

Exploring Structure-Activity Relationship in Tacrine-Squaramide Derivatives as Potent Cholinesterase Inhibitors

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³ Laboratory of Medicinal Chemistry, Institute of General Organic chemistry, Juan de la Cierva 3, 28006-Madrid, Spain

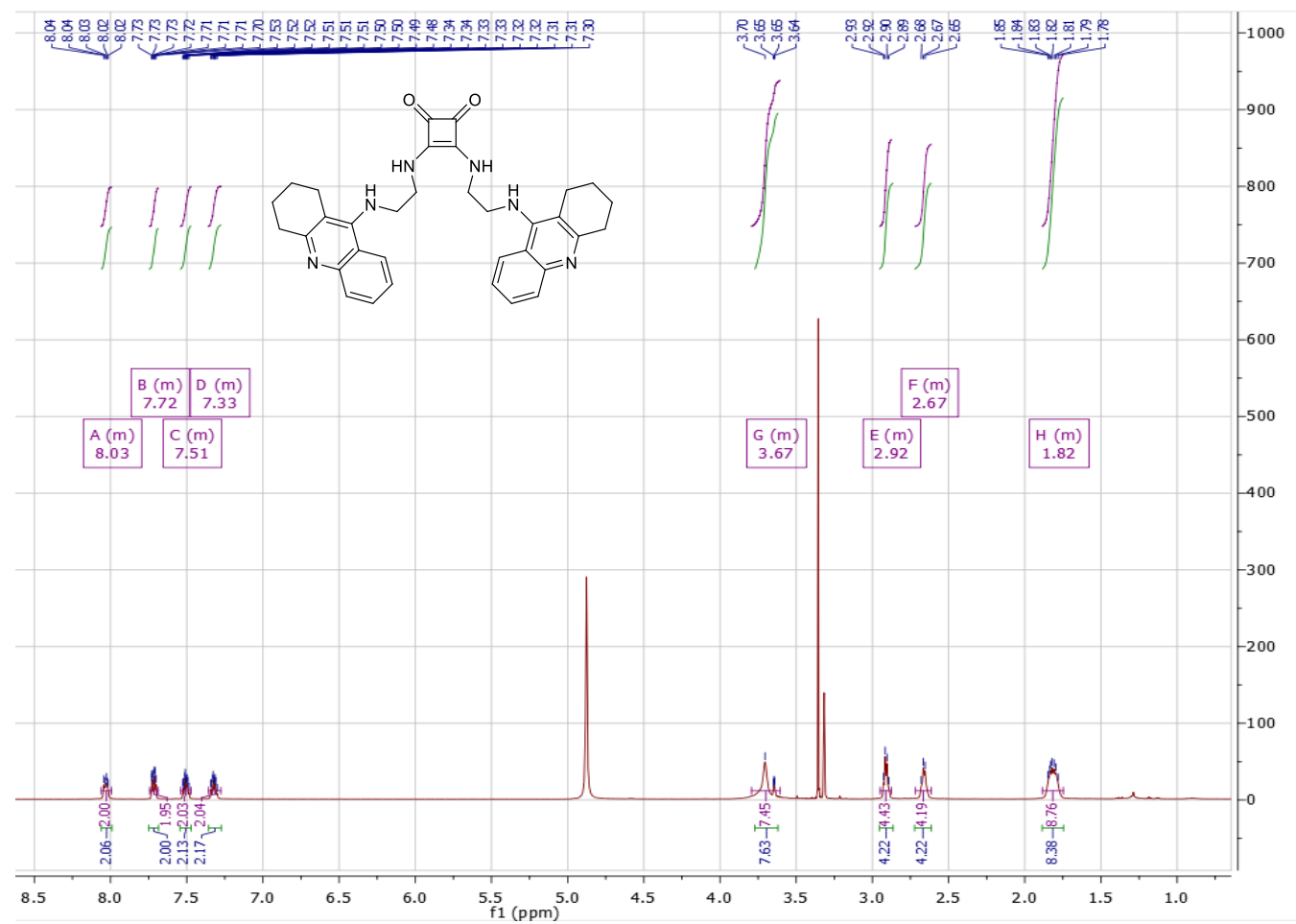
