

# ELECTRONIC SUPPORTING INFORMATION

## Metal-Free Eliminative C-H Arylthiolation of 2*H*-Imidazole N-oxides with Thiophenols

Egor. A. Nikiforov,<sup>1</sup> Nailya F. Vaskina,<sup>1</sup> Timofey D. Moseev,<sup>1</sup>

Mikhail V. Varaksin,<sup>1,2\*</sup> Valery N. Charushin,<sup>1,2</sup> and Oleg N. Chupakhin<sup>1,2</sup>

<sup>1</sup> *Ural Federal University, 19 Mira street, Ekaterinburg, 620002, Russia*

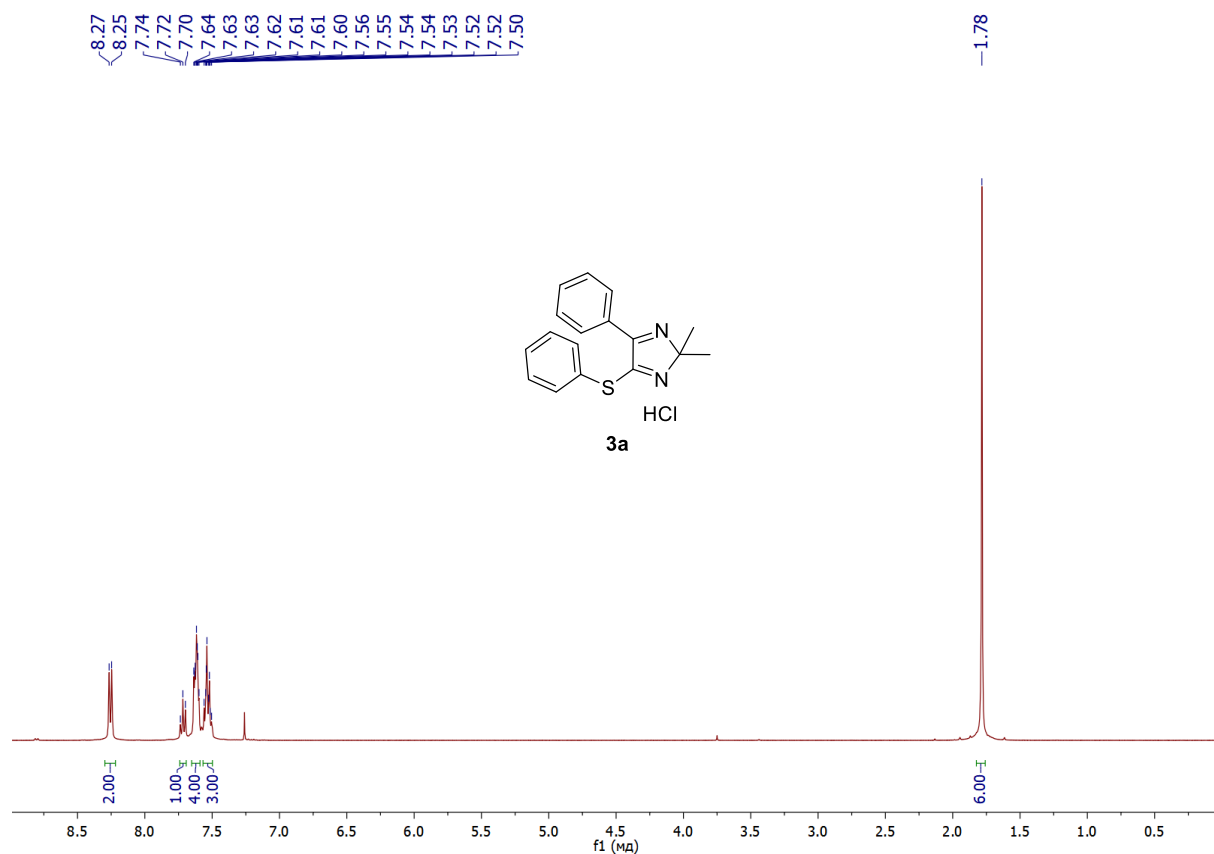
<sup>2</sup> *I.Ya. Postovsky Institute of Organic Synthesis, Ural Branch of the Russian Academy of Sciences  
22 S. Kovalevskaya street, Ekaterinburg, 620990, Russia*

*Corresponding author: m.v.varaksin@urfu.ru*

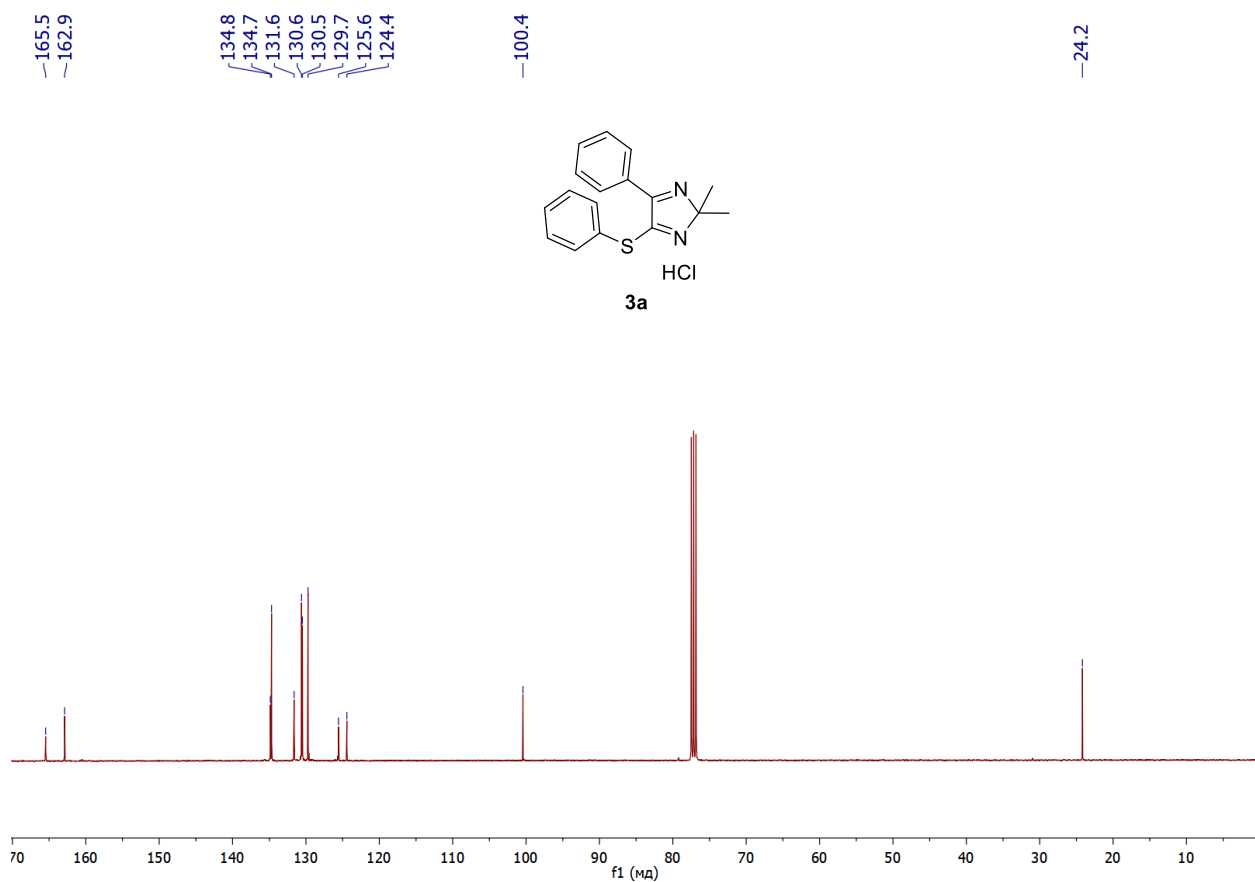
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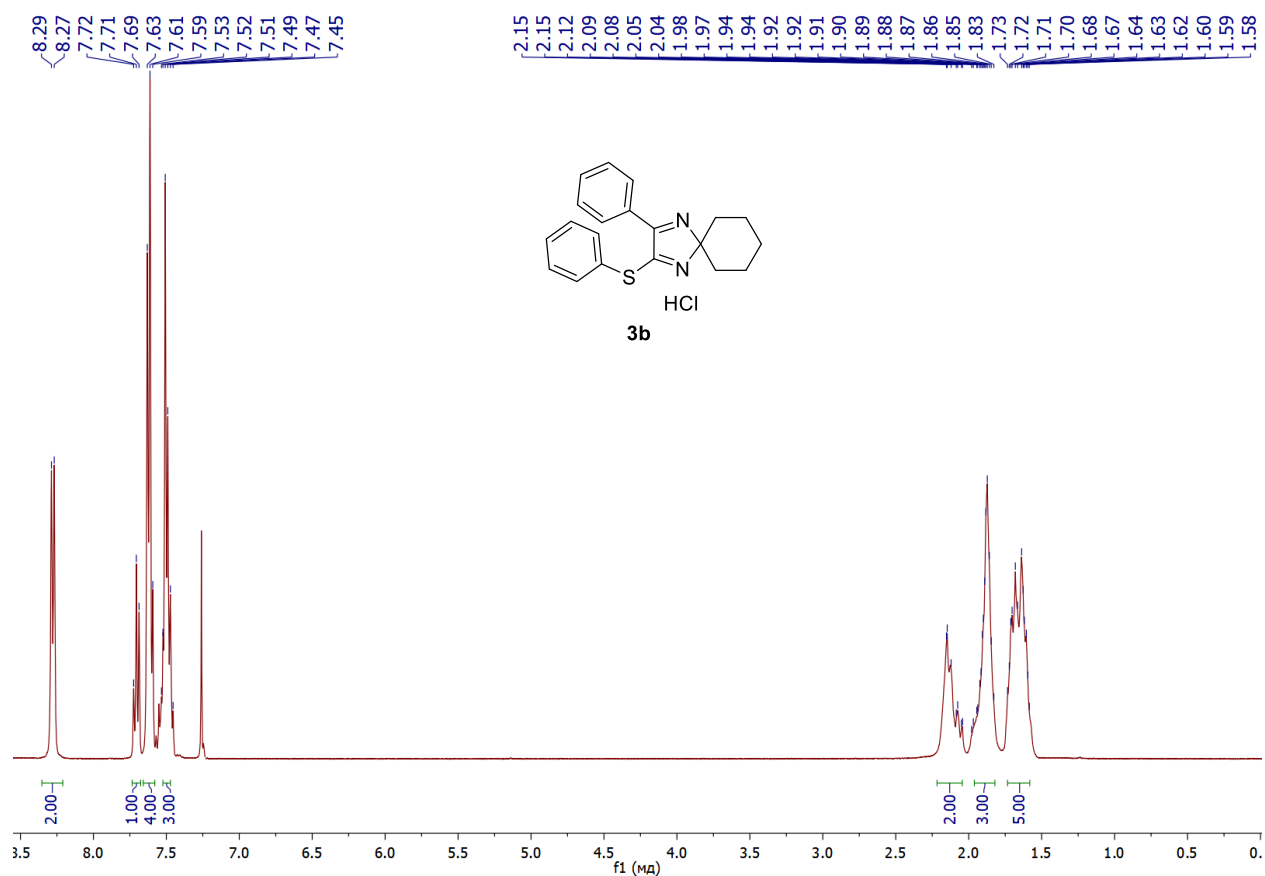
## 1. Copies of NMR spectra



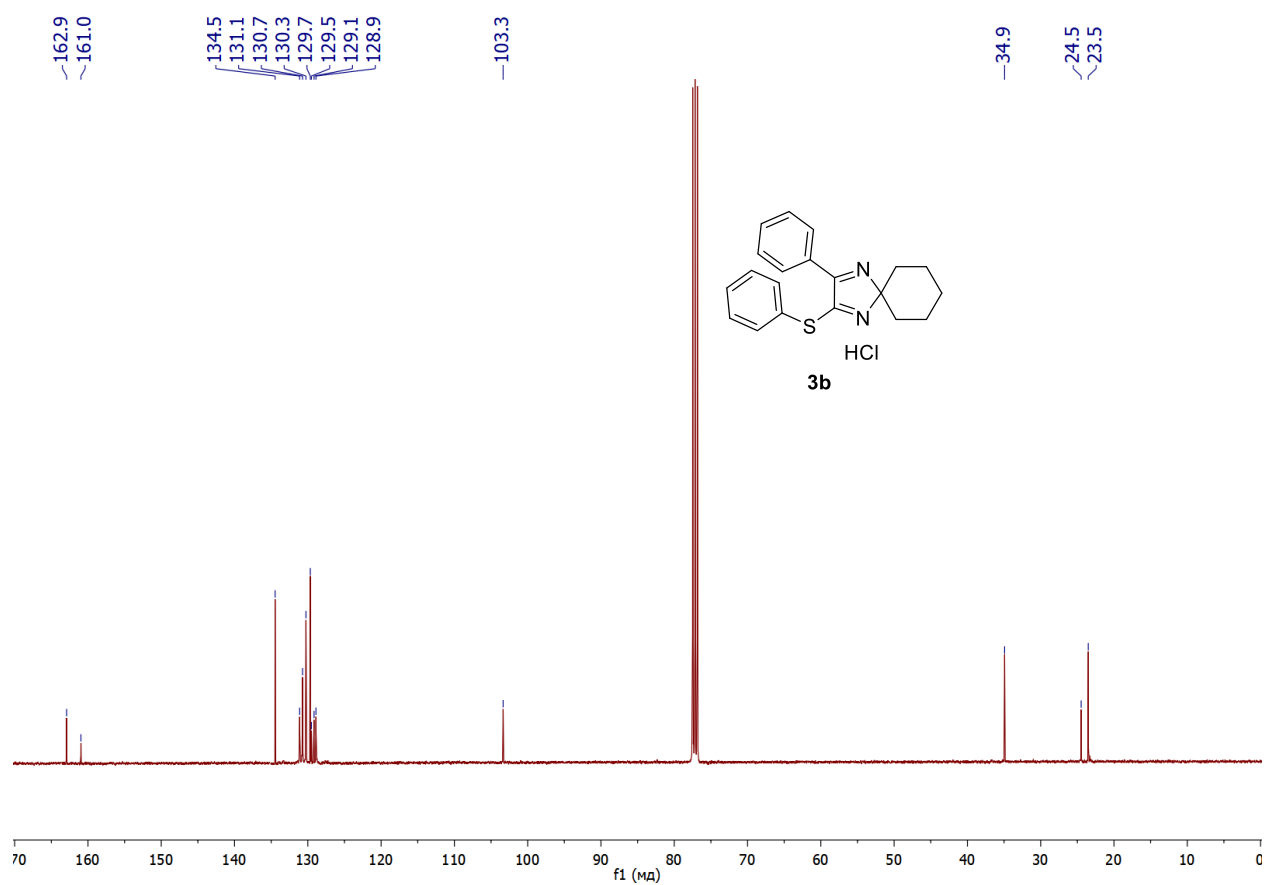
**Figure S1.** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound **3a**



