(_3\), 500 MHz): \(\delta\) (ppm) 6.37 (bs, 2H, H5 and H6), 5.30 (dd, 2H, \(J_{1,2}\approx J_{4,3}\approx 1.7\) Hz; H1 and H4), 3.47 (dd, 2H, \(J_{3,4}\approx 1.7\) Hz, \(J_{3,2}\approx 3.6\) Hz, H2 and H3), 3.35 (c, 2H, \(-\text{CH}_2\)-), 1.01 (t, 3H, Me).

\(^1\)C-RMN (CDCl\(_3\), 125 MHz): \(\delta\) (ppm) 174.7 (2-\(\text{C=O}\)), 134.3 (C5 and C6), 79.3 (C1 and C4), 45.8 (C2 and C3), 33.3 (\(-\text{CH}_2\)-), 12.6 (Me).

\(^1\)C-RMN (CDCl\(_3\), 125 MHz): \(\delta\) (ppm) 175.9 (2 \(\text{C=O}\)), 136.5 (C5 and C6), 80.8 (C1 and C4), 47.3 (C2 and C3), 33.8 (\(-\text{CH}_2\)-), 12.8 (Me).
IR: $\nu_{\text{max}}$ (KBr) 3083 w (=C-H), 2983 m, 2938 m (-CH$_3$), 2875 w (-CH$_2$-), 1761 s, 1693 s (C=O, cyclic imide 5 membered), 1360 s (C-N), 1194 m, 1069 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.38 (dd, 1H, $J_{5,6}$=5.6 Hz, $J_{5,4}$= 1.4 Hz, H5), 6.21 (d, 1H, $J_{6,5}$= 5.7 Hz, H6), $J_{3,4}$= 5.6 Hz, $J_{3,2}$= 7.5 Hz, H3), 3.37 (c, 2H, -CH$_2$-), 3.08 (d, 1H, $J_{2,3}$= 7.6 Hz, H2), 1.83 (s, 3H, Me-1), 1.03 (t, 3H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 174.9, 174.8 (2 C=O), 137.4 (C5), 134.7 (C6), 88.4 (C1), 79.0 (C4), 50.6 (C3), 48.5 (C2), 33.3 (-CH$_2$), 18.4 (Me-1), 12.6 (Me).

IR: $\nu_{\text{max}}$ (KBr) 3080 w (=C-H), 2983 m, 2942 w (-CH$_3$), 2872 d (-CH$_2$-), 1761 m, 1692 s (C=O cyclic imide 5 membered), 1361 m (C-N), 1197 m, 1069 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.50 (dd, 1H, $J_{5,6}$=5.6 Hz, $J_{5,4}$= 1.7 Hz, H5), 6.31 (d, 1H, $J_{6,5}$= 5.6 Hz, H6), 5.18 (d, 1H, $J_{4,5}$= 1.7 Hz, H4), 3.53 (c, 2H, -CH$_2$-), 2.94 (d, 1H, $J_{3,2}$= 6.4 Hz, H3), 2.69 (d, 1H, $J_{2,3}$= 6.4 Hz, H2), 1.73 (s, 3H, Me-1), 1.15 (t, 3H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 176.0, 174.8 (2 C=O), 140.6 (C5), 136.9 (C6), 88.1 (C1), 80.6 (C4), 50.6 (C3), 49.3 (C2), 33.8 (-CH$_2$-), 15.6 (Me-1), 12.9 (Me).
IR: $\nu_{\text{max}}$ (KBr) 2990 m (-CH$_3$), 2942 m (-CH$_2$), 1761 m, 1692 s (C=O, cyclic imide 5 membered), 1402 m (C=C), 1339 m (C-N), 1143 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.20 (s, 2H, H5 and H6), 3.38 (c, 2H, -CH$_2$-), 3.20 (s, 2H, H2 and H3), 1.79 (s, 6H, Me-1 and Me-4), 1.03 (t, 3H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 175.0 (2 C=O), 137.9 (C5 and C6), 87.8 (C1 and C4), 53.3 (C2 and C3), 33.2 (-CH$_2$-), 18.6 (Me-1 and Me-4), 12.5 (Me).