⁴ Centro de Química Orgánica "Lora-Tamayo" (CSIC), C/ Juan de la Cierva 3, 28006-Madrid, Spain

Author contribution: B.S. and E.M. contributed equally.

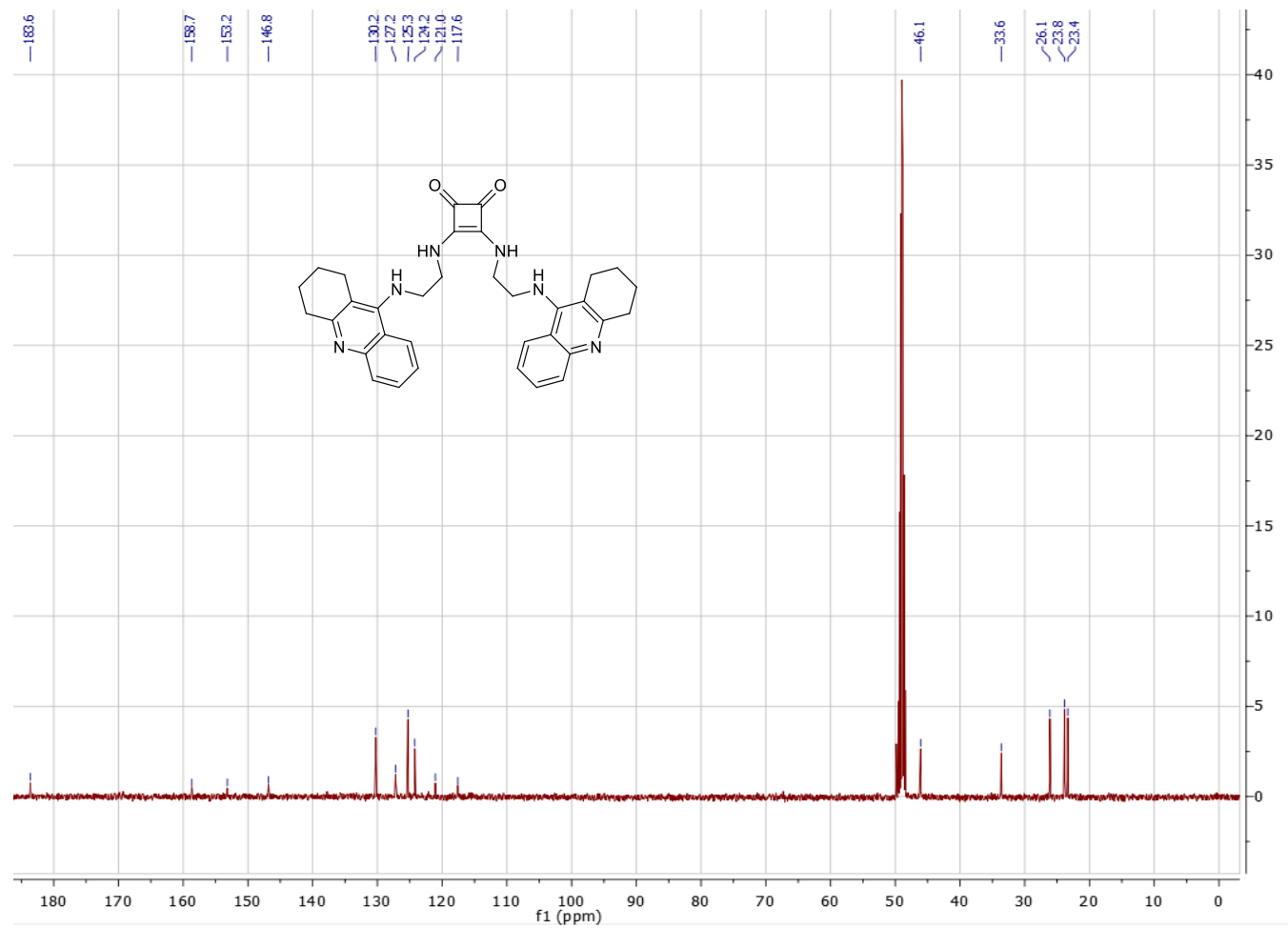
*Corresponding author: J.K - Phone: +420 973 255 167; e-mail: jan.korabecny@fnhk.cz; E.M. – Phone: +420 973 255 167; e-mail: eva.mezeiova@gmail.com

^1H and ^{13}C spectral copies of final products