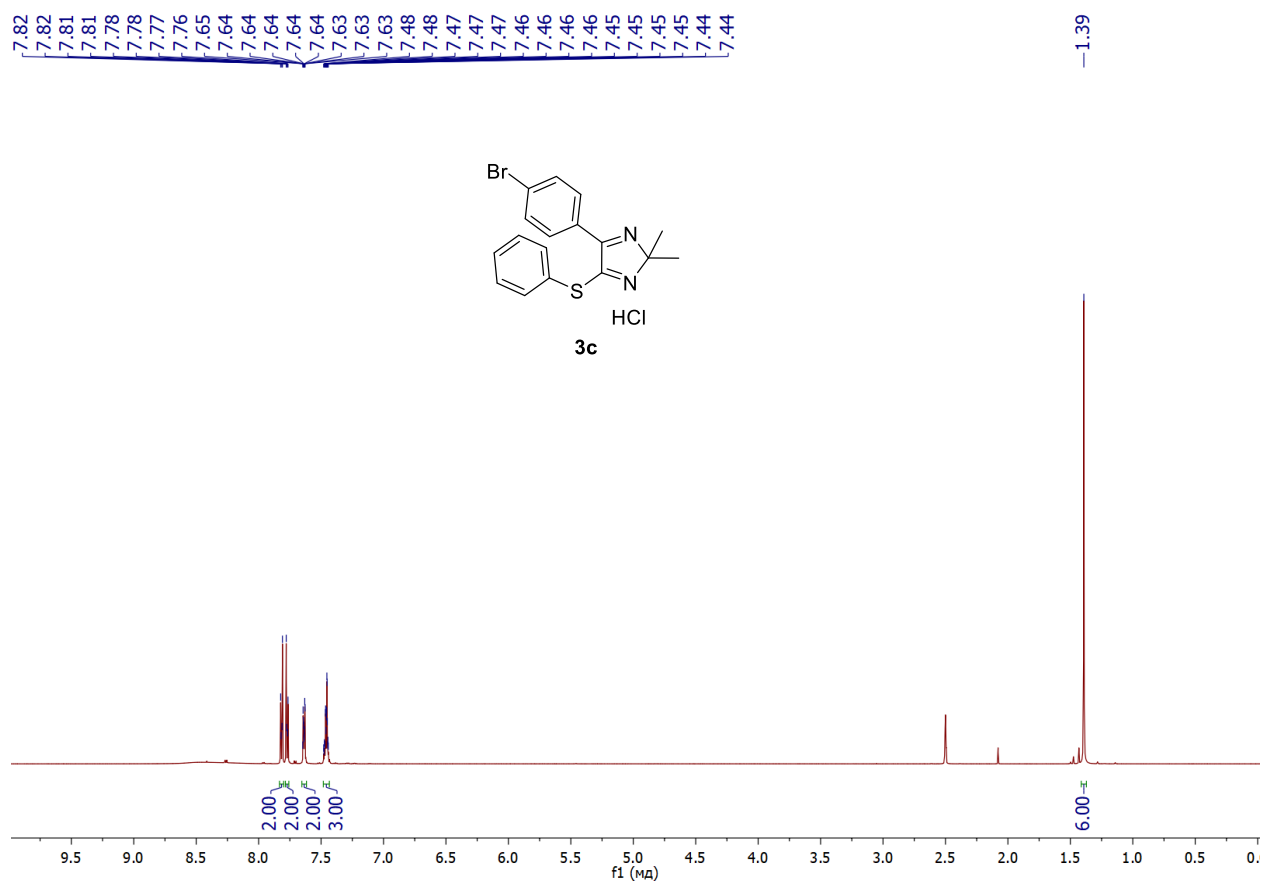
**Figure S2.** <sup>13</sup>C {<sup>1</sup>H} NMR spectrum (101 MHz, CDCl<sub>3</sub>) of compound **3a**



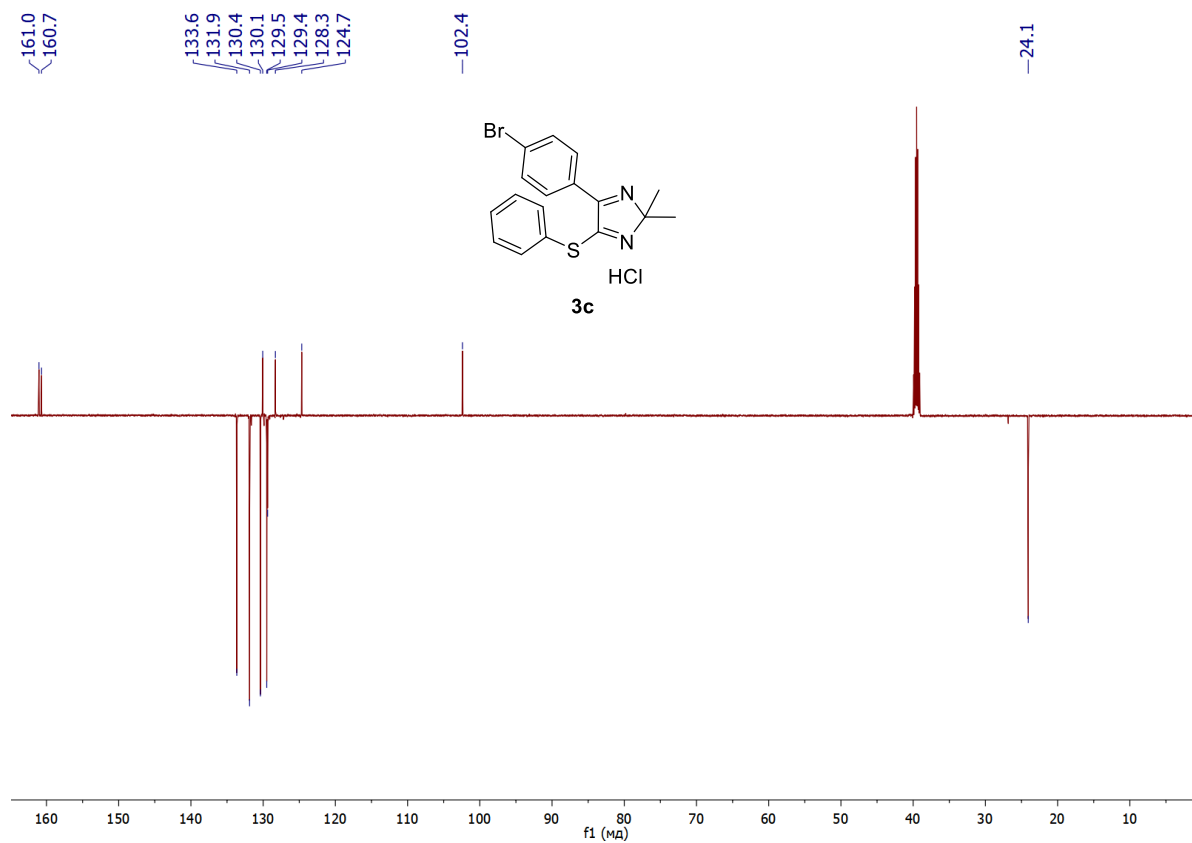
**Figure S3.** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound **3b**



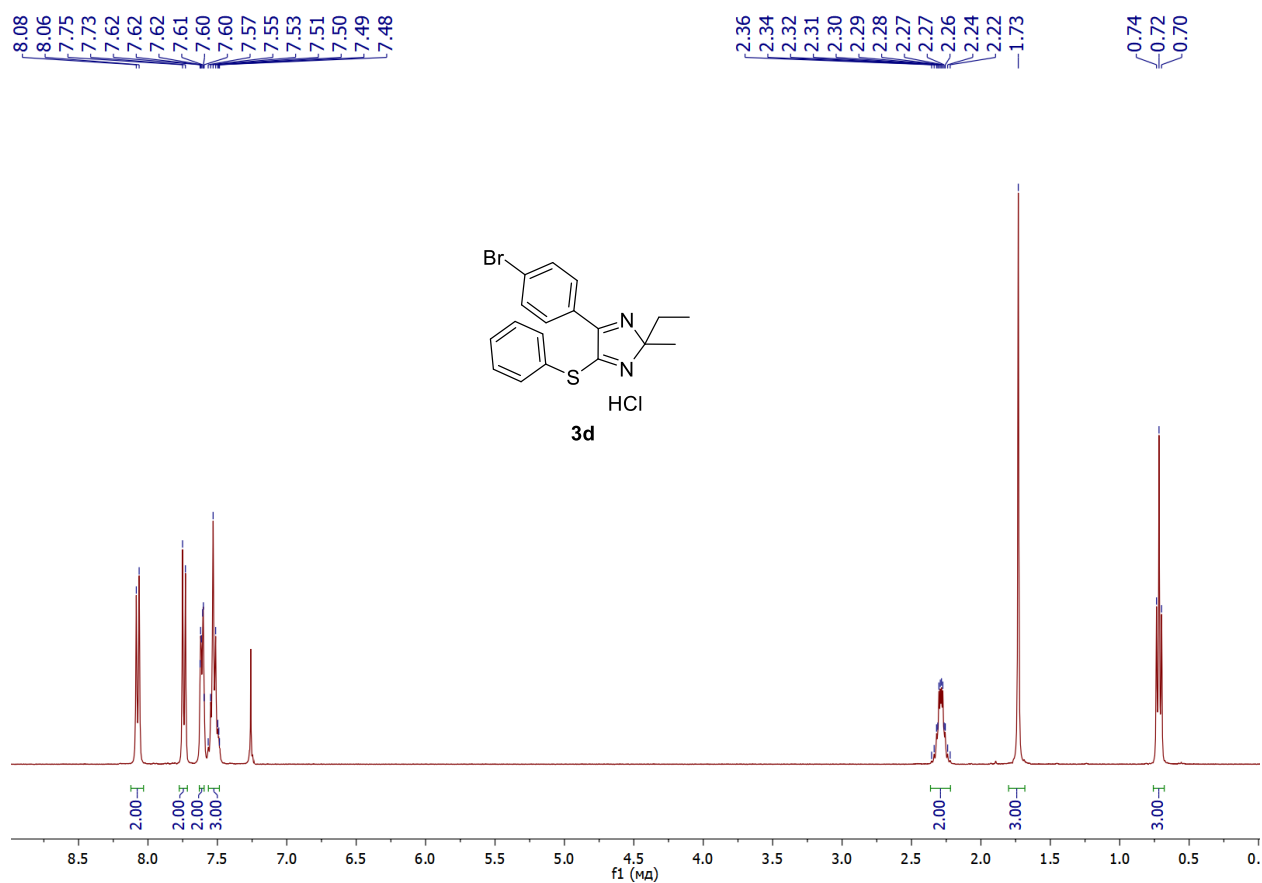
**Figure S4.** <sup>13</sup>C {<sup>1</sup>H} NMR spectrum (101 MHz, CDCl<sub>3</sub>) of compound **3b**



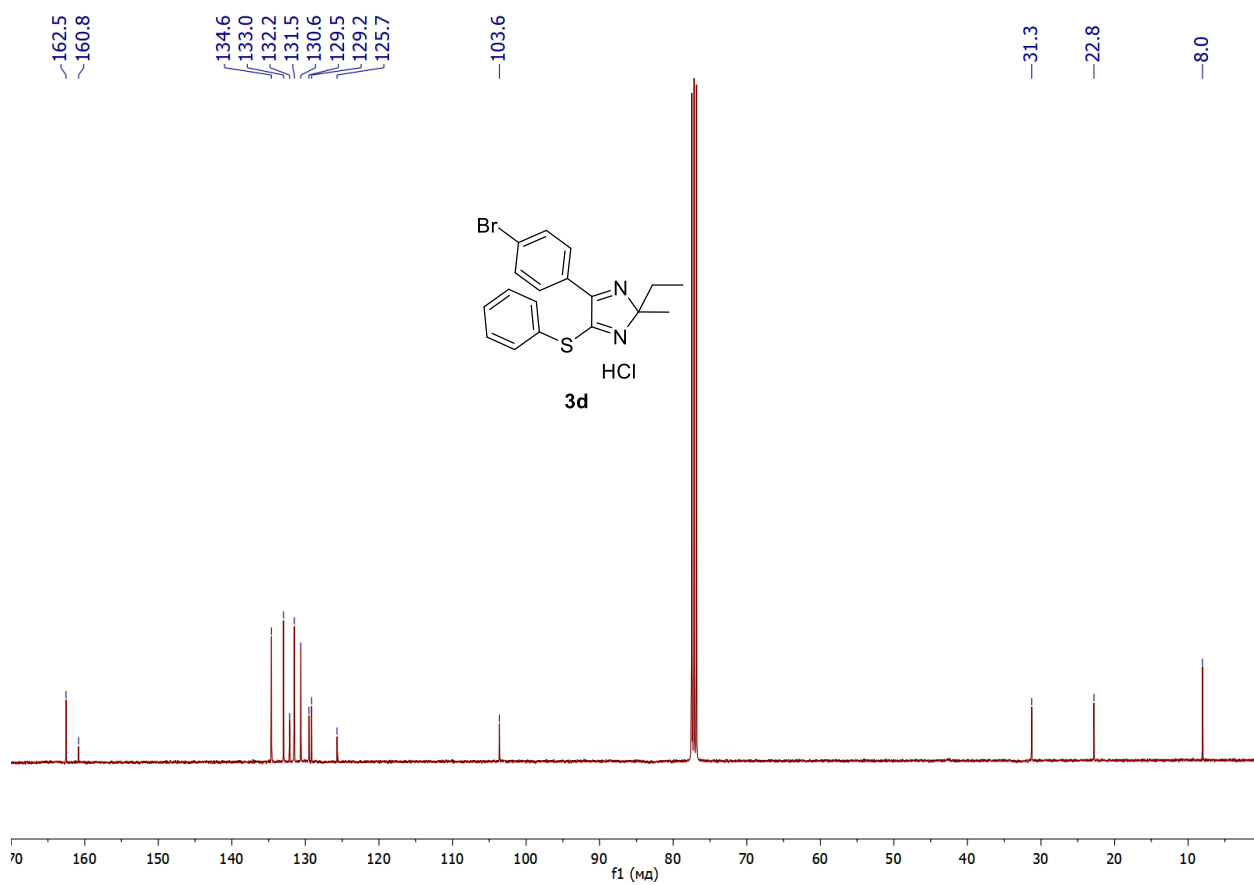
**Figure S5.** <sup>1</sup>H NMR spectrum (600 MHz, DMSO-d<sub>6</sub>) of compound **3c**



