Electronic Supplementary Material (ESI) for CrystEngComm.

Supporting Information

A simple and efficient synthesis of a series of N -(thiazol-2-yl)piperidine-2,6-dione compounds and their interesting NLO properties

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Table 1: Crystal data and CCDC number of compounds 1-5.

	Compound-1	**Compound -2**	**Compound -3**	**Compound-4**	**Compound -5**
Empirical formula	$C_8H_8N_2O_2S$	$C_9H_{10}N_2O_2S$	$C_9H_{10}N_2O_2S$	$C_{10}H_{12}N_2O_2S$	$C_{12}H_{10}N_2O_2S$
Formula weight	196.22	210.25	210.25	224.28	246.28
Temperature/K	293(2)	293(2)	293(2)	293(2)	293(2)
Crystal system	orthorhombic	orthorhombic	monoclinic	orthorhombic	orthorhombic
Space group	Fdd2	$Pna2_1$	$P2_1/c$	Pbca	Pbca
a/Å	22.635(4)	17.270(2)	10.4402(13)	11.0048(7)	10.7717(9)
b/Å	18.2458(18)	6.5290(5)	9.0667(12)	9.1927(7)	9.2453(9)
c/Å	8.4549(12)	8.7853(8)	10.6841(15)	21.2407(14)	23.0901(14)
α/°	90	90	90	90	90
β/°	90	90	103.828(12)	90	90
γ/°	90	90	90	90	90
Volume/$Å^3$	3491.9(8)	990.61(16)	982.0(2)	2148.8(2)	2299.5(3)
Z	16	4	4	8	8
$\rho_{calc}g/cm^3$	1.493	1.410	1.422	1.387	1.423
μ/mm^{-1}	0.336	0.301	0.304	0.282	0.272
F(000)	1632.0	440.0	440.0	944.0	1024.0
Crystal size/mm^3	0.98 × 0.26 × 0.243	0.94 × 0.79 × 0.6	1.47 × 0.8 × 0.447	1.177 × 0.683 × 0.301	1.26 × 0.693 × 0.346

Radiation	Mo Kα (λ = 0.71073)	Mo Kα (λ = 0.71073)	Mo Kα (λ = 0.71073)	Mo Kα (λ = 0.71073)	Mo Kα (λ = 0.71073)
2Θ range for data collection/°	7.2 to 57.668	6.672 to 57.672	7.704 to 52.74	6.94 to 58.04	6.796 to 52.744
Index ranges	$-26 \le h \le 28$, $-16 \le k \le 24$, $-11 \le l \le 4$	$-23 \le h \le 18$, $-7 \le k \le 8$, $-6 \le l \le 11$	$-13 \le h \le 12$, $-11 \le k \le 9$, $-13 \le l \le 12$	$-13 \le h \le 14$, $-12 \le k \le 12$, $-25 \le l \le 29$	$-13 \le h \le 12$, $-11 \le k \le 11$, $-28 \le l \le 28$
Reflections collected	2347	3049	3834	7976	12129
Independent reflections	1290 [R_{int} = 0.0159, R_{sigma} = 0.0232]	1505 [R_{int} = 0.0140, R_{sigma} = 0.0189]	1982 [R_{int} = 0.0148, R_{sigma} = 0.0237]	2104 [R_{int} = 0.0321, R_{sigma} = 0.0459]	2321 [R_{int} = 0.0331, R_{sigma} = 0.0270]
Data/restraints/parameters	1290/1/118	1505/1/128	1982/0/138	2104/0/139	2321/0/187
Goodness-of-fit on F^2	0.961	1.075	1.060	1.022	0.715
Final R indexes [I>=2σ (I)]	R_1 = 0.0347, wR_2 = 0.1099	R_1 = 0.0412, wR_2 = 0.1136	R_1 = 0.0367, wR_2 = 0.0924	R_1 = 0.0460, wR_2 = 0.1040	R_1 = 0.0525, wR_2 = 0.1553
Final R indexes [all data]	R_1 = 0.0379, wR_2 = 0.1158	R_1 = 0.0448, wR_2 = 0.1164	R_1 = 0.0468, wR_2 = 0.0989	R_1 = 0.0671, wR_2 = 0.1155	R_1 = 0.0699, wR_2 = 0.1783
Largest diff. peak/hole / e $Å^{-3}$	0.16/-0.16	0.48/-0.41	0.19/-0.22	0.46/-0.15	0.37/-0.21
Flack parameter	0.32(13)	0.18(6)			
CCDC Number	1560120	1561181	2062131	2062127	1561183

Table 2: Geometries of hydrogen bond in **Compound-1** to **compound-5**

	D	H	A	d(D…H)/Å	d(H…A)/Å	d(D…A)/Å	D-H…A/°	Symmetry operation for A
Compound-1	C7 C5 C3	H7A H5A H3	O1[1] O1[1] N1[2]	0.97 0.97 0.93	2.47 2.48 2.56	3.222(4) 3.234(4) 3.224(4)	133.8 134.6 129.0	[1]-7/4-X,1/4+Y,1/4+Z; [2]-7/4-X,-1/4+Y,-1/4+
Compound-2	C2 C4	H2 H4B	O2[1] O2[1]	0.93 0.96	2.62 2.57	3.416(5) 3.412(6)	143.7 146.0	[1]3/2-X,-1/2+Y,1/2+Z
Compound-3	C8 C2 C4	H8B H2 H4B	N1[1] O1[2] O1[3]	0.97 0.93 0.96(4)	2.54 2.56 2.62(4)	3.399(2) 3.084(2) 3.562(3)	147.1 115.7 168(3)	[1]2-X,1-Y,2-Z; [2]1-X,1/2+Y,3/2-Z; [3]+X,1/2-Y,-1/2+Z
Compound-4	C9 C4	H9A H4A	O1[1] O1[2]	0.97 0.96	2.56 2.55	3.433(3) 3.436(3)	150.1 153.2	[1]1/2+X,+Y,3/2-Z; [2]-X,-Y,1-Z
Compound-5	C9 C11	H9B H11C	O2[1] O1[2]	0.93(5) 1.40(6)	2.45(5) 2.65(6)	3.281(4) 3.538(5)	148(4) 119(4)	[1]1-X,-1/2+Y,3/2-Z; [2]1/2+X,+Y,3/2-Z

Table 3: SHG experimental data of compounds 1-5.

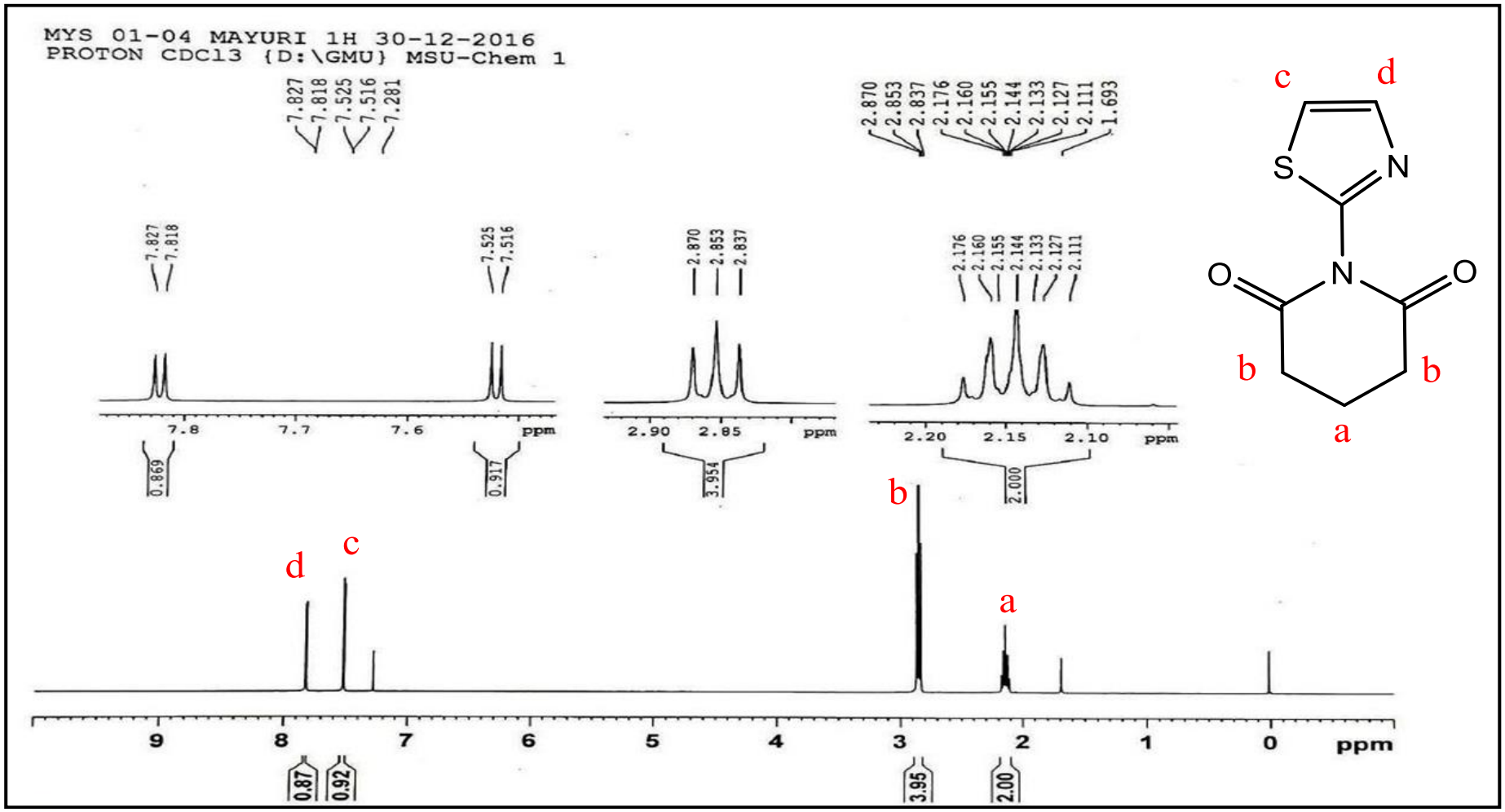
Compound Info.	Compound 1 (2-AT) M.F.:$C_8H_8N_2O_2S$ CCDC: 1560120 Fdd_2	Compound 2 (2-AT-5-Me) M.F.:$C_9H_{10}N_2O_2S$ CCDC: 1561181 $Pna2_1$	Compound 3 (2-AT-4-Me) M.F.:$C_9H_{10}N_2O_2S$ CCDC: 2062131 $P2_{1/C}$	Compound 4 (2-AT-4,5-Dime) M.F.:$C_{10}H_{12}N_2O_2S$ CCDC: 2062127 Pbca	Compound 5 (2-AT-Phenyl) M.F.:$C_{12}H_{10}N_2O_2S$ CCDC: 1561183 Pbca
NLO-Second Harmonic generation	192 mV 3.05> Urea 6.62> KDP	60mV 0.95> Urea 2.07> KDP	10 mV 0.3 > Urea = KDP	25 mV 0.5> Urea 1.13> KDP	10mV 0.3 > Urea = KDP

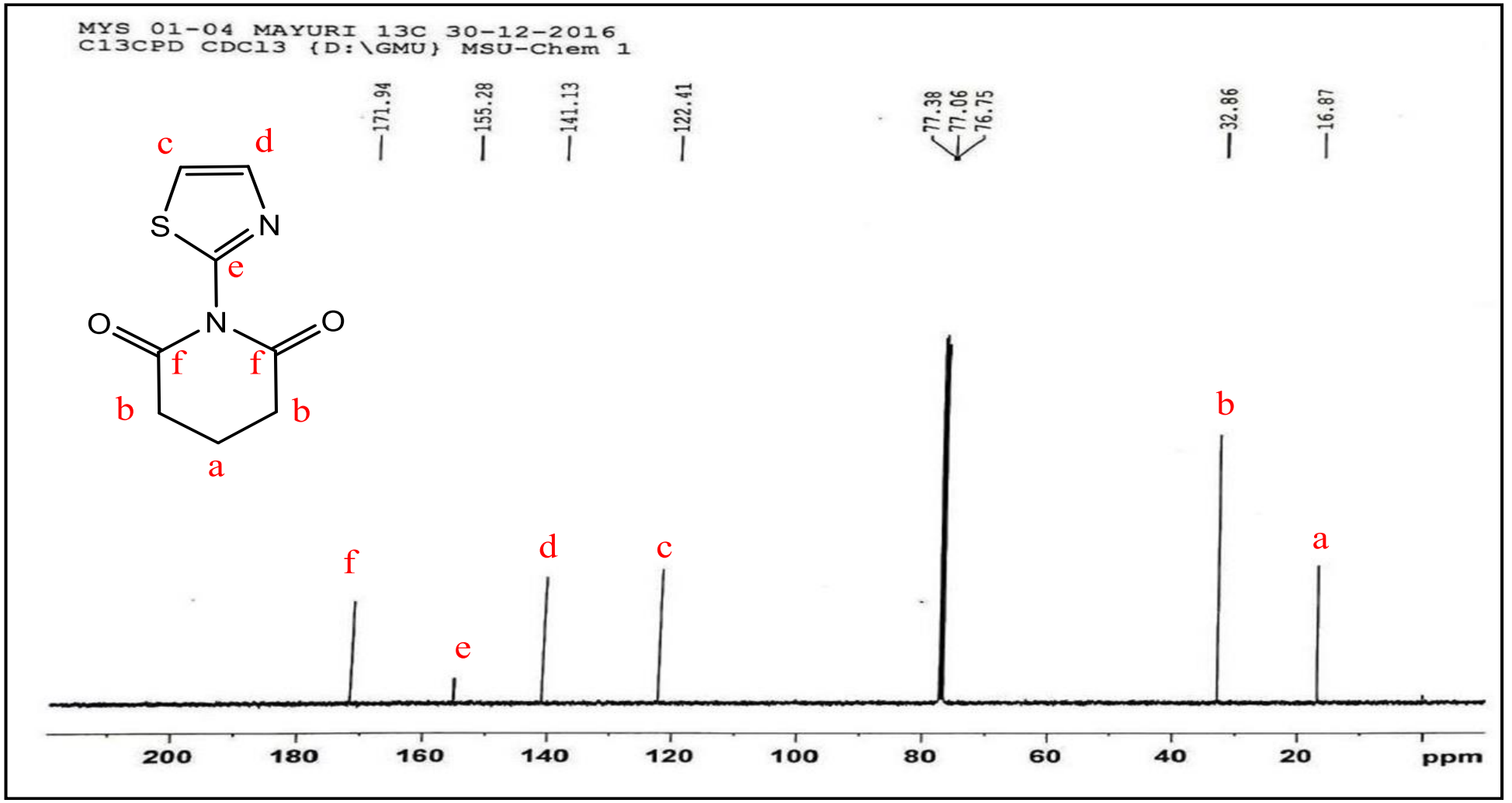
Table 4 : % Contribution of various non-covalent interactions in Compound-1to Compound-5 (calculated using Hirshfeld surface analysis)

% **Compounds**	**C-H**	**H-C**	**C-O**	**O-C**	**C-N**	**N-C**	**C-S**	**S-C**	**S-N**	**N-S**	**N-O**	**O-N**	**C-C**	**O-O**	**H-H**	**O-H**	**H-O**	**H-S**	**S-H**	**O-S**	**S-O**	**H-N**	**N-H**
2-AT	4.0	3.1	1.0	0.8	0.7	0.7	0.3	0.3	0.2	0.1	0.7	0.7	1.1	0.3	27.6	15.5	13.6	5.2	9.0	1.2	1.6	5.5	6.9
2-A-5-MT	5.1	4.1	0.7	0.7	0.0	0.0	0.0	0.1	0.0	0.0	0.6	0.6	0.0	0.4	36.2	13.8	11.2	3.5	6.7	1.5	2.1	5.4	7.1
2-A-4-MT	5.1	4.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	34.0	14.4	11.8	4.5	8.9	1.1	1.7	5.3	6.5
2-A-4,5-DMT	3.6	2.9	0.7	0.6	0.0	0.0	0.7	0.7	0.7	0.6	0.5	0.3	0.3	0.1	42.7	13.8	11.5	3.4	6.1	0.7	1.0	4.0	5.2
2-ABT	9.9	7.9	0.5	0.5	0.0	0.0	1.4	1.4	0.7	0.5	0.4	0.3	4.4	0.5	30.0	12.0	10.0	3.2	5.5	0.8	1.1	3.9	5.1