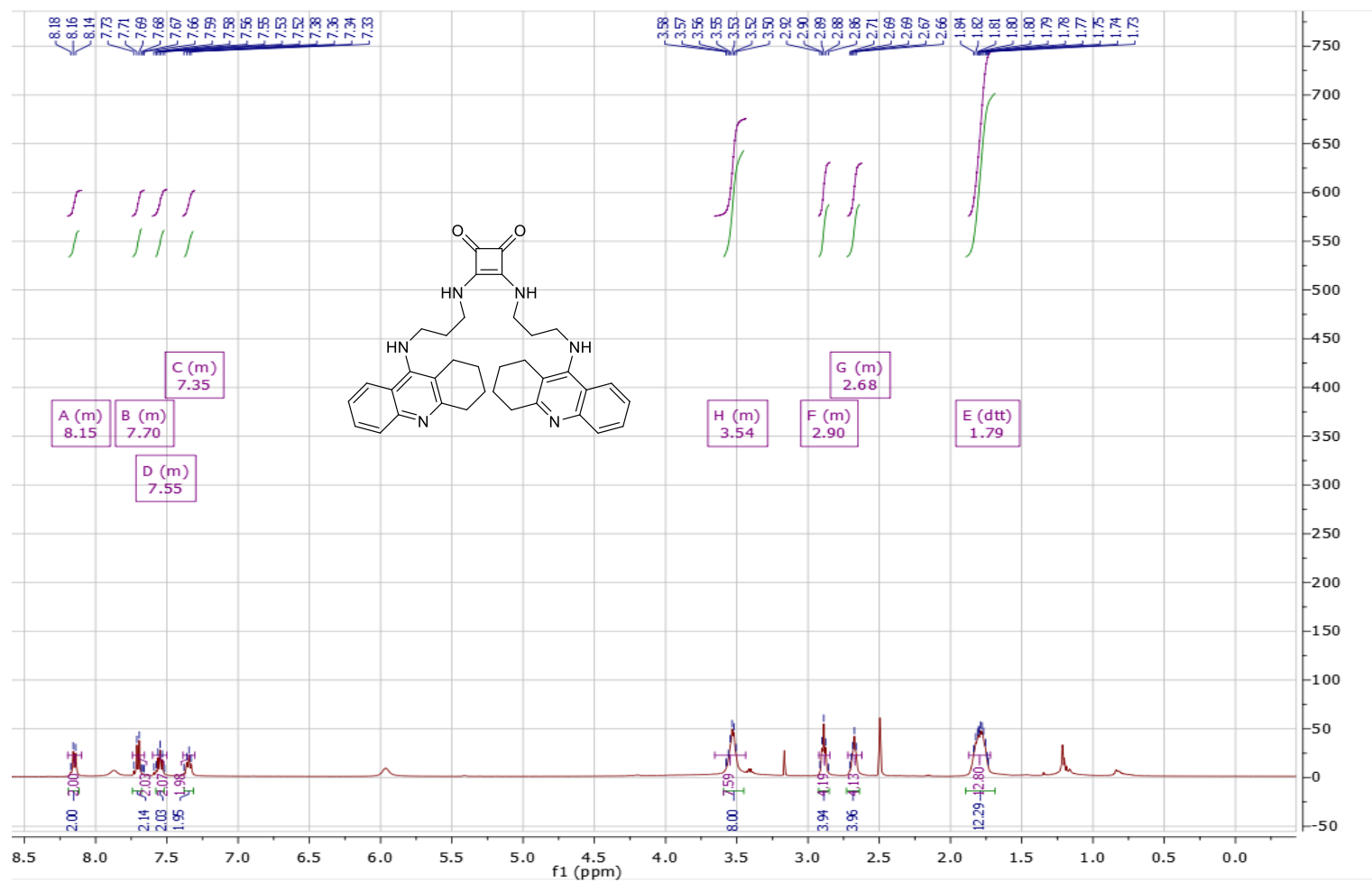
Bis({2-[(1,2,3,4-tetrahydroacridin-9-yl)amino]ethyl}amino)cyclobut-3-ene-1,2-dione (3a) ^1H NMR:



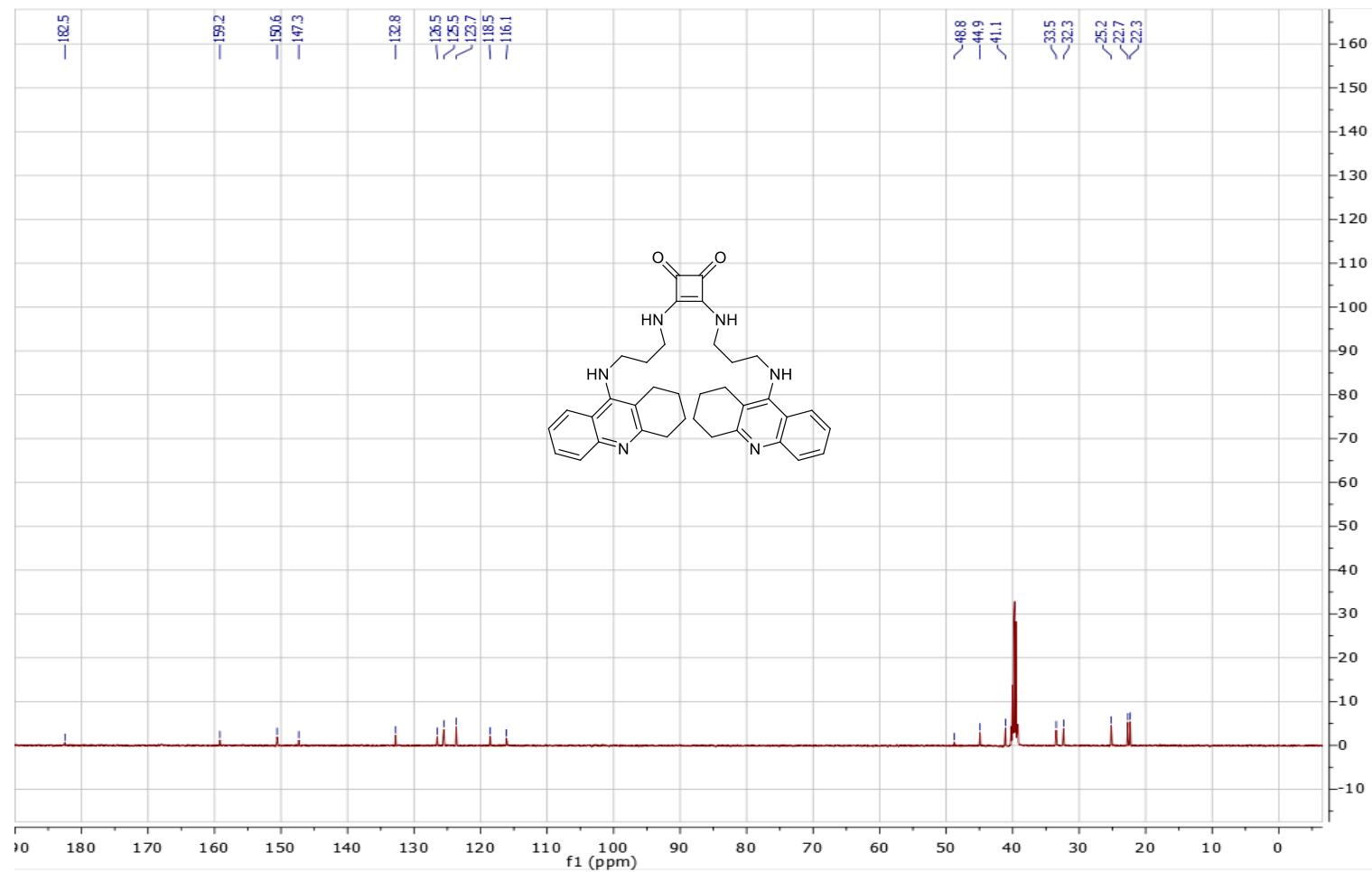
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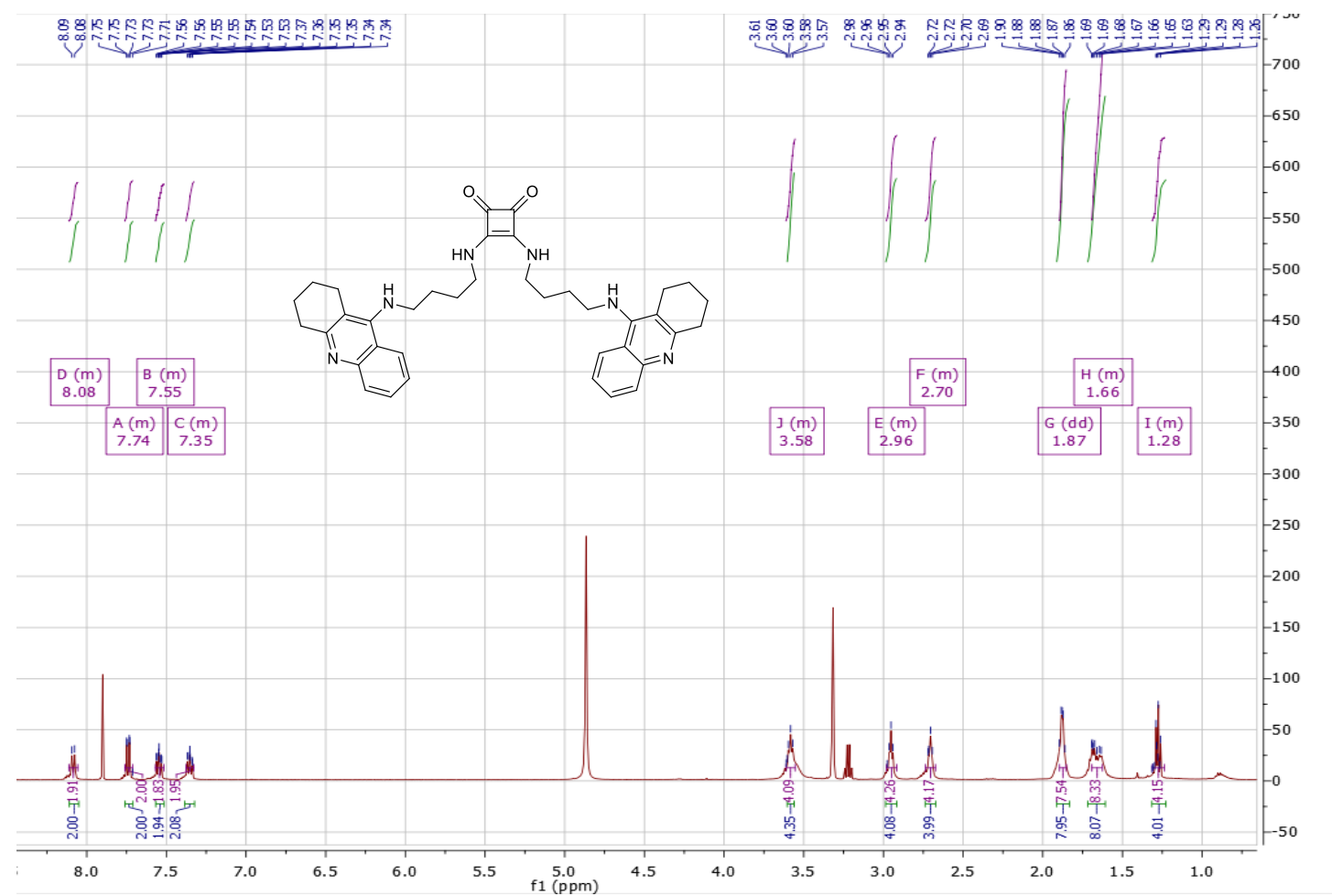
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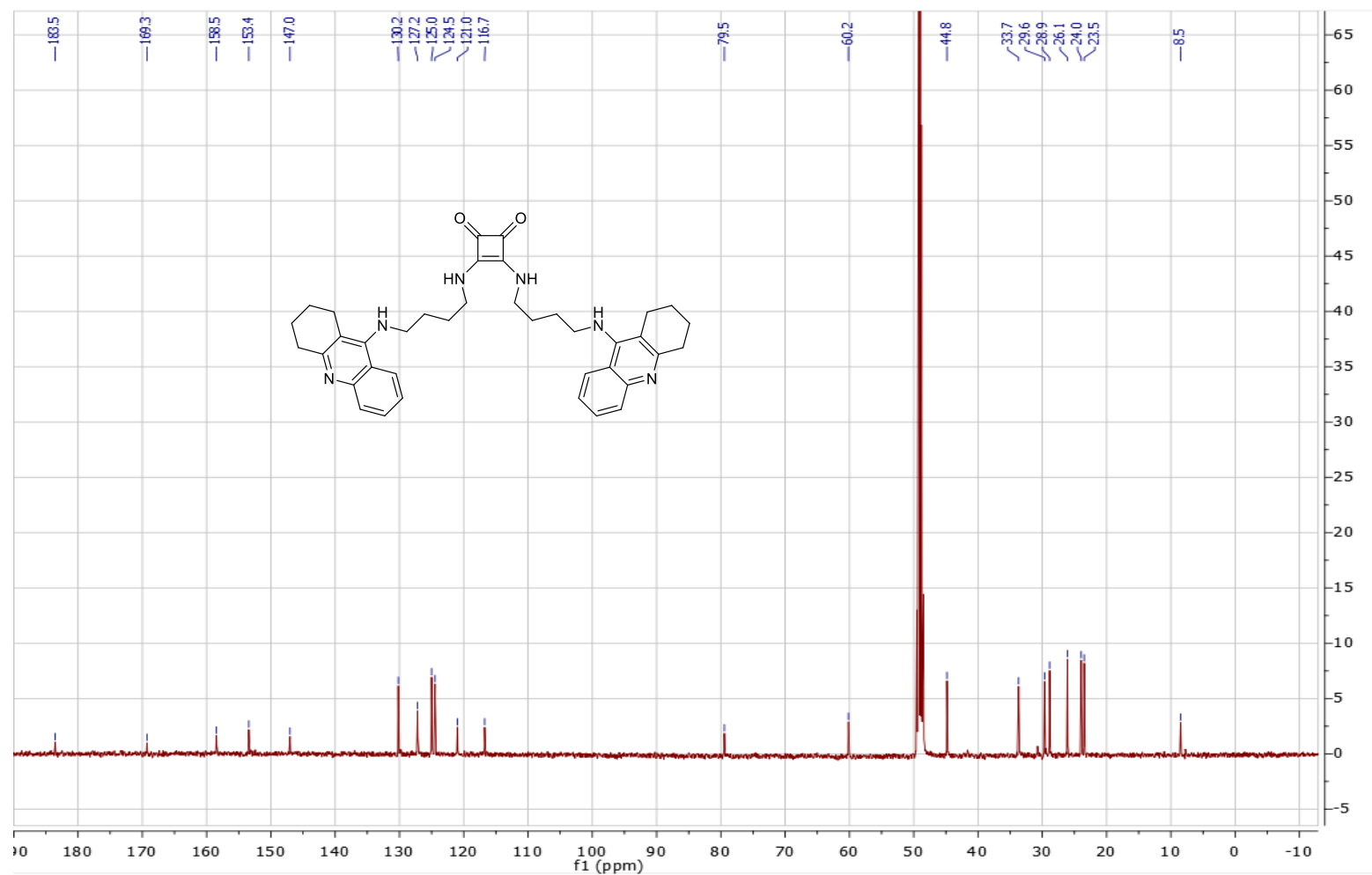