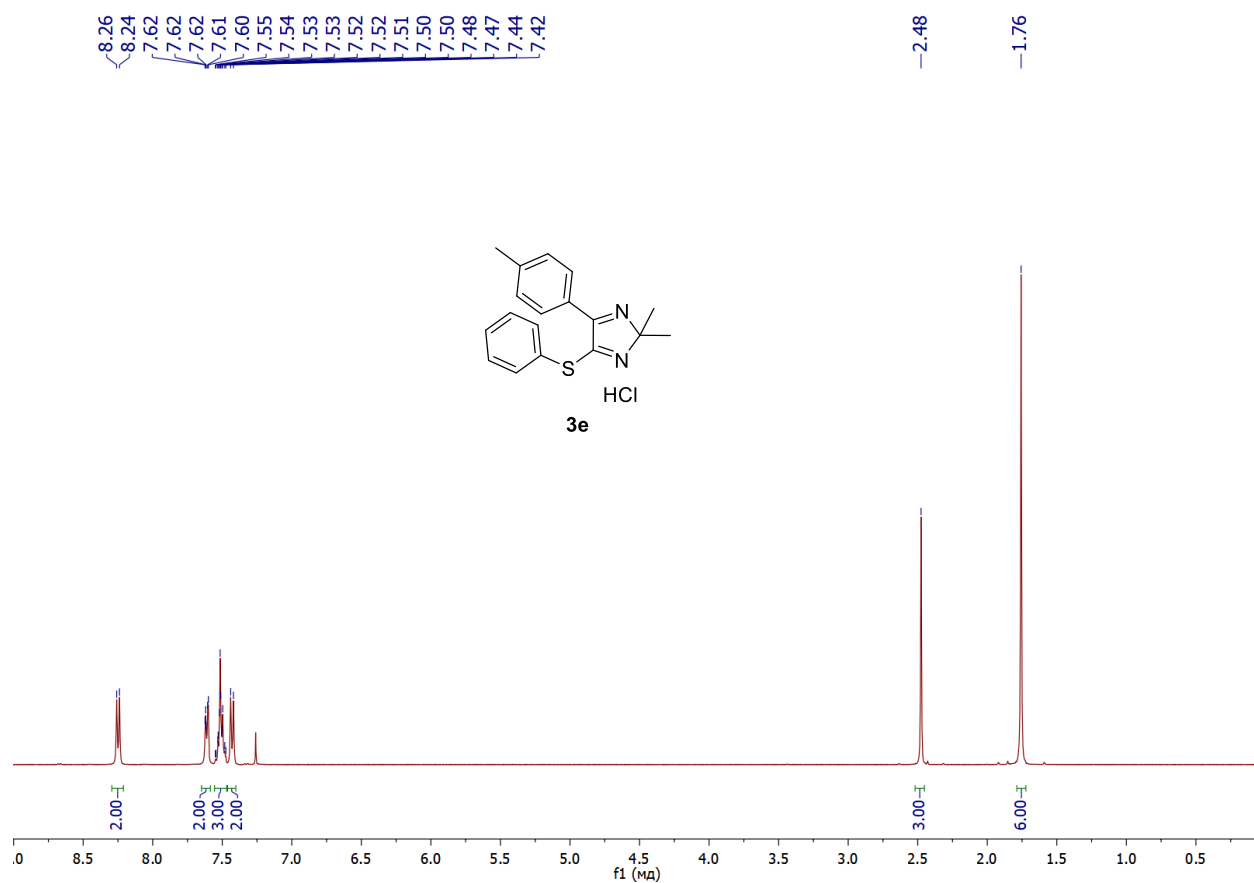
**Figure S6.** <sup>13</sup>C NMR spectrum (151 MHz, DMSO-d<sub>6</sub>) of compound **3c**



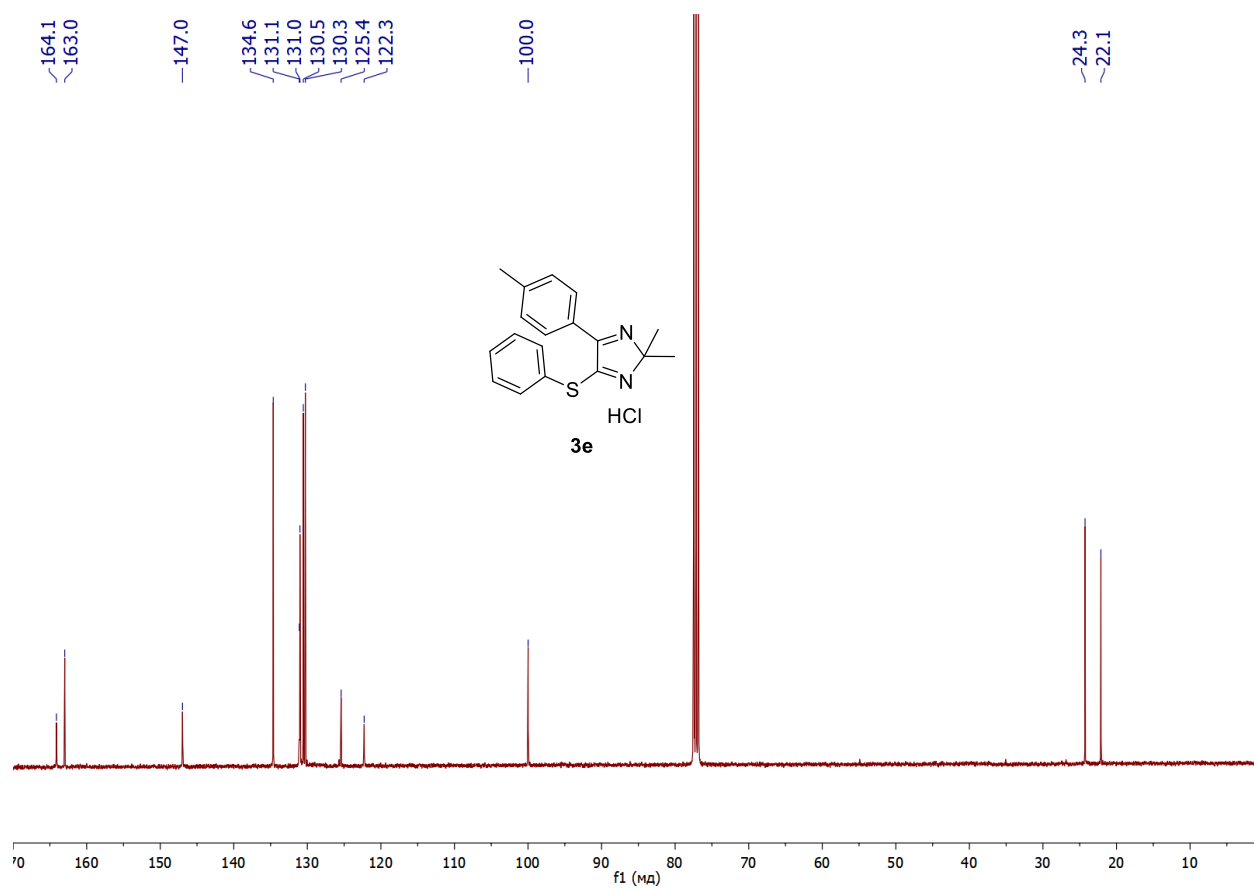
**Figure S7.** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound **3d**



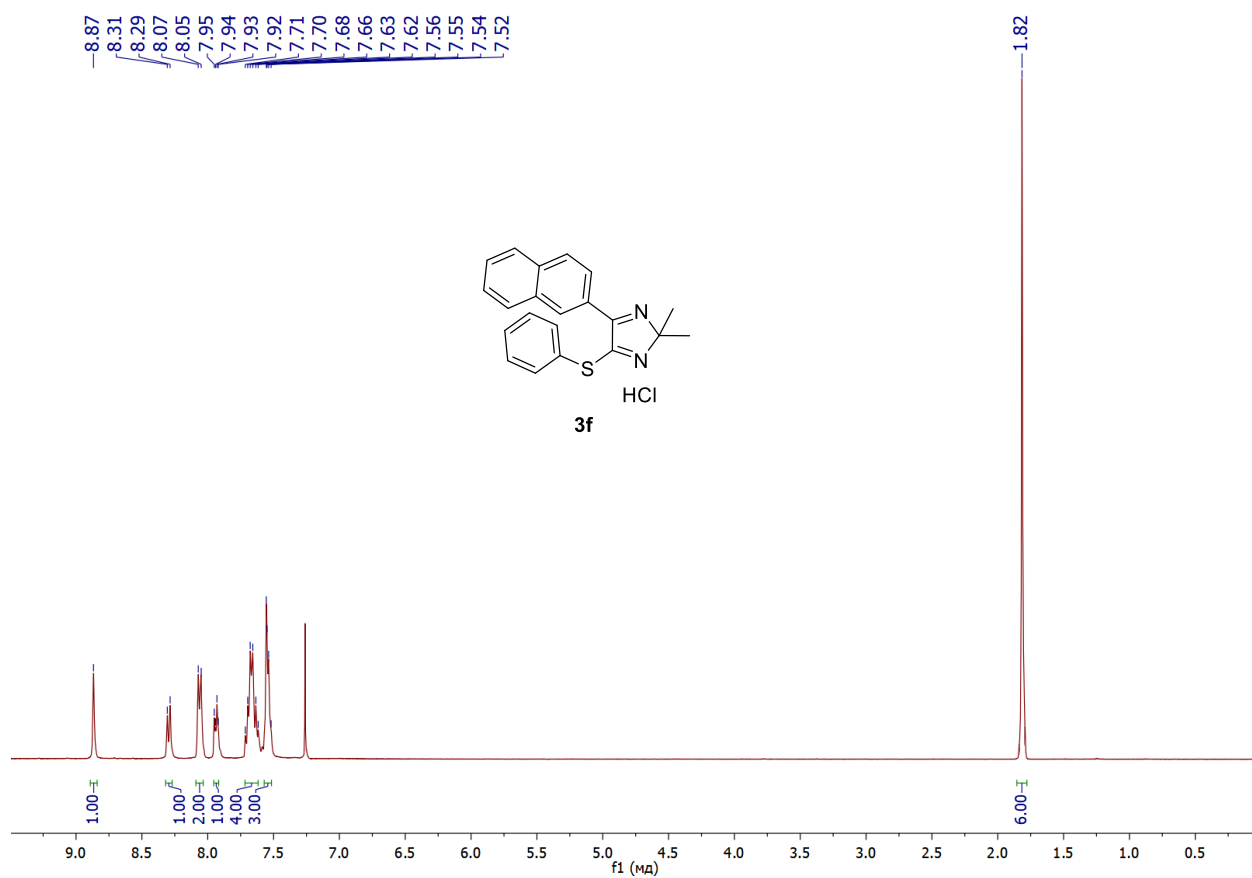
**Figure S8.** <sup>13</sup>C NMR spectrum (101 MHz, CDCl<sub>3</sub>) of compound **3d**



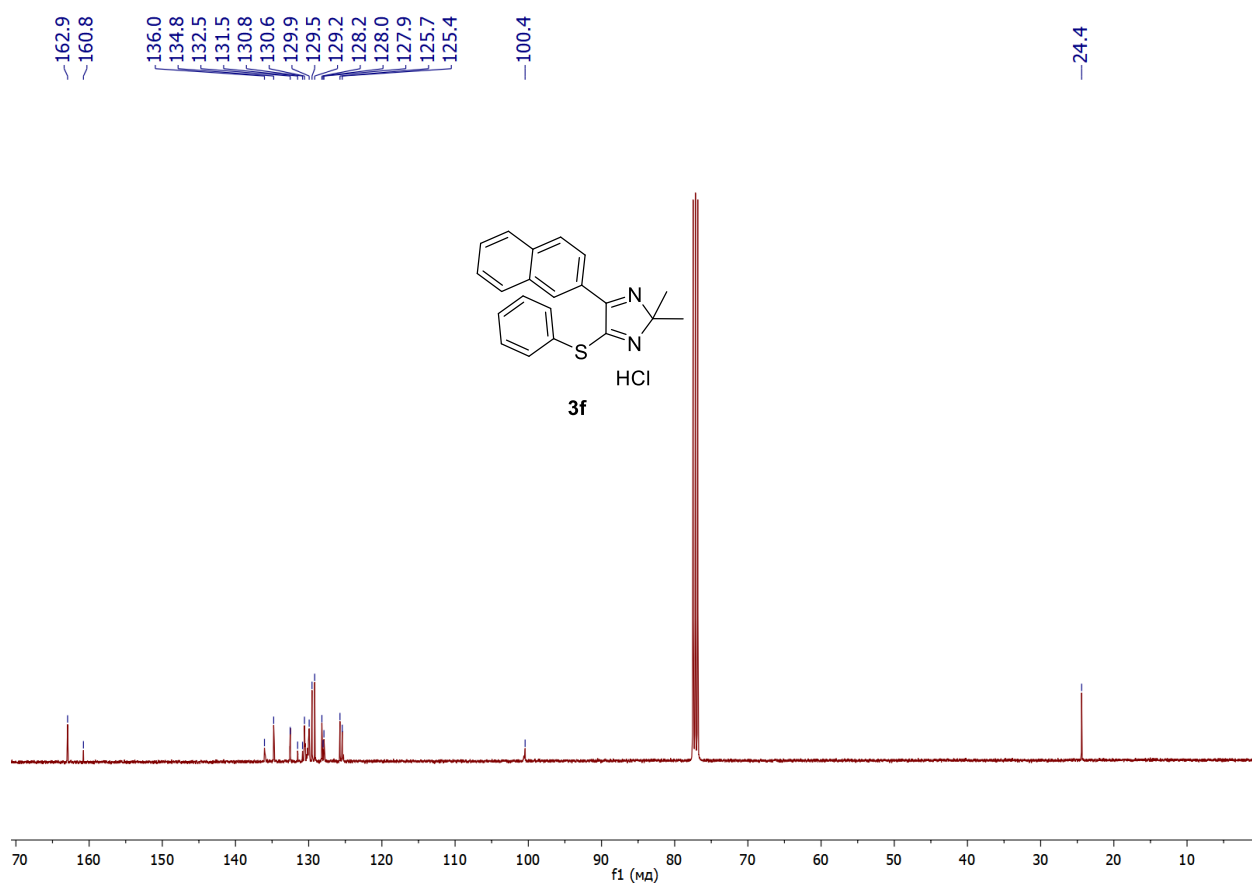
**Figure S9.** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound **3e**



