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Unsymmetrical urea and thiourea derivatives: an efficient nano $\text{BF}_3\text{-SiO}_2$ catalyzed PEG-400 mediated sonochemical synthesis and biological evaluation

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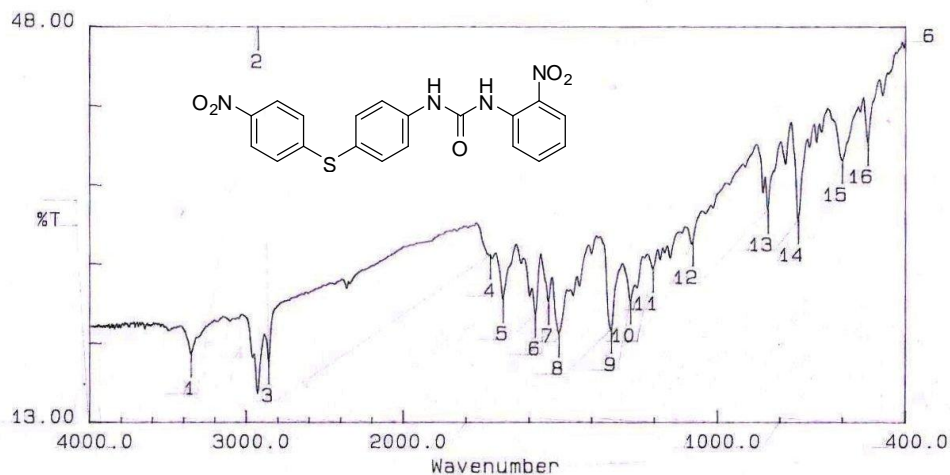
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S1. FT-IR spectrum of 1-(2-nitrophenyl)-3-(4-(4-nitrophenylthio)phenyl)urea (6a)