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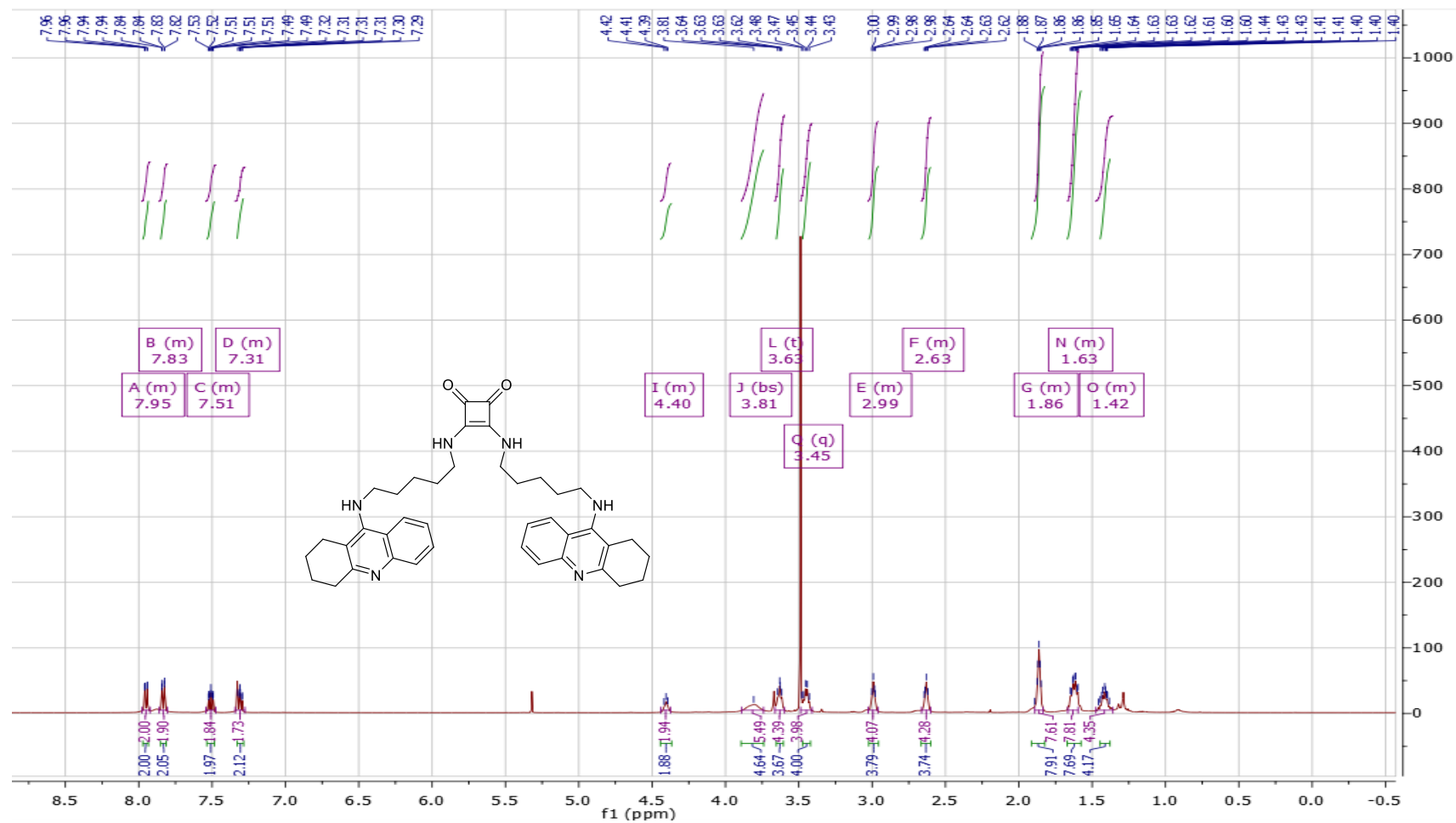
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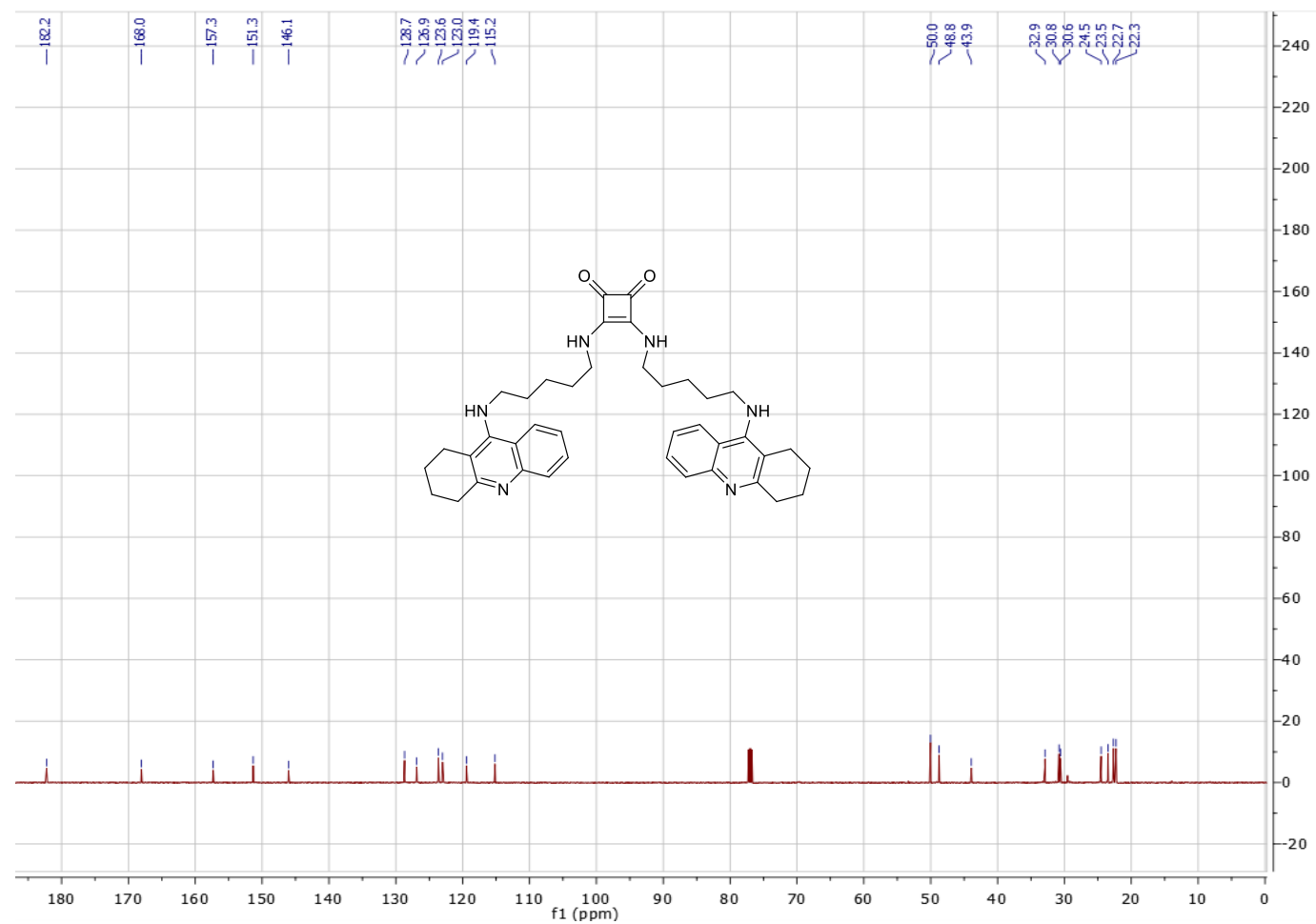
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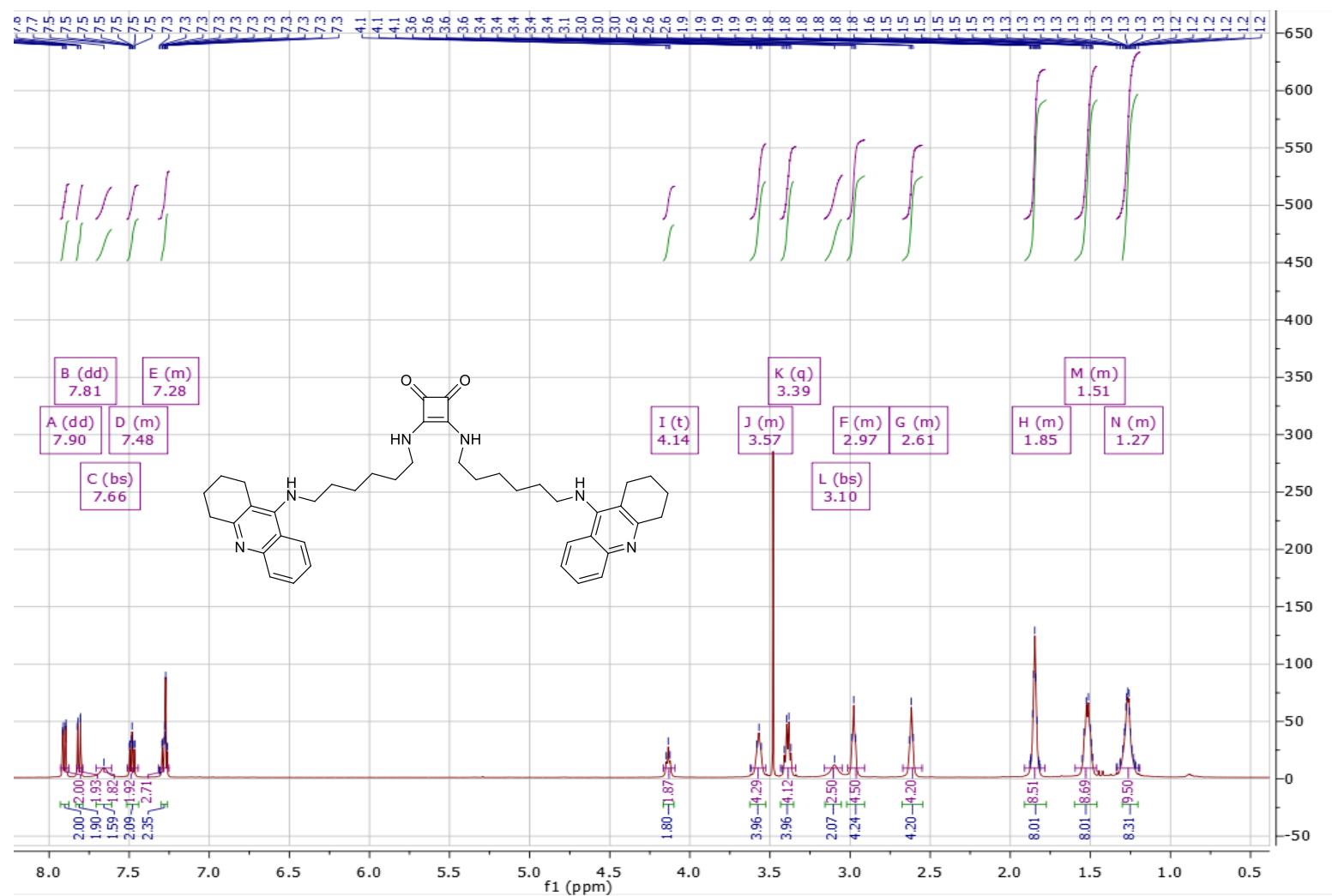
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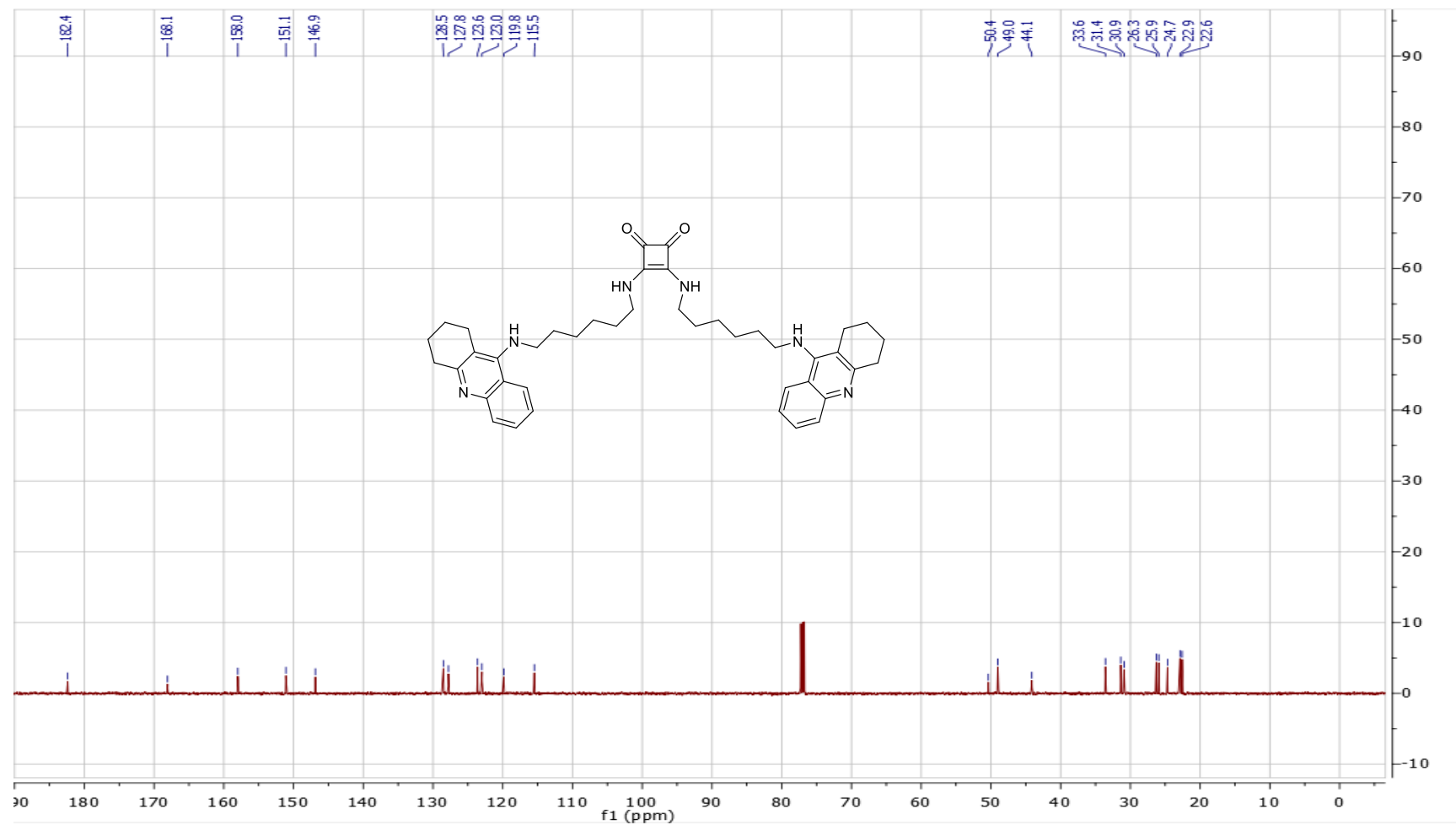