Physico-Chemical Characterization of Compounds 1-5

Data of Compound -1: Piperidine-2, 6-dione derivative of 2-Aminothiazole

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O
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O
f
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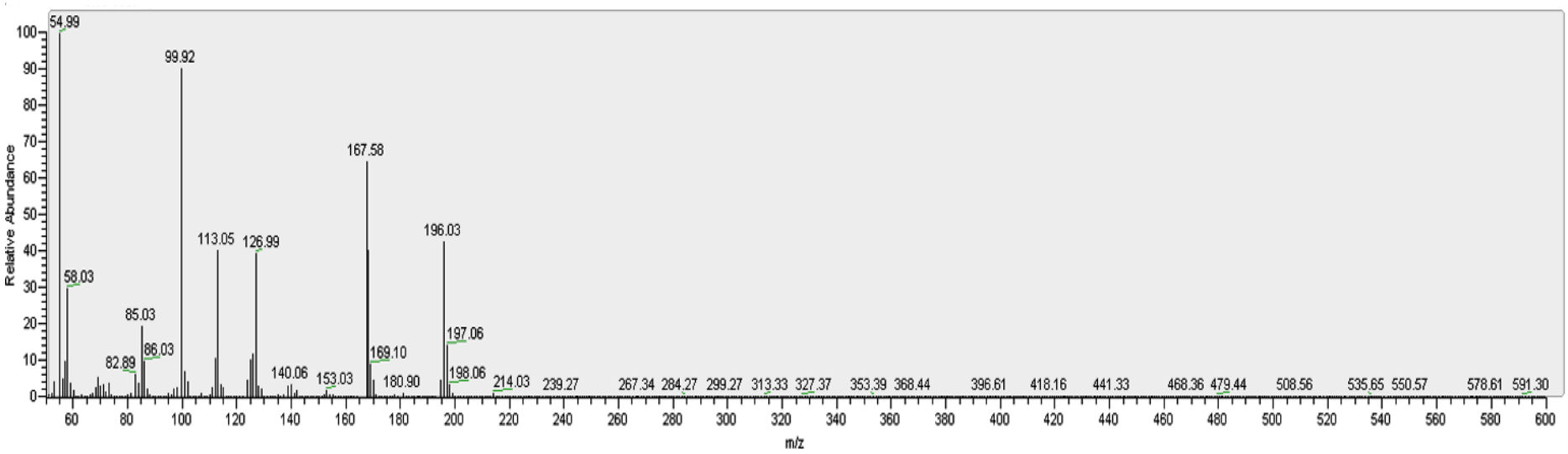
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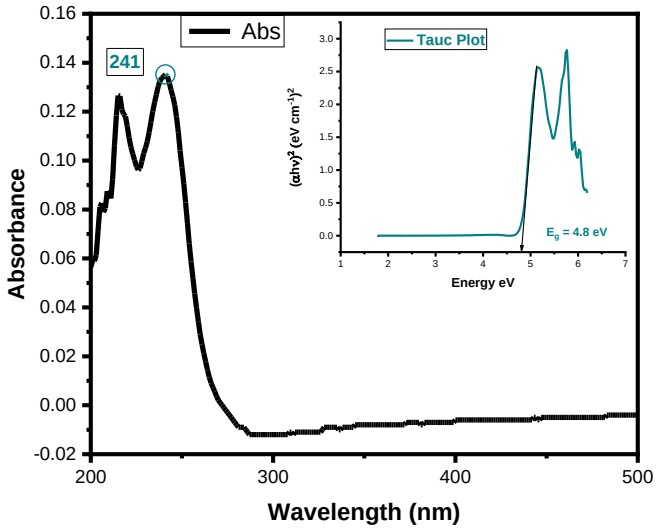
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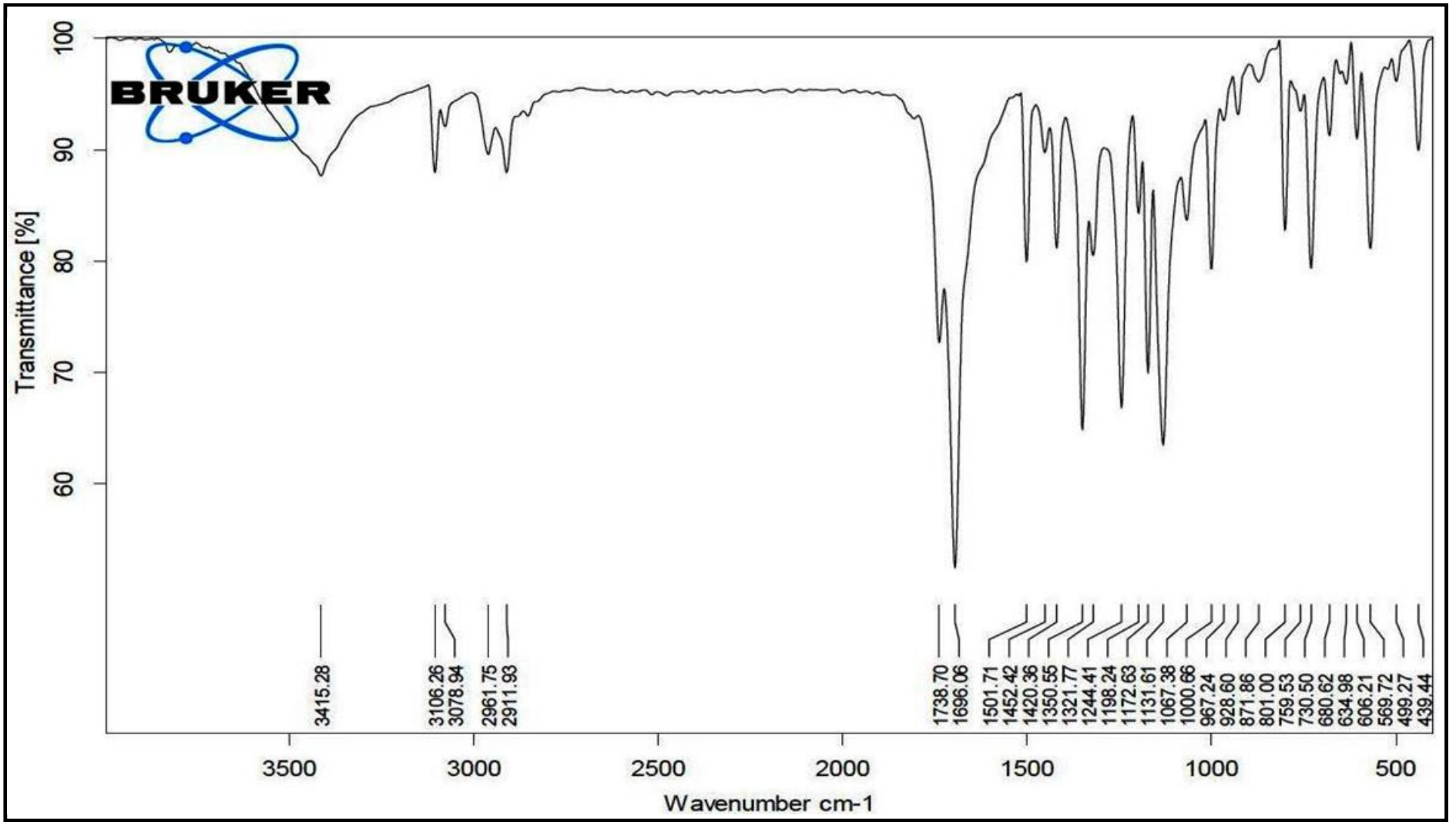
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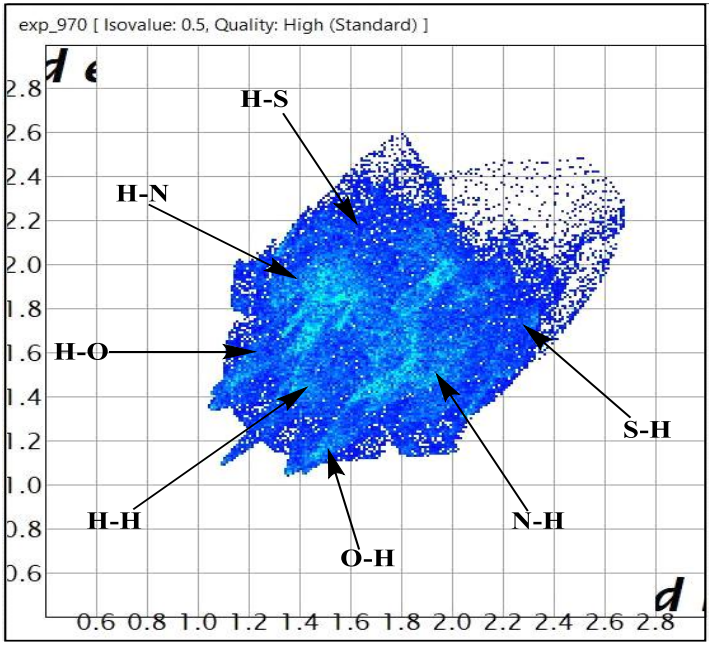
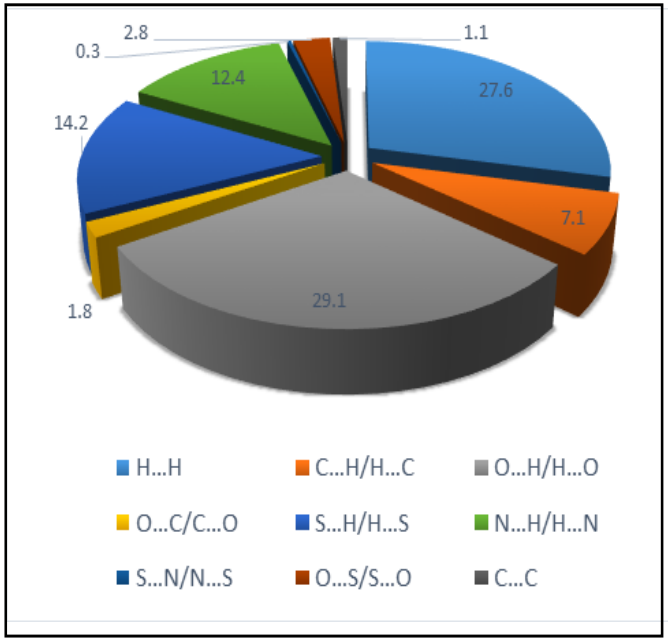
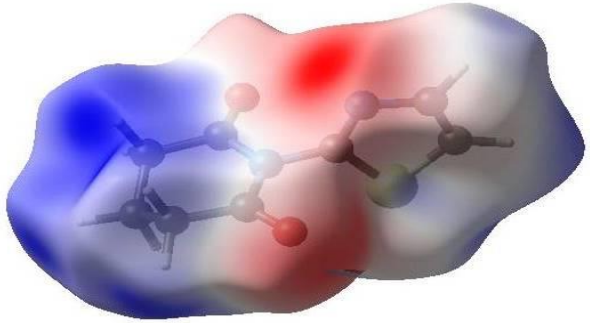
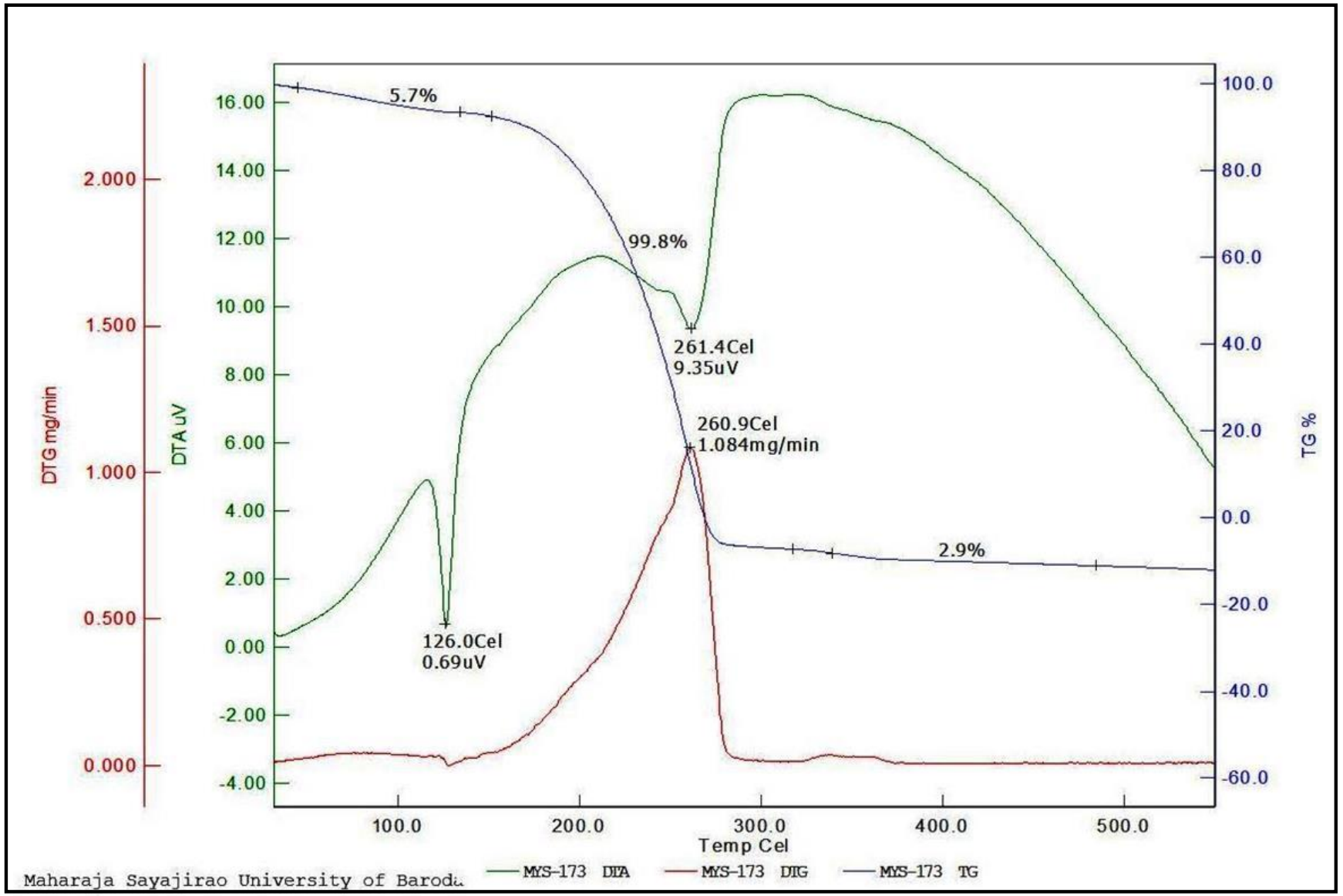
Wavenumber cm-1

Compound 1: Hirschfeld fingerprint graph and % contribution of weak interactions





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260.9Cel
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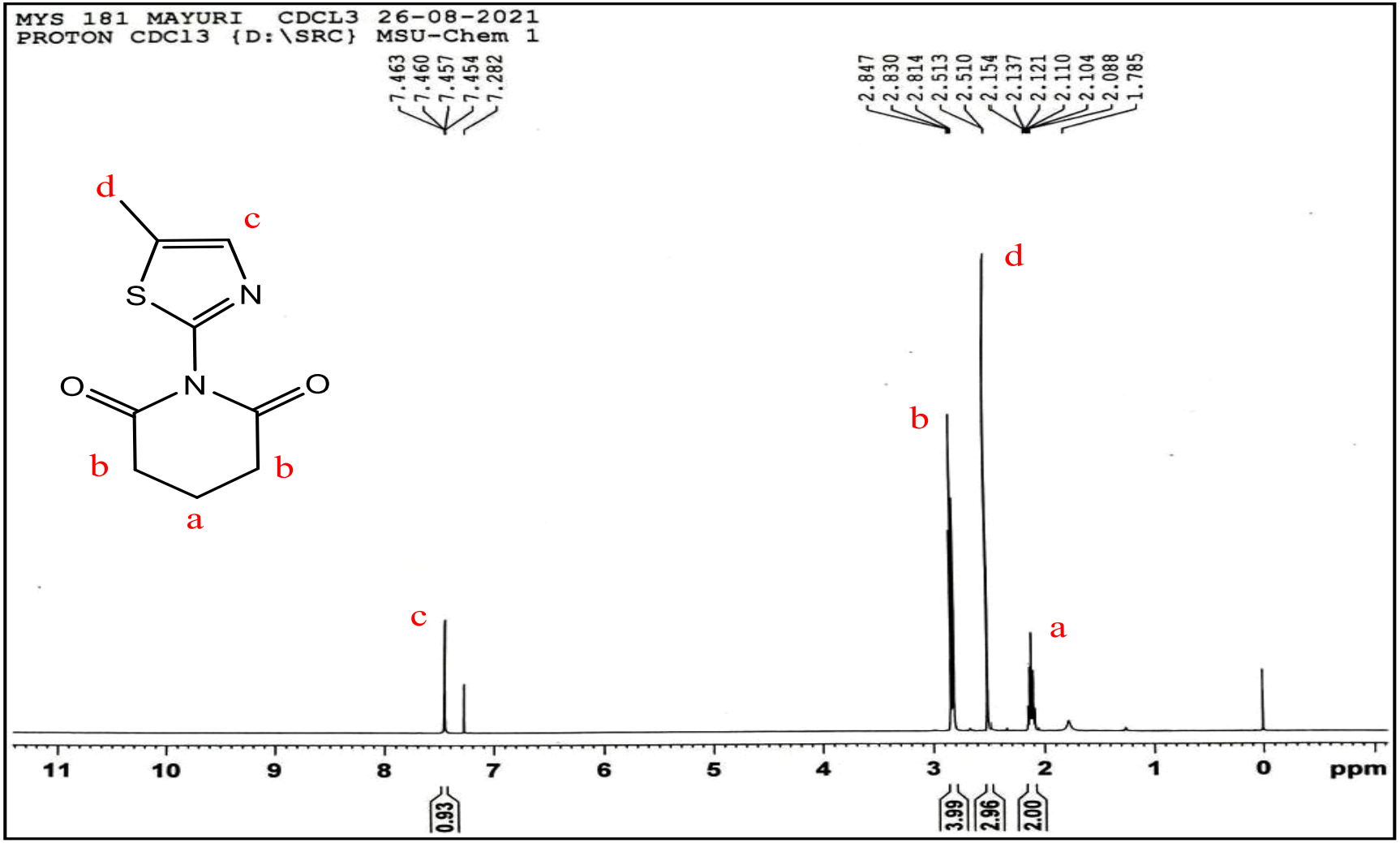
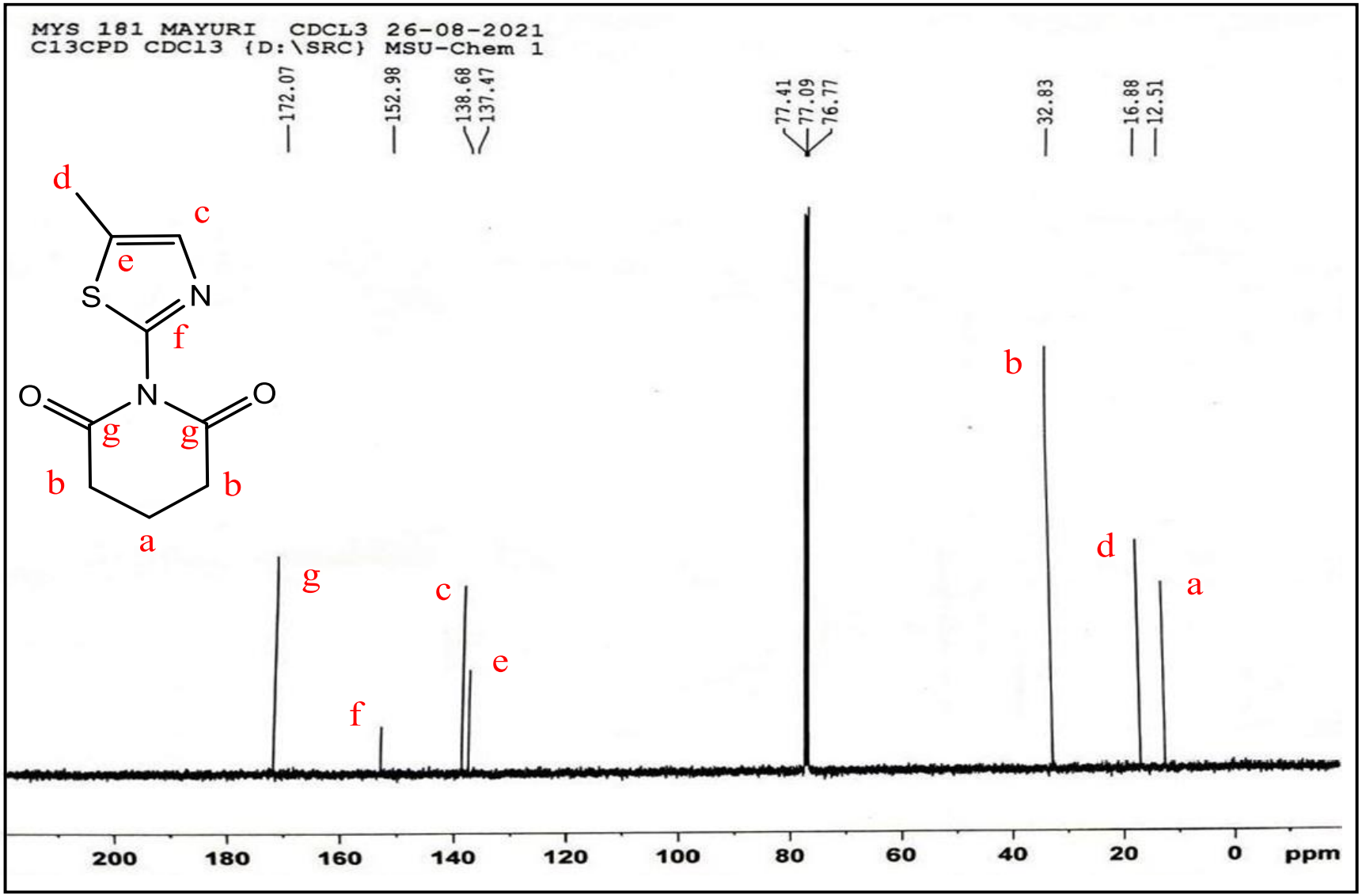
2.9%
126.0Cel
0.69uV
DTG mg/min
DTA uV
TG %
Temp Cel
MYS-173 DTA
MYS-173 DTG
MYS-173 TG
Maharaja Sayajirao University of Baroda

