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

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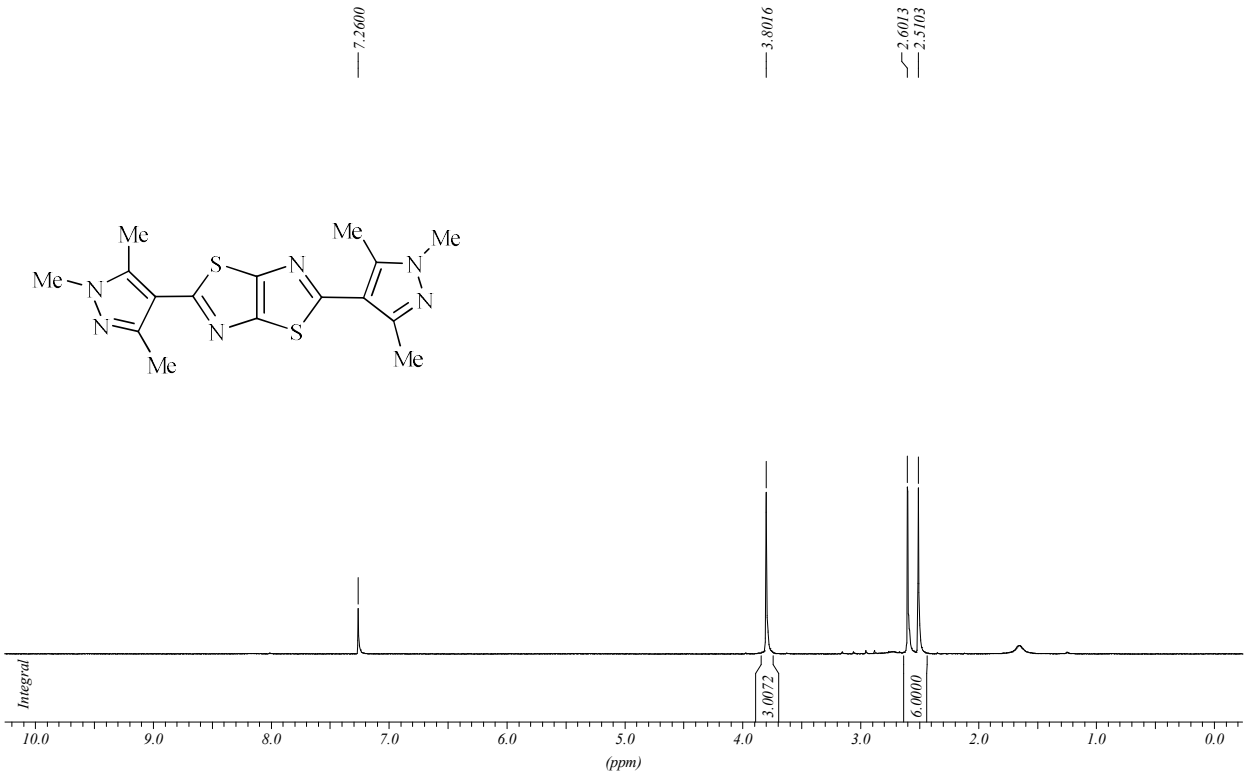