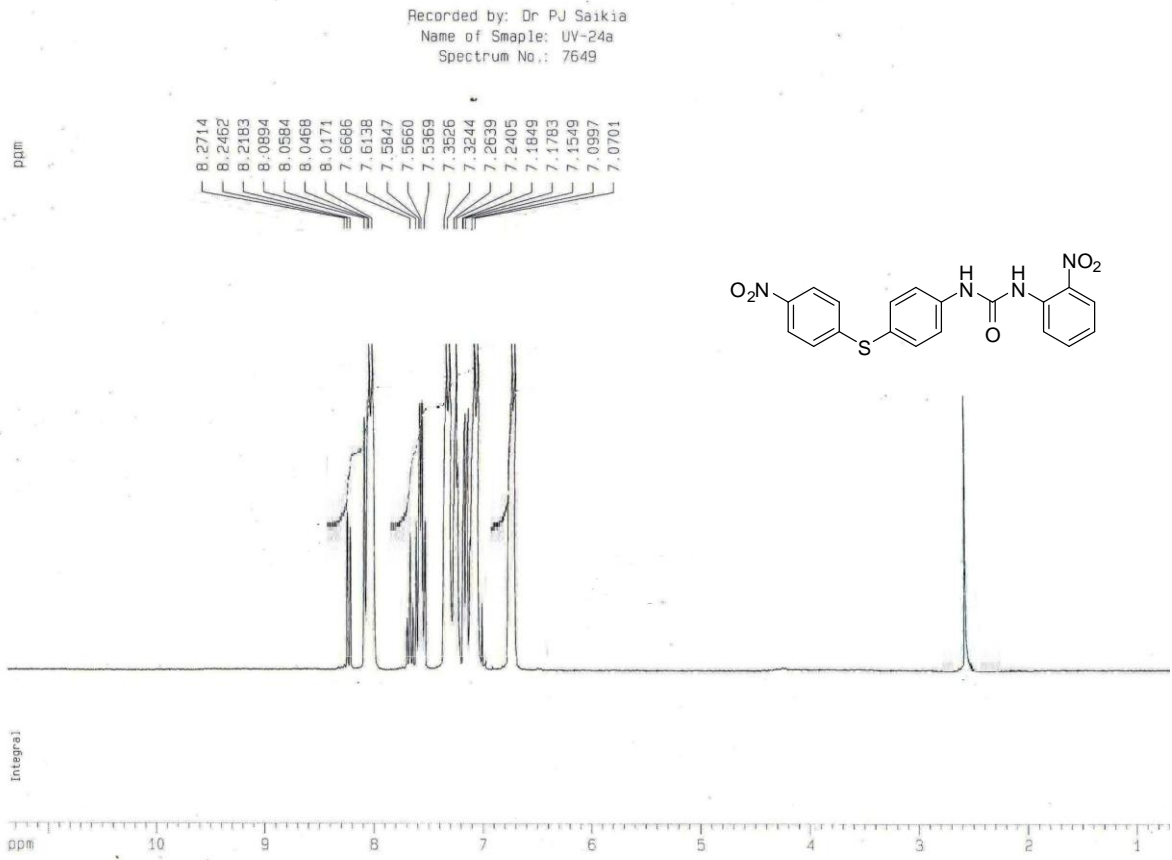
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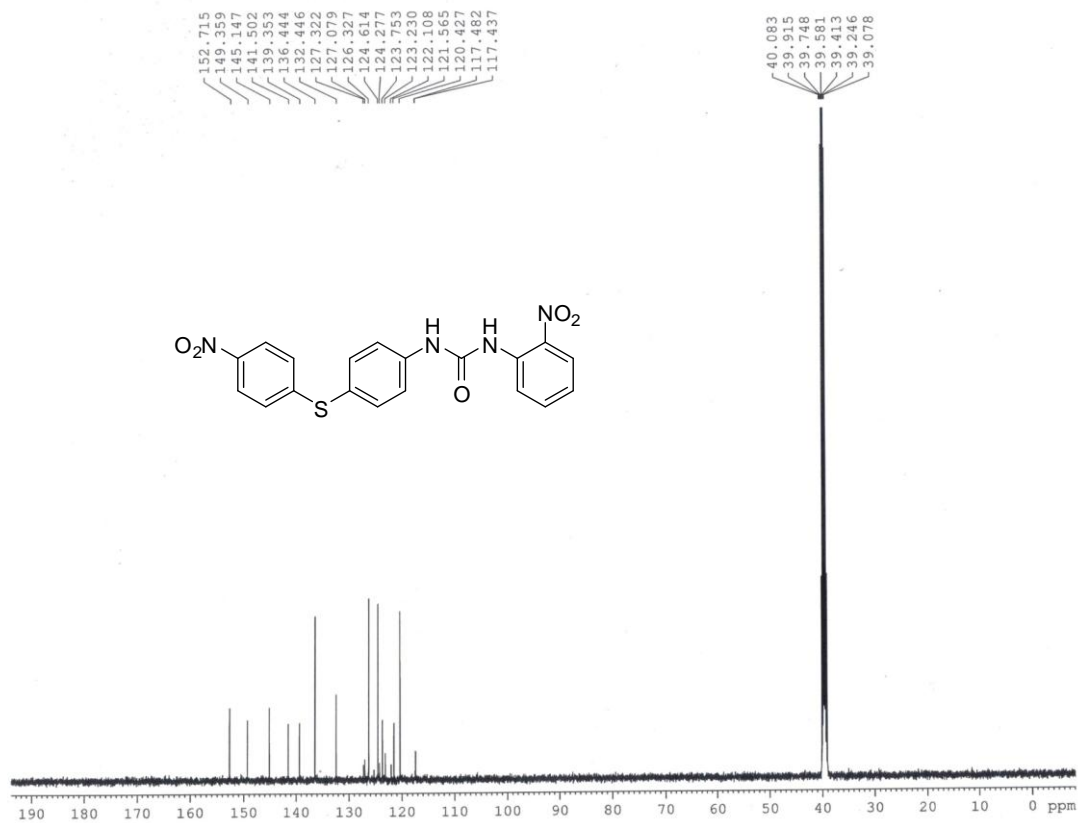