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.30 (s, 2H, H5 and H6), 3.52 (c, 2H, -CH$_2$-), 2.80 (s, 2H, H2 and H3), 1.70 (s, 6H, Me-1 and Me-4), 1.15 (t, 3H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 174.6 (2 C=O), 140.9 (C5 and C6), 87.6 (C1 and C4), 52.4 (C2 and C3), 33.7 (Me-1 and Me-4), 15.9 (-CH$_2$-), 13.0 (Me).
IR: $v_{\text{max}}$ (KBr) 3075 w (=C-H), 2925 m (-CH$_3$), 1768 m, 1694 s (C=O, cyclic imide 5 membered), 1459 m (C=C), 1348 s (C-N), 1168 m, 1082 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.40 (bs, 2H, H5 and H6), 5.27 (m, 2H, $J_{1,2} \approx J_{4,3} \approx 1.7$ Hz; H1 and H4), 3.34 (dd, 2H, $J_{3,4} \approx 1.8$ Hz, $J_{3,2} \approx 3.6$ Hz, H2 and H3), 1.44 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 176.3 (2 C=O), 134.4 (C5 and C6), 79.8 (C1 and C4), 45.6 (C2 and C3), 28.1 (Me).

IR: $v_{\text{max}}$ (KBr) 3091 w (=C-H), 2975 w, 2935 w (-CH$_3$), 1764 m, 1700 s (C=O, cyclic imide 5 membered), 1461 m (C=C), 1338 s (C-N), 1170 m, 1094 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.48 (bs, 2H, H5 and H6), 5.22 (bs, 2H, H1 and H4), 2.66 (bs, 2H, H2 and H3), 1.55 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 177.4 (2 C=O), 136.5 (C5 and C6), 81.4 (C1 and C4), 47.0 (C2 and C3), 28.4 (Me).
IR: $v_{\text{max.}}$ (KBr) 3088 w (=C-H), 2999 m, 2936 w (-CH$_3$), 1763 m, 1697 s (C=O, cyclic imide 5 membered), 1456 m (C=C), 1346 s (C-N), 1177 m, 1079 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.47 (dd, 1H, $J_{5,6}$ $\approx$ 5.6 Hz, $J_{5,4}$ $\approx$ 1.7 Hz, H5), 6.29 (d, 1H, $J_{6,5}$ $\approx$ 5.6 Hz, H6), 5.14 (d, 1H, $J_{4,5}$ $\approx$ 1.7 Hz, H4), 2.79 (d, 1H, $J_{3,2}$ $\approx$ 6.6 Hz, H3), 2.51 (d, 1H, $J_{2,3}$ $\approx$ 6.6 Hz, H2), 1.70 (s, 3H, Me-1), 1.56 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 177.2, 176.1 (2 C=O), 140.5 (C5), 136.8 (C6), 88.2 (C1), 81.0 (C4), 50.0 (C3), 48.8 (C2), 28.3 (Me), 15.6 (Me-1).

IR: $v_{\text{max.}}$ (KBr) 3077 w (=C-H), 2982 m, 2937 m (-CH$_3$), 1769 m, 1693 s (C=O, cyclic imide 5 membered), 1450 m (C=C), 1331 s (C-N), 1158 m, 1089 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.22 (s, 2H, H5 and H6), 3.06 (s, 2H, H2 and H3), 1.77 (s, 6H, Me-1 and Me-4), 1.46 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 176.6 (2 C=O), 138.0 (C5 and C6), 88.1 (C1 and C4), 58.1 (N-C-tBu), 52.9 (C2 and C3), 28.1 (Me), 18.6 (Me-1 and Me-4).
**IR:** $\nu_{\text{max}}$ (KBr) 3077 w (=C-H), 2974 w, 2934 w (-CH$_3$), 1760 m, 1697 s (C=O, cyclic imide 5 membered), 1479 m (C=C), 1347 s (C-N), 1175 m, 1104 m (C-O-C) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 6.28 (s, 2H, H5 and H6), 2.62 (s, 2H, H2 and H3), 1.68 (s, 6H, Me-1 and Me-4), 1.56 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 175.8 (2 C=O), 140.8 (C5 and C6), 87.7 (C1 and C4), 58.3 (N-C-'Bu), 51.9 (C2 and C3), 28.3 (Me), 15.9 (Me-1 and Me-4).

