

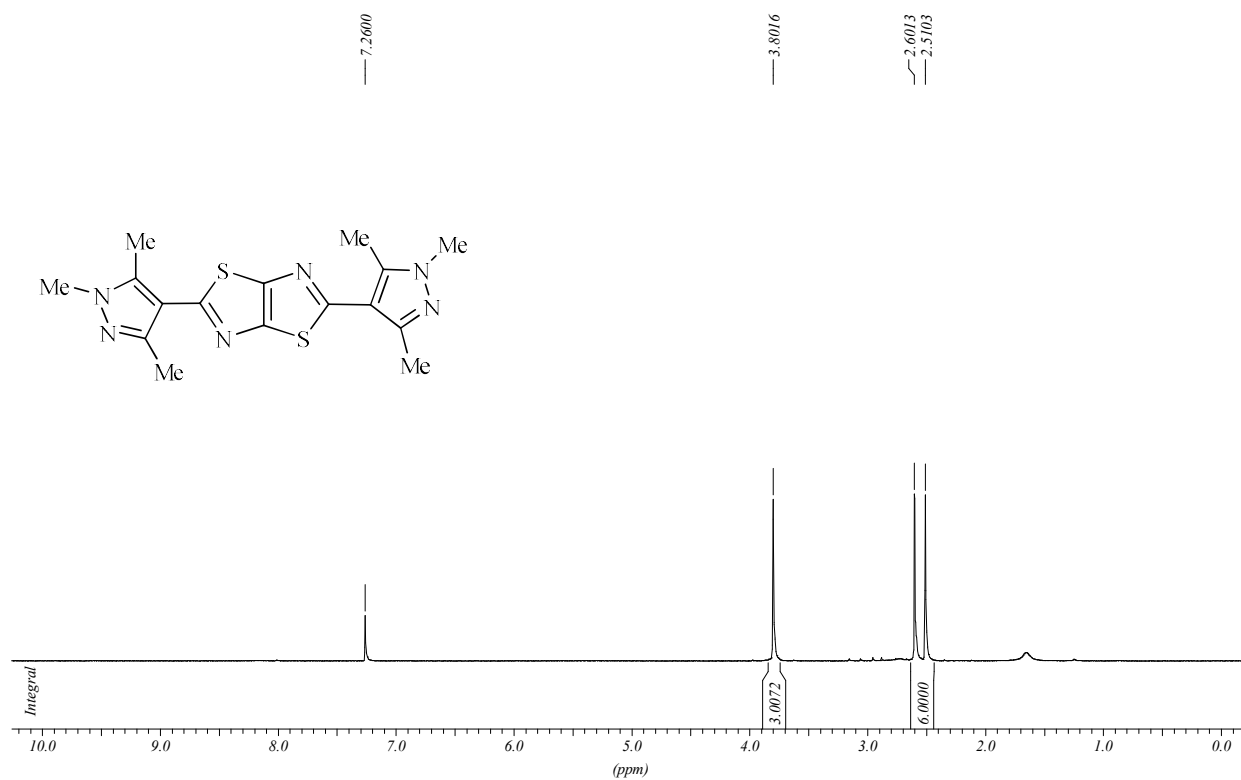
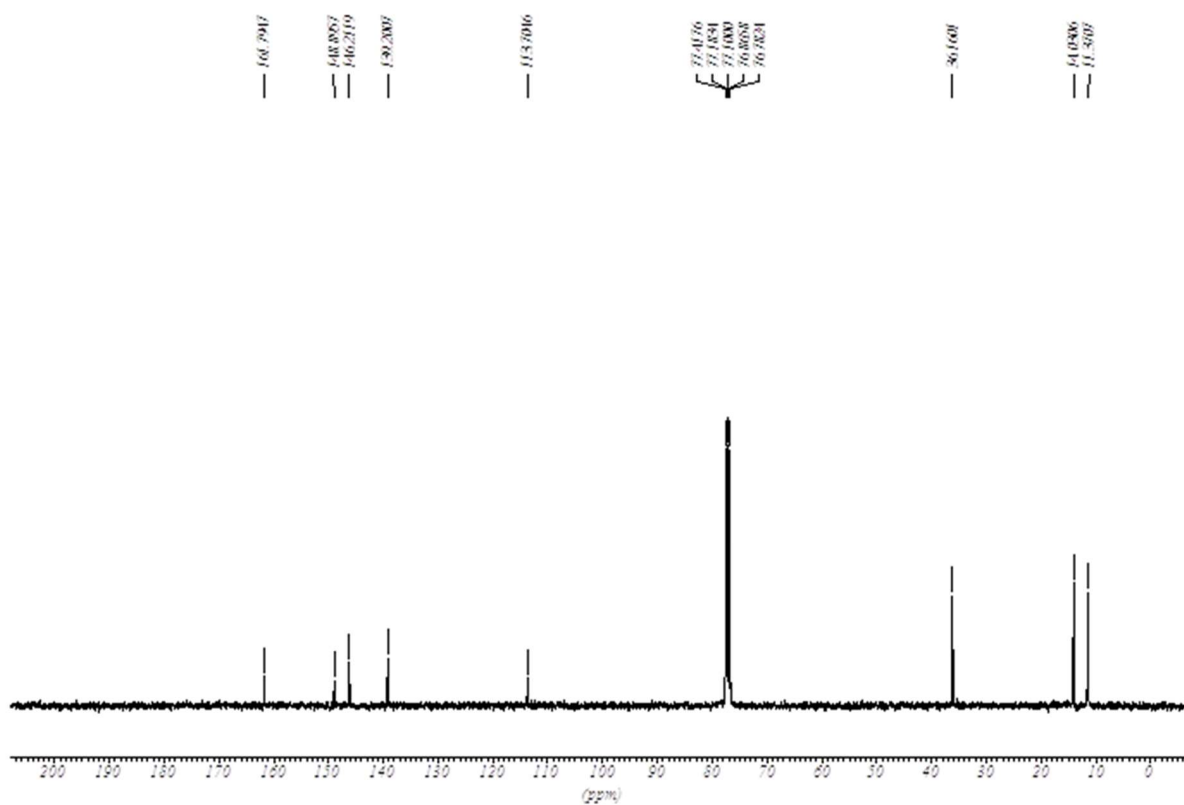
Supplementary Material
One-pot microwave-assisted synthesis of 2,5-bis(pyrazol-4-yl)[1,3]thiazolo[5,4-*d*][1,3]thiazoles from pyrazole-4-carbaldehydes and dithiooxamide