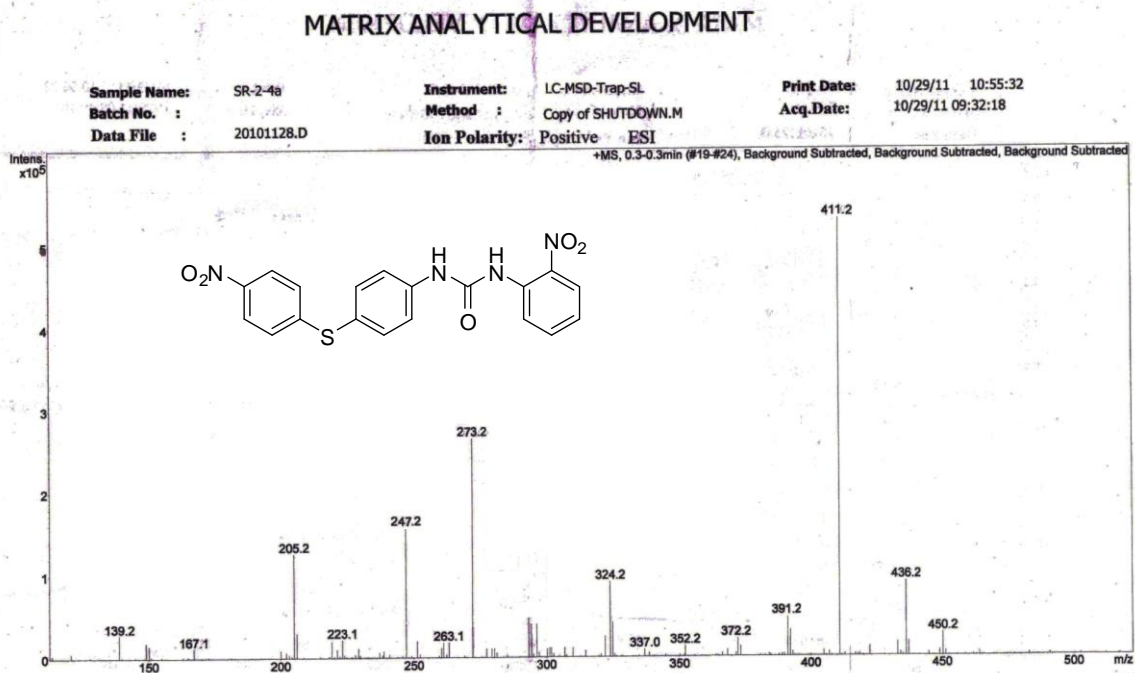
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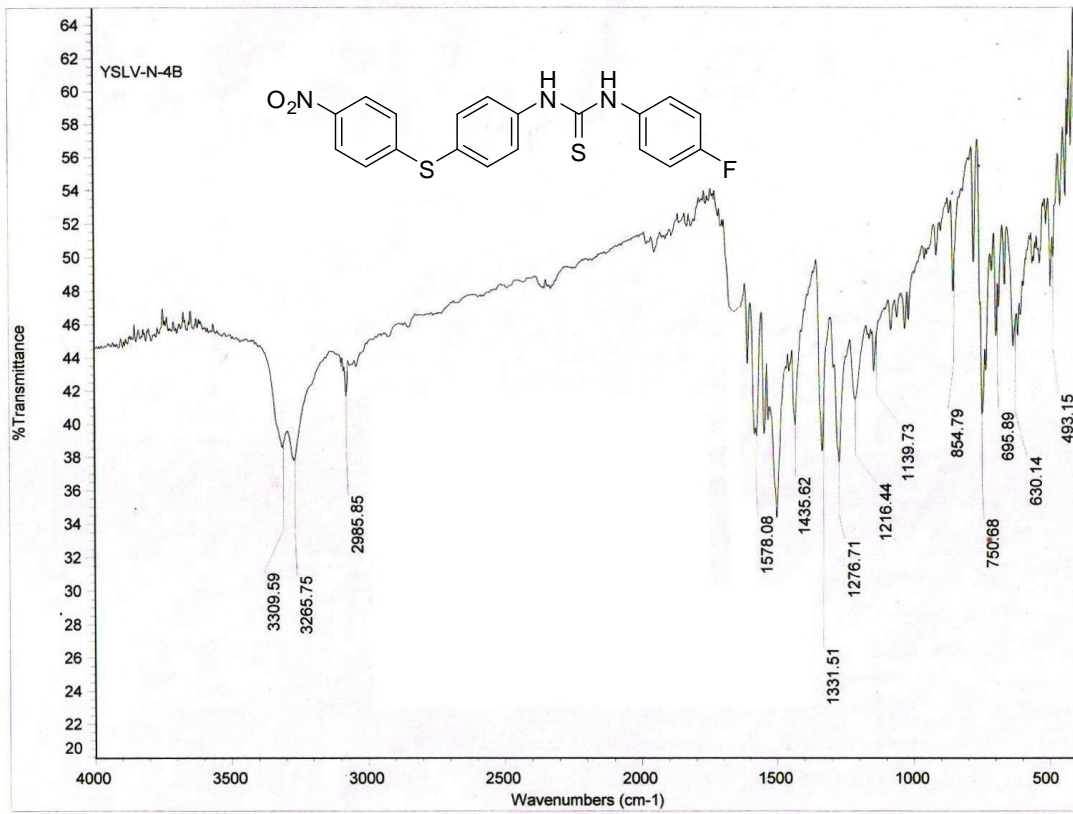
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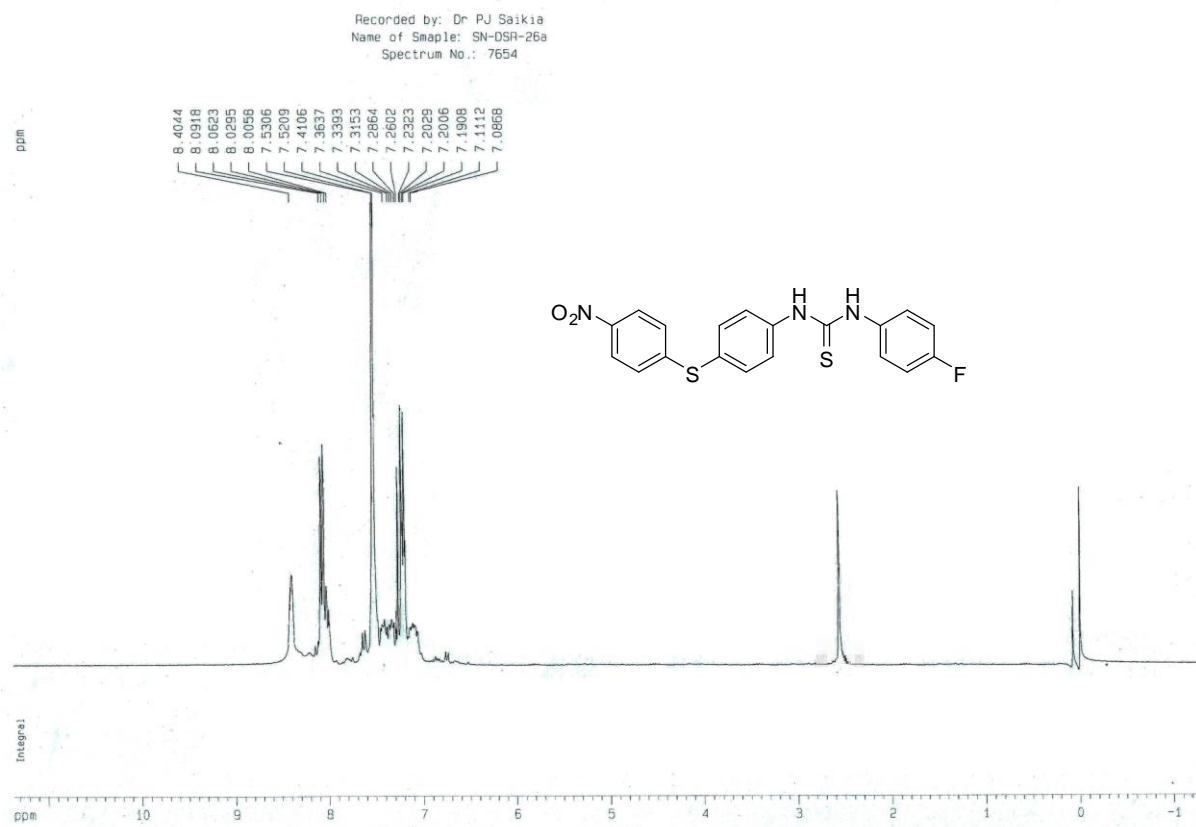
1: 3352.58 (19.1)	2: 2924.35 (15.6)	3: 2854.90 (18.5)	4: 1722.59 (27.8)
5: 1682.08 (24.0)	6: 1579.84 (22.6)	7: 1537.40 (23.8)	8: 1504.61 (20.9)
9: 1336.79 (21.2)	10: 1275.06 (23.8)	11: 1203.69 (26.6)	12: 1078.31 (29.0)
13: 837.18 (31.8)	14: 740.73 (31.0)	15: 599.92 (36.2)	16: 518.90 (37.9)