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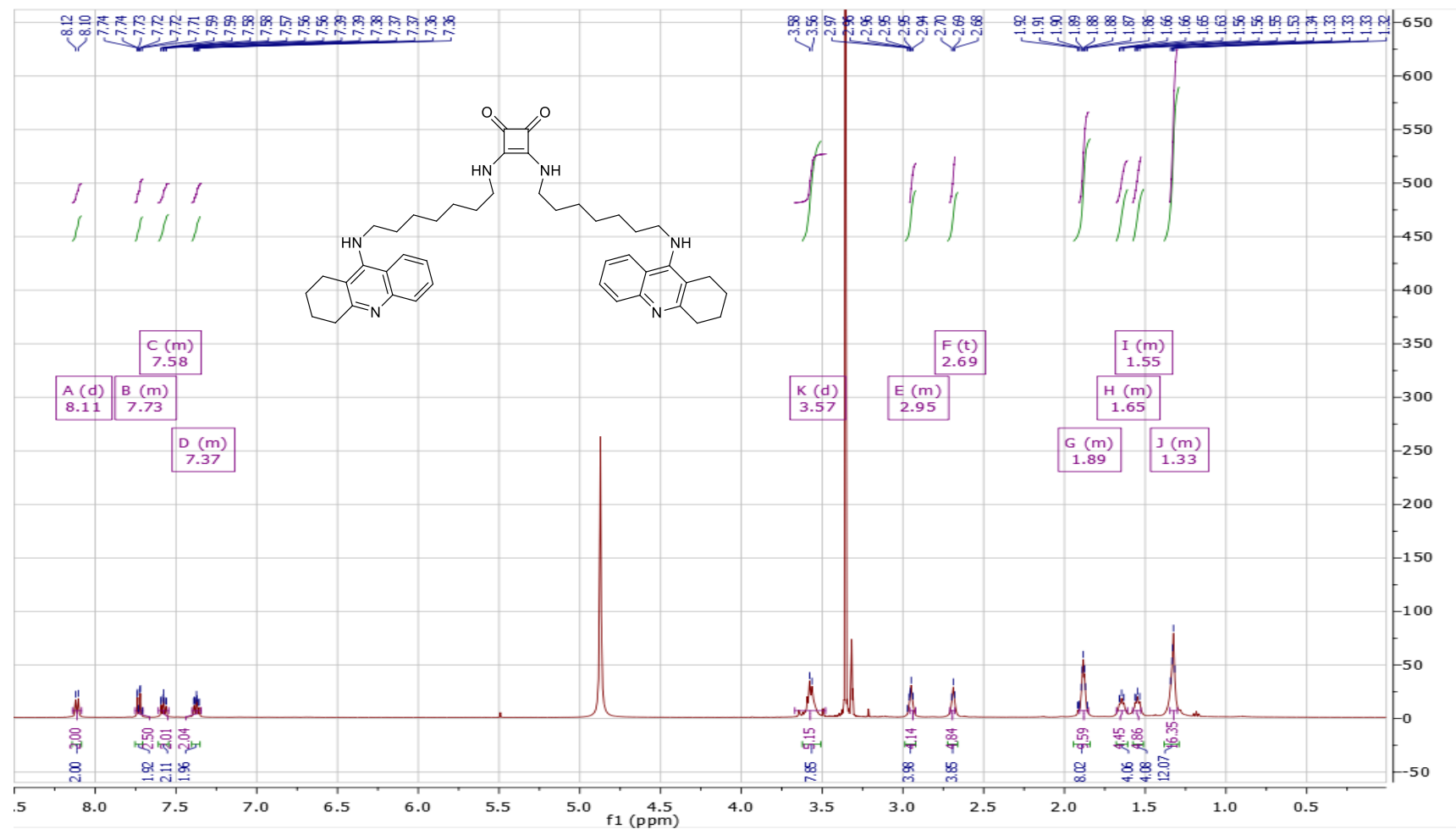
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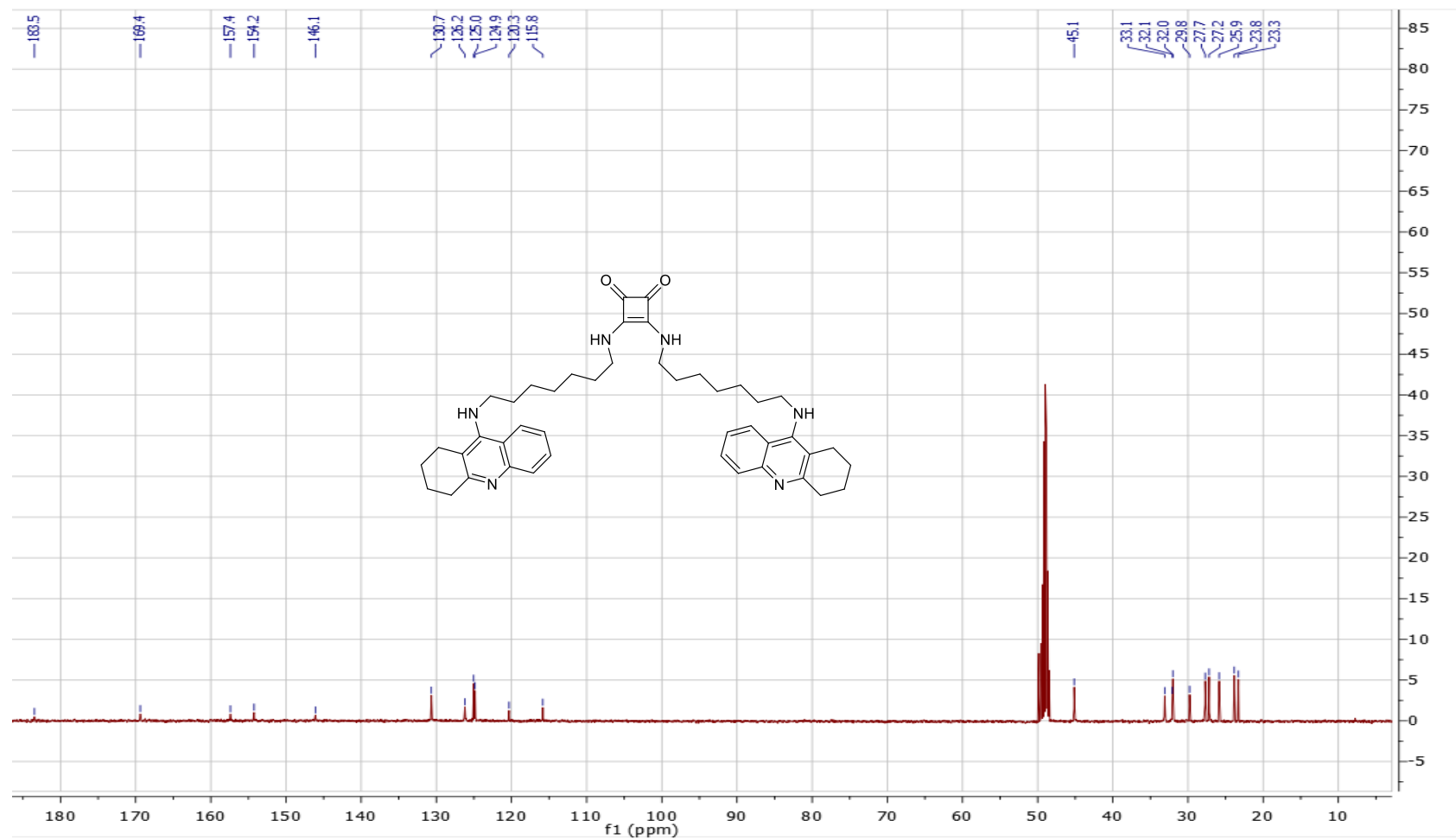
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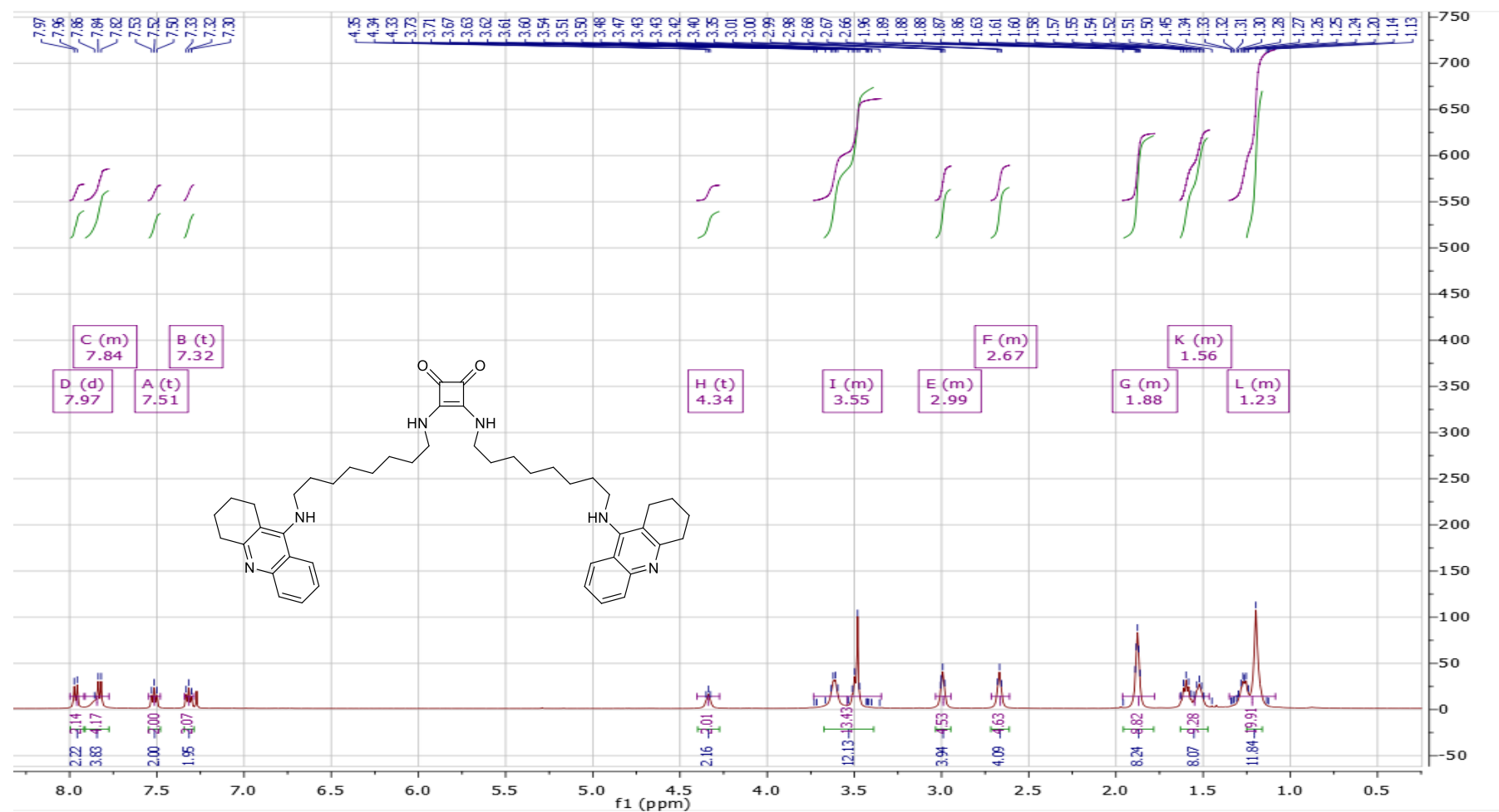