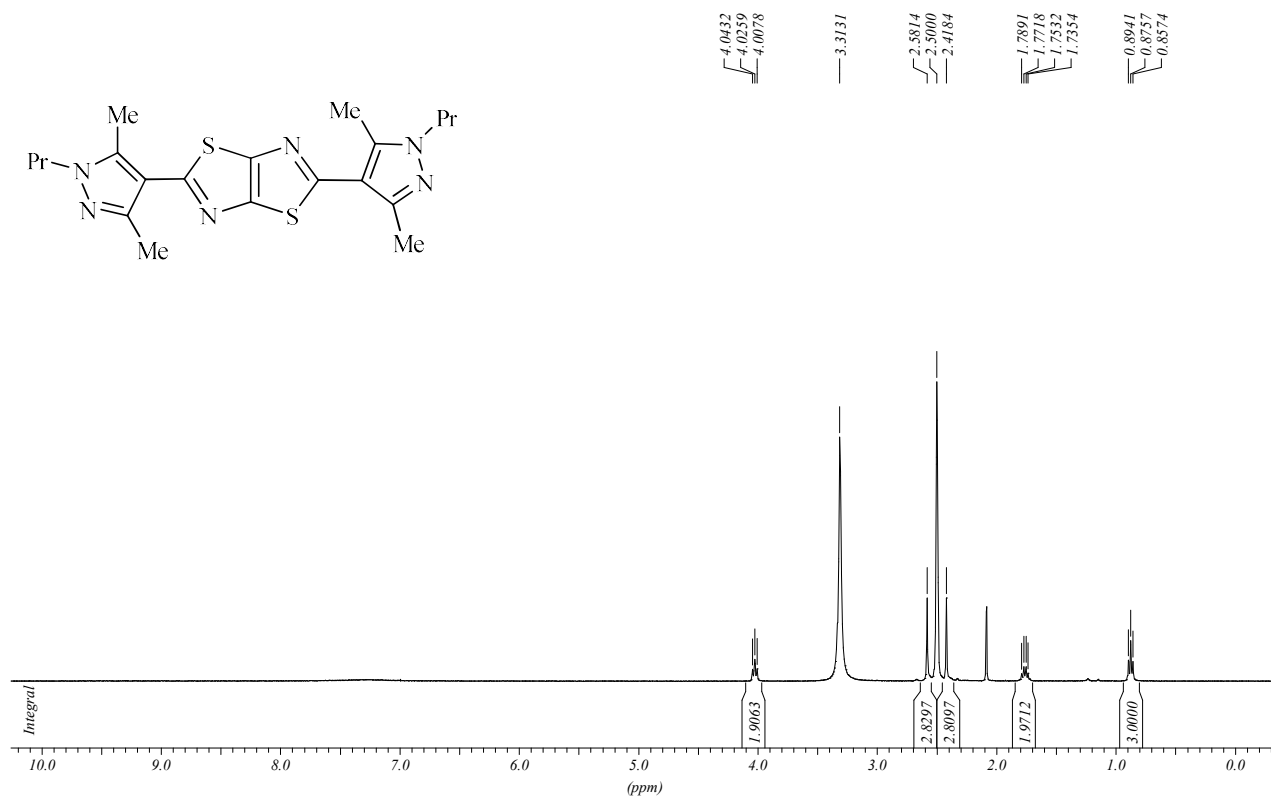
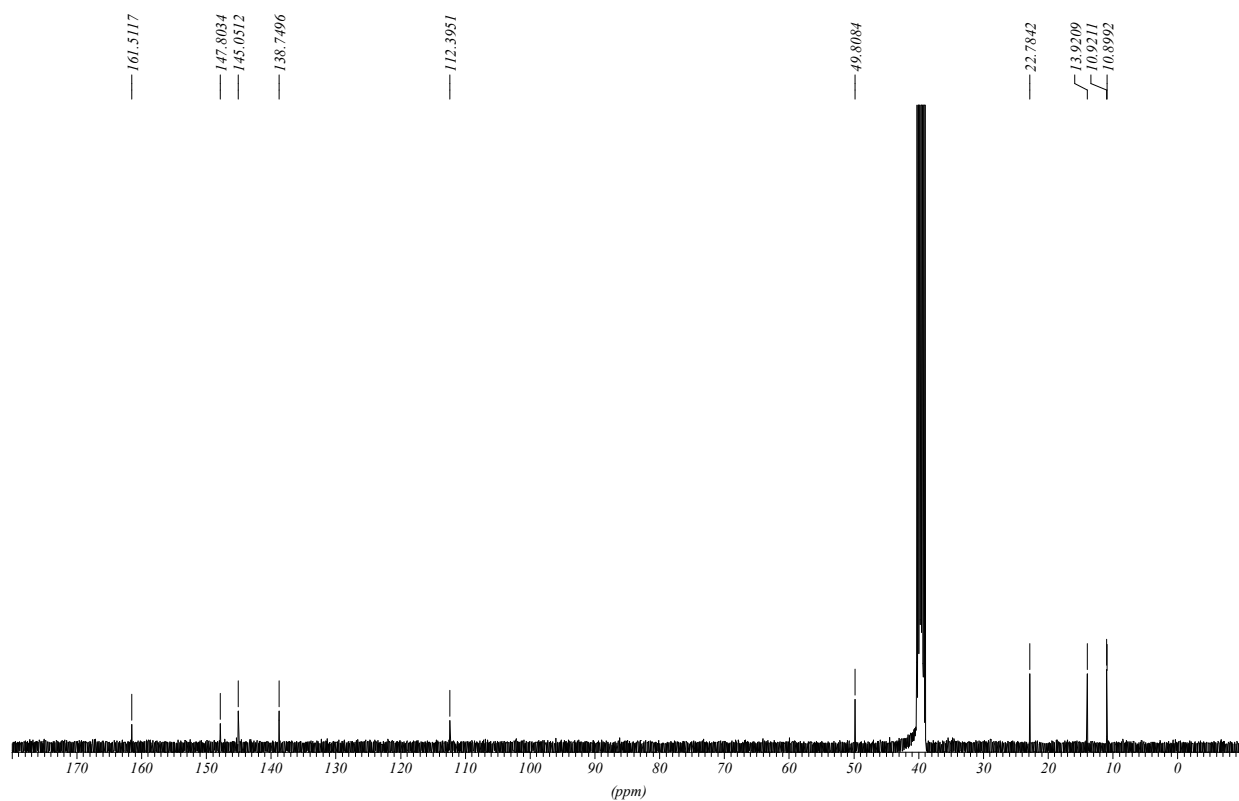
Lyubov K. Papernaya,* Alexandra A. Shatrova, Alexander I. Albanov, Galina G. Levkovskaya, and Igor B. Rozentsveig