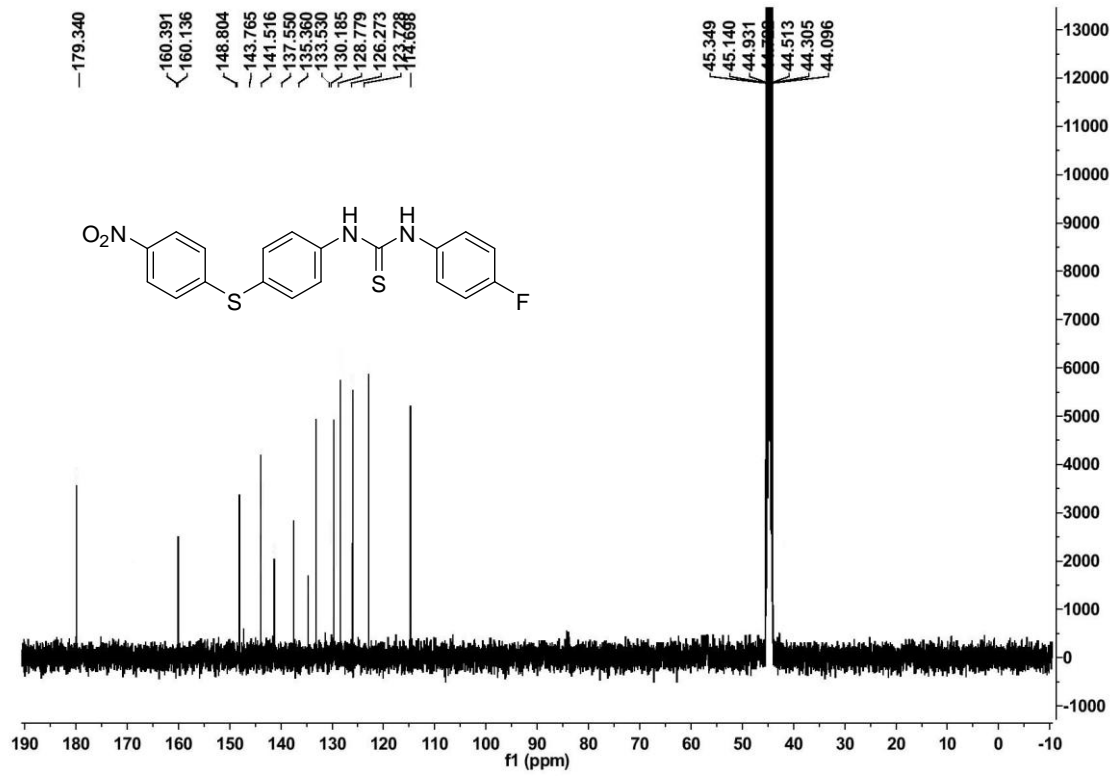
S2. ^1H NMR spectrum of 1-(2-nitrophenyl)-3-(4-(4-nitrophenylthio)phenyl)urea (**6a**)

S3. ^{13}C NMR spectrum of 1-(2-nitrophenyl)-3-(4-(4-nitrophenylthio)phenyl)urea (**6a**)

S4. Mass spectrum of 1-(2-nitrophenyl)-3-(4-(4-nitrophenylthio)phenyl)urea (**6a**)

S5. FT-IR spectrum of 1-(4-Fluorophenyl)-3-(4-(4-nitrophenylthio)phenyl)thiourea (6f)

S6. ^1H NMR spectrum of 1-(4-Fluorophenyl)-3-(4-(4-nitrophenylthio)phenyl)thiourea (**6f**).

S7. ^{13}C NMR spectrum of 1-(4-fluorophenyl)-3-(4-(4-nitrophenylthio)phenyl)thiourea (**6f**).

S8. Mass spectrum of 1-(4-fluorophenyl)-3-(4-(4-nitrophenylthio)phenyl)thiourea (6f).

MATRIX ANALYTICAL DEVELOPMENT