Data of Compound -2: 2-Amino-5-methylthiazole derivative

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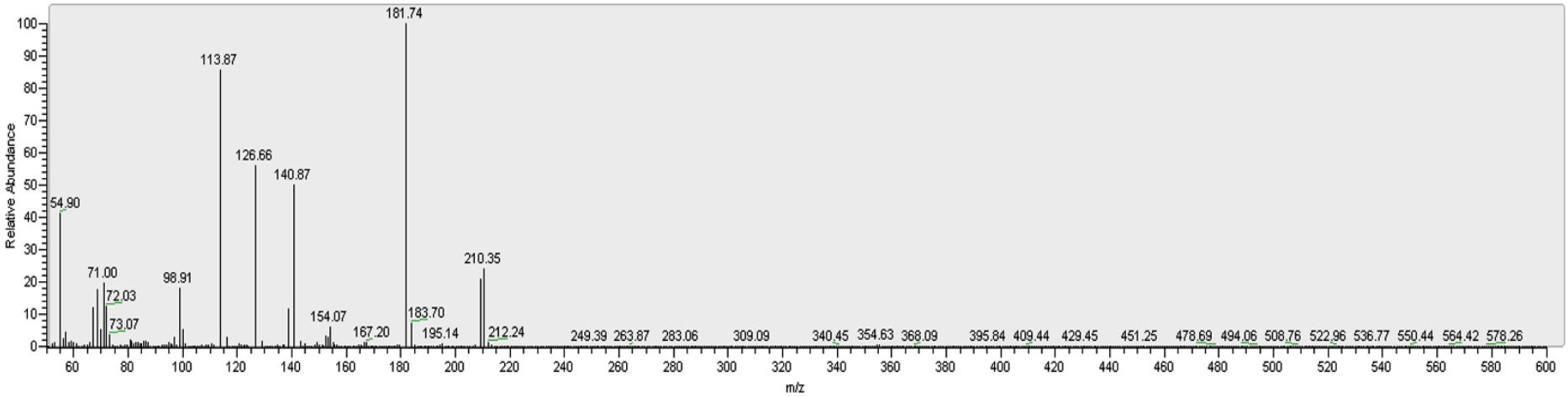
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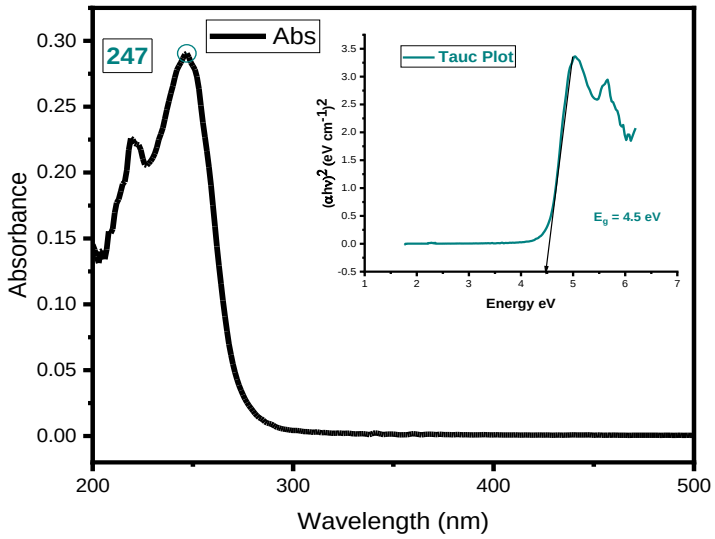
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Tauc Plot
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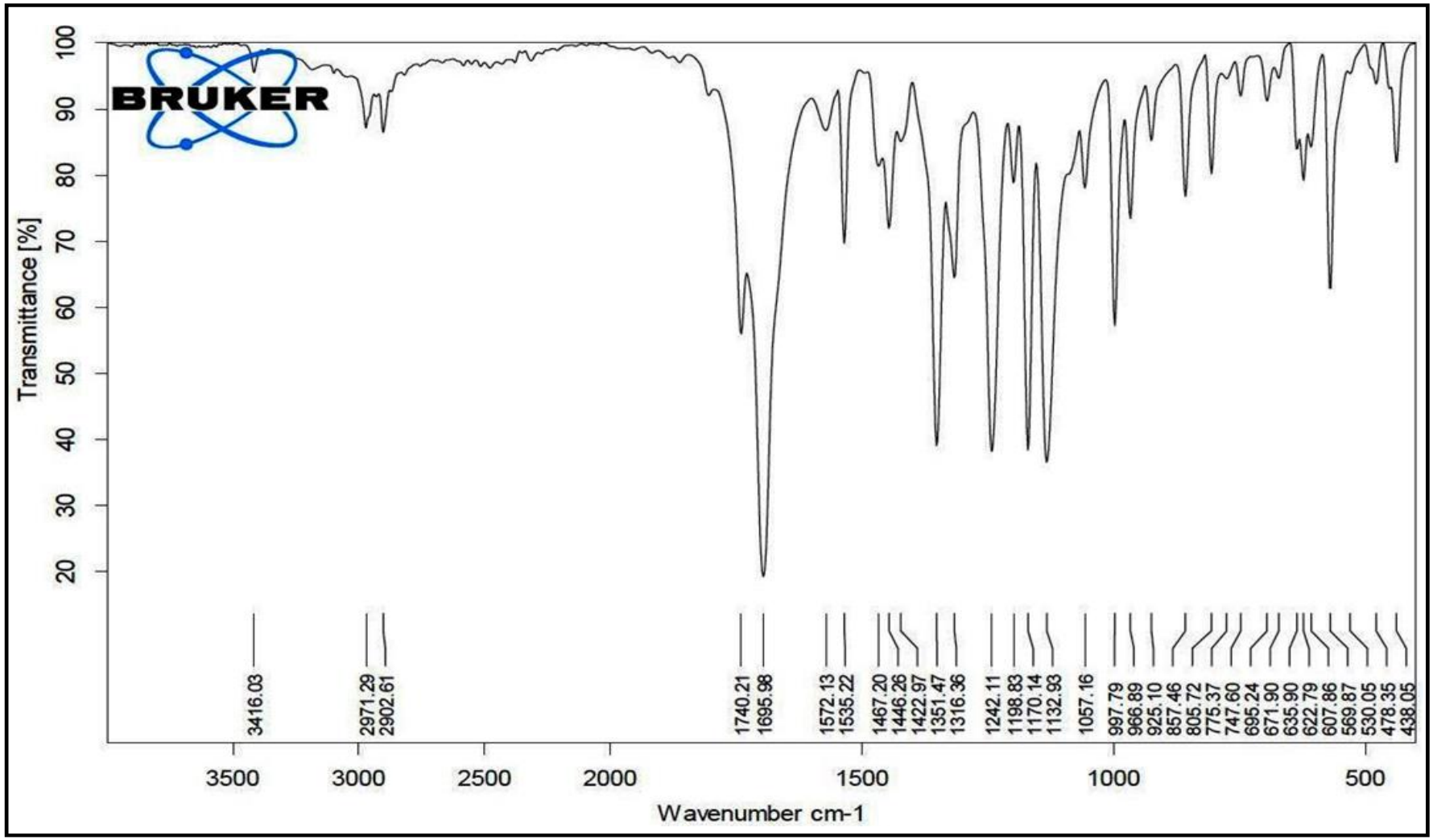
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1446.26
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1351.47
1316.36
1242.11
1198.83
1170.14
1132.93
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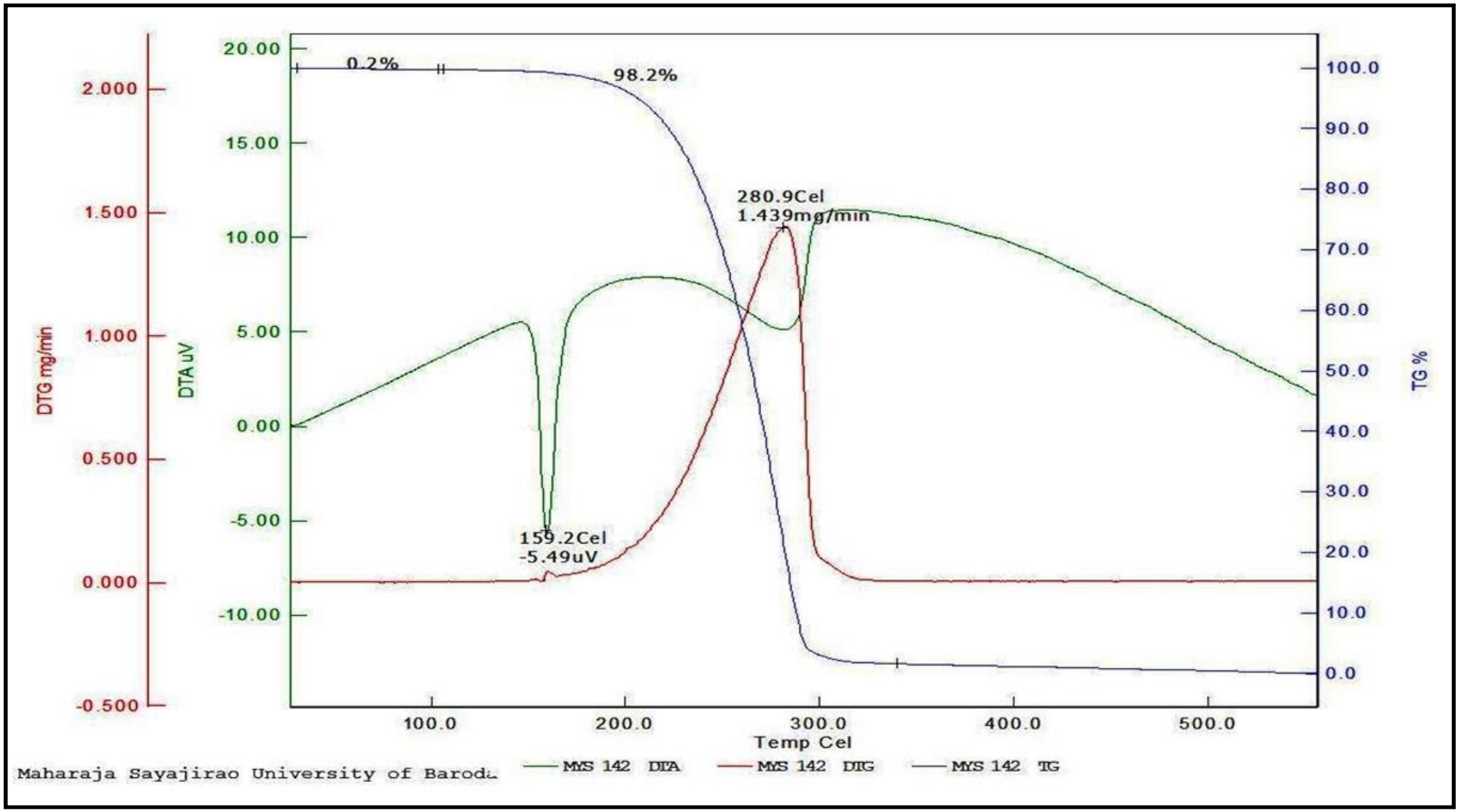
Wavenumber cm-1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Maharaja Sayajirao University of Baroda
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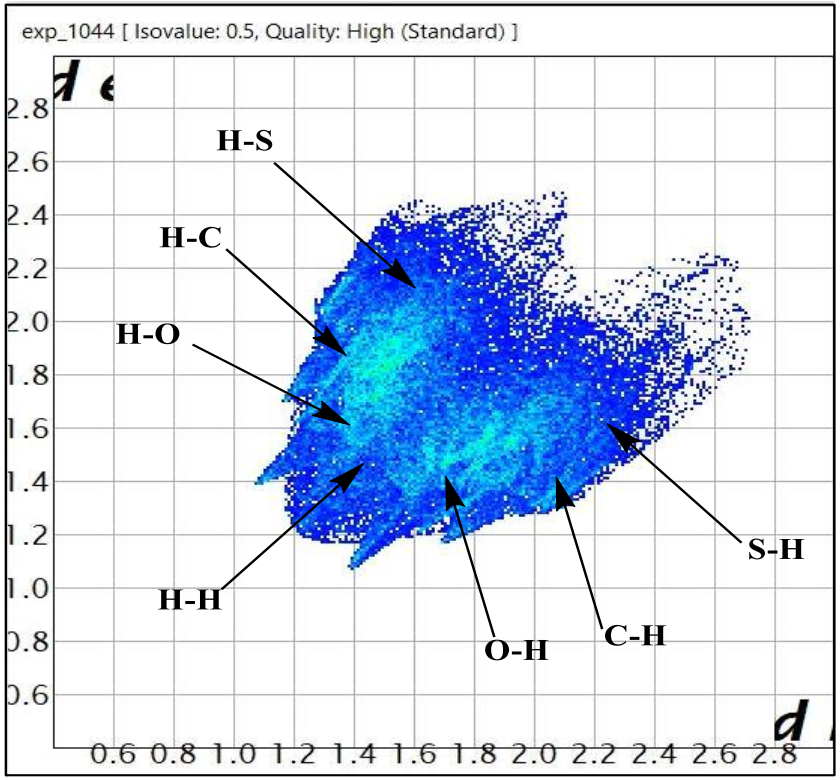
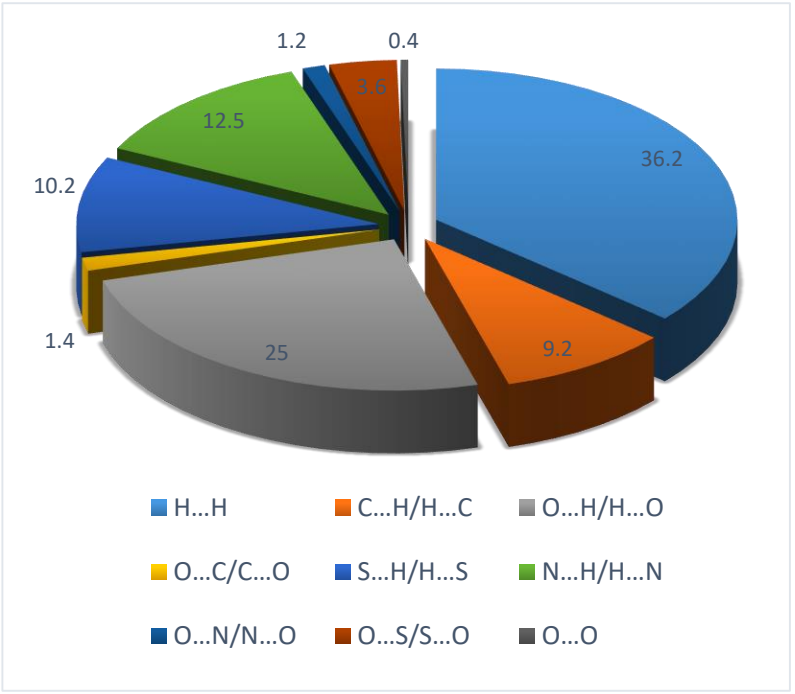
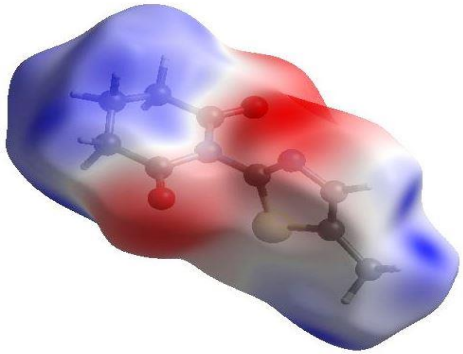
2-A-5MT product: Hirschfeld fingerprint graph and % contribution of weak interactions