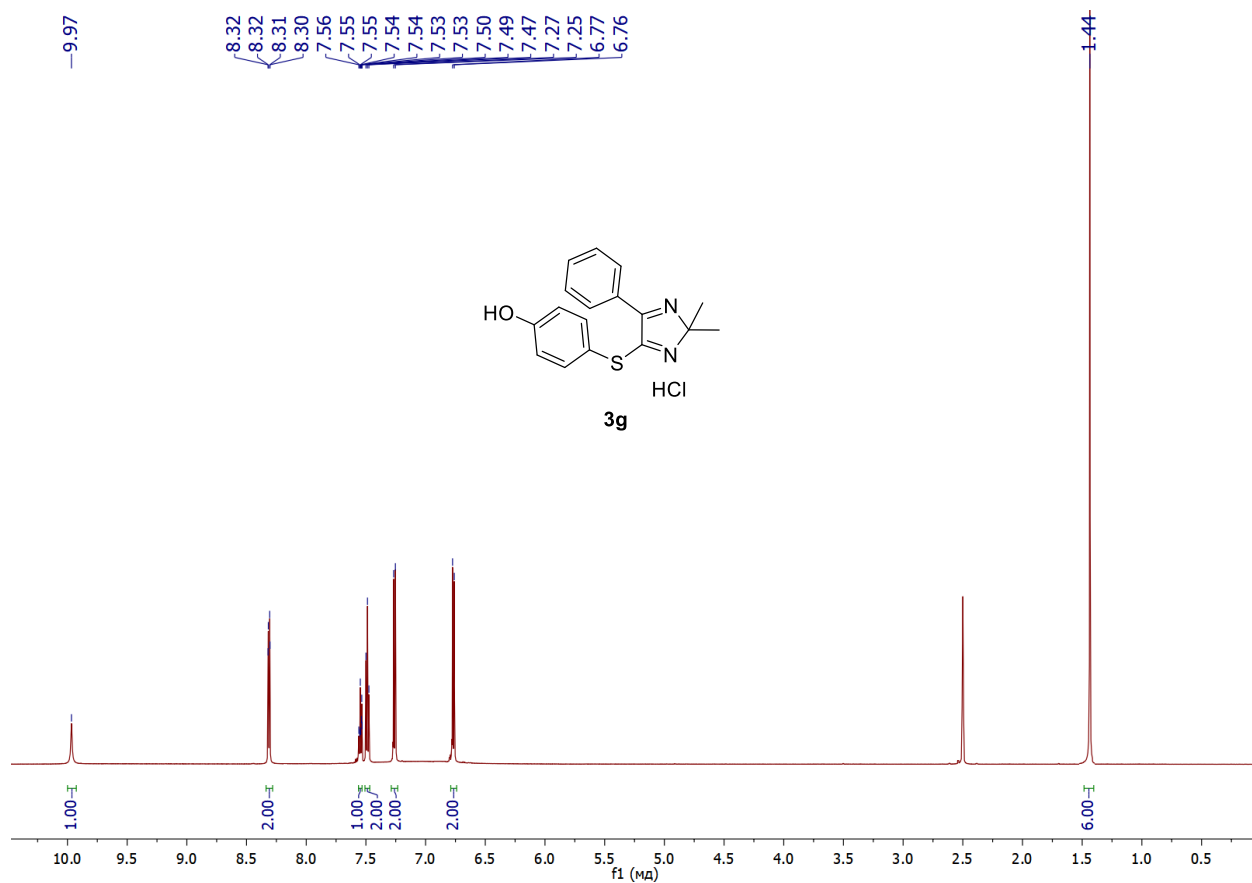
**Figure S10.** <sup>13</sup>C NMR spectrum (101 MHz, CDCl<sub>3</sub>) of compound **3e**



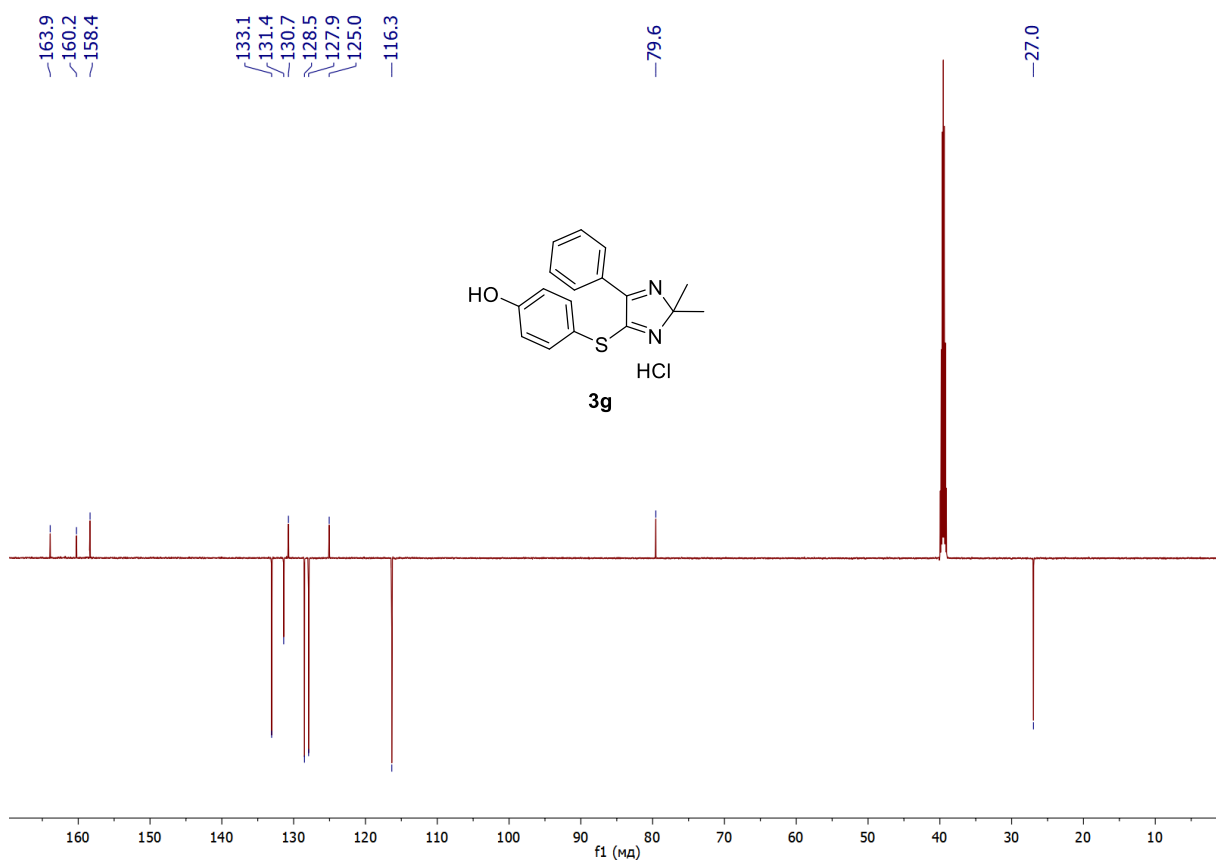
**Figure S11.** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound **3f**



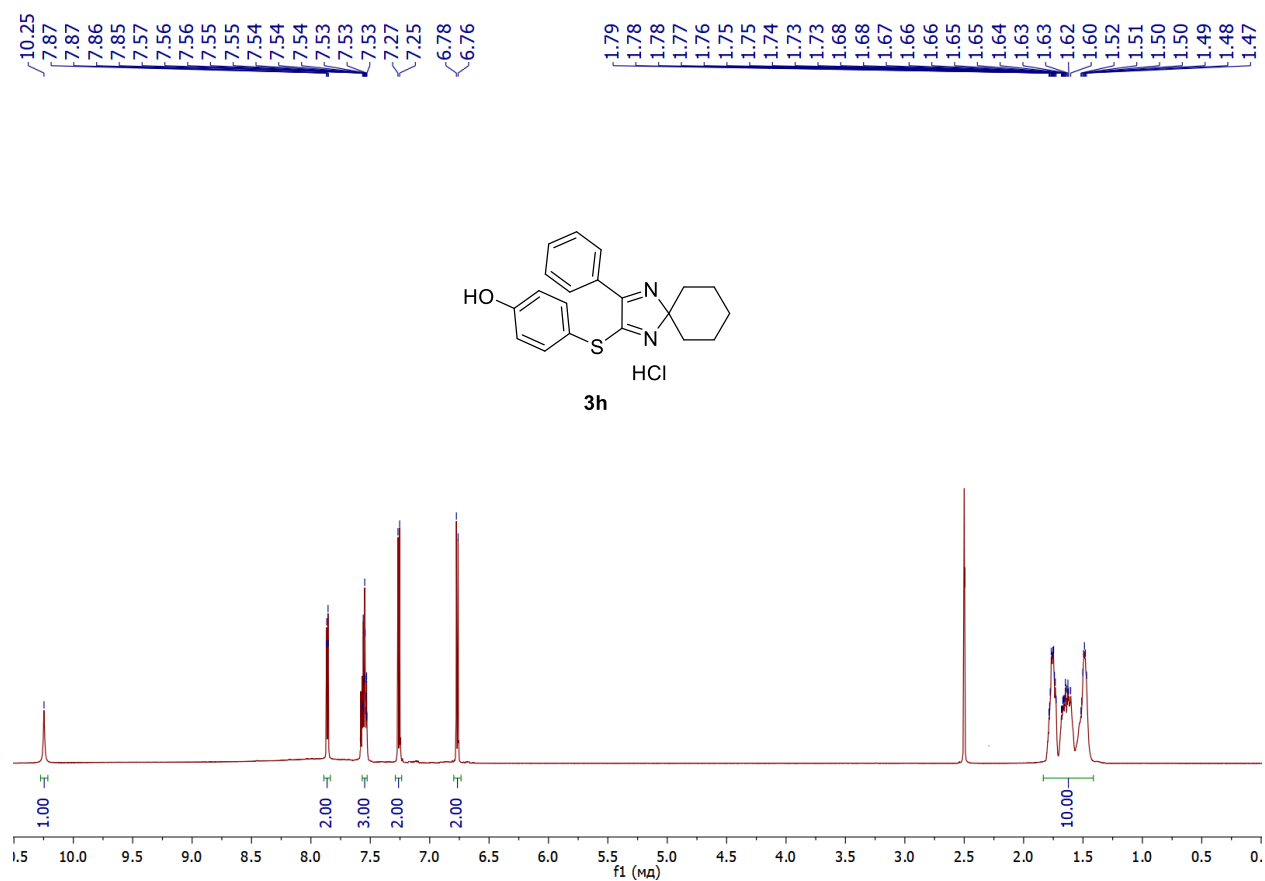
**Figure S12.** <sup>13</sup>C NMR spectrum (101 MHz, CDCl<sub>3</sub>) of compound **3f**



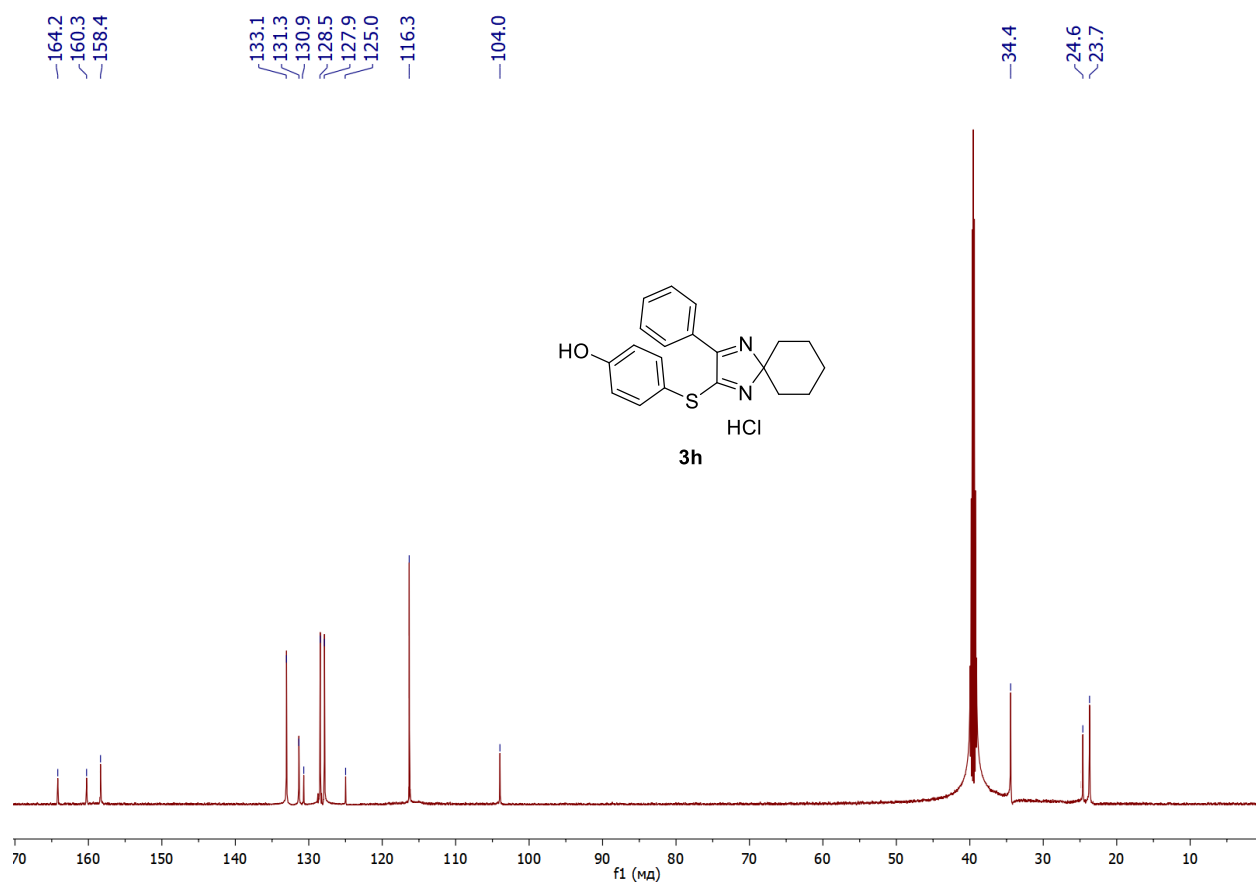
**Figure S13.** <sup>1</sup>H NMR spectrum (600 MHz, DMSO-d<sub>6</sub>) of compound **3g**