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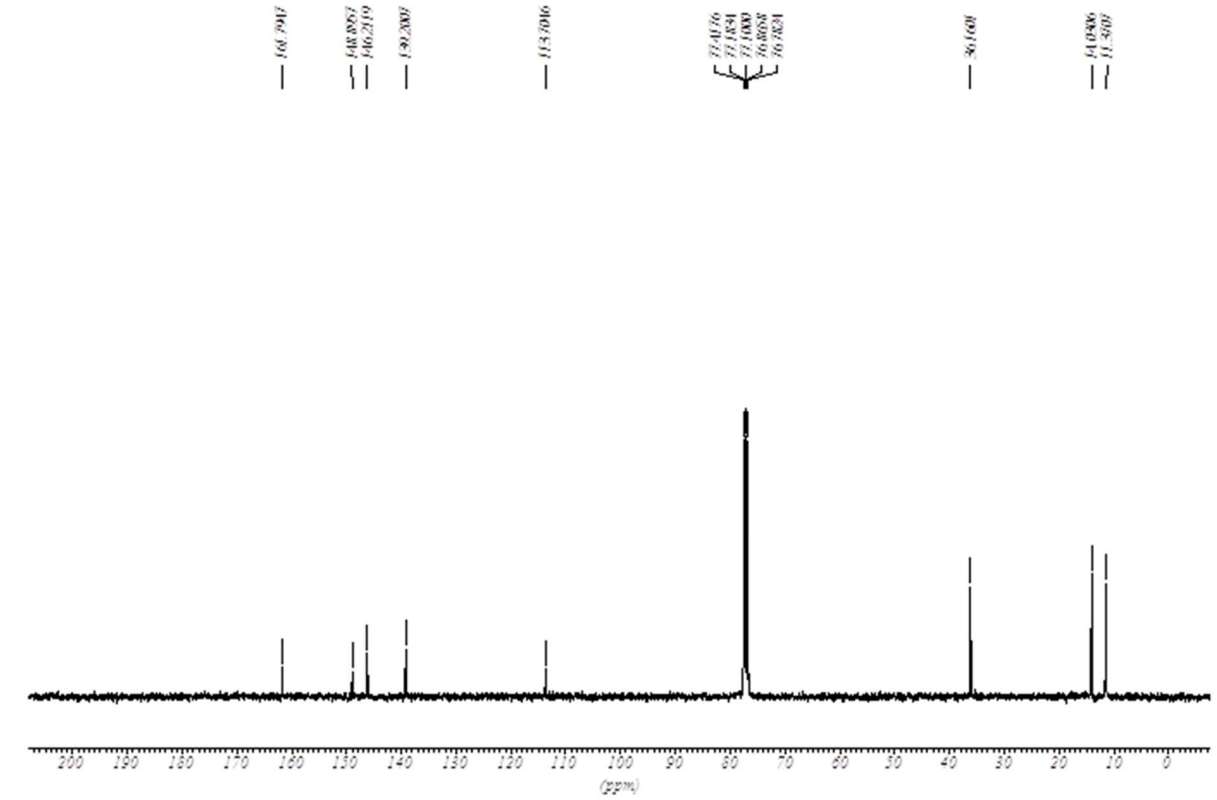
2. X-ray study S6