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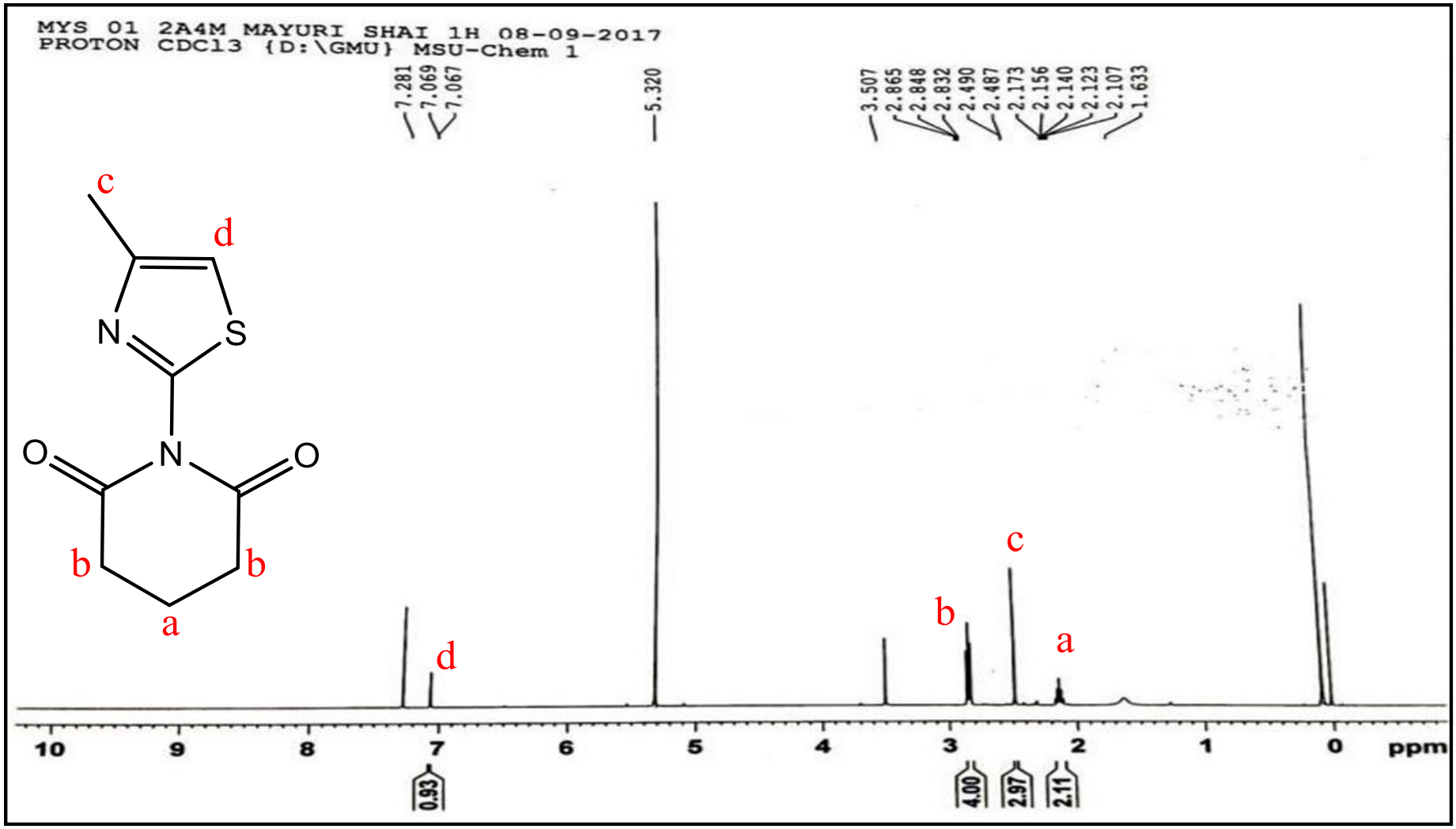

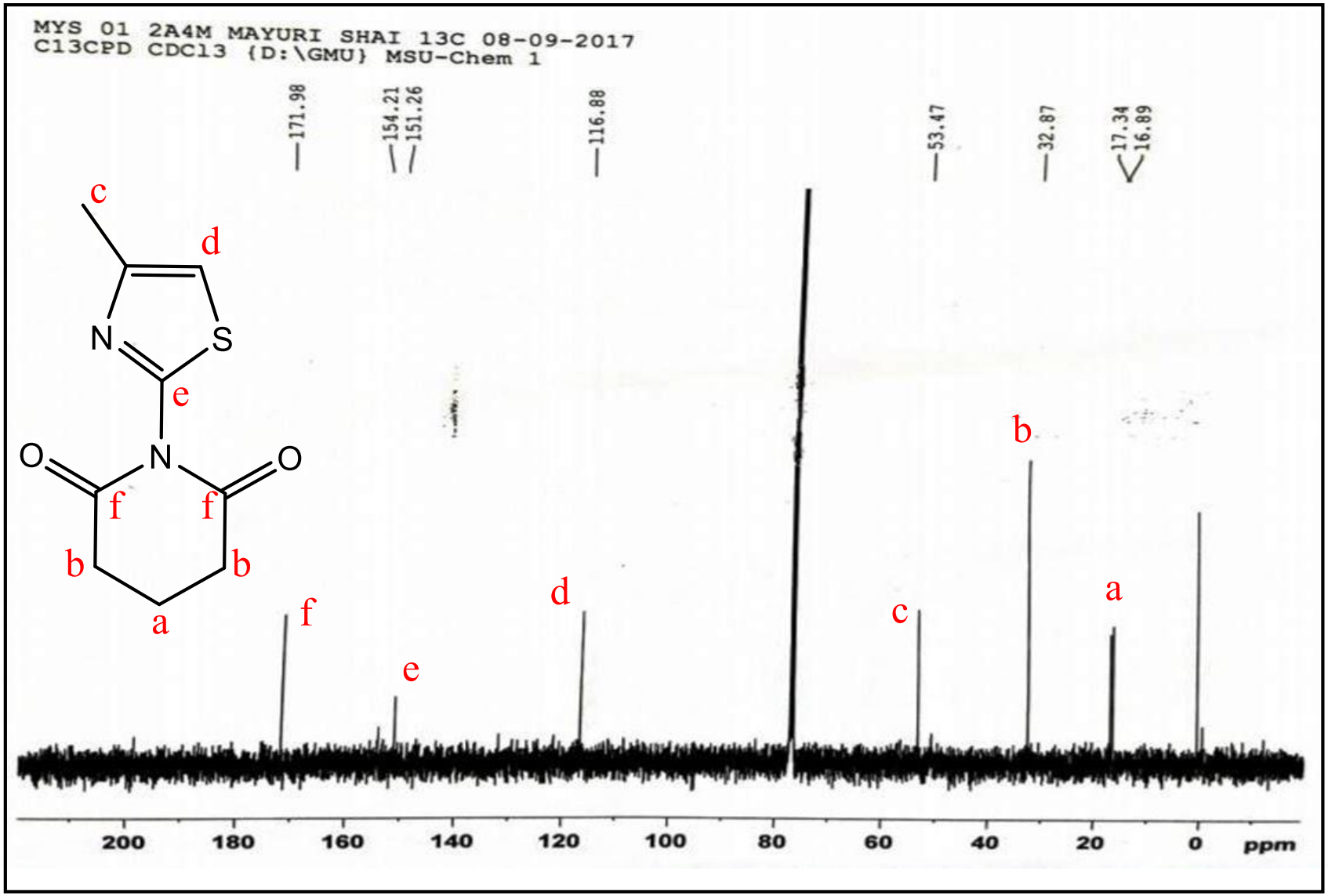
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f
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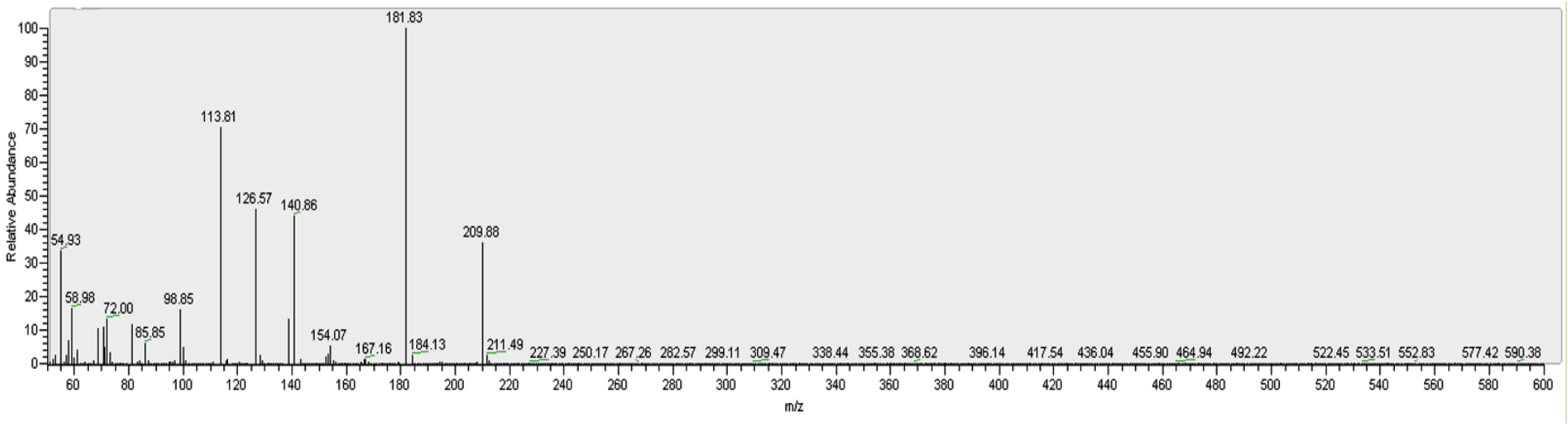
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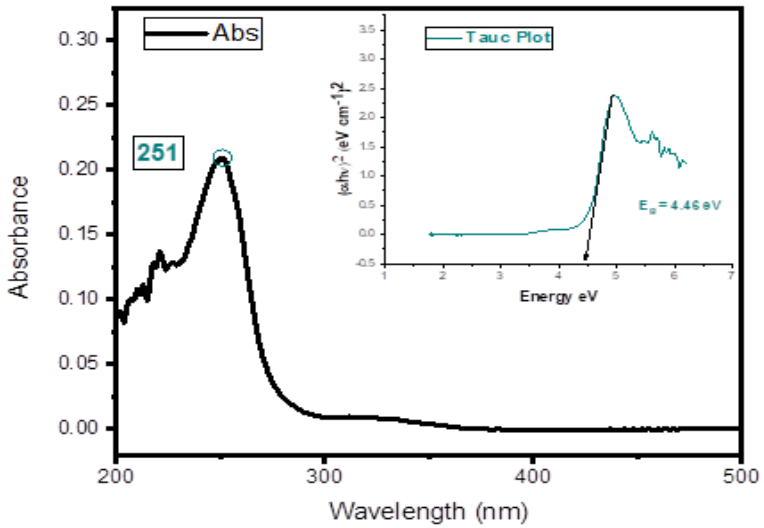
211.49
227.39 250.17 267.26 282.57 299.11 309.47 338.44 355.38 368.62 396.14 417.54 436.04 455.90 464.94 492.22 522.45 533.51 552.83 577.42 590.38


Abs
251
Tauc Plot
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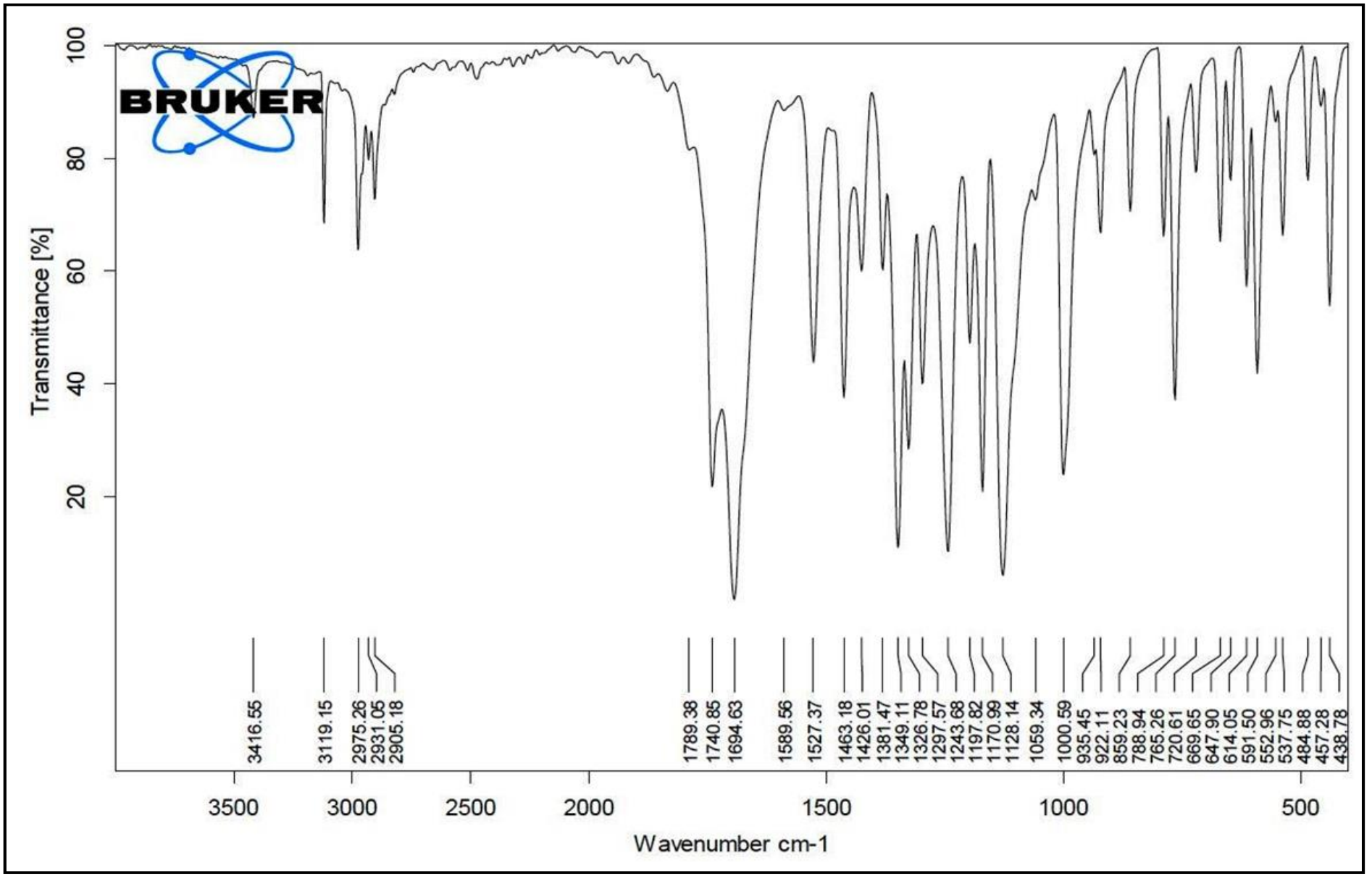
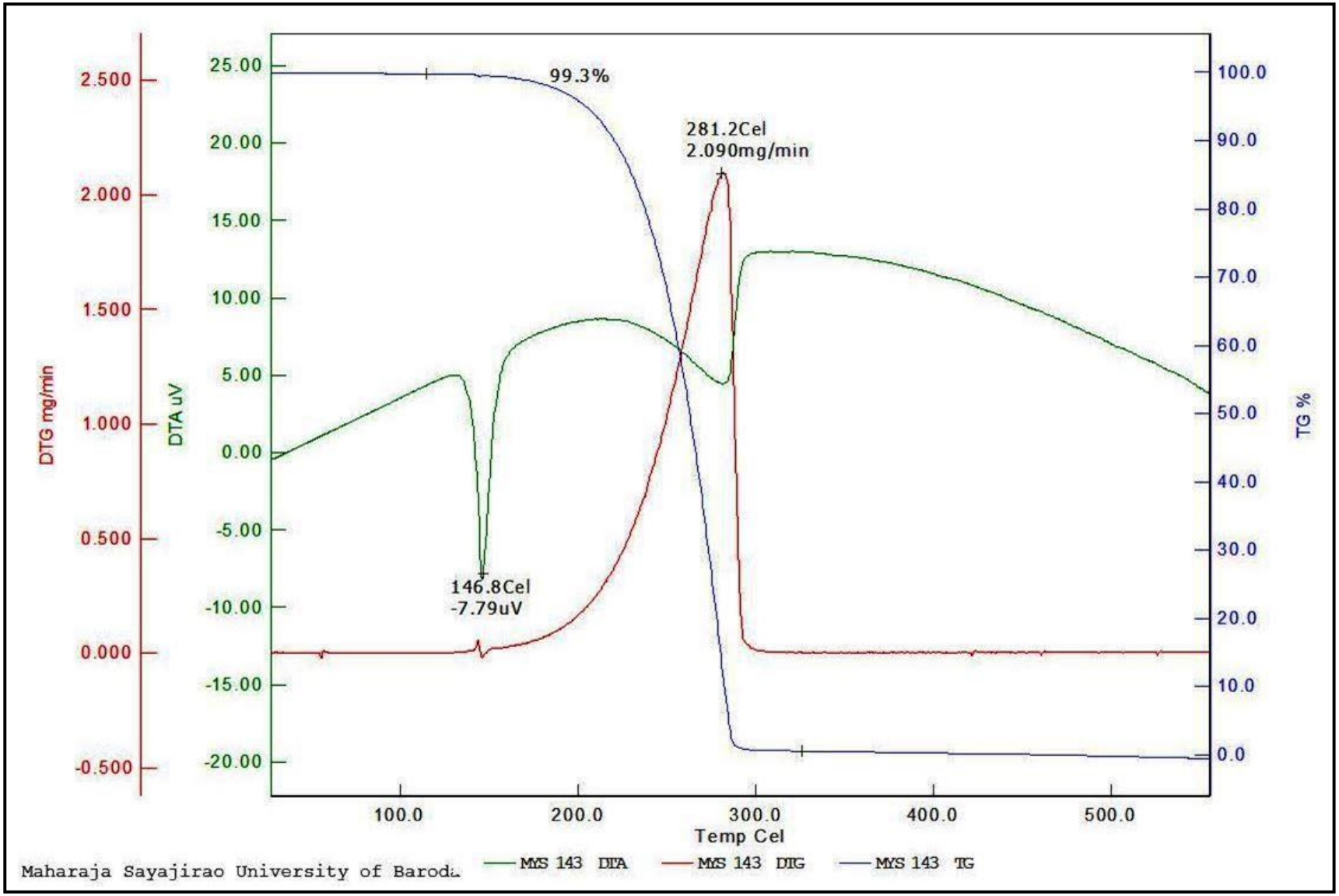
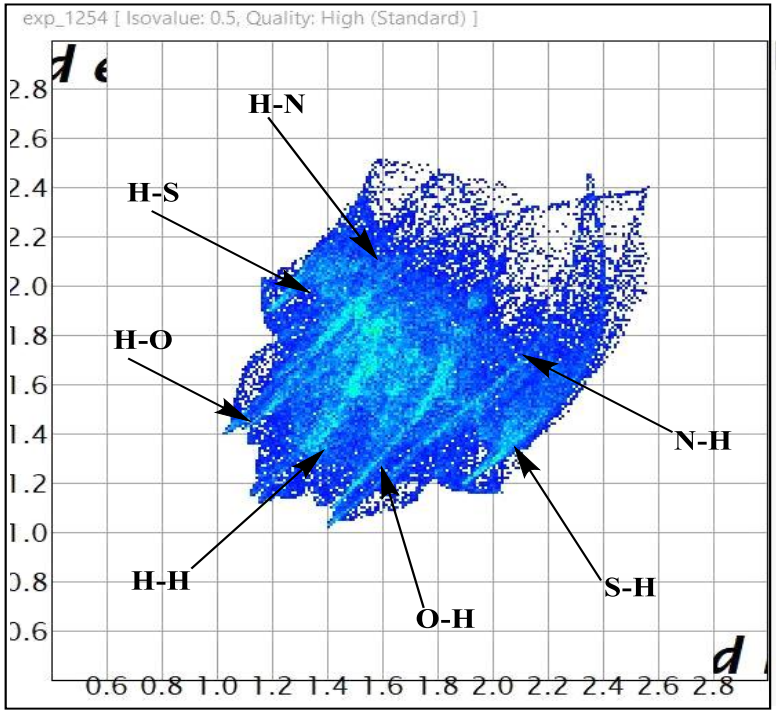
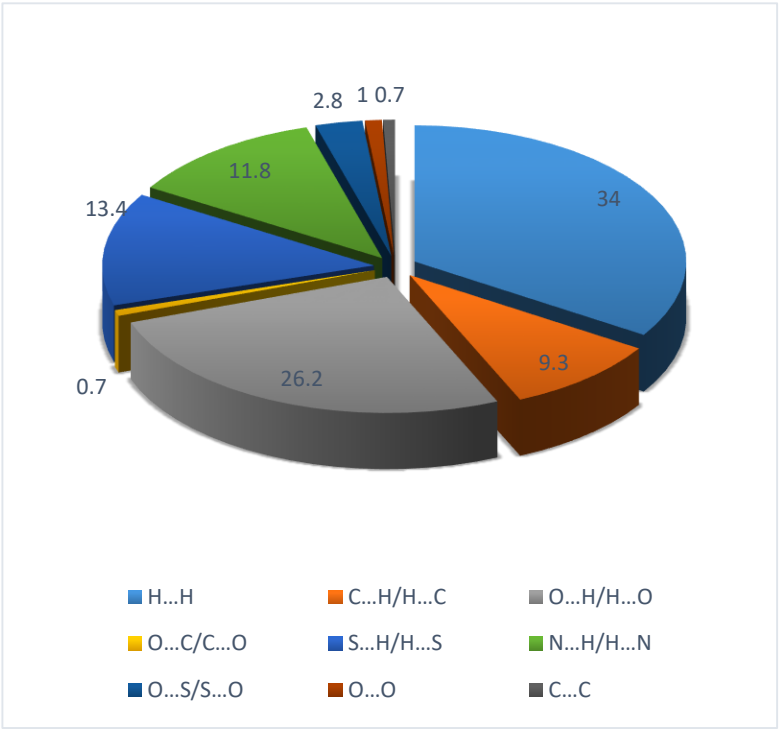
Energy eV
Absorbance
Wavelength (nm)

