Electronic Supplementary Information

A regioselective and convergent paired electrochemical synthesis of

\[ N,N'-\text{diphenyl}-3-(\text{sulfonyl})-[1,1'-\text{biphenyl}]-4,4'-\text{diamines} \]

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Table of Contents:

1. \(^1\text{H} \ \text{NMR spectrum of 4a.} \) Page3
2. Expanded \(^1\text{H} \ \text{NMR spectrum of 4a.} \) Page4
3. \(^1\text{H} \ \text{NMR spectrum of 4a (with D}_2\text{O).} \) Page5
4. \(^{13}\text{C} \ \text{NMR spectrum of 4a.} \) Page6
5. Expanded \(^{13}\text{C} \ \text{NMR spectrum of 4a.} \) Page7
6. MS spectrum of 4a. Page8
7. FT-IR spectrum of 4a. Page9
8. \(^1\text{H} \ \text{NMR spectrum of 4b.} \) Page10
9. Expanded \(^1\text{H} \ \text{NMR spectrum of 4b.} \) Page11
10. \(^1\text{H} \ \text{NMR spectrum of 4b (with D}_2\text{O).} \) Page12
11. Expanded \(^1\text{H} \ \text{NMR spectrum of 4b (with D}_2\text{O).} \) Page13
12. \(^{13}\text{C} \ \text{NMR spectrum of 4b.} \) Page14
13. Expanded \(^{13}\text{C} \ \text{NMR spectrum of 4b.} \) Page 15
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>MS spectrum of $4b$.</td>
</tr>
<tr>
<td>15.</td>
<td>FT-IR spectrum of $4b$.</td>
</tr>
<tr>
<td>16.</td>
<td>$^{1}H$ NMR spectrum of $4c$.</td>
</tr>
<tr>
<td>17.</td>
<td>Expanded $^{1}H$ NMR spectrum of $4c$.</td>
</tr>
<tr>
<td>18.</td>
<td>$^{1}H$ NMR spectrum of $4c$ (with $D_{2}O$)</td>
</tr>
<tr>
<td>19.</td>
<td>$^{13}C$ NMR spectrum of $4c$.</td>
</tr>
<tr>
<td>20.</td>
<td>Expanded $^{13}C$ NMR spectrum of $4c$.</td>
</tr>
<tr>
<td>21.</td>
<td>MS spectrum of $4c$.</td>
</tr>
<tr>
<td>22.</td>
<td>FT-IR spectrum of $4c$.</td>
</tr>
<tr>
<td>23.</td>
<td>$^{1}H$ NMR spectrum of $4d$.</td>
</tr>
<tr>
<td>24.</td>
<td>Expanded $^{1}H$ NMR spectrum of $4d$.</td>
</tr>
<tr>
<td>25.</td>
<td>$^{1}H$ NMR spectrum of $4d$ (with $D_{2}O$)</td>
</tr>
<tr>
<td>26.</td>
<td>$^{13}C$ NMR spectrum of $4d$.</td>
</tr>
<tr>
<td>27.</td>
<td>Expanded $^{13}C$ NMR spectrum of $4d$.</td>
</tr>
<tr>
<td>28.</td>
<td>MS spectrum of $4d$.</td>
</tr>
<tr>
<td>29.</td>
<td>FT-IR spectrum of $4d$.</td>
</tr>
<tr>
<td>30.</td>
<td>Double-potential step chronoamperometric studies</td>
</tr>
</tbody>
</table>
H NMR spectrum of

![Chemical structure image]
Expanded $^1$H NMR spectrum of 4a
$^1$H NMR spectrum of 4a (with D$_2$O)
$^{13}$C NMR spectrum of 4a
Expanded $^{13}$C NMR spectrum of 4a
MS spectrum of 4a
FT-IR spectrum of 4a
$^1$H NMR spectrum of 4b
Expanded $^1$H NMR spectrum of 4b
$^1$H NMR spectrum of 4b (with D$_2$O)
Expanded $^1$H NMR spectrum of 4b (with D$_2$O)
$^{13}$C NMR spectrum of 4b
Expanded $^{13}$C NMR spectrum of 4b
MS spectrum of 4b

Scan 127 (1.255 min): 3802516647.D1data.mz
490.5

Scan 127 (1.255 min): 3802516647.D1data.mz
490.5

Scan 127 (1.255 min): 3802516647.D1data.mz
490.5
FT-IR spectrum of 4b
\textsuperscript{1}H NMR spectrum of 4c
Expanded $^1$H NMR spectrum of 4c
$^1$H NMR spectrum of 4c (with D$_2$O)
$^1^3$C NMR spectrum of 4c
Expanded $^{13}$C NMR spectrum of 4c
MS spectrum of 4c
FT-IR spectrum of 4c
$^1$H NMR spectrum of 4d
Expanded $^1$H NMR spectrum of 4d
$^1$H NMR spectrum of 4d (with D$_2$O)
$^{13}$C NMR spectrum of 4d
Expanded $^{13}$C NMR spectrum of 4d
MS spectrum of 4d
FT-IR spectrum of 4d
Double-potential step chronoamperometric studies

In order to obtain more information, the electrochemical oxidation of DPB in the presence of 1a in water (phosphate buffer 0.2 M, pH 2.0)/acetonitrile mixture (40/40 v/v), was also evaluated by double-potential step chronoamperometry (CA). Figure I shows the variation of current as a function of time when the potential is stepped from +0.77 V to 0.07 V. From comparison of curves a and b, it is observed that the forward current ($I_f$) of double-potential step chronoamperogram of DPB in the presence of 1a (curve b) is larger than $I_f$ of chronoamperogram of DPB in the absence of 1a (curve a), while, this process is reversed in the reversal currents ($I_r$).

**Figure I.** Double-step chronoamperograms of DPB (1.0 mM): (a) in the absence of 1a; (b) in the presence of 1a (1.0 mM) at glassy carbon electrode, in water (phosphate buffer 0.2 M, pH 2.0)/acetonitrile mixture (40/40 v/v), when the potential is stepped from +0.77 V to +0.07 V.