Bis({7-[(1,2,3,4-tetrahydroacridin-9-yl)amino]heptyl}amino)cyclobut-3-ene-1,2-dione (3f) ¹H NMR:



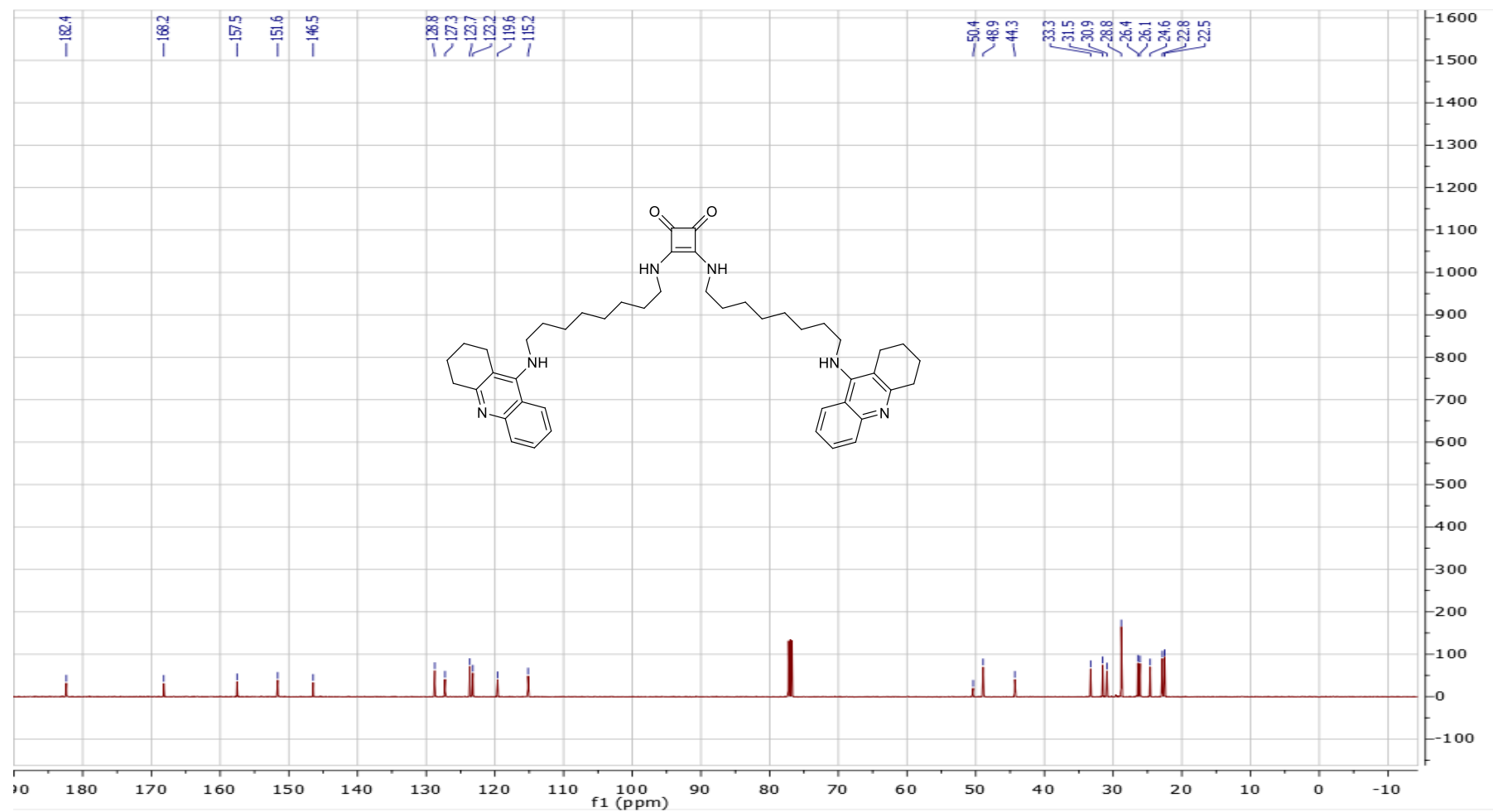
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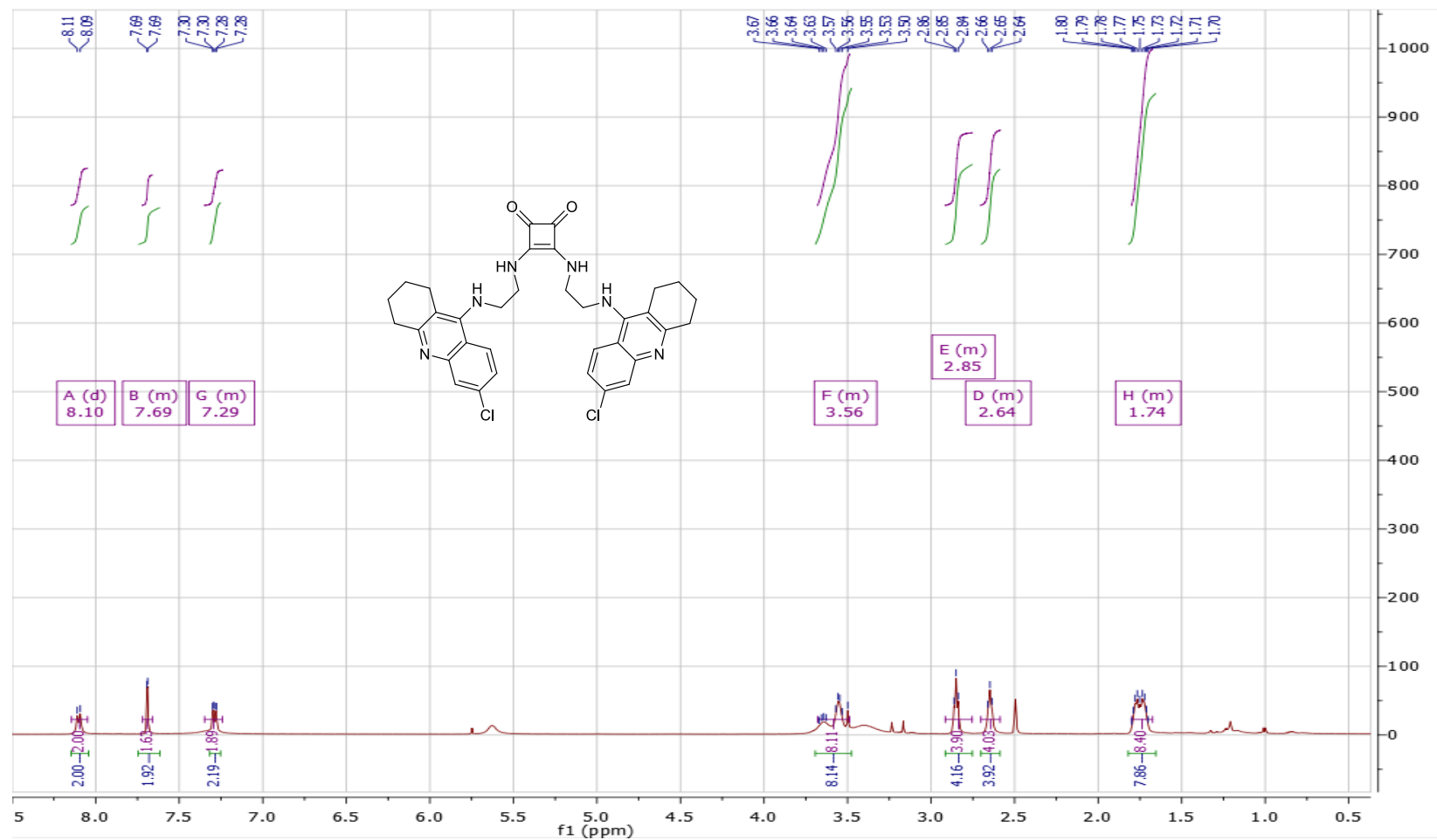
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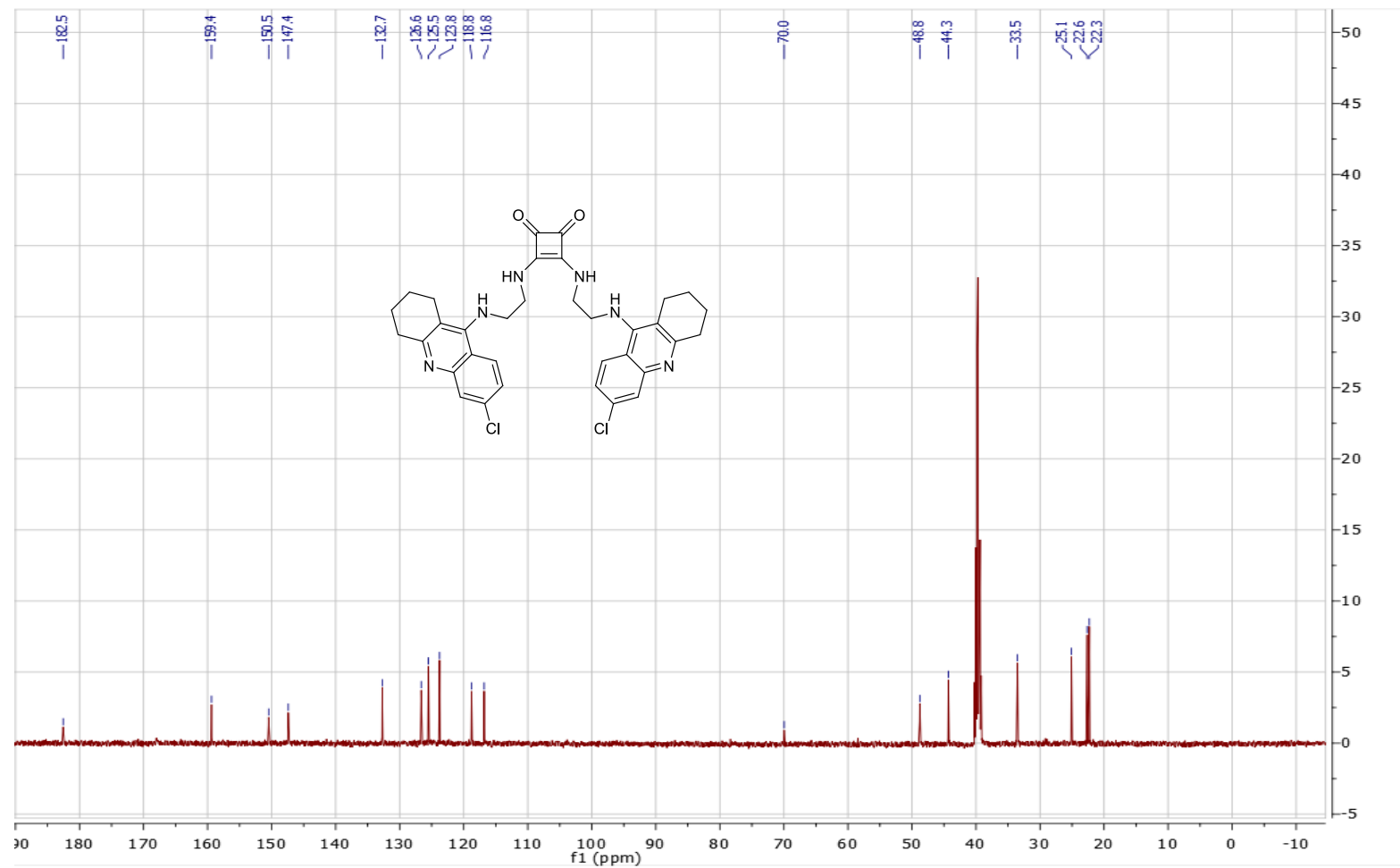
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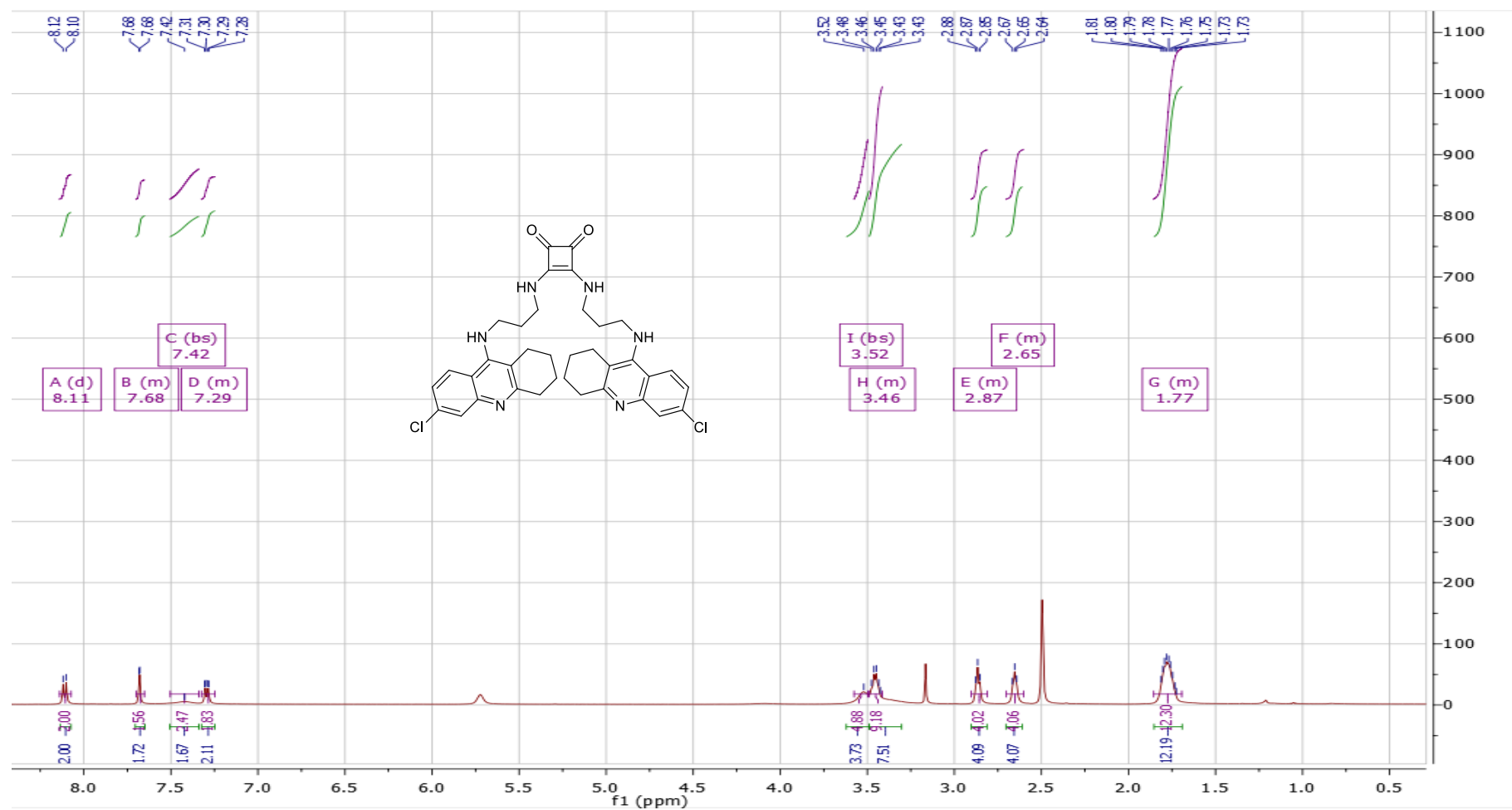