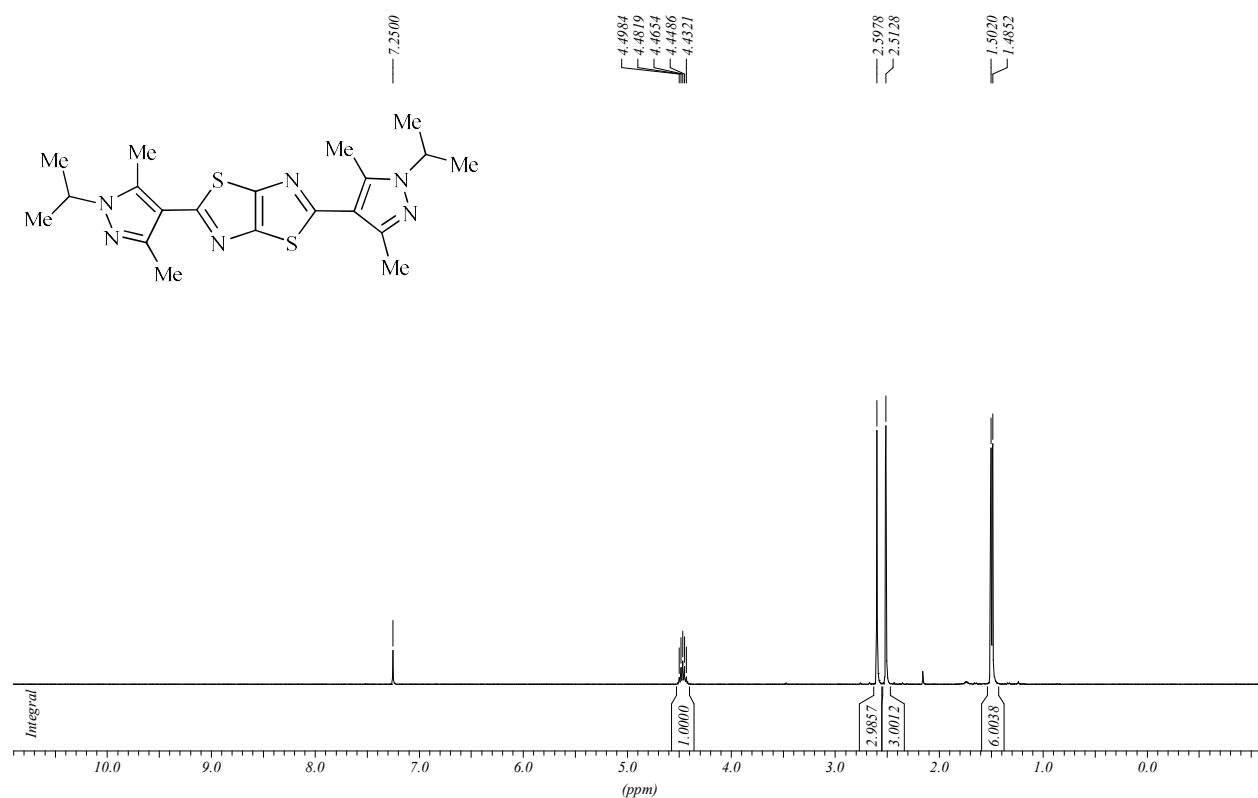
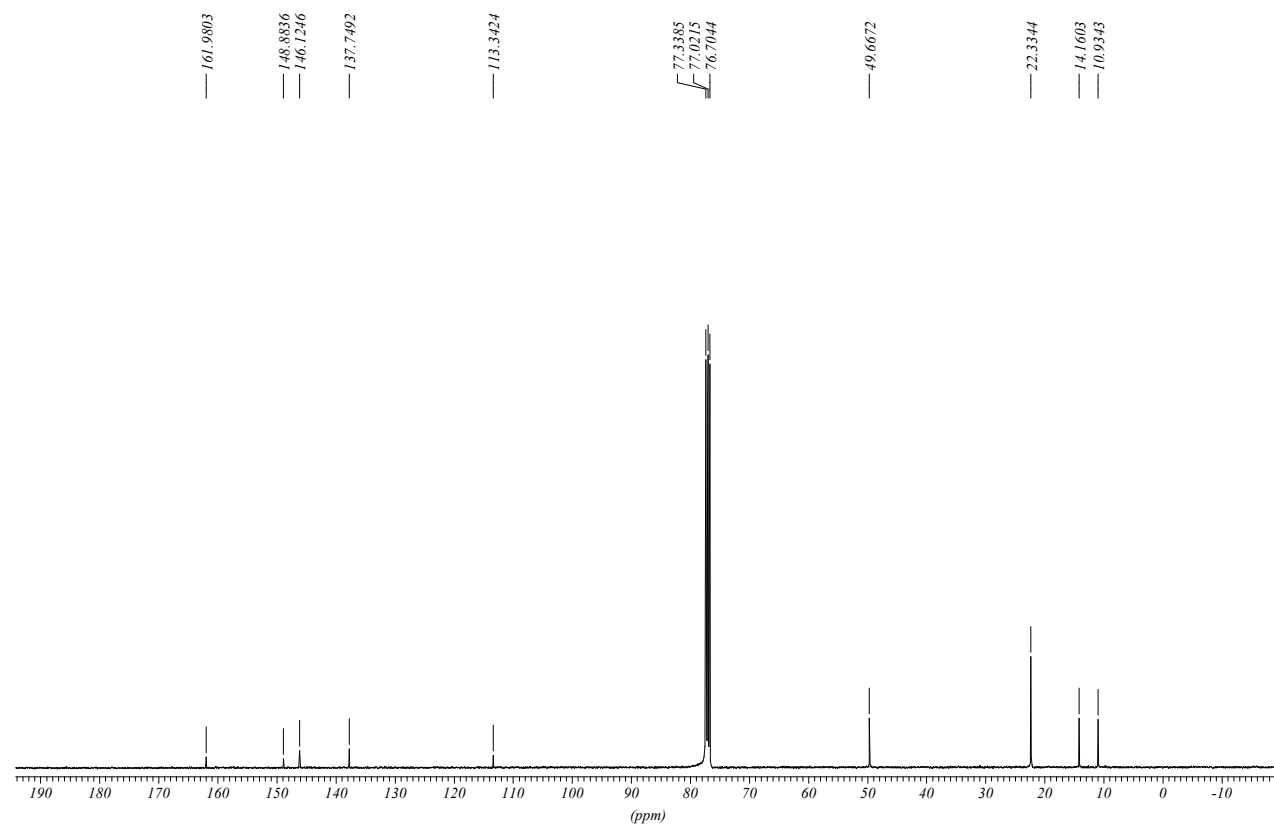
A. E. Favorsky Irkutsk Institute of Chemistry, Siberian Branch of the Russian Academy of Sciences, 1 Favorsky Street, 664033 Irkutsk, Russia
E-mail: papern@irioch.irk.ru

