Synthesis of Amphiphilic Asymmetrical Dithienylethenes with Aryl Groups at the Reactive Carbons

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NMR spectra for all synthesized compounds

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High-resolution mass spectra for all synthesized compounds

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$^1$H NMR spectrum of compound 2
$^{13}$C NMR spectrum of compound 2
$^1$H NMR spectrum of compound 4
$^{13}$C NMR spectrum of compound 4
$^1$H NMR spectrum of compound 5
$^{13}$C NMR spectrum of compound 5
$^1$H NMR spectrum of compound 6
\[ ^{13}\text{C} \text{ NMR spectrum of compound 6} \]
$^1$H NMR spectrum of compound 7
$^{13}$C NMR spectrum of compound 7
$^1\text{H NMR spectrum of compound 8}$
$^{13}$C NMR spectrum of compound 8
$^1$H NMR spectrum of compound 9
$^{13}$C NMR spectrum of compound 9

![Chemical Structure Image]
$^1$H NMR spectrum of compound 10

![NMR spectrum of compound 10](image)
$^{13}$C NMR spectrum of compound 10
$^1$H NMR spectrum of compound 11
$^{13}$C NMR spectrum of compound 11
$^1$H NMR spectrum of compound 12
$^13$C NMR spectrum of compound 12
$^1$H NMR spectrum of compound 13
$^{13}$C NMR spectrum of compound 13
$^1$H NMR spectrum of compound 14
$^{13}$C NMR spectrum of compound 14
$^1$H NMR spectrum of compound 15
$^{13}$C NMR spectrum of compound 15
$^1$H NMR spectrum of compound 16

![NMR spectrum diagram]

$R^1 = C\text{CPh}$
$^{13}$C NMR spectrum of compound 16

$R^1 = CC\text{Ph}$
$^1$H NMR spectrum of compound 17

The spectrum shows signals at various chemical shifts. The structure of the compound is labeled with $R^1 = \text{CCPh}$.
\(^{13}\text{C} \text{NMR spectrum of compound 17}\)
$^1$H NMR spectrum of compound 18
$^{13}$C NMR spectrum of compound 18
HRMS of compound 4
HRMS of compound 5
HRMS of compound 6

- 114.1295
- 185.0416
- 344.8755
- 413.9692
- 459.0060
HRMS of compound 7
HRMS of compound 8

![Chemical Structure](image.png)

**Acq. Data Name:** JS092  
**Experiment Date/Time:** 19/04/2016 10:30:03 AM  
**Creation Parameters:** Average (MS Time: 0.02...0.17 x10³)  
**Ionization Mode:** FD+(eIF)
HRMS of compound 9

[Chemical structure image]

Acq. Data Name: JS112 and std
Creation Parameters: Average(MS Time:0.05..0.07)
x10^3
Intensity (73198)
HRMS of compound 10
HRMS of compound 12

Chemical structure:

Experimental details:
- Acq. Data Name: JS-138 and std
- Creation Parameters: Average(MS Time:0.34..0.40)
- Intensity (33201)

Parameters used:
- Ionization Mode: FD+(eIF)

Chemical formula: N-alkylaryl-

Additional notes:
- Experiment Date/Time: 28/11/2016 3:54:07 PM
- Mass range: 200 - 1600
HRMS of compound 14
HRMS of compound 15
HRMS of compound 16

625.9355
626.9409
627.9383
628.9417
629.9380
631.9402
R' = C6H4
m/z
HRMS of compound 17

854.0782

855.0815

856.0793

857.0787
HRMS of compound 18