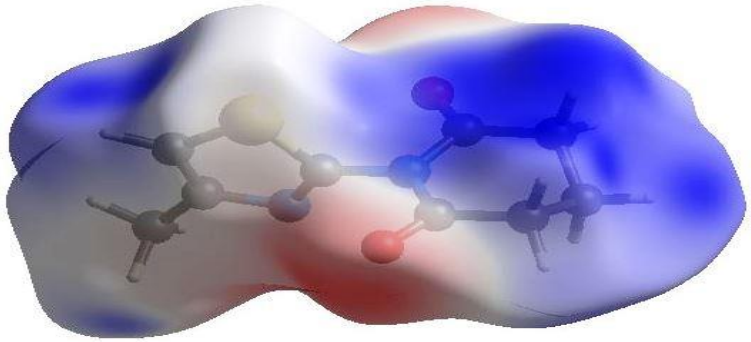

BRUKER
Transmittance [%]
100
80
60
40
20
3416.55
3119.15
2975.26
2931.05
2905.18
1789.38
1740.85
1694.63
1589.56
1527.37
1463.18
1426.01
1381.47
1349.11
1326.78
1297.57
1243.68
1197.82
1170.99
1128.14
1059.34
1000.59
935.45
922.11
859.23
788.94
765.26
720.61
669.65
647.90
614.05
591.50
552.96
537.75
484.88
457.28
438.78
3500
3000
2500
2000
1500
1000
500
Wavenumber cm-1


99.3%
281.2Cel
2.090mg/min
146.8Cel
-7.79uV
DTG mg/min
DTA uV
TG %
Temp Cel
MYS 143 DTA
MYS 143 DTG
MYS 143 TG
Maharaja Sayajirao University of Baroda

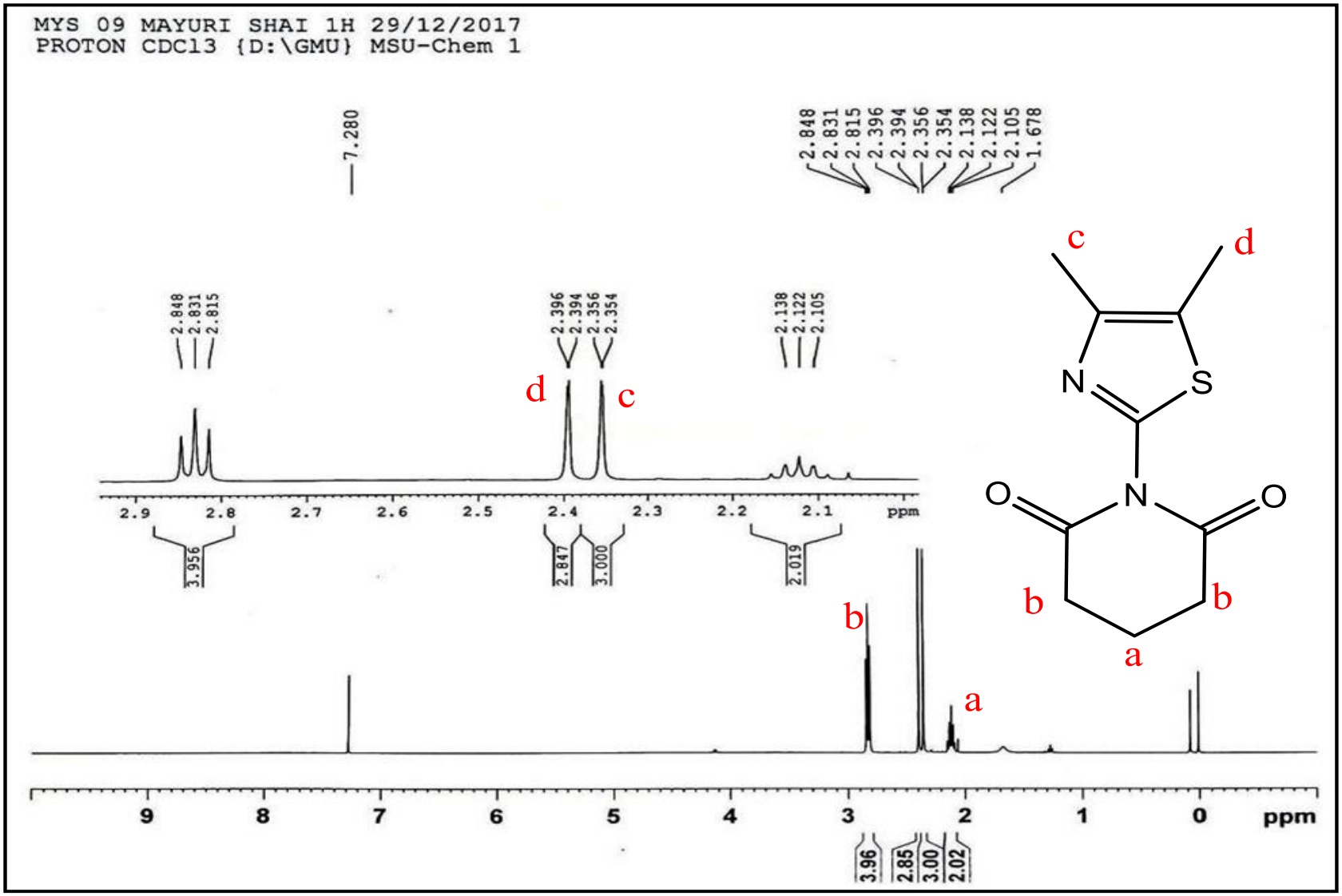
2-A-4-MT product: Hirschfeld fingerprint graph and % contribution of weak interactions

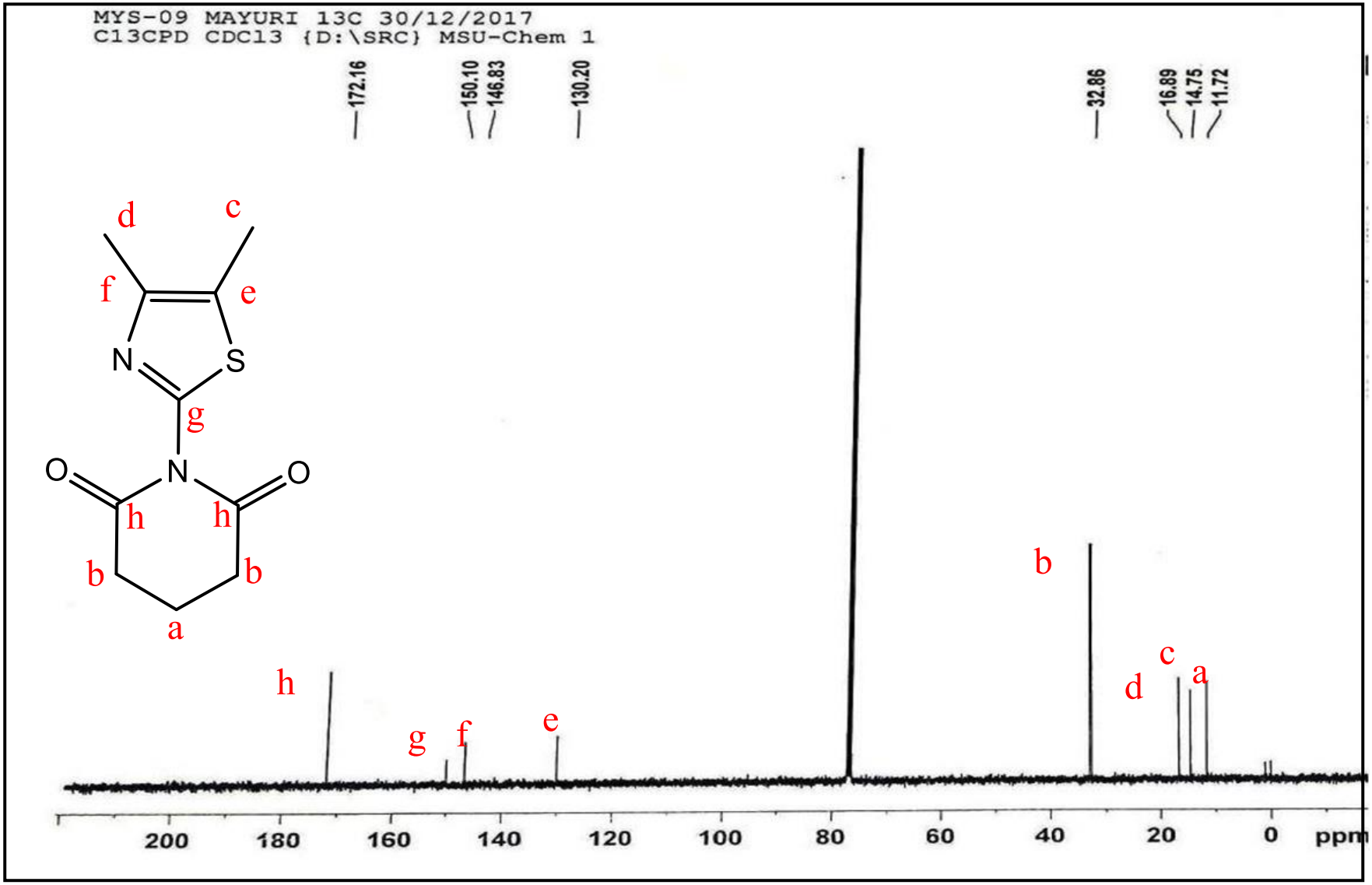


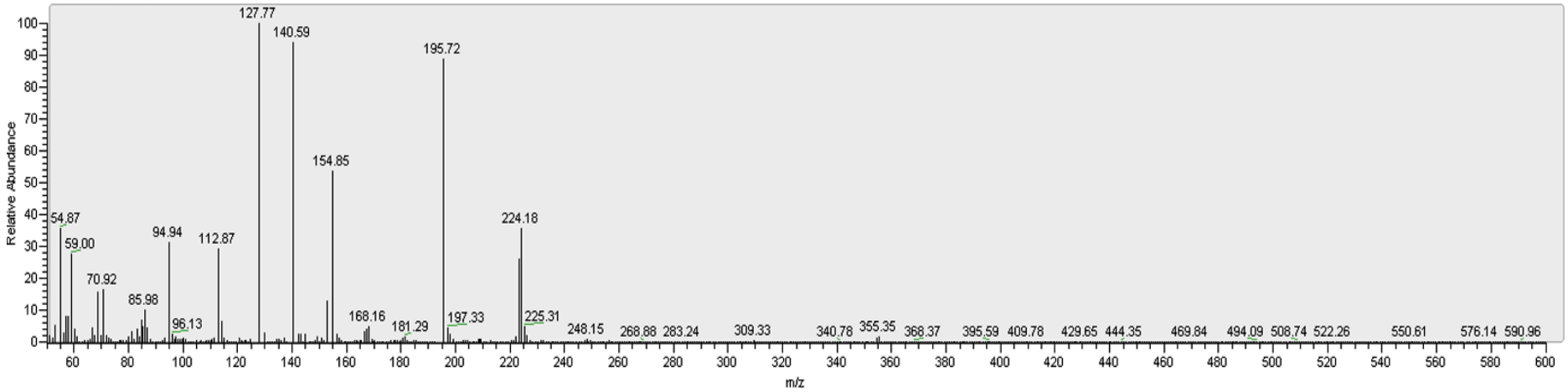




Data of Compound -4: 2-Amino-4,5-dimethylthiazole derivative




MYS-09 MAYURI 13C 30/12/2017
C13CPD CDCl3 {D:\SRC} MSU-Chem 1
172.16
150.10
146.83
130.20
32.86
16.89
14.75
11.72
d
c
f
e
N
S
g
O
N
O
h
h
b
b
a
h
g
f
e
b
d
c
a
200
180
160
140
120
100
80
60
40
20
0
ppm