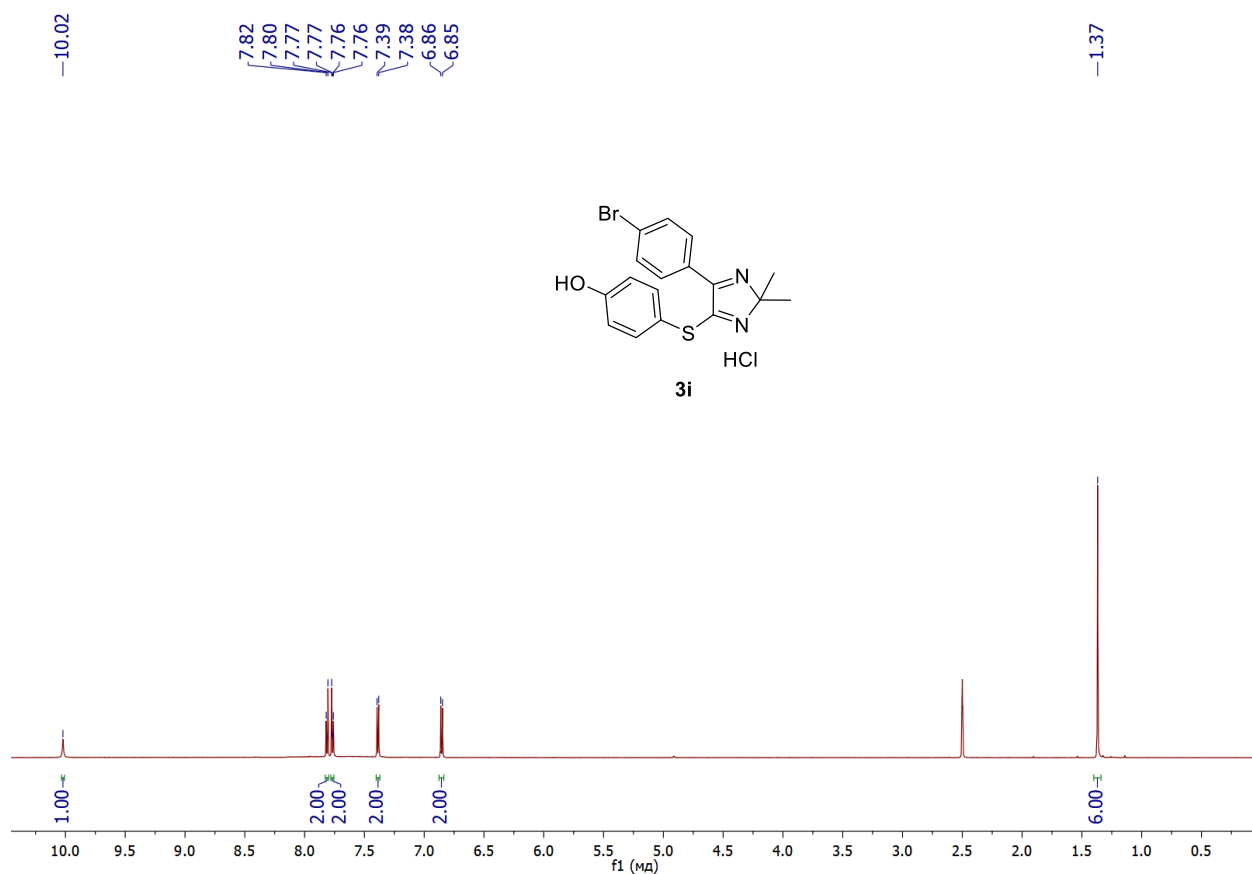
**Figure S14.** <sup>13</sup>C NMR spectrum (151 MHz, DMSO-d<sub>6</sub>) of compound **3g**



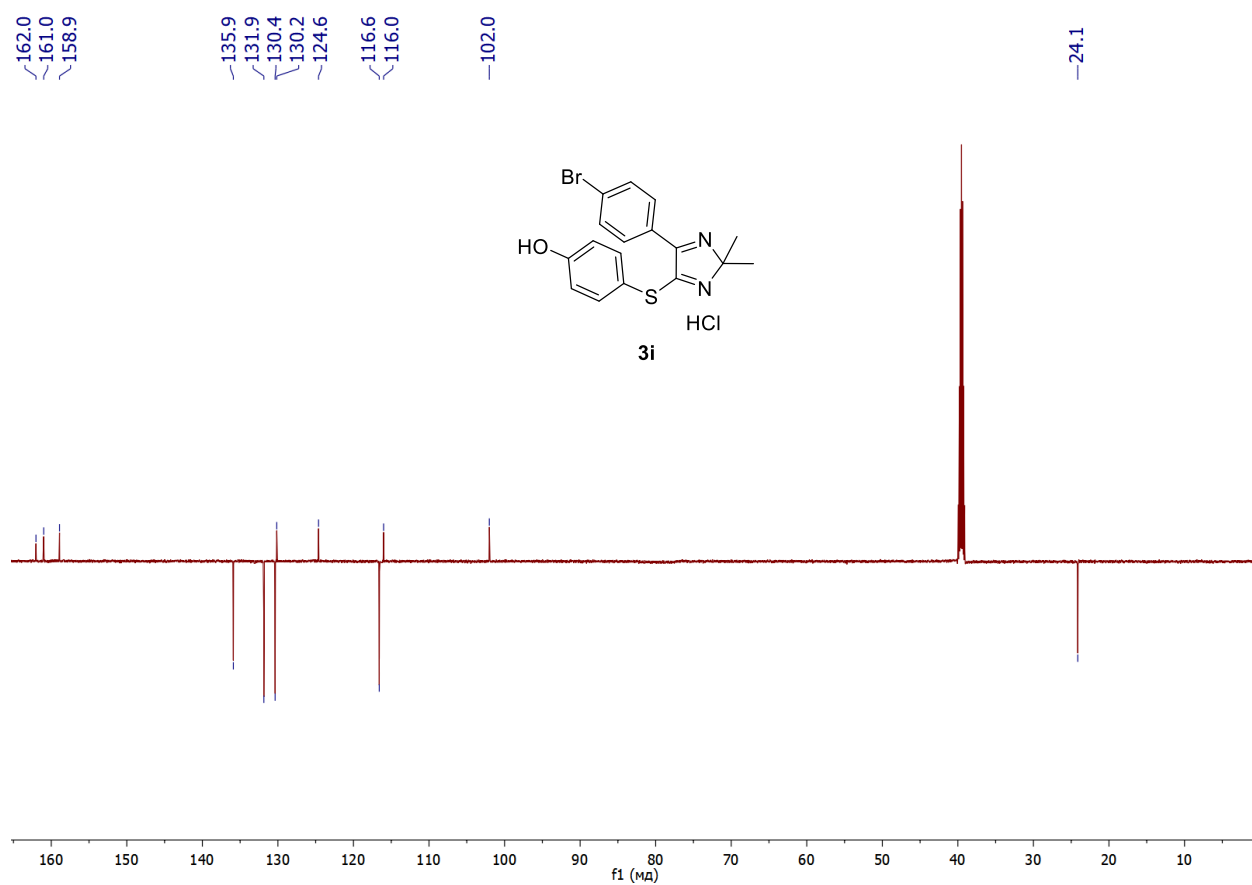
**Figure S15.** <sup>1</sup>H NMR spectrum (600 MHz, DMSO-d<sub>6</sub>) of compound **3h**



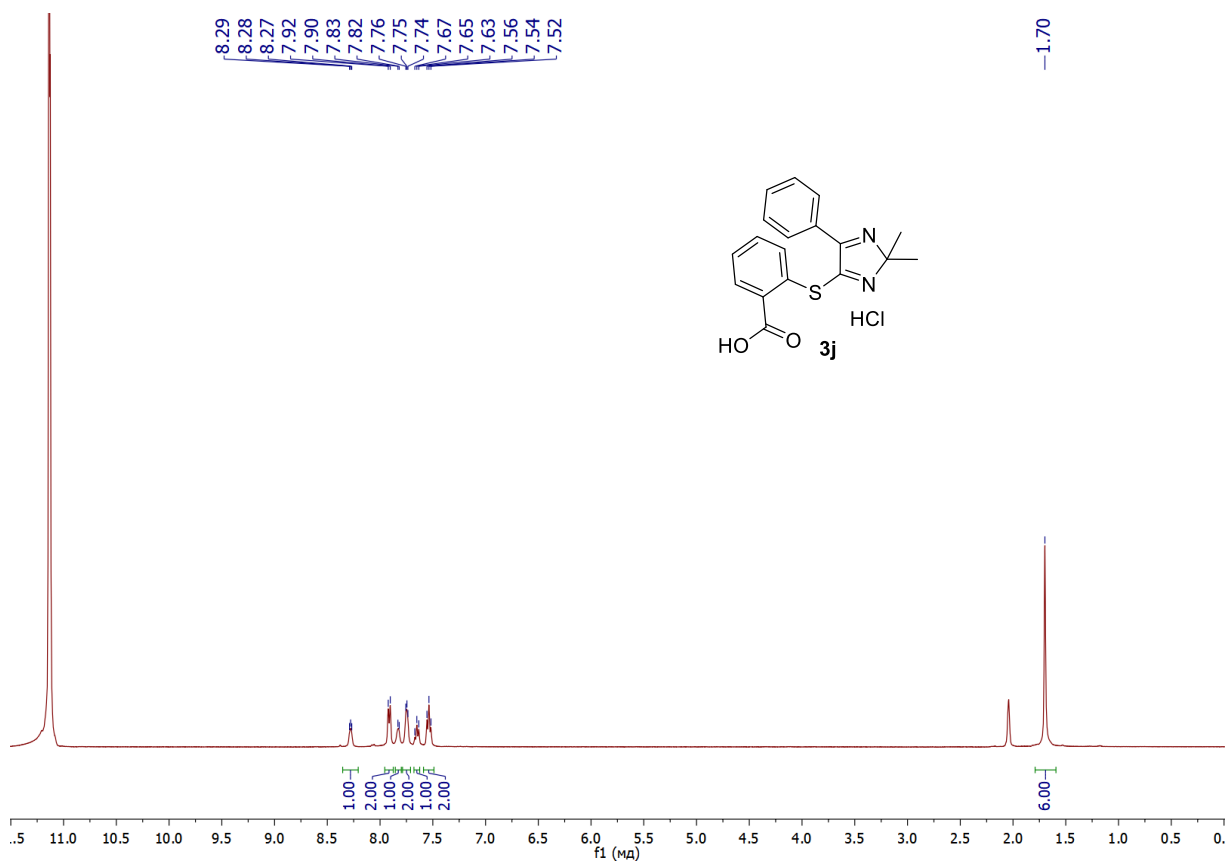
**Figure S16.** <sup>13</sup>C NMR spectrum (151 MHz, DMSO-d<sub>6</sub>) of compound **3h**



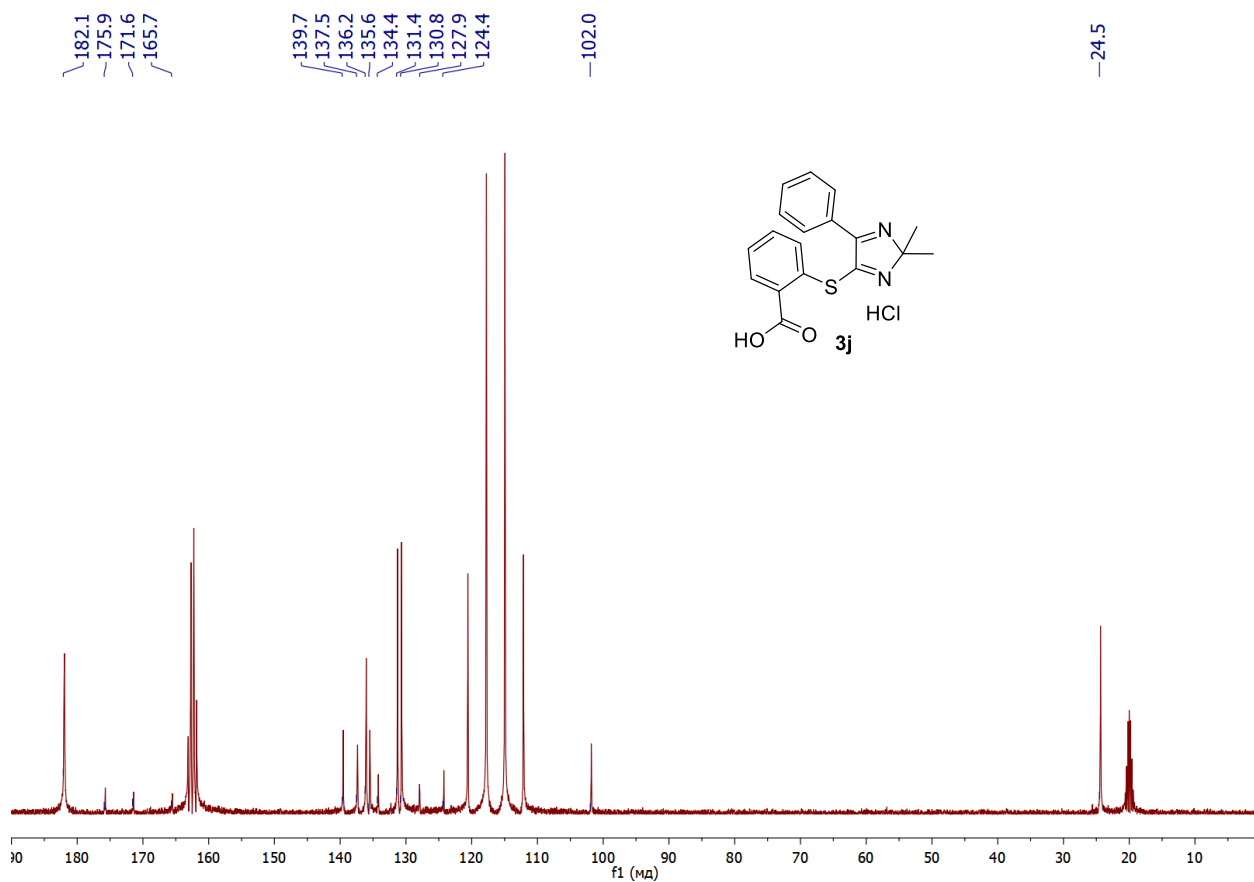
**Figure S17.** <sup>1</sup>H NMR spectrum (600 MHz, DMSO-d<sub>6</sub>) of compound **3i**



