Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2015

# **Supplementary Information**

Electrochemical generation of Michael acceptor: A green method for the synthesis of 4-amino-3-(phenylsulfonyl)diphenylamine derivatives

Eslam Salahifar and Davood Nematollahi\*

Faculty of Chemistry, Bu-Ali-Sina University, Hamedan 65178-38683, I. R. Iran

nemat@basu.ac.ir

#### **Table of Contents**

1.	<sup>1</sup> H NMR spectrum of <b>3a</b>	<u>S2</u>
2.	<sup>1</sup> H NMR spectrum (expanded) of <b>3a</b>	<u>S3</u>
3.	<sup>1</sup> H NMR spectrum of <b>3a</b> (with $D_2O$ )	V
4.	<sup>1</sup> H NMR spectrum of <b>3a</b> (with D <sub>2</sub> O, expanded)	<u>S5</u>
5.	<sup>13</sup> C NMR spectrum of <b>3a</b>	<u>S6</u>
6.	<sup>13</sup> C NMR spectrum of <b>3a</b> (expanded)	<u>S7</u>
7.	FT-IR spectrum of <b>3a</b>	<u>S8</u>
8.	<sup>1</sup> H NMR spectrum of <b>3b</b>	X
9.	<sup>1</sup> H NMR spectrum (expanded) of <b>3b</b>	XI
10.	. <sup>1</sup> H NMR spectrum of <b>3b</b> (with D <sub>2</sub> O)	<u>S11</u>
11.	. <sup>1</sup> H NMR spectrum of <b>3b</b> (with D <sub>2</sub> O, expanded)	<u>S12</u>
12.	. <sup>13</sup> C NMR spectrum of <b>3b</b>	<u>S13</u>
13.	. <sup>13</sup> C NMR spectrum of <b>3b</b> (expanded)	<u>S14</u>
14.	. FT-IR spectrum of <b>3b</b>	<u>\$15</u>
15.	<sup>1</sup> H NMR spectrum of <b>3c</b>	<u>S16</u>
16.	. <sup>1</sup> H NMR spectrum of <b>3c</b> (expanded)	XVIII
17.	. <sup>1</sup> H NMR spectrum of <b>3c</b> (with D <sub>2</sub> O)	<u>S18</u>
18.	. <sup>1</sup> H NMR spectrum of <b>3c</b> (with D <sub>2</sub> O, expanded)	<u>S19</u>
20.	<sup>13</sup> C NMR spectrum of <b>3c</b>	<u>S20</u>
21.	. <sup>13</sup> C NMR spectrum of <b>3c</b> (expanded)	<u>S21</u>
22.	. FT-IR spectrum of <b>3c</b>	<u>S22</u>
23.	. ORTEP view of X-ray crystal structure of <b>3c</b>	S23
24.	. CCDC number	S24

### <sup>1</sup>H NMR spectrum of 3a



### <sup>1</sup>H NMR spectrum (expanded) of 3a



# ➢ <sup>1</sup>H NMR spectrum of 3a (with D₂O)





#### ▶ <sup>1</sup>H NMR spectrum of 3a (with D<sub>2</sub>O, expanded)

## <sup>13</sup>C NMR spectrum of 3a



## <sup>13</sup>C NMR spectrum of 3a (expanded)



### FT-IR spectrum of 3a



## <sup>1</sup>H NMR spectrum of 3b



### <sup>1</sup>H NMR spectrum (expanded) of 3b



## ➢ <sup>1</sup>H NMR spectrum of 3b (with D₂O)



# ➢ <sup>1</sup>H NMR spectrum of 3b (with D₂O, expanded)



## <sup>13</sup>C NMR spectrum of 3b



## > <sup>13</sup>C NMR spectrum of 3b (expanded)



#### **FT-IR spectrum of 3b**



## > <sup>1</sup>H NMR spectrum of 3c



#### <sup>1</sup>H NMR spectrum of 3c (expanded)



## ➢ <sup>1</sup>H NMR spectrum of 3c (with D₂O)



#### ➢ <sup>1</sup>H NMR spectrum of 3c (with D₂O-expanded)



## > <sup>13</sup>C NMR spectrum of 3c



### <sup>13</sup>C NMR spectrum of 3c (expanded)



#### > FT-IR spectrum of 3c





## > ORTEP view of X-ray crystal structure of 3c

4ADPA-sulfinic crystal- khavasi

Dear Depositor,

Thank you for depositing your crystal structure(s) at the Cambridge Crystallographic Data Centre. The data have been assigned to the following deposition numbers.

CCDC 1019143

\_\_\_\_\_

Summary of Data CCDC 1019143

Compound Name: Formula: C18 H16 N2 O2 S1 Unit Cell Parameters: a 7.4296(5) b 19.375(2) c 22.6760(18) Pbna

If we have any queries relating to the data then we will contact you later.

Data submitted as a Private Communication will be processed and added to the Cambridge Structural Database (CSD).

Please note, if the data have not appeared in a journal publication 1 year after the date of deposition, and the CCDC cannot contact you to discuss the matter, then the CCDC will automatically include the data

in the CSD as a Private Communication.

Kind regards, Data Acquisition Team