Relative Abundance
m/z
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54.87
59.00
94.94
112.87
70.92
85.98
96.13
168.16
181.29
197.33
225.31
248.15
268.88
283.24
309.33
340.78
355.35
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429.65
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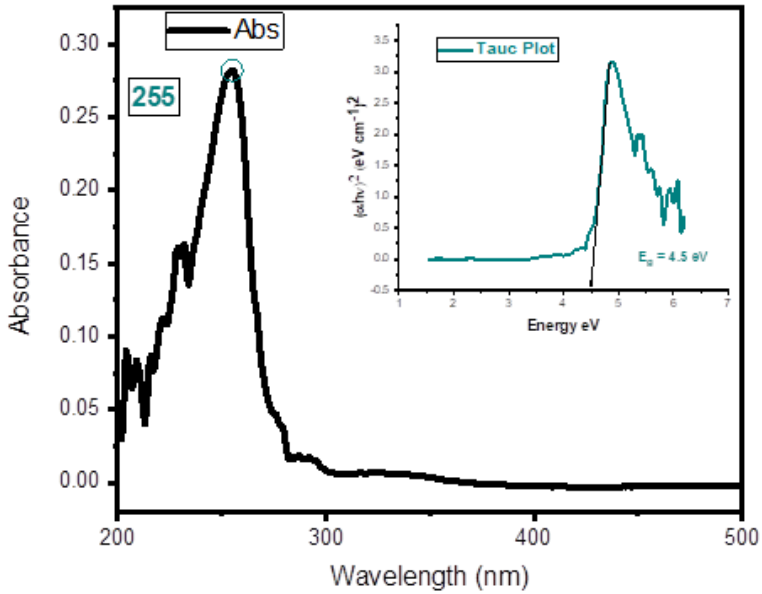
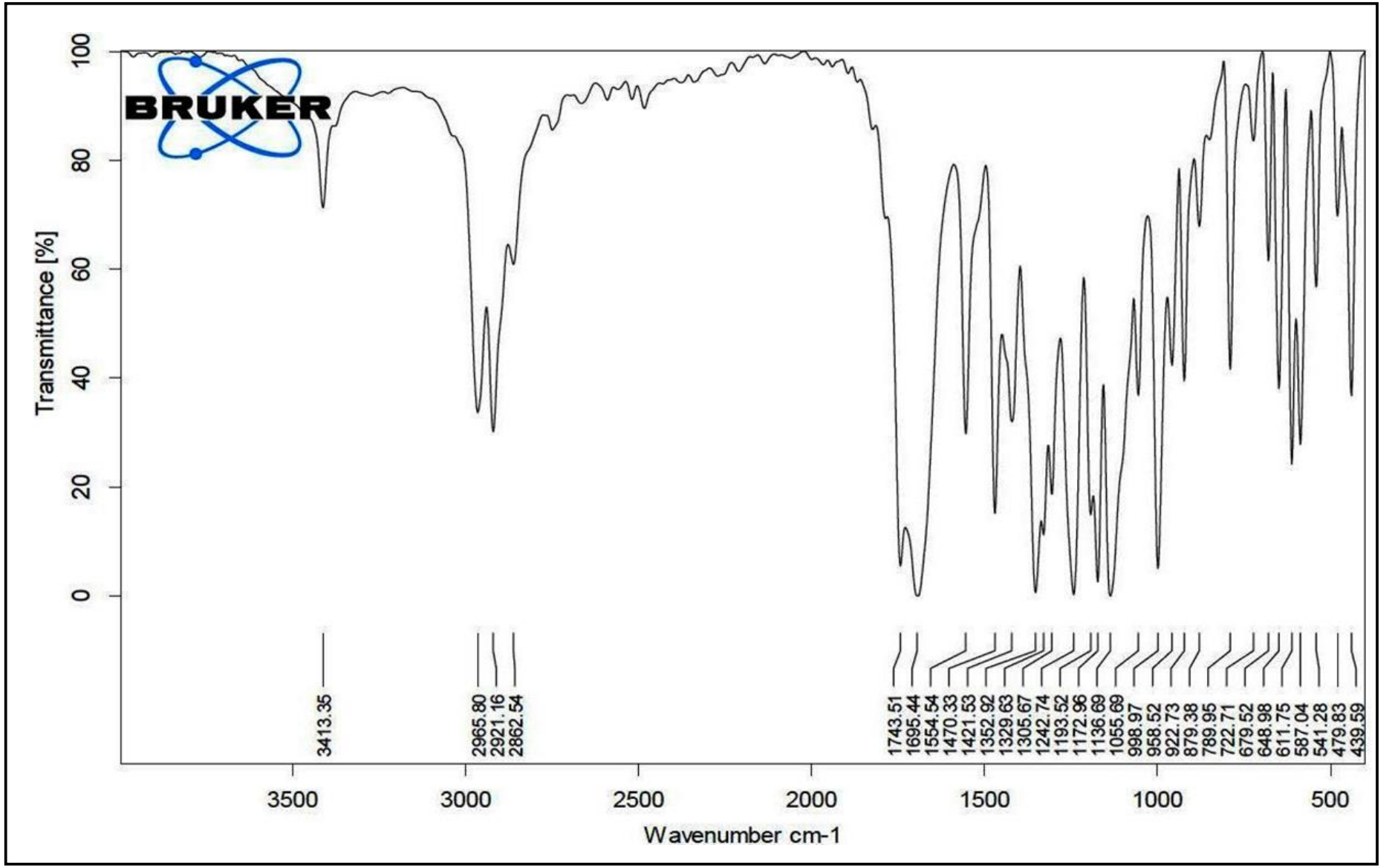
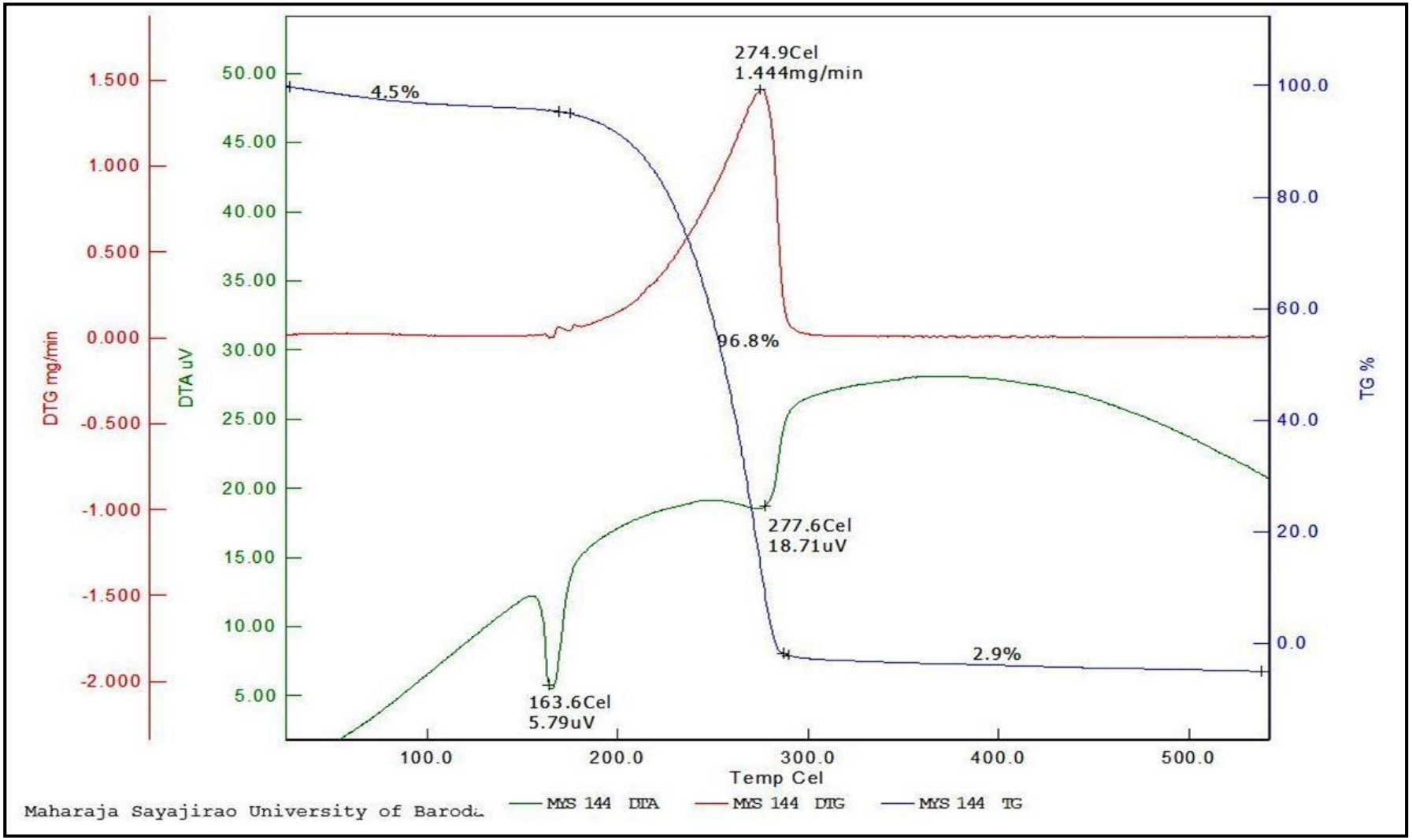
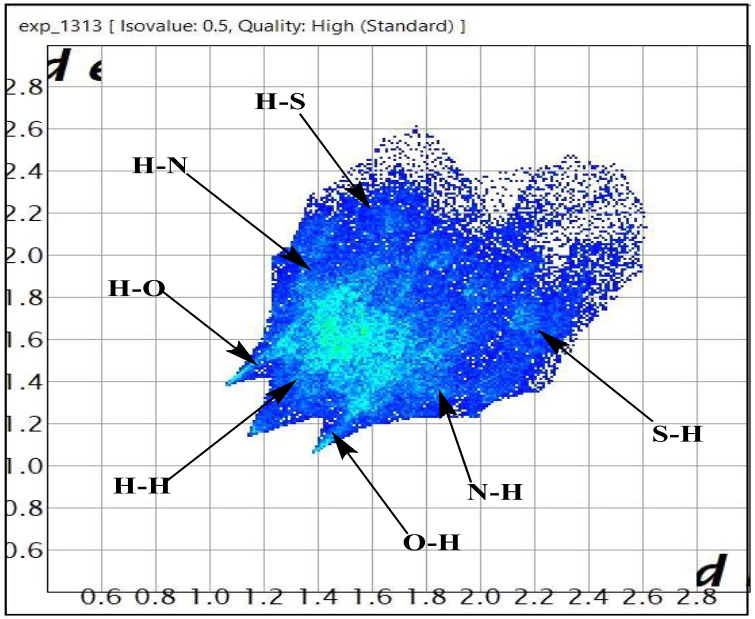
550.61
576.14
590.96

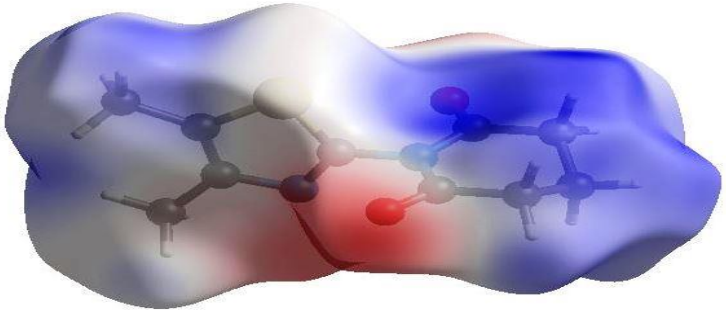

Abs
255
Absorbance
Wavelength (nm)
Tauc Plot
Energy eV
E_g = 4.5 eV

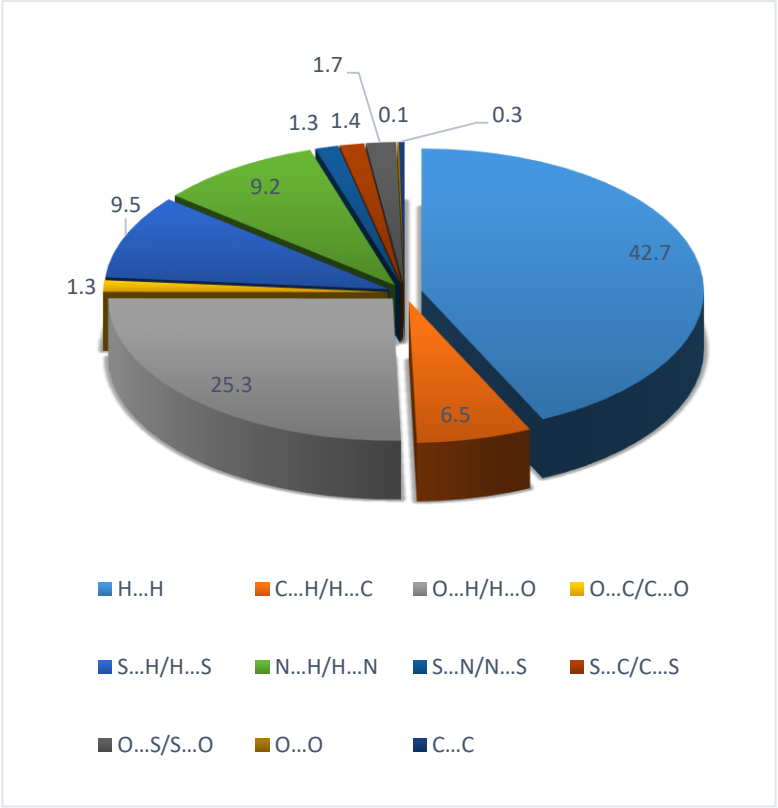

BRUKER
Transmittance [%]
100
80
60
40
20
0
3413.35
2965.80
2921.16
2862.54
1743.51
1695.44
1554.54
1470.33
1421.53
1352.92
1329.63
1305.67
1242.74
1193.52
1172.96
1136.69
1055.69
998.97
958.52
922.73
879.38
789.95
722.71
679.52
648.98
611.75
587.04
541.28
479.83
439.59
3500
3000
2500
2000
1500
1000
500
Wavenumber cm-1


274.9Cel
1.444mg/min
4.5%
96.8%
277.6Cel
18.71uV
163.6Cel
5.79uV
2.9%
DTG mg/min
DTA uV
TG %
Temp Cel
100.0
200.0
300.0
400.0
500.0
1.500
1.000
0.500
0.000
-0.500
-1.000
-1.500
-2.000
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
100.0
80.0
60.0
40.0
20.0
0.0
Maharaja Sayajirao University of Baroda
MYS 144 DTA
MYS 144 DTG
MYS 144 TG

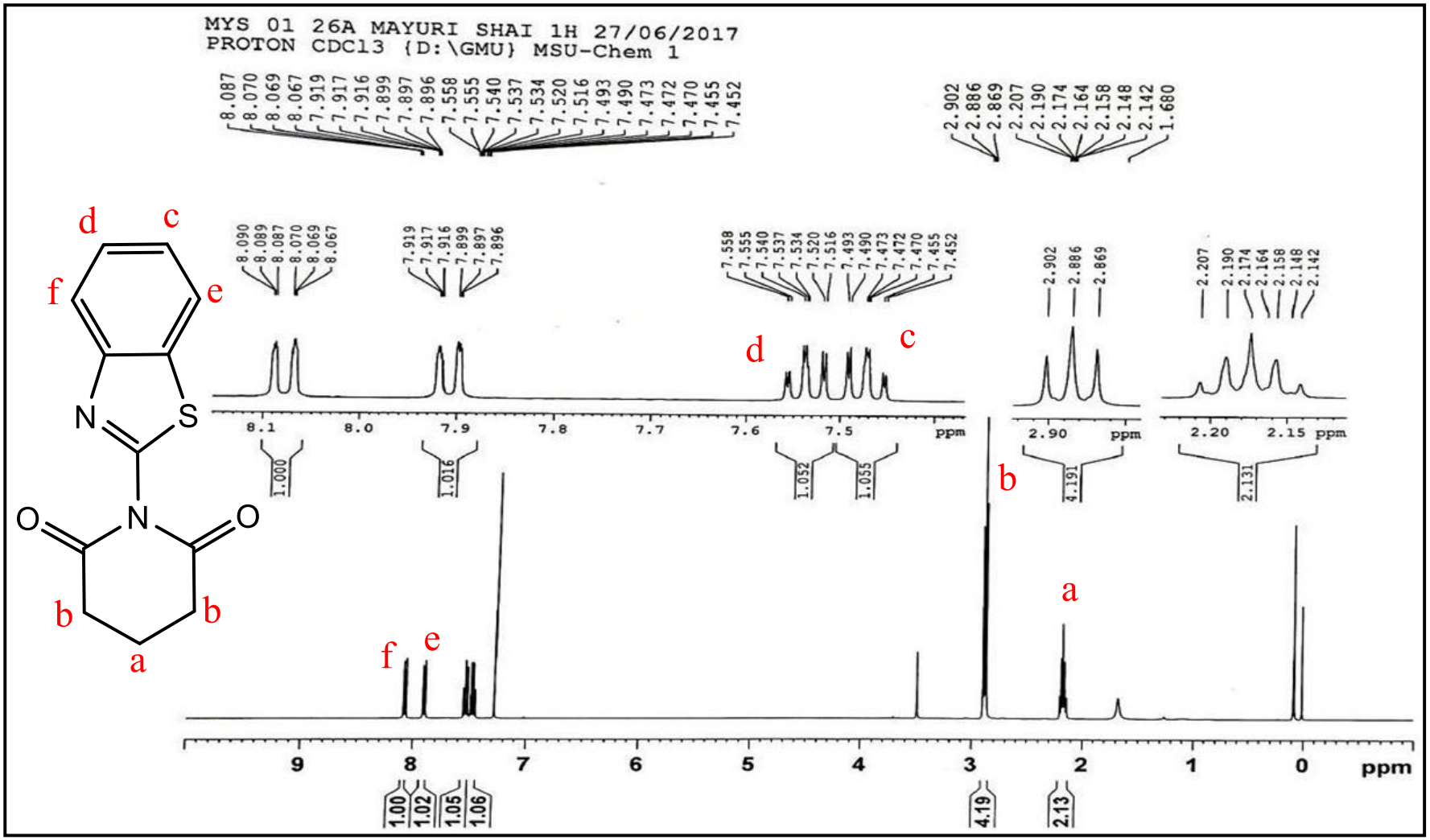
2-A-4,5-DMT product: Hirschfeld fingerprint graph and % contribution of weak interactions