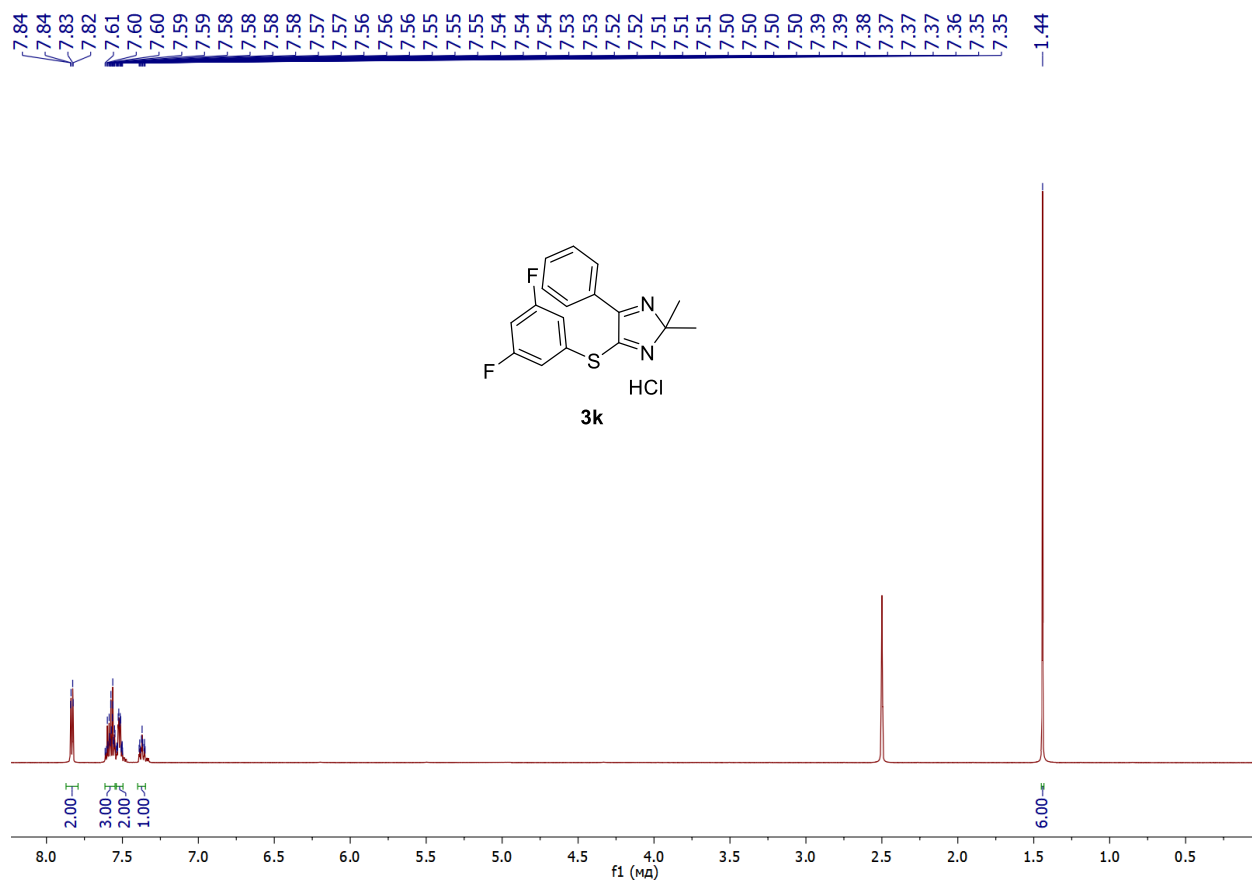
**Figure S18.** <sup>13</sup>C NMR spectrum (151 MHz, DMSO-d<sub>6</sub>) of compound **3i**



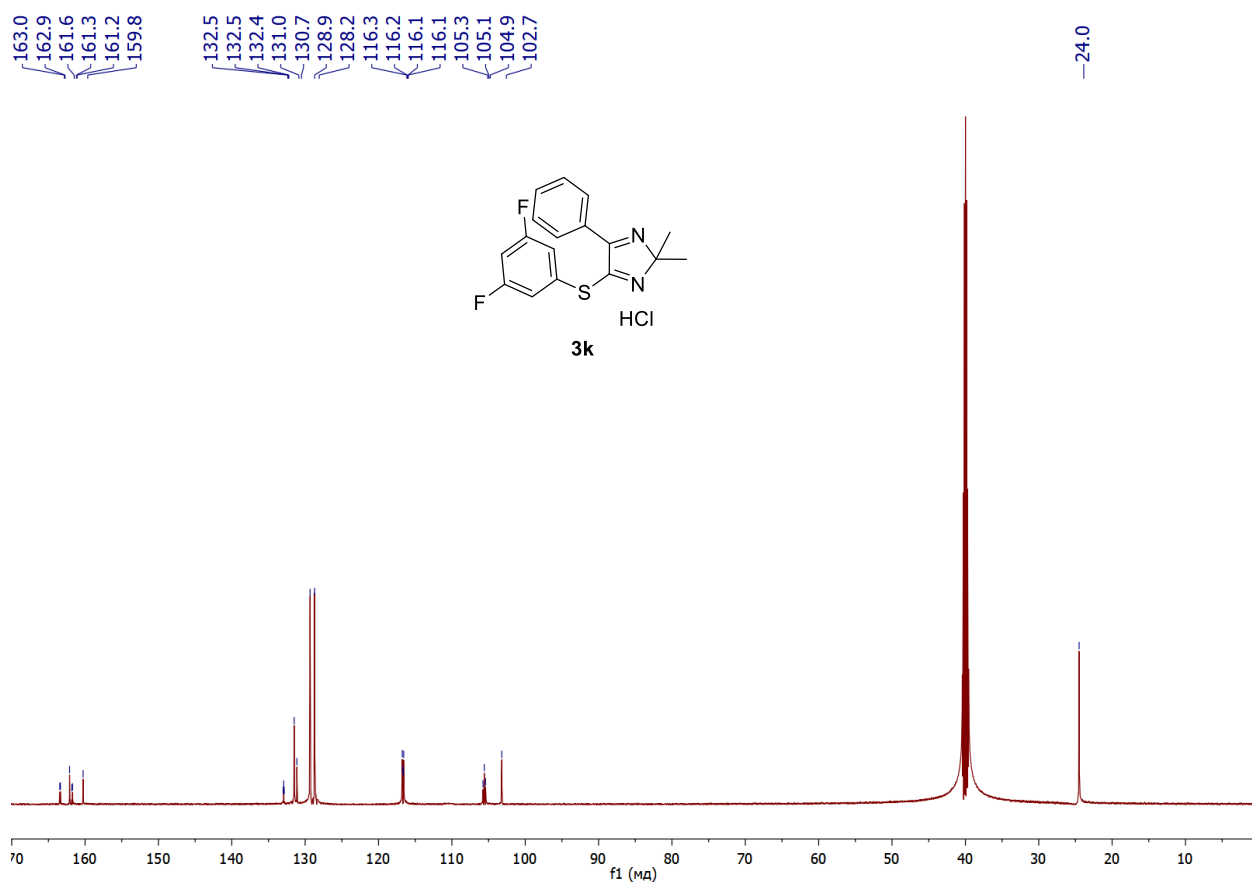
**Figure S19.** <sup>1</sup>H NMR spectrum (400 MHz, CF<sub>3</sub>COOD + CD<sub>3</sub>COOD) of compound **3j**



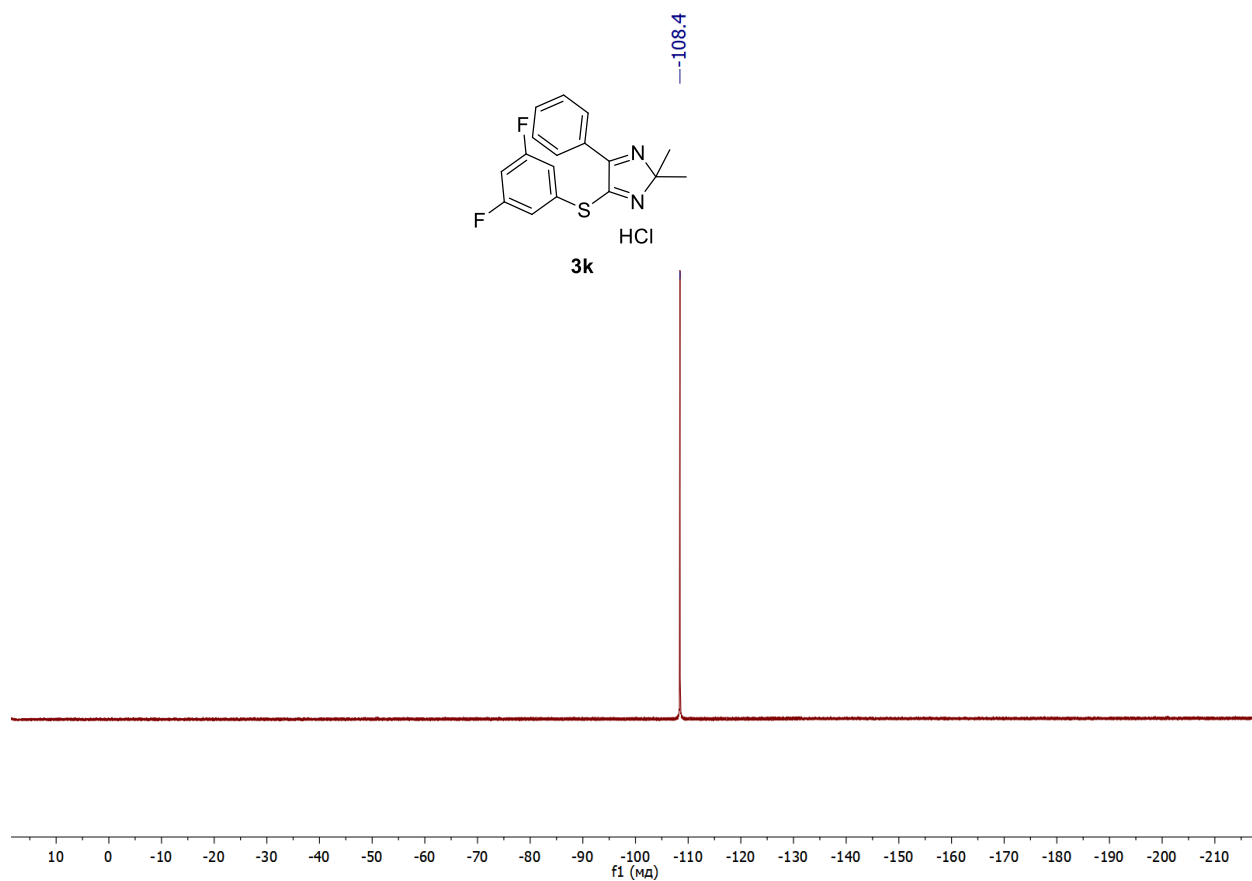
**Figure S20.** <sup>13</sup>C NMR spectrum (101 MHz, CF<sub>3</sub>COOD + CD<sub>3</sub>COOD) of compound **3j**