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**IR:** $\nu_{\text{max}}$ (KBr) 3067 w, 3033 w (=C-H), 2885 w (-CH$_3$), 1767 m, 1715 s (C=O, cyclic imide 5 membered), 1595 m, 1500 s (C=C$_{\text{aromatic}}$), 1553 m (C=N), 1380 s (N-C$_{\text{aromatic}}$) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 8.30 (d, 1H, $J_{5,6} \approx 8.1$ Hz, H7), 8.15 (s, 1H, H4a), 7.72 (d, 1H, $J_{5,6} \approx 7.2$ Hz, H5), 7.63 (t, 1H, $J_{6,7} \approx 7.7$ Hz, $J_{6,5} \approx 7.6$ Hz, H6), 7.50 (t, 2H, H$_{\text{meta}}$), 7.43 (d, 2H, H$_{\text{ortho}}$), 7.39 (t, 1H, H$_{\text{para}}$), 3.13 (s, 6H, Me-N).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 168.3, 167.3 (C1 and C3), 136.9 (C4), 133.7 (C4a), 132.0 (C3a), 131.8 (C7a), 129.3 (C5), 129.0 (2 C$_{\text{meta}}$), 127.9 (C$_{\text{para}}$), 126.7 (2 C$_{\text{ortho}}$), 124.2 (C6), 124.0 (N-C$_{\text{aromatic}}$), 121.1 (C7), 42.5 (Me-N).
IR: $\nu_{\text{max}}$ (KBr) 3085 w (\(-\text{C-H}\)), 2950 w (-CH$_3$), 2875 w (- CH$_2$-), 2794 d (-CH), 1757 s, 1698 s (C=O, cyclic imide 5 membered), 1594 m, 1443 m (C=C$_{\text{aromatic}}$), 1547 m (C=N), 1468 m (-CH$_3$) cm$^{-1}$.

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 8.21 (d, 1H, $J_{7,6} \approx 8.1$ Hz, H7), 8.11 (s, 1H, H4a), 7.59 (d, 1H, $J_{5,6} \approx 7.2$ Hz, H5), 7.54 (t, 1H, $J_{6,7} \approx 7.8$ Hz, $J_{6,5} \approx 7.4$ Hz, H6), 3.71 (c, 2H, H2b), 3.11 (s, 6H, Me-N), 1.26 (t, 3H, H3b).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 169.3, 168.3 (C1 and C3), 136.2 (C4), 133.2 (C4a), 132.4 (C3a), 128.8 (C5), 124.8 (C7a), 124.5 (C6), 120.7 (C7), 42.5 (Me-N), 32.7 (C2b), 13.9 (C3b).

$^1$H-RMN (CDCl$_3$, 500 MHz): $\delta$ (ppm) 8.20 (dd, 1H, $J_{7,6} \approx 7.4$ Hz, H7), 8.13 (s, 1H, H4a), 7.54 (d, 1H, H5), 7.52 (t, 1H, H6), 3.11 (s, 6H, Me-N), 1.70 (s, 9H, Me).

$^{13}$C-RMN (CDCl$_3$, 125 MHz): $\delta$ (ppm) 170.8, 169.6 (C1 and C3), 135.6 (C4), 133.0 (C4a), 132.5 (C3a), 128.7 (C5), 124.9 (C6), 124.7 (C7a), 120.2 (C7), 57.6 (C-$^t$Bu), 42.6 (Me-N), 29.2 (Me-$^t$Bu).
After time specified, the reaction mixture from 5b and 6b was diluted with brine (5 mL), extracted with methylene chloride (3 x 5 mL), dried over magnesium sulfate, and evaporated to an oil that crystallized after 24 hours into the freezer. Then, the solid was collected by filtration and washed on the filter with cold water.

The exo-adduct 7b was the only product after refluxing for 45 minutes an aqueous suspension of a mixture of 7a and 7b.

In this case, work-up of the reaction mixture was the same as indicated in reference [1]. Adducts 13a and 13b were separated by preparative thin layer chromatography.