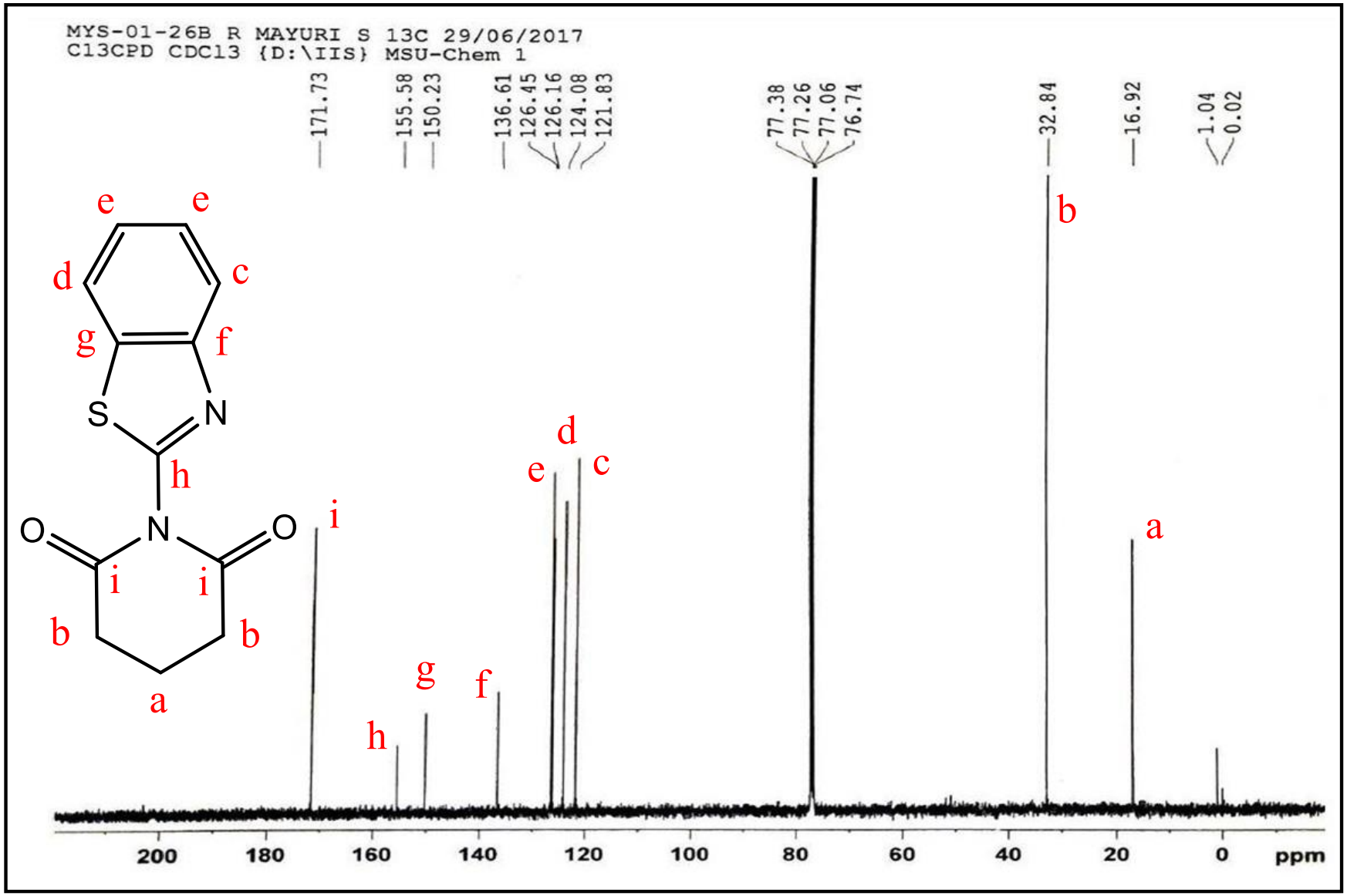


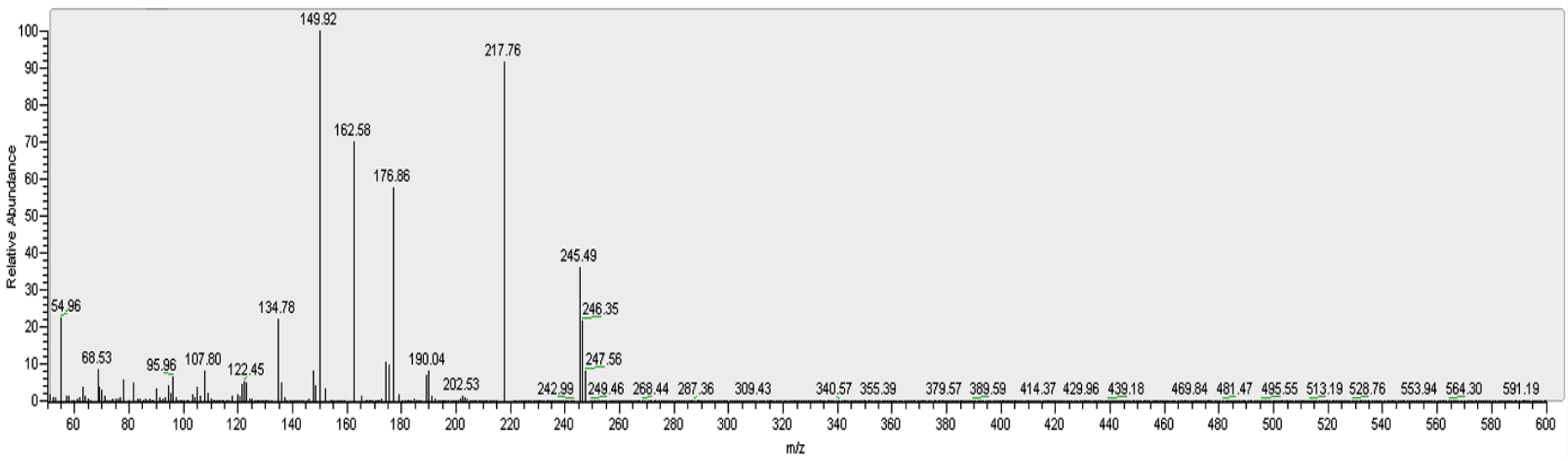




Data of Compound -5: 2-Aminobenzthiazole derivative




MYS-01-26B R MAYURI S 13C 29/06/2017
C13CPD CDCl3 {D:\IIS} MSU-Chem 1
171.73
155.58
150.23
136.61
126.45
126.16
124.08
121.83
77.38
77.26
77.06
76.74
32.84
16.92
1.04
0.02
O
N
O
S
N
a
b
c
d
e
f
g
h
i
200
180
160
140
120
100
80
60
40
20
0
ppm


Relative Abundance
m/z
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217.76
162.58
176.86
245.49
246.35
247.56
54.96
134.78
68.53
95.96
107.80
122.45
190.04
202.53
242.99
249.46
268.44
287.36
309.43
340.57
355.39
379.57
389.59
414.37
429.96
439.18
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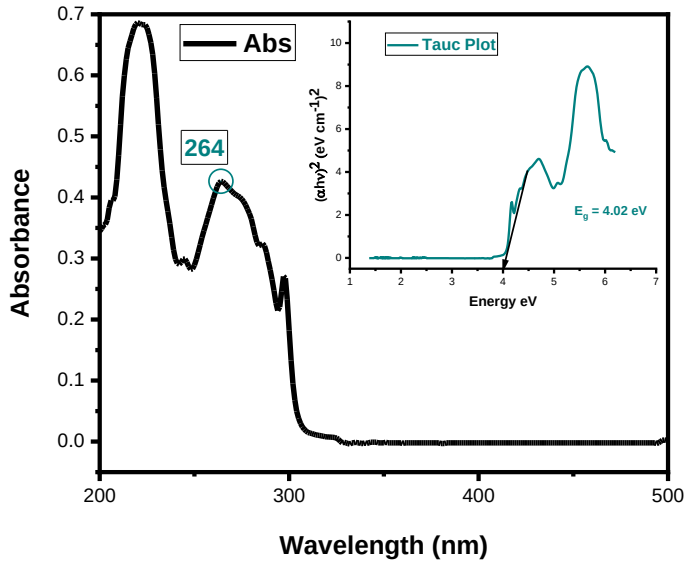
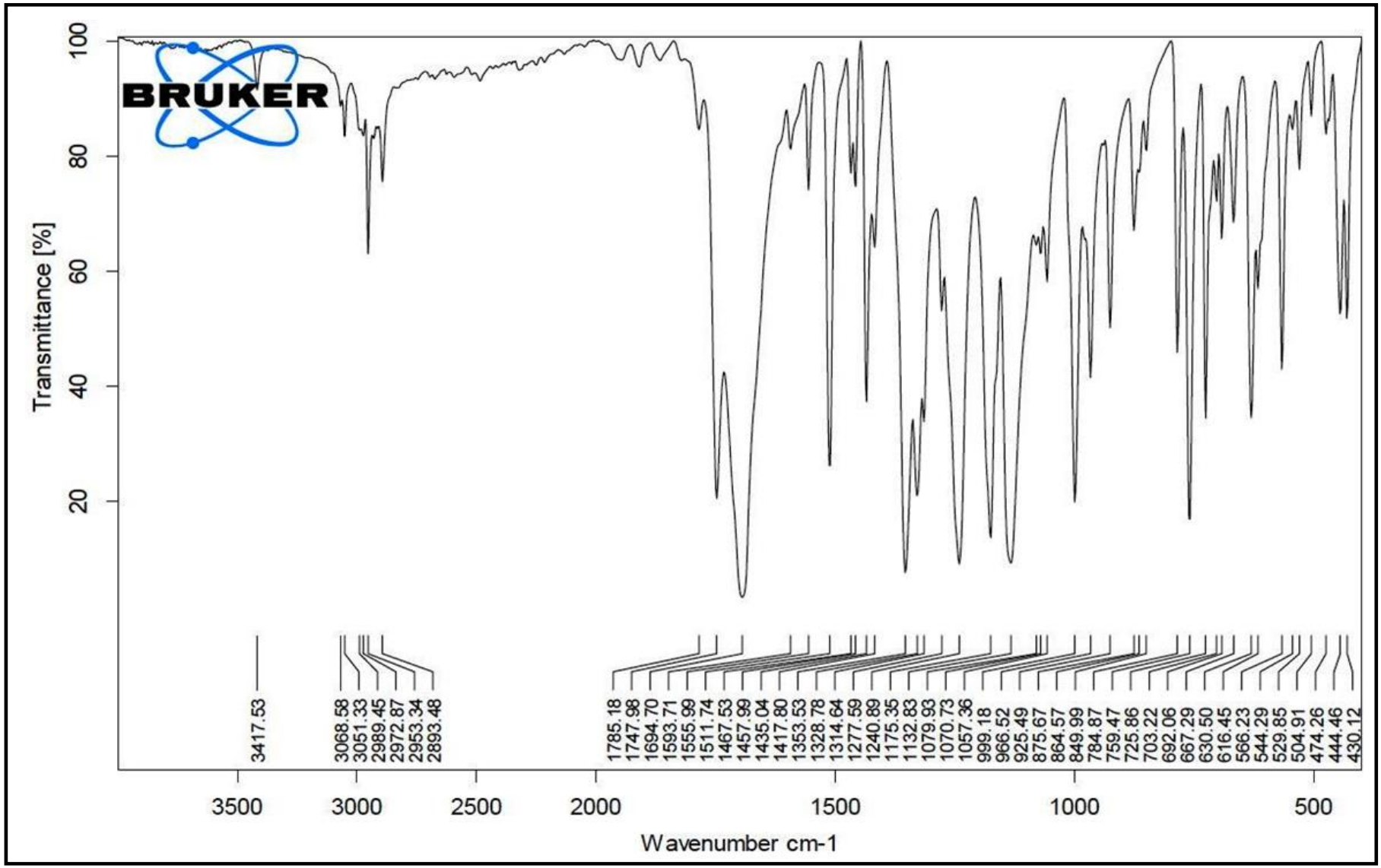
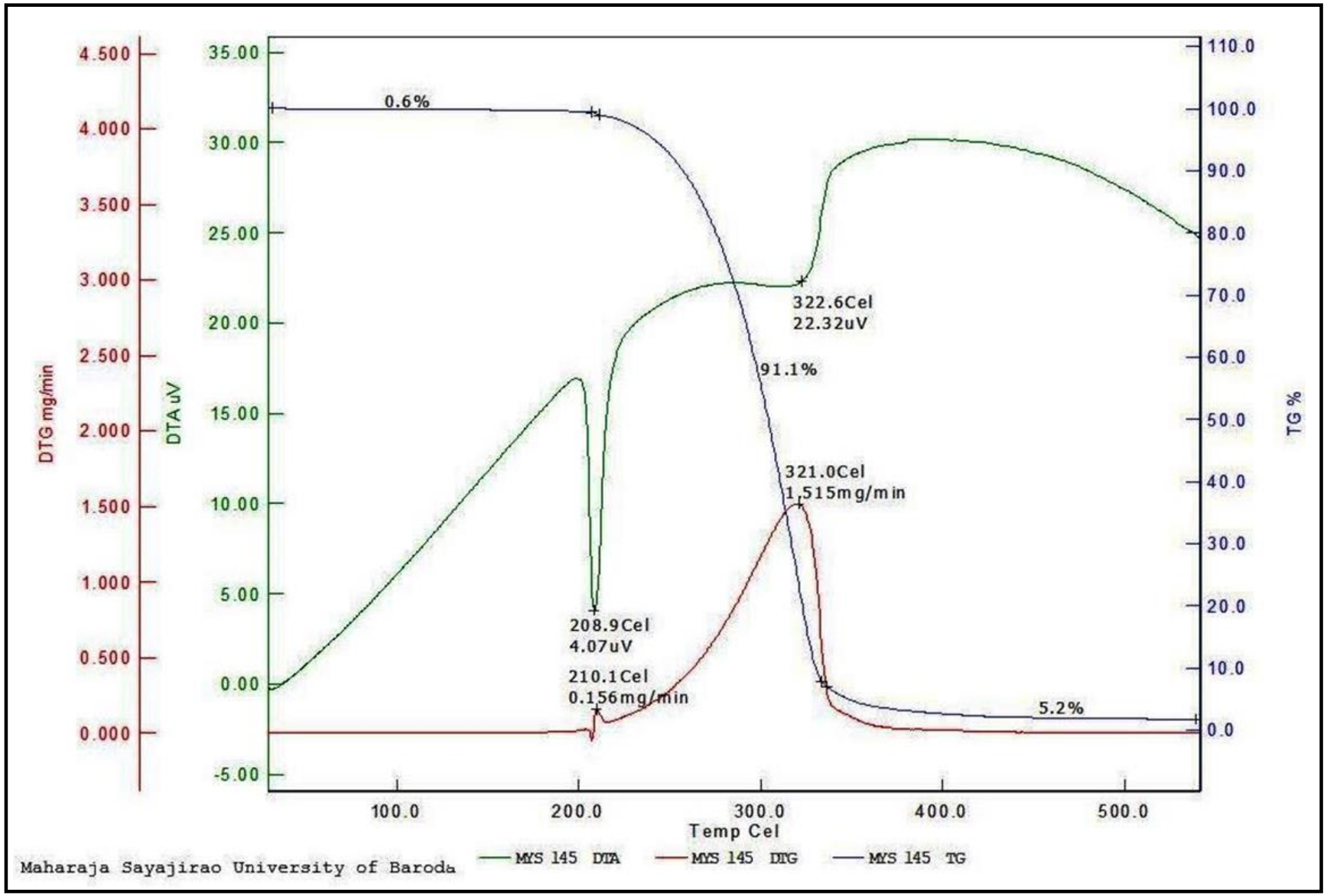
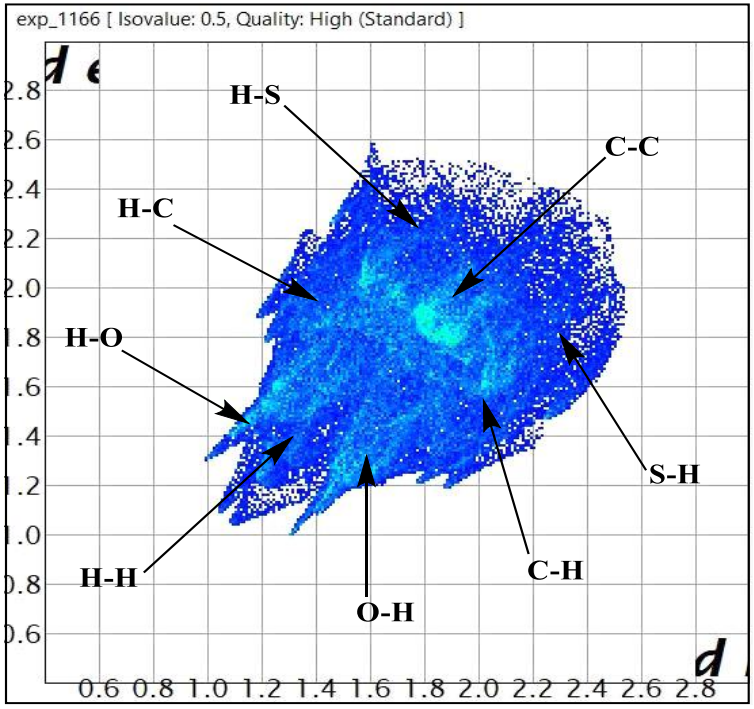
481.47
495.55
513.19
528.76
553.94
564.30
591.19

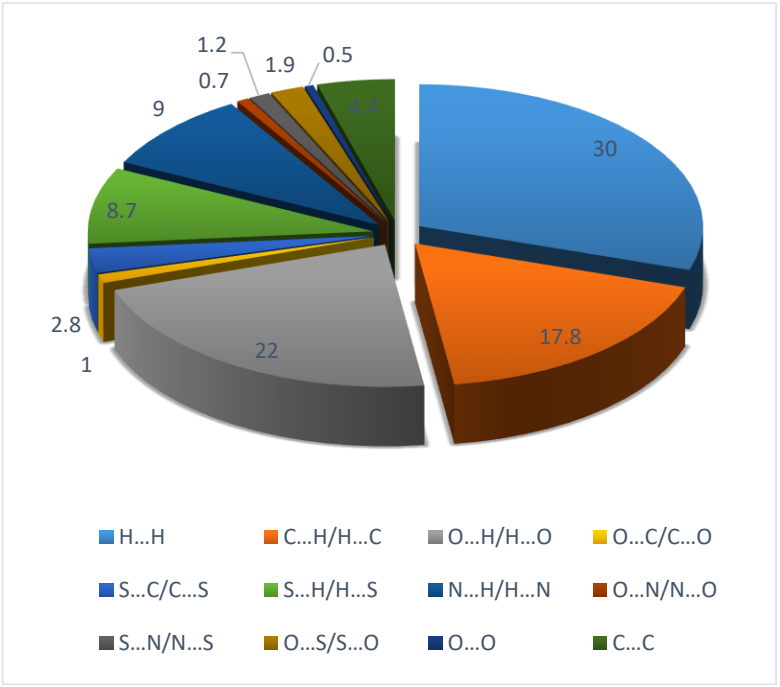

Abs
264
Absorbance
Wavelength (nm)
Tauc Plot
$(\alpha h\nu)^2$ (eV cm^{-1})^2
E_g = 4.02 eV
Energy eV


BRUKER
Transmittance [%]
100
80
60
40
20
3417.53
3068.58
3051.33
2989.45
2972.87
2953.34
2893.48
1785.18
1747.98
1694.70
1593.71
1555.99
1511.74
1467.53
1457.99
1435.04
1417.80
1353.53
1328.78
1314.64
1277.59
1240.89
1175.35
1132.83
1079.93
1070.73
1057.36
999.18
966.52
925.49
875.67
864.57
849.99
784.87
759.47
725.86
703.22
692.06
667.29
630.50
616.45
566.23
544.29
529.85
504.91
474.26
444.46
430.12
3500
3000
2500
2000
1500
1000
500
Wavenumber cm-1


DTG mg/min
DTA uV
TG %
Temp Cel
0.6%
91.1%
5.2%
322.6Cel
22.32uV
321.0Cel
1.515mg/min
208.9Cel
4.07uV
210.1Cel
0.156mg/min
Maharaja Sayajirao University of Baroda
MYS 145 DTA
MYS 145 DTG
MYS 145 TG

2-ABT product: Hirschfeld fingerprint graph and % contribution of weak interactions





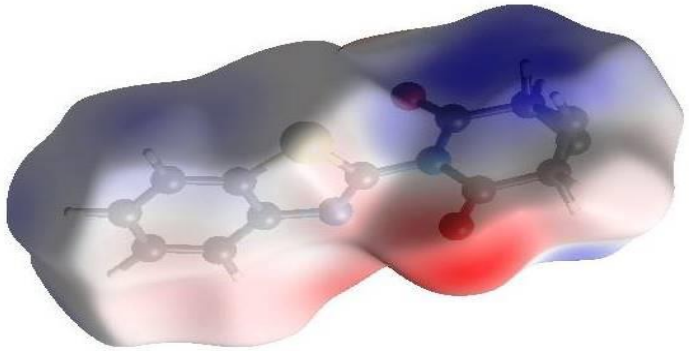


Table 5: The comparative table for band gap obtained from experiments and theoretical calculations

Compounds	**Band gap (ev) (UV-Spectra)**	**Band gap (ev) Tauc plot**	**Band gap (ev) (Theoretical calculations in gaseous phase)**	**Band gap (ev) (Theoretical calculations in THF)**
1	5.14	4.80	5.87	5.87
2	5.02	4.50	5.65	5.65
3	4.93	4.46	5.58	5.58
4	4.86	4.50	5.36	5.36
5	4.7	4.02	5.30	5.30