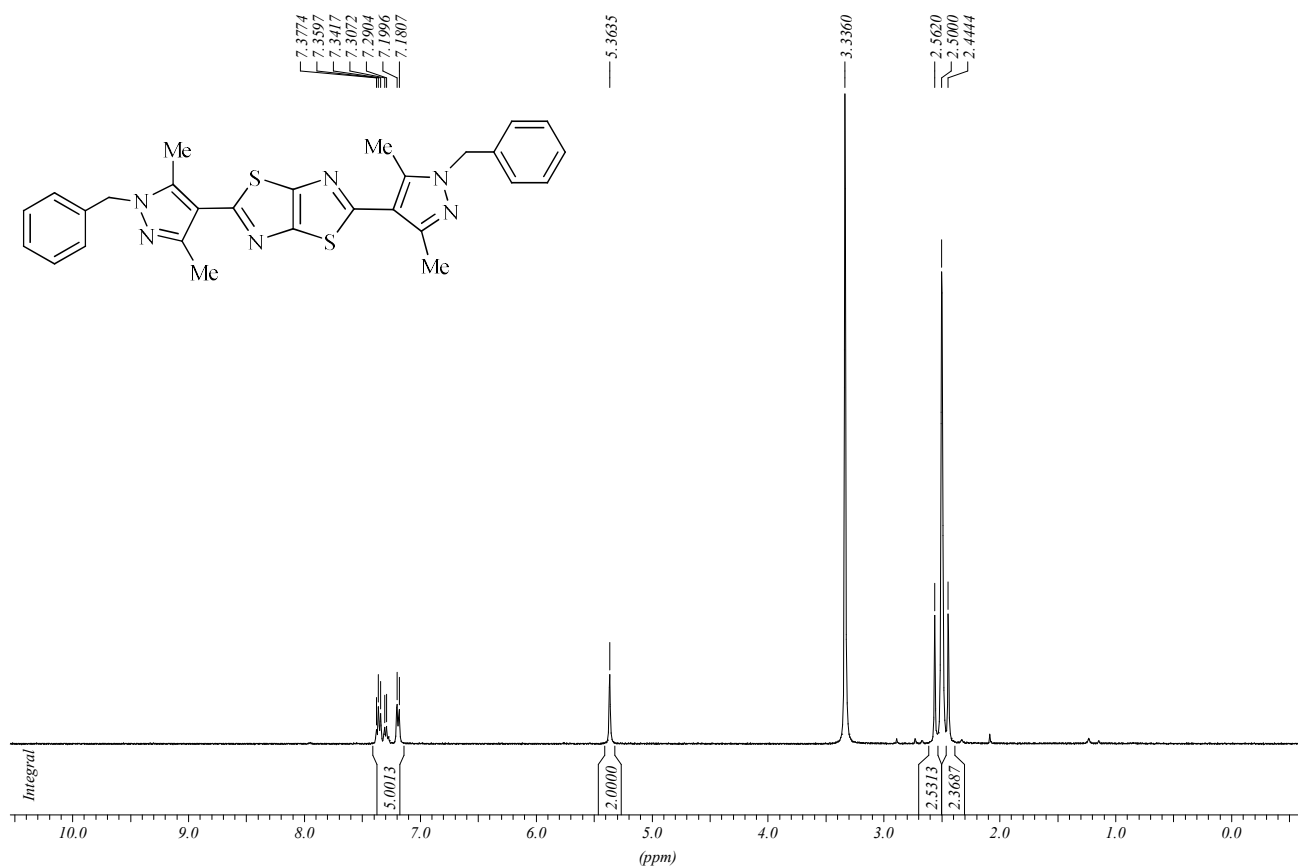
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¹³C NMR spectrum of compound **2b**¹H NMR spectrum of compound **2c**