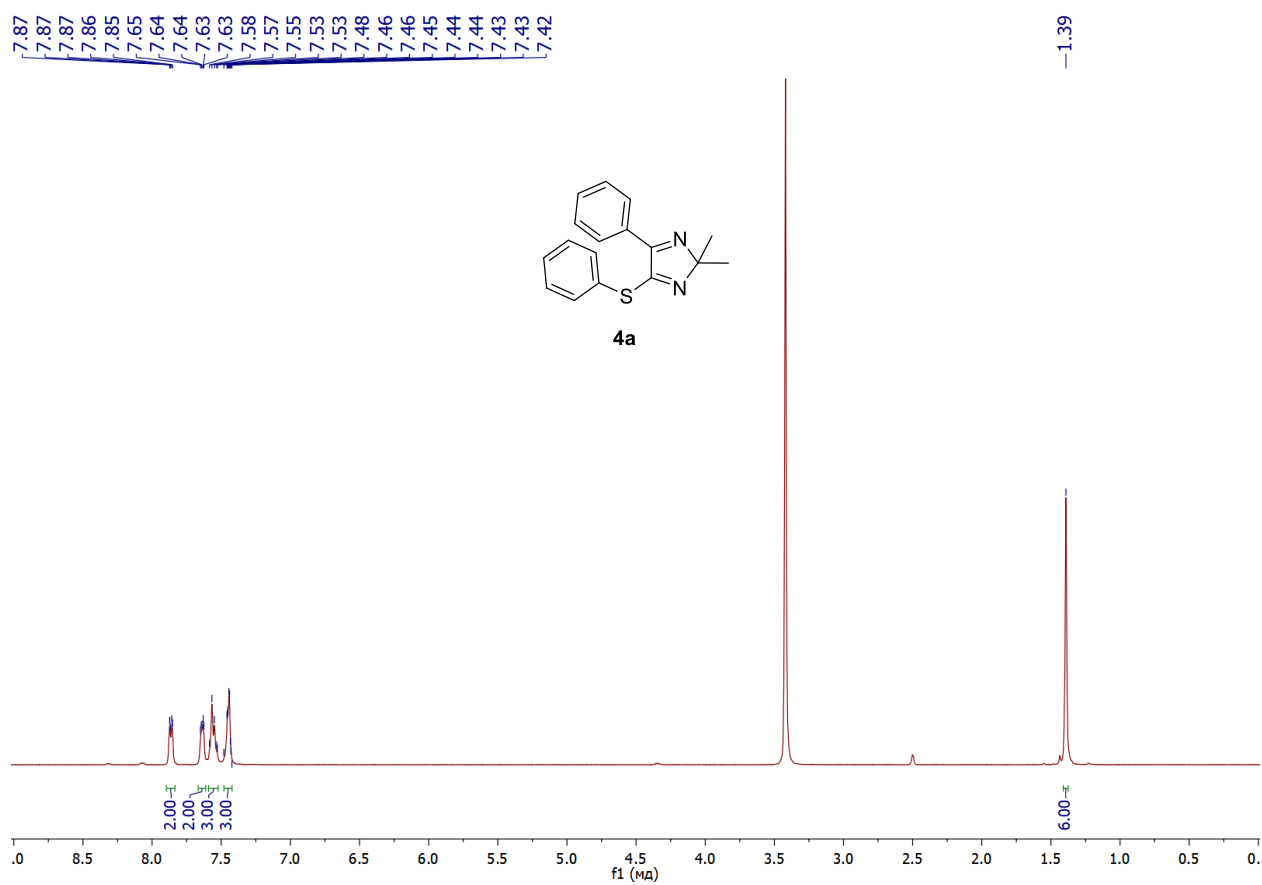
**Figure S21.** <sup>1</sup>H NMR spectrum (600 MHz, DMSO-d<sub>6</sub>) of compound **3k**



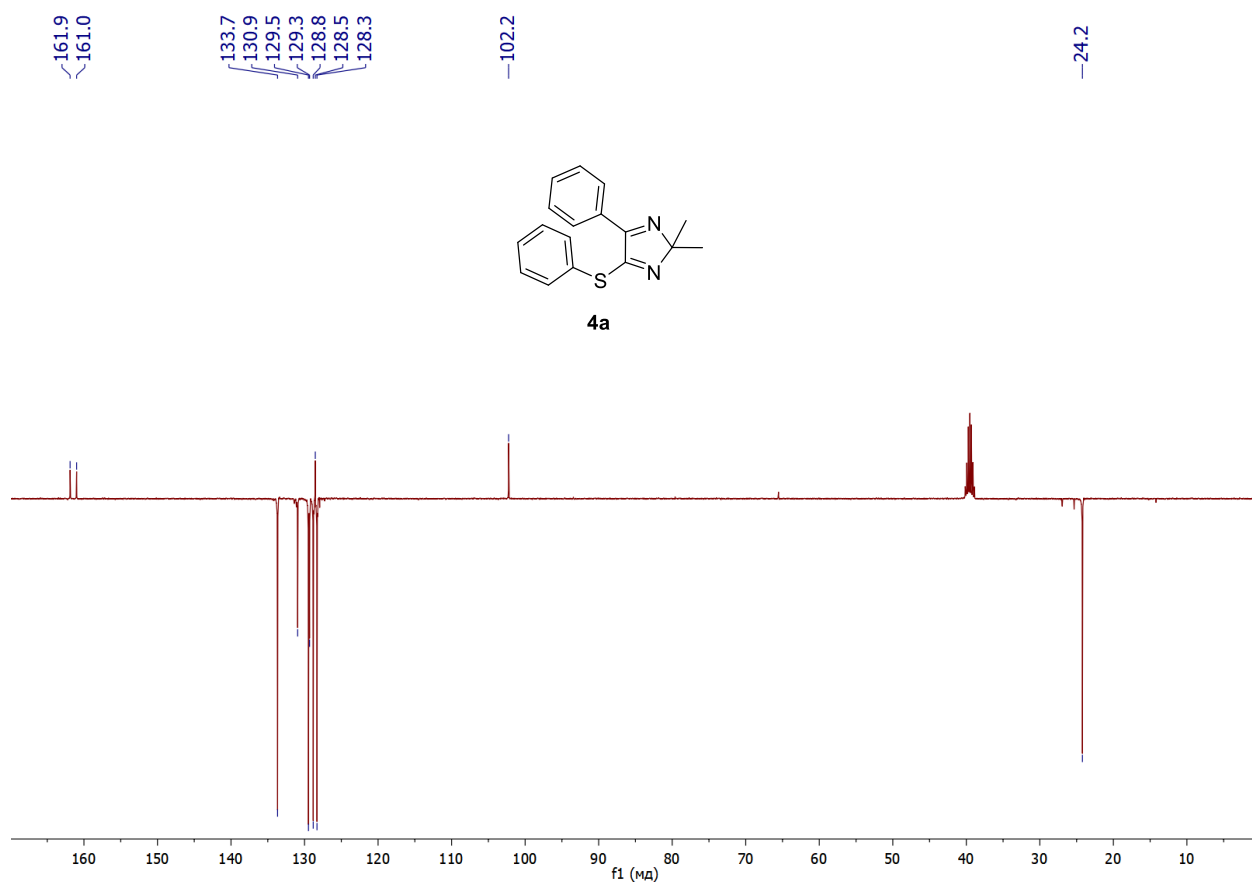
**Figure S22.** <sup>19</sup>F NMR spectrum (151 MHz, DMSO-d<sub>6</sub>) of compound **3k**



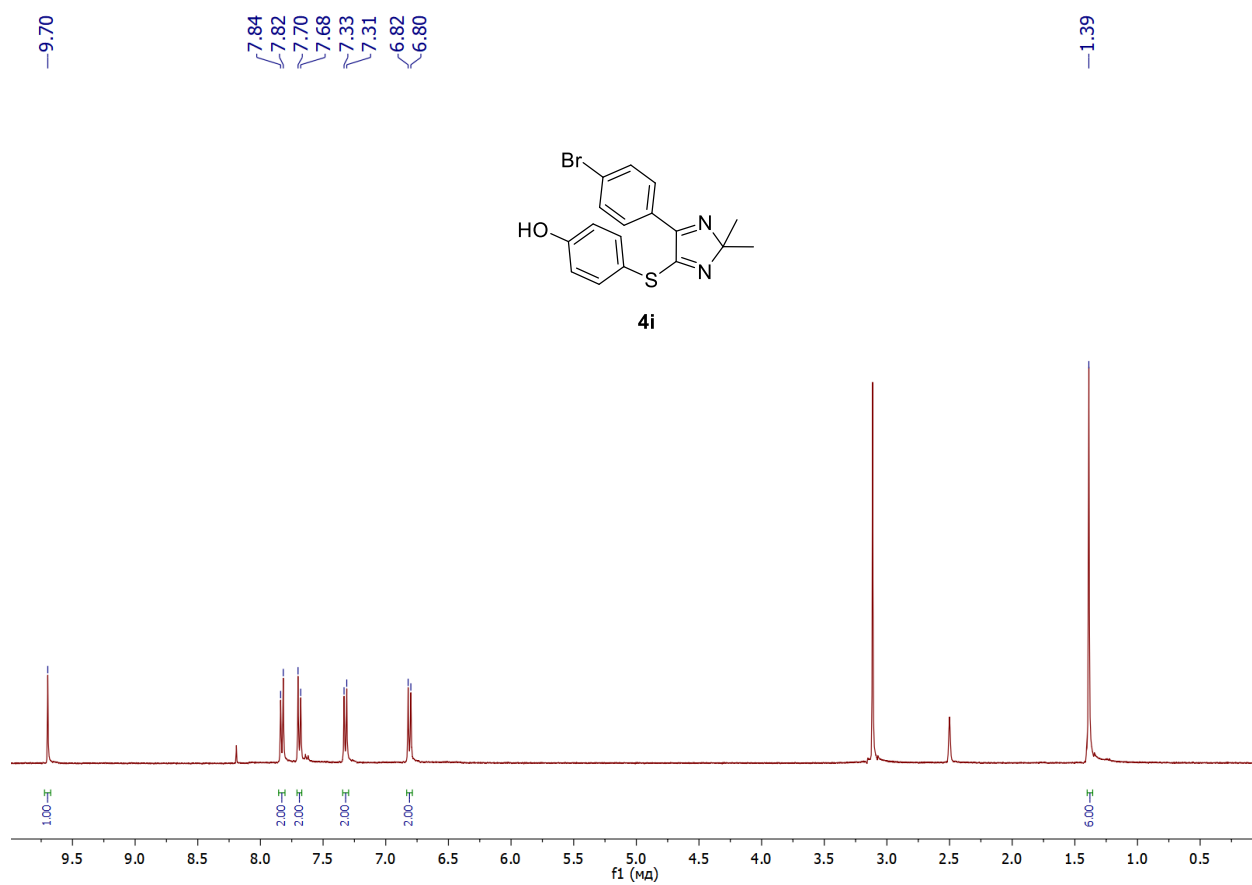
**Figure S23.** <sup>13</sup>C NMR spectrum (376 MHz, DMSO-d<sub>6</sub>) of compound **3k**



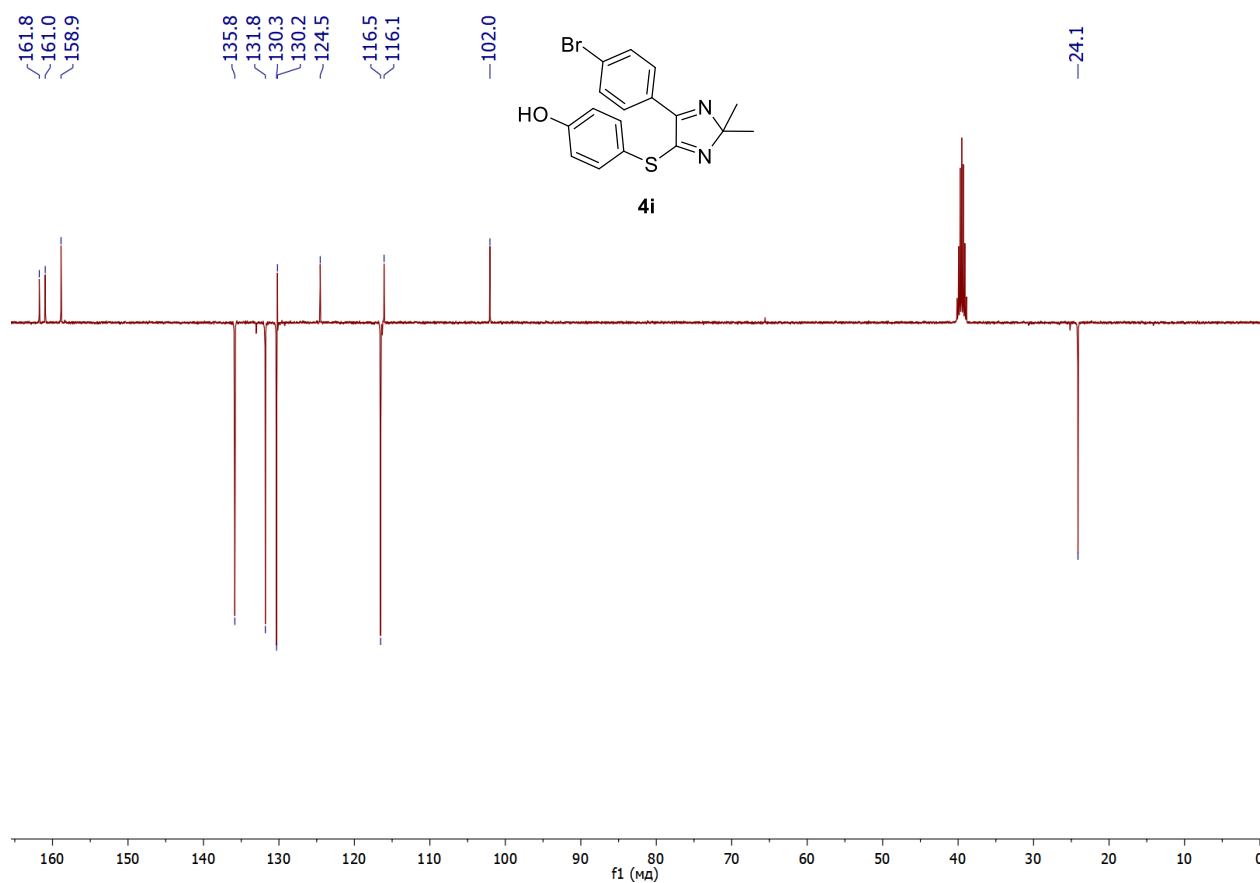
**Figure S24.** <sup>1</sup>H NMR spectrum (400 MHz, DMSO-d<sub>6</sub>) of compound **4a**