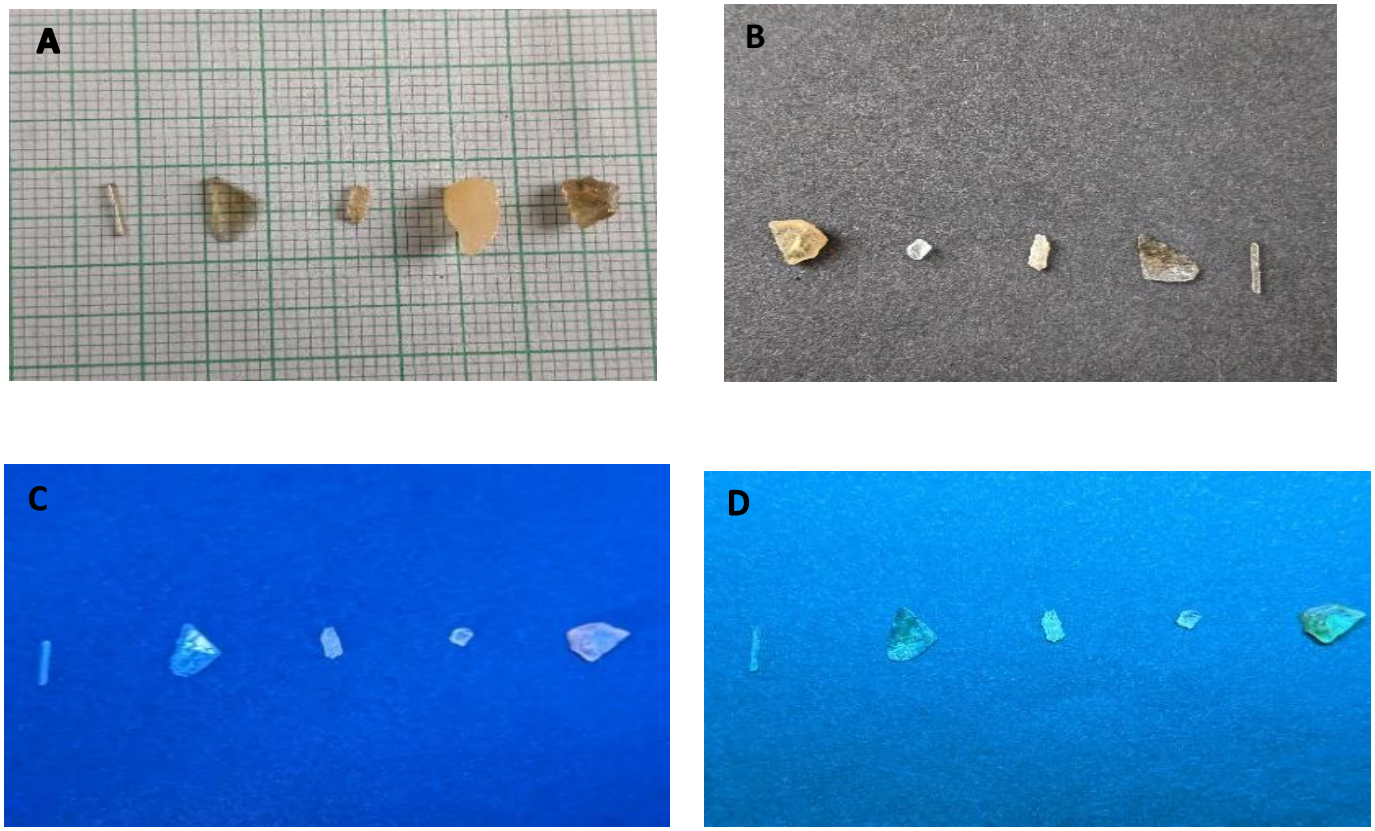


Figure S1: A) image of Crystals of compounds (1-5) placed on graph paper (for maximum size); (b) Crystals image in Visible light; C) Crystal image in Short UV light; D) Crystal image in long UV light

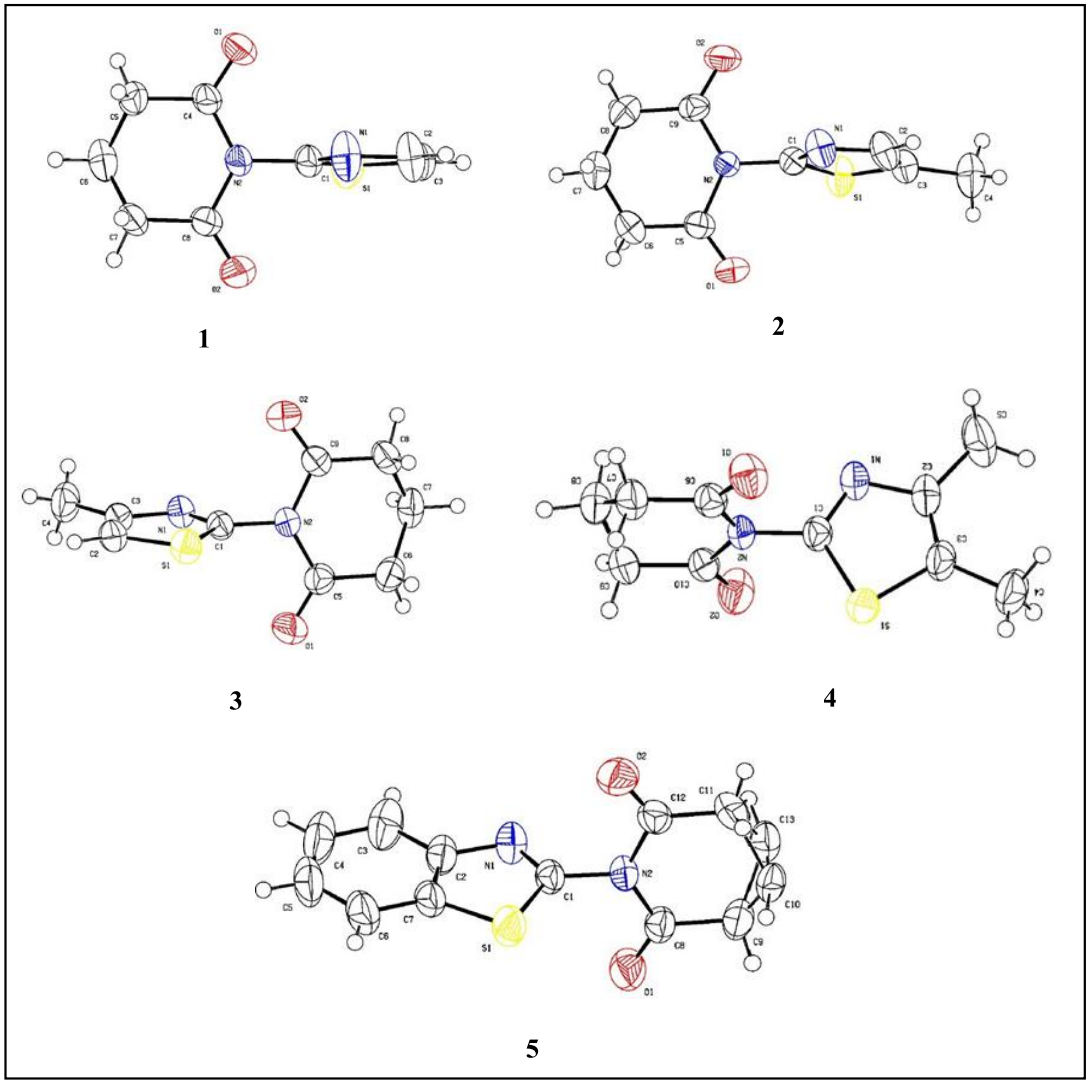


Figure S2: ORTEP (50% probability) diagram of 1–5.

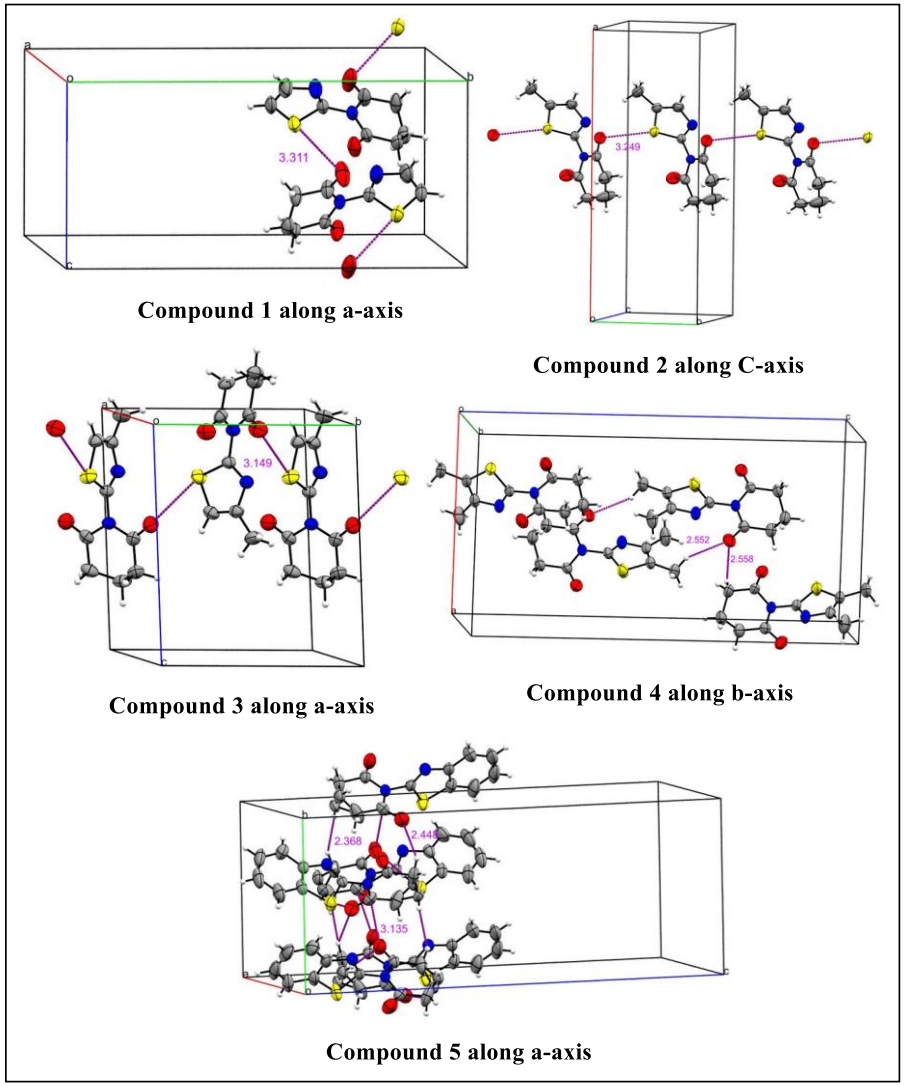


Figure S3: ORTEP diagram of compounds 1–5 with crystallographic axis.

Table 6: The computed global reactivity parameters of all considered systems in the gas phase.

Systems/Compound	*ionization potential* ($IP = -E_{HOMO}$)	*electron affinity* ($EA = -E_{LUMO}$)	*electron egativity* ($\chi = (IP + EA)/2$)	*chemical potential* ($\mu' = -\chi$)	*hardness* ($\eta = (IP-EA)/2$)	*softness* ($S = 1/\eta$)	*electrophilicity index* ($\omega = \mu'^2/2\eta$)
1	7.095	1.229	4.162	-4.162	2.933	0.341	2.953
2	6.810	1.156	3.983	-3.983	2.827	0.353	2.805
3	6.764	1.182	3.973	-3.973	2.791	0.358	2.827
4	6.470	1.112	3.791	-3.791	2.679	0.373	2.682
5	6.705	1.407	4.056	-4.056	2.649	0.377	3.105

Table 7: The computed Transition energy (E), maximum wavelength (λ), oscillation strengths (f), and MO contribution of all considered systems in THF solvent.

Compounds	λ (nm)	*E (eV)*	F (10^{-4})	*MO contribution*	
1	253.71	4.88	9	H -> L (66.34 %)	H-2->L (28.74 %)
2	257.51	4.82	4	H -> L (68.79%)	H-2->L (14.28%)
3	259.05	4.79	3	H -> L (66.34 %)	H-2->L (20.90 %)
4	270.99	4.58	0	H -> L (77.62 %)	H-2->L (2.86 %)
5	270.40	4.59	488	H -> L (81.09%)	H-2->L+2(10.69 %) H-1->L (4.68%)

Table 8: The computed second-order perturbation energies (E2), the energy difference between donor and acceptor I and J orbitals (E(J)-E(I)), and Fock matrix element (F(I, J)) in the gas phase.

Complex	*Donor(i)*	*Type*	*Acceptor(j)*	*Type*	*E(2)*	*E(J)-E(I)*	*F(I,J)*
C1	π	C12-N13	π*	C18-C20	17.34	0.34	0.071
	π	C18-H19	π*	S1-C18	0.51	0.28	0.056
	σ	N13-C20	σ*	N2-C12	7.42	1.14	0.083
	σ	C18-H19	σ*	S1-C18	0.51	0.78	0.018
	LP (2)	S1	π*	C18-C20	20.38	0.26	0.068
	LP(2)	O3/05	π*	C12-N13	1.61	0.27	0.02
C2	π	C12-N13	π*	C18 - C19	15.77	0.35	0.069
	π	S1-C12	π*	N2 – C4	0.5	0.28	0.057
	σ	N13-C19	σ*	N 2 - C12	7.5	1.14	0.083
	σ	C 6-C 9	σ*	C 9 - H11	0.51	1.03	0.021
	LP(1)	N2	π*	O 3 - C17	43.42	0.29	0.104
	LP(2)	O 3/O5	π*	C12 - N13	1.58	0.27	0.019
C5	π	C17-N27	π*	C19 - C22	13.14	0.3	0.084
	π	C19-C22	π*	C17-N27	1.61	0.28	0.029
	σ	N12-C18	σ*	N 1 - C11	4.93	1.13	0.095
	σ	C5-C8	σ*	C 8 - H10	0.25	1.03	0.02
	LP (2)	O2	σ*	N 1 - C16	14.92	0.65	0.125
	LP*(1)	C 3	σ*	C 8 - C13	0.44	0.5	0.03
	LP*(1)	C21	π*	C19 - C22	14.49	0.13	0.085
	LP (2)	O 2	π*	C11 - N12	0.92	0.28	0.02
	LP (3)	O2	LP*(1)	C16	165.03	0.12	0.186
	LP (3)	O4	LP*(1)	C3	165.03	0.12	0.186
C3	π	C12-N13	π*	C18 - C19	17.79	0.35	0.074
	π	S1-C12	π*	N2 – C4	0.58	0.28	0.054
	σ	N13-C19	σ*	N 2 - C12	7.04	1.14	0.081

	σ	C 6 - C 9	σ*	C 9 - H11	0.51	1.03	0.021
	LP (1)	O 3	σ*	N 2 - C17	1.05	1.06	0.03
	LP (1)	N 2	π*	O 3 - C17	43.38	0.29	0.104
	LP (1)	N 2	π*	O 3 - C17	43.38	0.29	0.104
	LP (2)	S 1	π*	C12 - N13	29.83	0.25	0.078
	LP (2)	O 3	π*	C12 - N13	1.6	0.27	0.02
C4	π	C12-N13	π*	C18-C19	16.4	0.36	0.072
	π	S1-C12	π*	N2-C4	0.58	0.28	0.056
	σ	N13-C19	π*	N2-C12	7	1.14	0.08
	σ	O3-C17	π*	N2-C17	0.51	1.47	0.025
	LP(1)	N2	π*	O3-C17	43.59	0.29	0.104
	LP(2)	O3	π*	C12-N13	1.55	0.27	0.019

Table 9: The computed Transition energy (E), maximum wavelength (λ), oscillation /strengths (f), and MO contribution of all considered systems in the Gas Phase.

Compound in gas phase	*Band gap (eV)*	*μ (D)*	*a_0 (10^{-24} esu)*	*Δα (10^{-24} esu)*	*a (-w,w) (10^{-24} esu)*	*Δα (−ω,ω) (10^{-24} esu)*	*β_{vec} (10^{-30} esu)*	*β_{HRS} (10^{-30} esu)*	*β (-w;w,0) (10^{-30} esu)*	*β(-2w;w,0)* SHG *(10^{-30} esu)*	*γ_0 (10^{-36} esu)*	*γ (−ω;ω,0,0) (10^{-36} esu*	*γ (−2ω;ω,ω,0) (10^{-36} esu*
1	5.87	2.79	18.52	6.43	18.71	6.53	0.79	0.21	1.27	1.37	14.24	15.02	16.74
2	5.65	2.28	20.67	8.7	20.89	8.87	1.55	0.21	2.02	2.27	16.7	17.68	19.84
3	5.58	2.37	20.56	6.8	20.77	6.9	1.51	0.39	1.98	2.16	16.21	17.13	19.1
4	5.36	1.83	22.57	8.52	22.81	8.67	2.35	0.6	2.75	3.11	18.58	19.72	22.2
5	5.30	2.80	26.13	15.54	26.49	15.97	0.68	0.18	1.19	1.44	22.76	24.75	28.61

Table 10: The computed Transition energy (E), maximum wavelength (λ), oscillation /strengths (f), and MO contribution of all considered systems in THF solvent.

Compound in THF	*Band gap (eV)*	*μ (D)*	*a_0 (10^{-24} esu)*	*Δa (10^{-24} esu)*	*a (-w,w) (10^{-24} esu)*	*Δa (10^{-24} esu)*	*b_0 (10^{-30} esu)*	*b_{HRS} (10^{-30} esu)*	*b(-w;w,0) (10^{-30} esu)*	*b(-2w;w,0)* SHG *(10^{-30} esu)*	*γ_0 (10^{-36} esu)*	*γ (–ω;ω,0,0) (10^{-36} esu*	*γ (–2ω;ω,ω,0) (10^{-36} esu*
1	5.87	3.77	23.38	6.00	20.8	6.62	0.92	0.39	1.59	1.47	26.39	22.74	23.32
2	5.65	3.24	25.99	8.12	23.18	8.99	2.65	0.12	2.75	2.79	30.39	26.56	27.27
3	5.58	3.18	25.88	6.09	23.06	6.93	2.59	0.59	2.71	2.53	29.86	25.66	26.54
4	5.36	2.6	28.37	7.89	25.32	8.82	4.3	1.03	3.97	3.98	33.59	29.32	30.43
5	5.30	3.47	33.44	17.2	29.68	17.26	0.73	0.43	1.58	1.63	45.76	39.61	42.35