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^{1}H NMR spectrum of compound **2a**

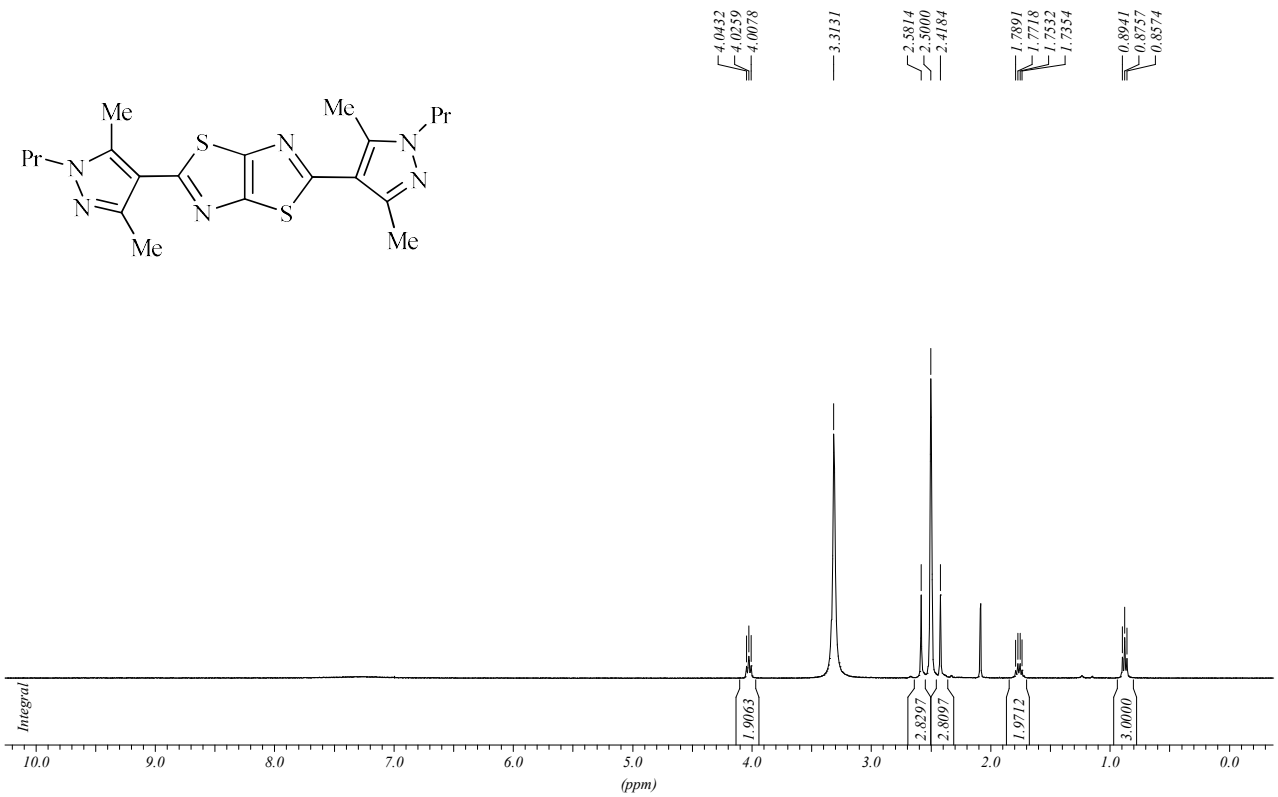


^{13}C NMR spectrum of compound **2a**