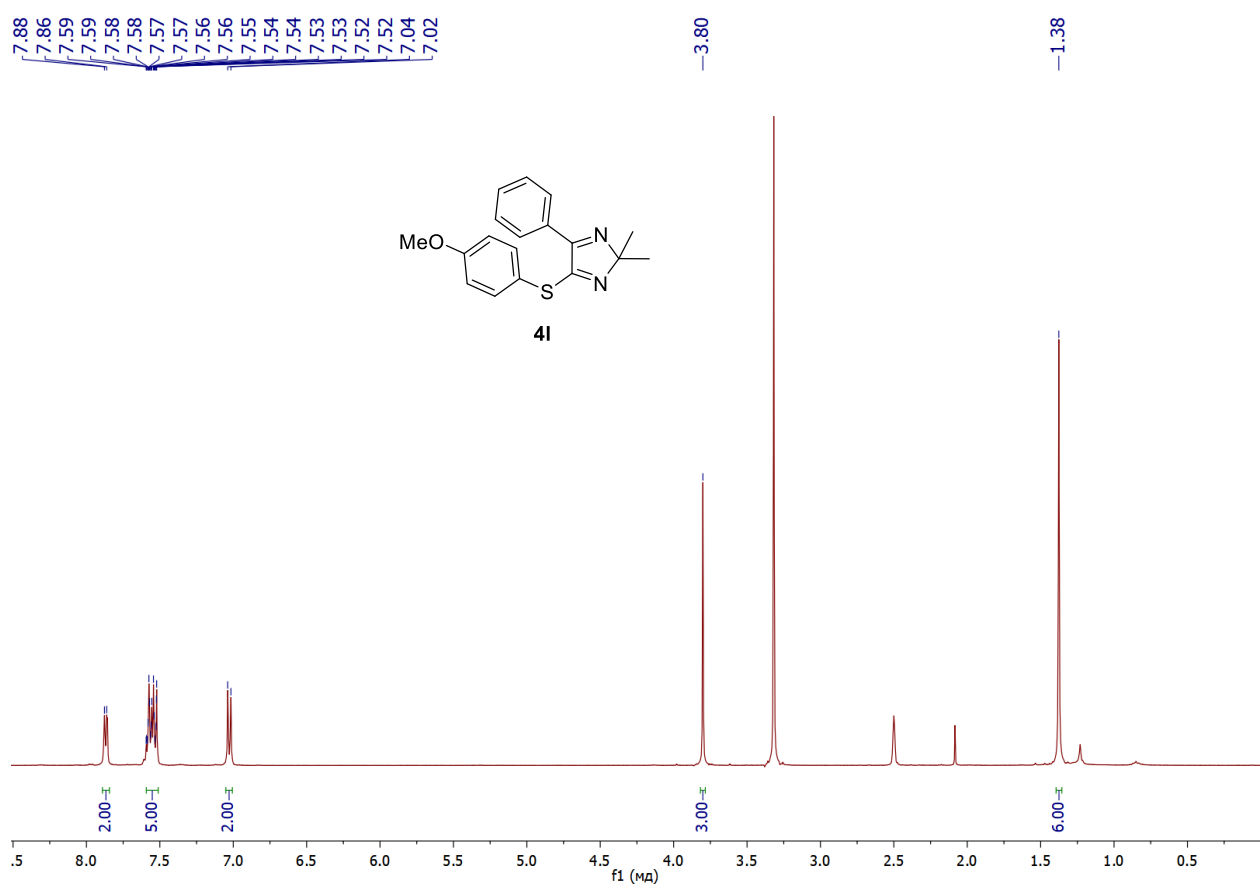
**Figure S25.**  $^{13}\text{C}$  NMR spectrum (101 MHz, DMSO- $d_6$ ) of compound **4a**



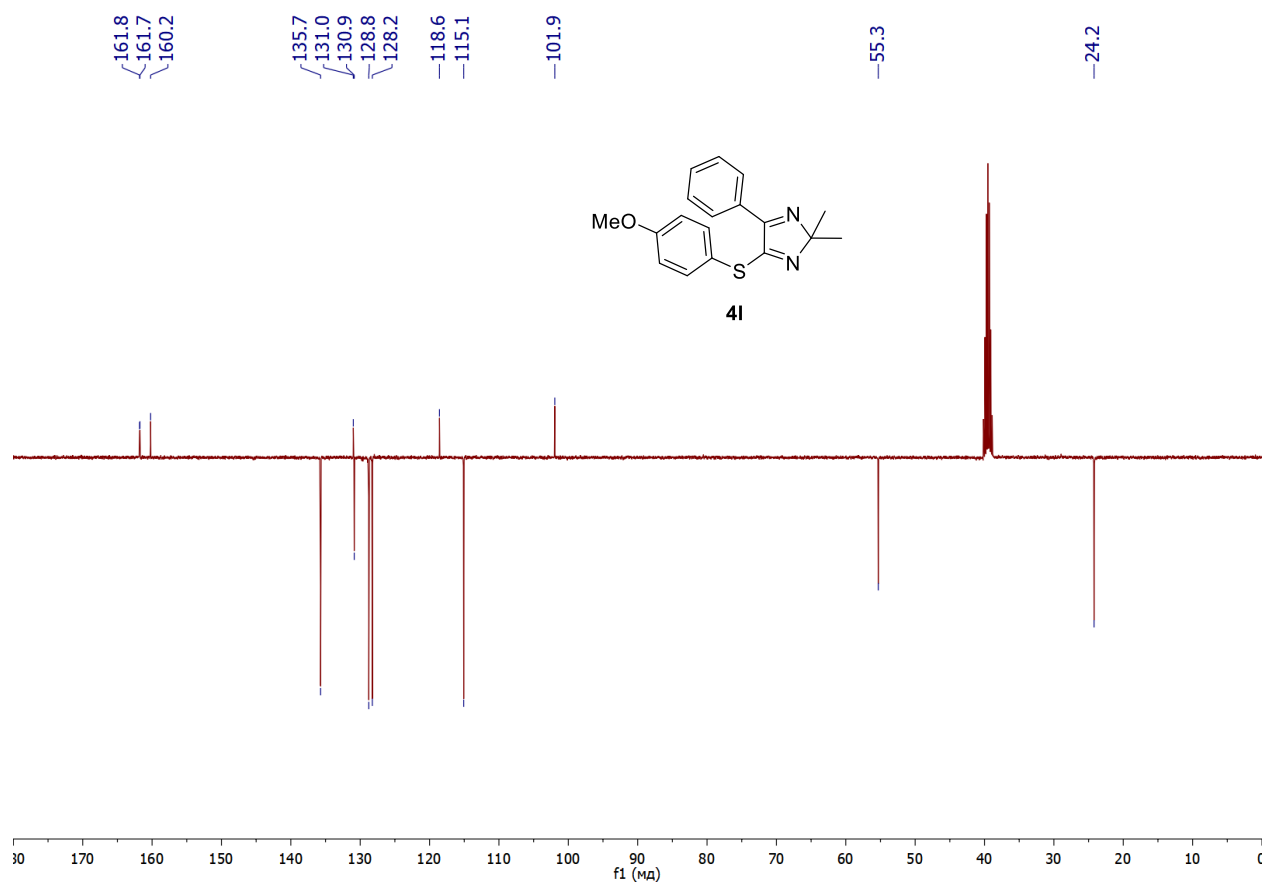
**Figure S26.**  $^1\text{H}$  NMR spectrum (400 MHz, DMSO- $d_6$ ) of compound **4i**



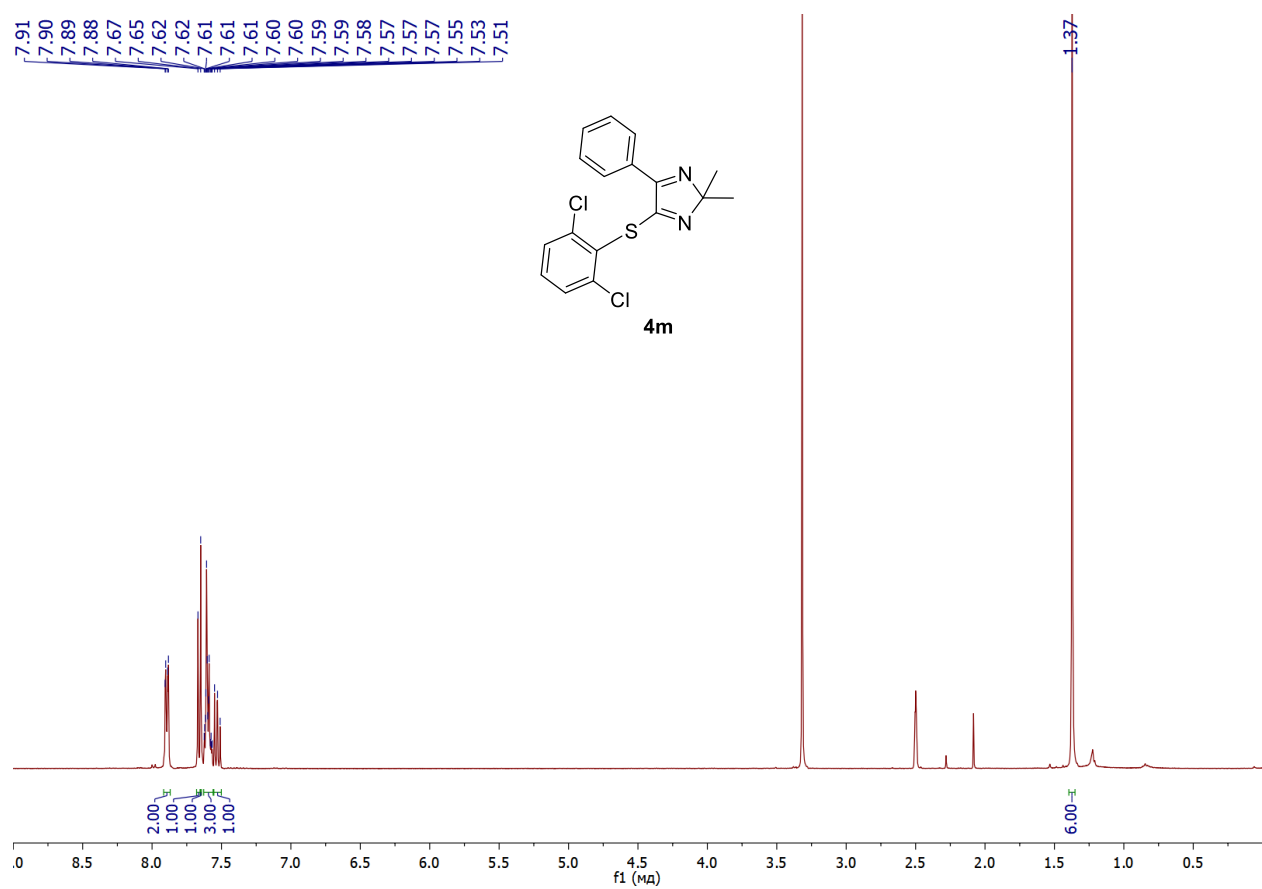
**Figure S27.** <sup>13</sup>C NMR spectrum (101 MHz, DMSO-d<sub>6</sub>) of compound **4i**



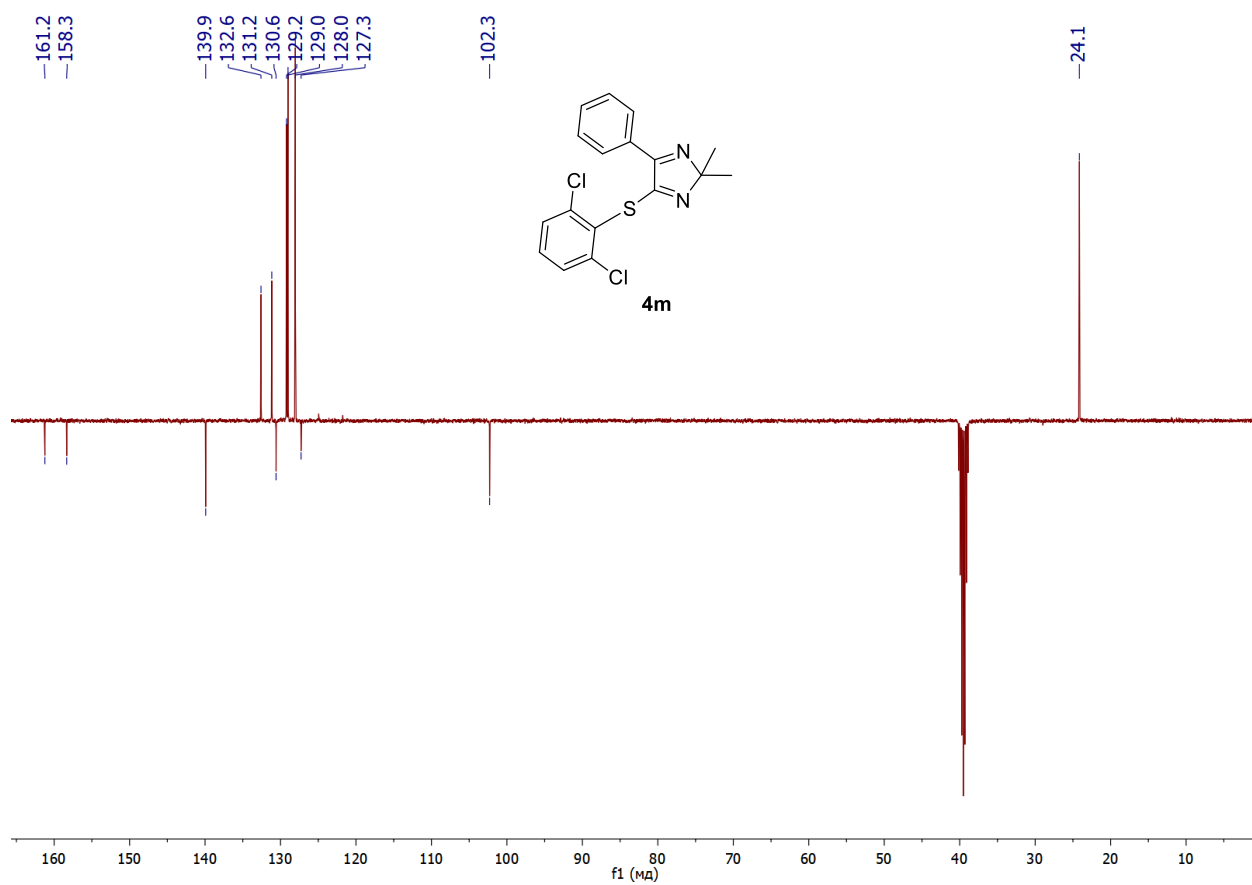
**Figure S28.** <sup>1</sup>H NMR spectrum (400 MHz, DMSO-d<sub>6</sub>) of compound **4l**



**Figure S29.** <sup>13</sup>C NMR spectrum (101 MHz, DMSO-d<sub>6</sub>) of compound **4l**



**Figure S30.** <sup>1</sup>H NMR spectrum (400 MHz, DMSO-d<sub>6</sub>) of compound **4m**



**Figure S31.**  $^{13}\text{C}$  NMR spectrum (101 MHz,  $\text{DMSO-d}_6$ ) of compound **4m**