¹³C NMR spectrum of compound **2c**¹H NMR spectrum of compound **2d**



X-ray analysis

Crystal data, data collection and structure refinement details are summarized in Table 1.

Table 1 Experimental data and precise structures of compounds **2c**

Formula	$\text{C}_{10}\text{H}_{13}\text{N}_3\text{S}$
Specimen	colorless plate
Spice dimensions, mm	0.070 x 0.320 x 0.500
Temperature, K	100
Crystal system / Space group	triclinic / P -1
Mr, g/mol	207.29
$\theta_{\text{min}} / \theta_{\text{max}}$,	2.67/30.25
a, Å; b, Å; c, Å	5.7032(4); 7.7544(6); 1.9147(8)
α , °; β , °; γ , °	89.211(2); 81.328(2); 79.248(3)
V, Å ³	511.70(6)
Z	2
D _{calc} , g/cm ³	1.345
F (000)	220
Absorp. Coeff., mm ⁻¹	0.279
Reflections collected/Independ reflections	22201 / 3019
Number of ref.param.	131
Final R ₁ , % / Rw (all data)	3.37 / 0.0404
Goodness-of-fit on F ²	1.076
($\Delta\rho$) _{max} and ($\Delta\rho$) _{min} , e/Å ³	0.394 and -0.411

$$\text{Weight scheme} \quad w=1/[\sigma^2(F_o^2)+(0.0419P)^2+0.2512P]$$

$$\text{where } P=(F_o^2+2F_c^2)/3$$

Principal bond distances, bond angles and torsion angles are presented in Table 2.

Table 2 Selected bond lengths, bond and torsion angles in compounds **2c**

<i>l</i> , Å	Angle	φ, °	Angle	θ, °
1.7296(12)	C6-S1-C5	88.77(5)	C3-N1-N3-C8	1.02(13)
1.3494(14)	C3-N1-C2	127.47(10)	C3-N1-C2-C10	-143.54(12)
1.4718(14)	C5-N2-C6	109.03(10)	C3-N1-C2-C1	92.20(14)
1.3670(14)	N1-C2-C10	110.20(10)	N3-N1-C3-C4	-0.87(14)
1.5204(18)	C10-C2-C1	112.39(10)	C6-S1-C5-N2	-0.66(9)
1.7700(11)	N3-N1-C2	119.09(9)	N1-N3-C8-C4	-0.74(13)
1.3654(13)	C8-N3-N1	105.11(9)	C3-C4-C5-S1	163.62(10)
1.3201(15)	N1-C2-C1	109.71(10)	C8-C3-C4-O1	179.66(10)
1.3324(14)	N1-C3-C7	122.81(10)	N1-C3-C4-C5	179.07(11)
1.4907(17)	N2-C5-S1	115.03(8)	C3-C4-C5-N2	-15.86(19)
1.4513(15)	C6-C6-S1	108.92(11)	N3-N1-C2-C10	44.60(14)
1.4008(15)	N3-C8-C9	119.10(10)	N3-N1-C2-C1	-79.66(13)