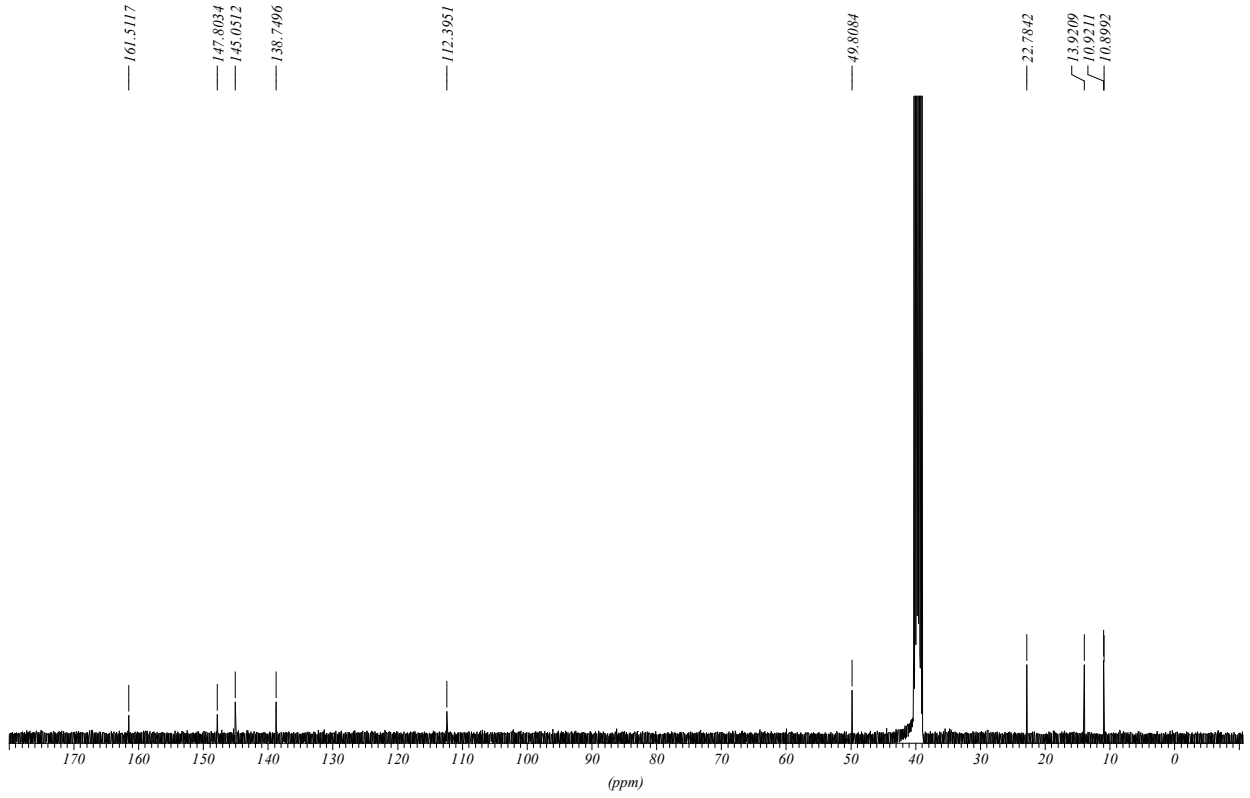


^{1}H NMR spectrum of compound **2b**

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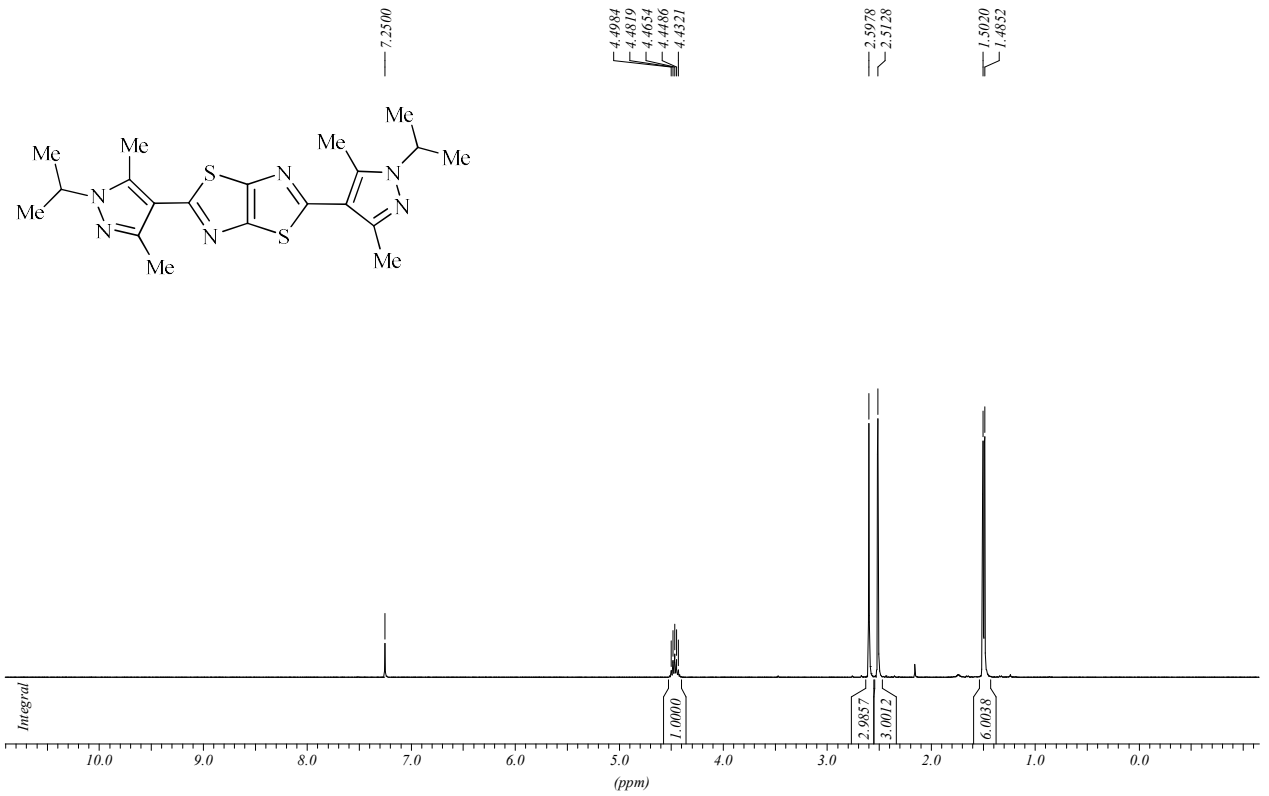


^{13}C NMR spectrum of compound **2b**

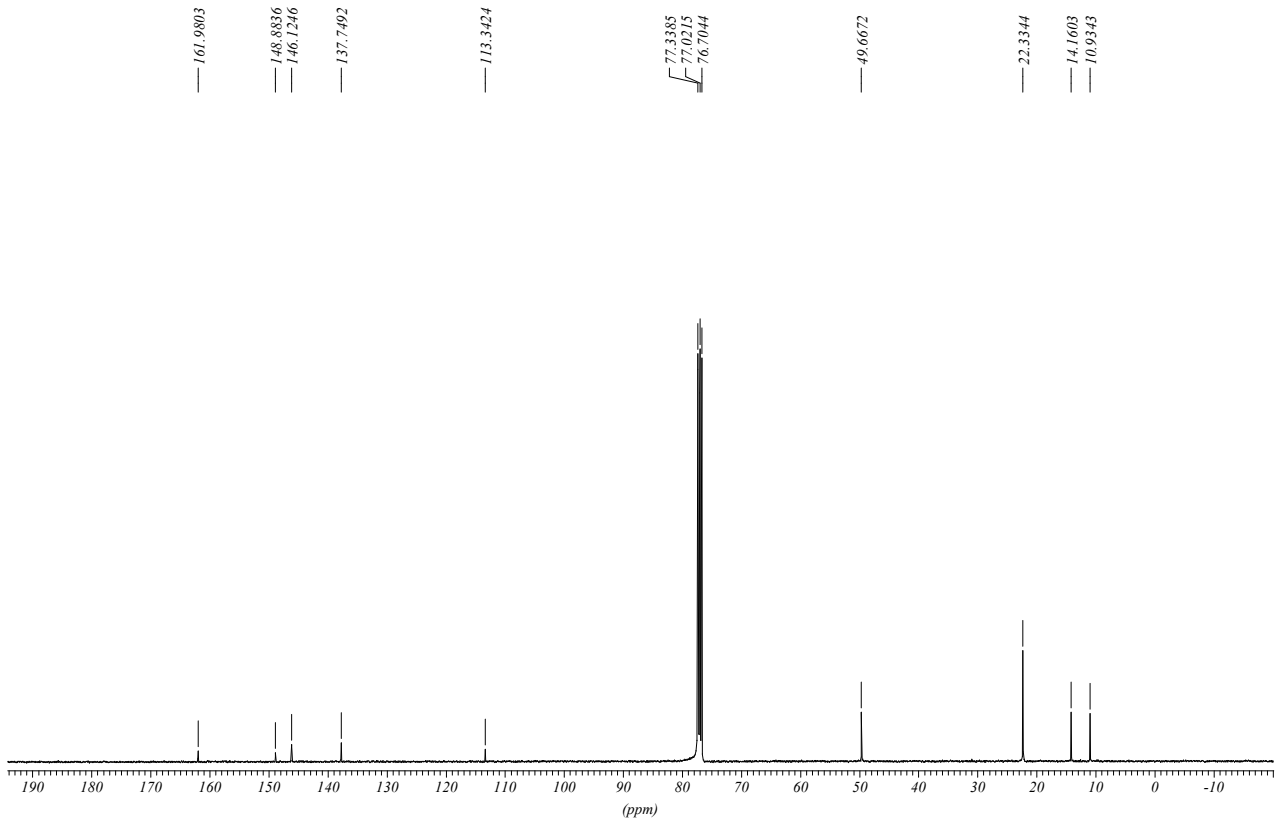


^{1}H NMR spectrum of compound **2c**

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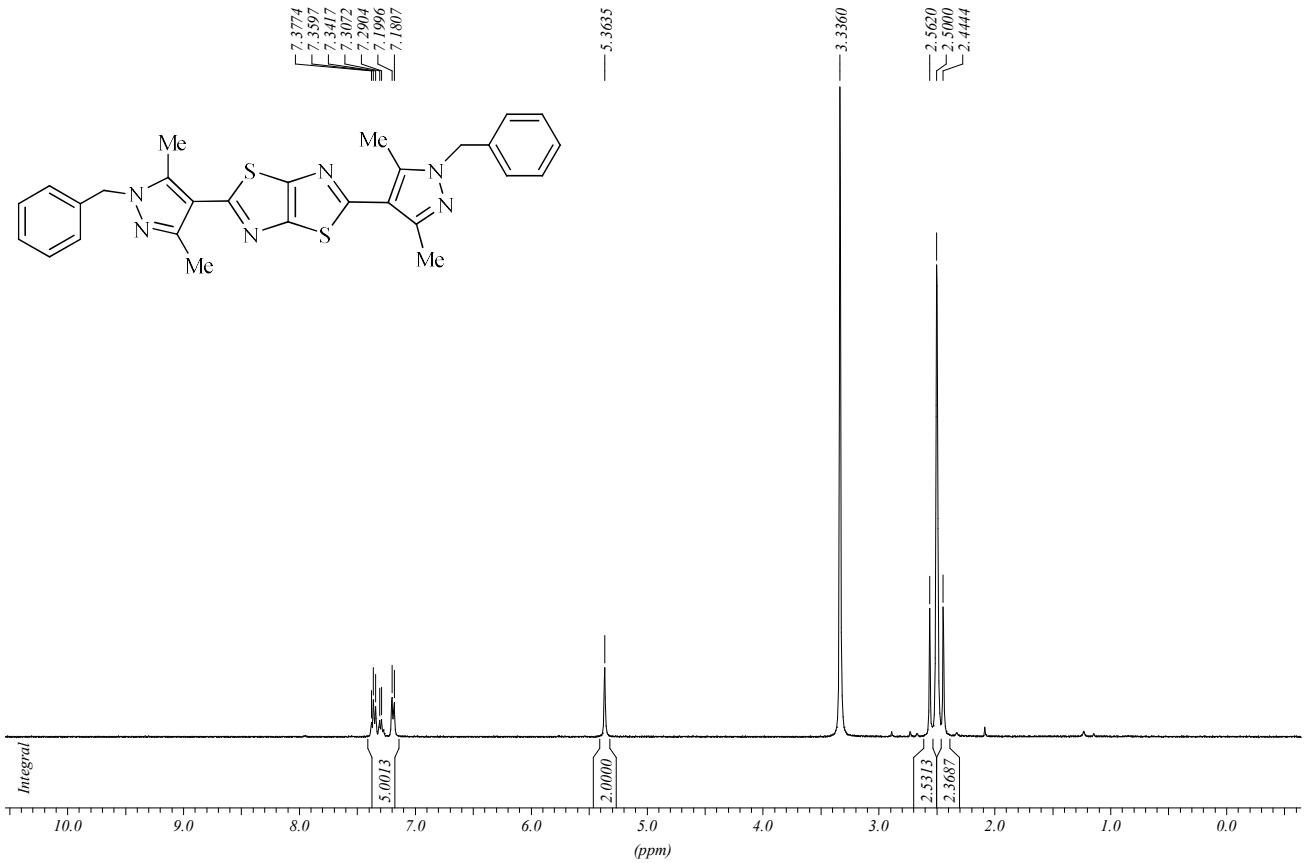


^{13}C NMR spectrum of compound **2c**



^{1}H NMR spectrum of compound **2d**

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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	$C_{10}H_{13}N_3S$
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
θ_{min} /θ_{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

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

l, 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)

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