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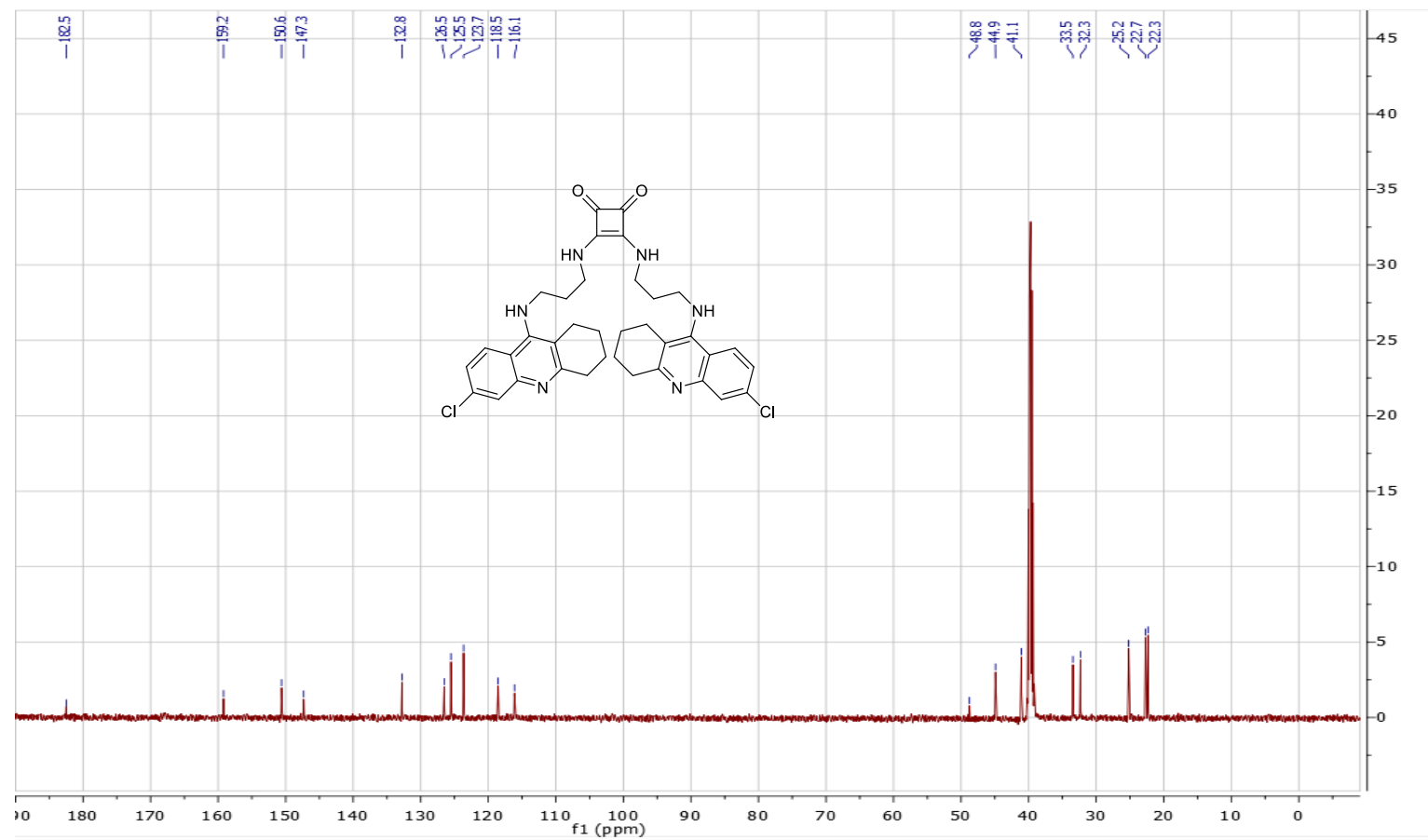
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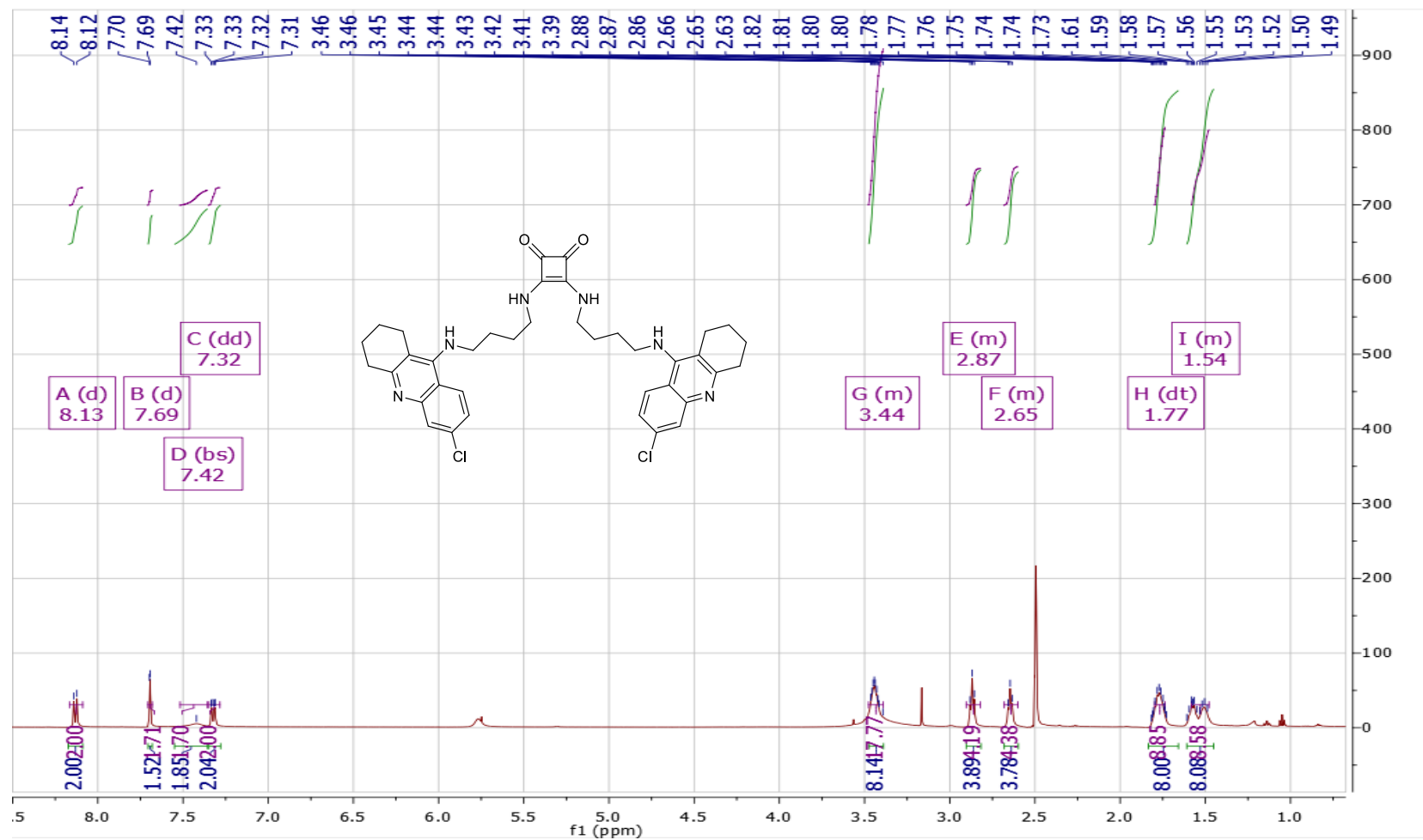
Bis({3-[(6-chloro-1,2,3,4-tetrahydroacridin-9-yl)amino]propyl}amino)cyclobut-3-ene-1,2-dione (4b) ¹H NMR:



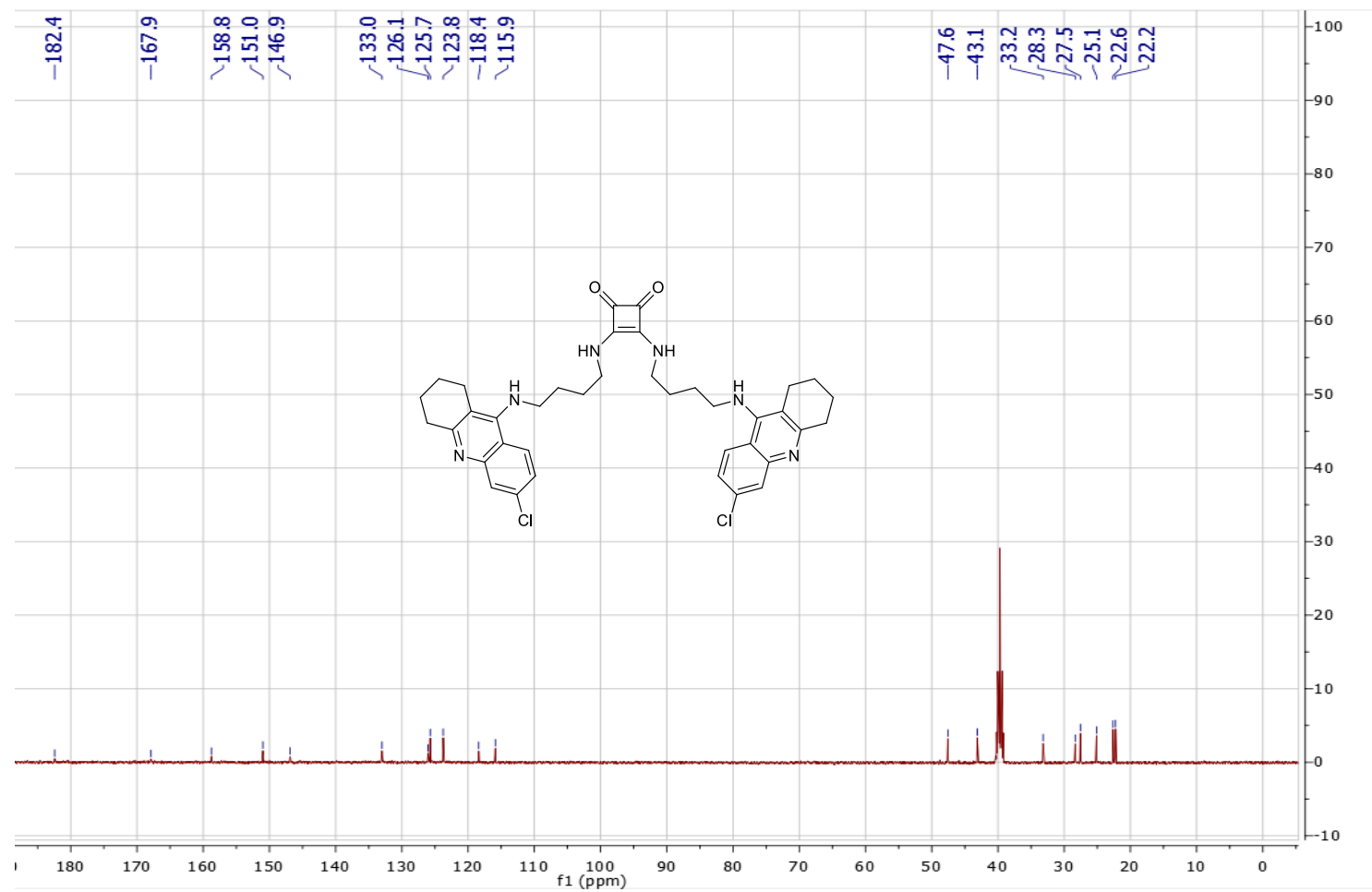
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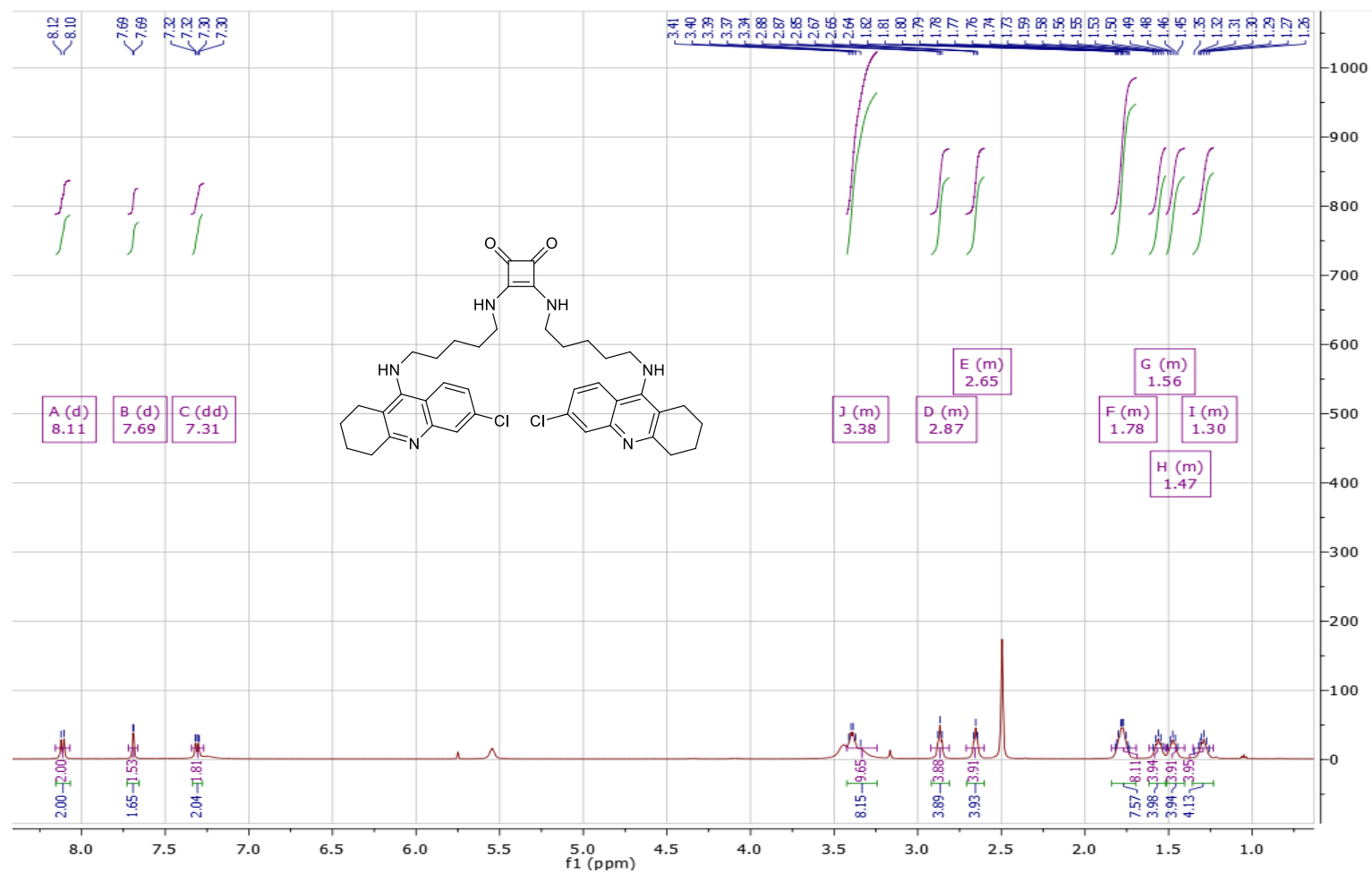
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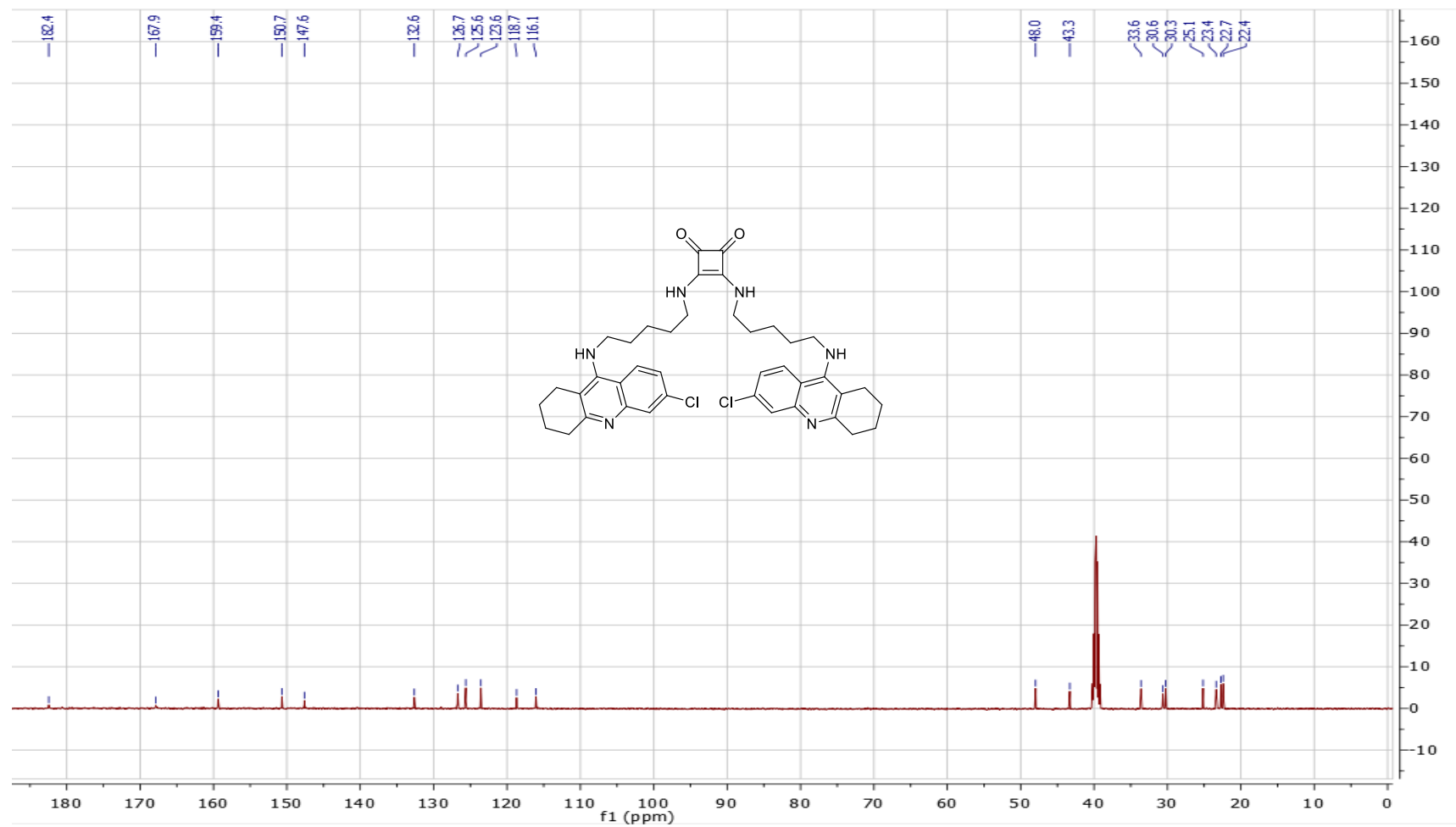
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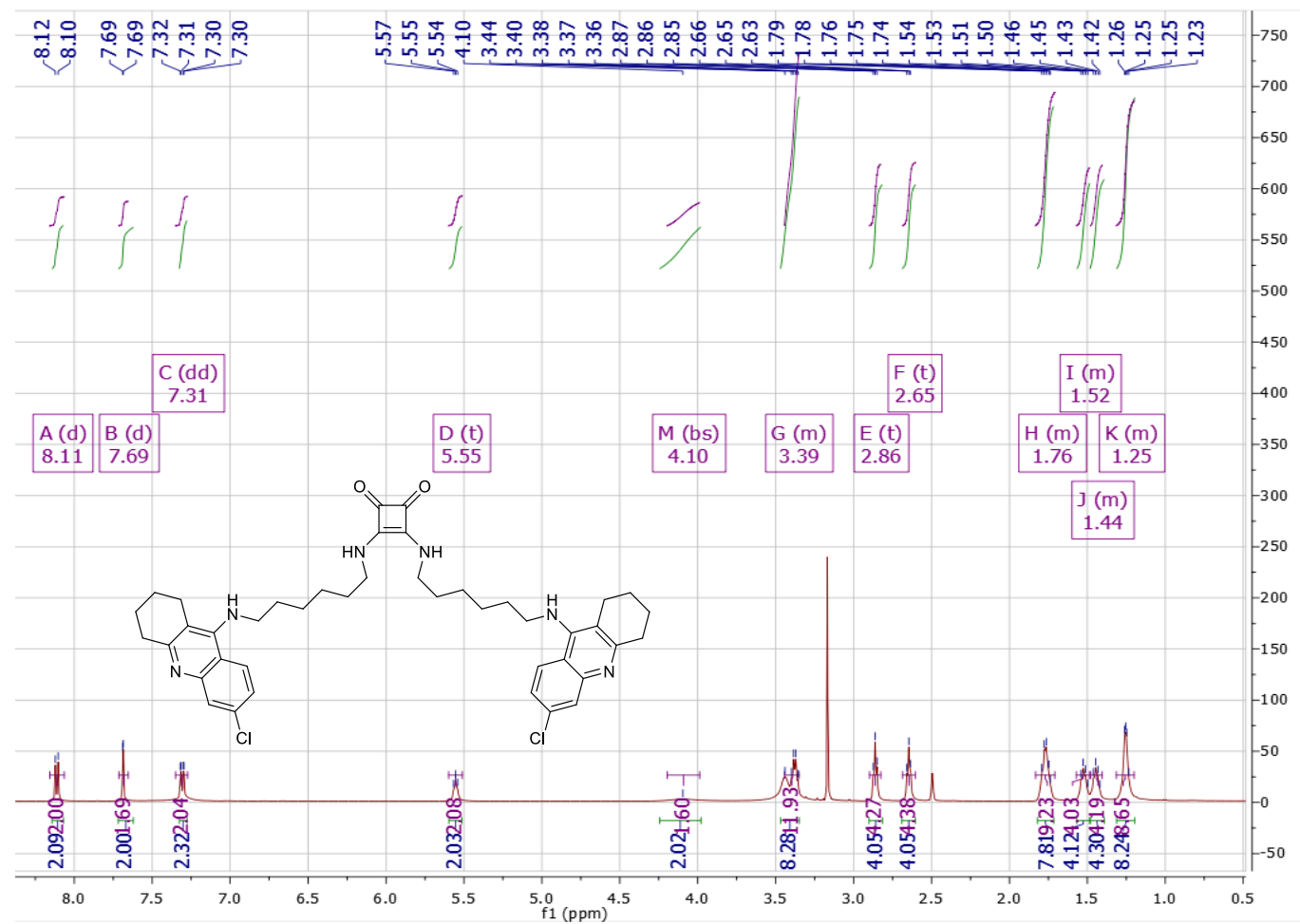
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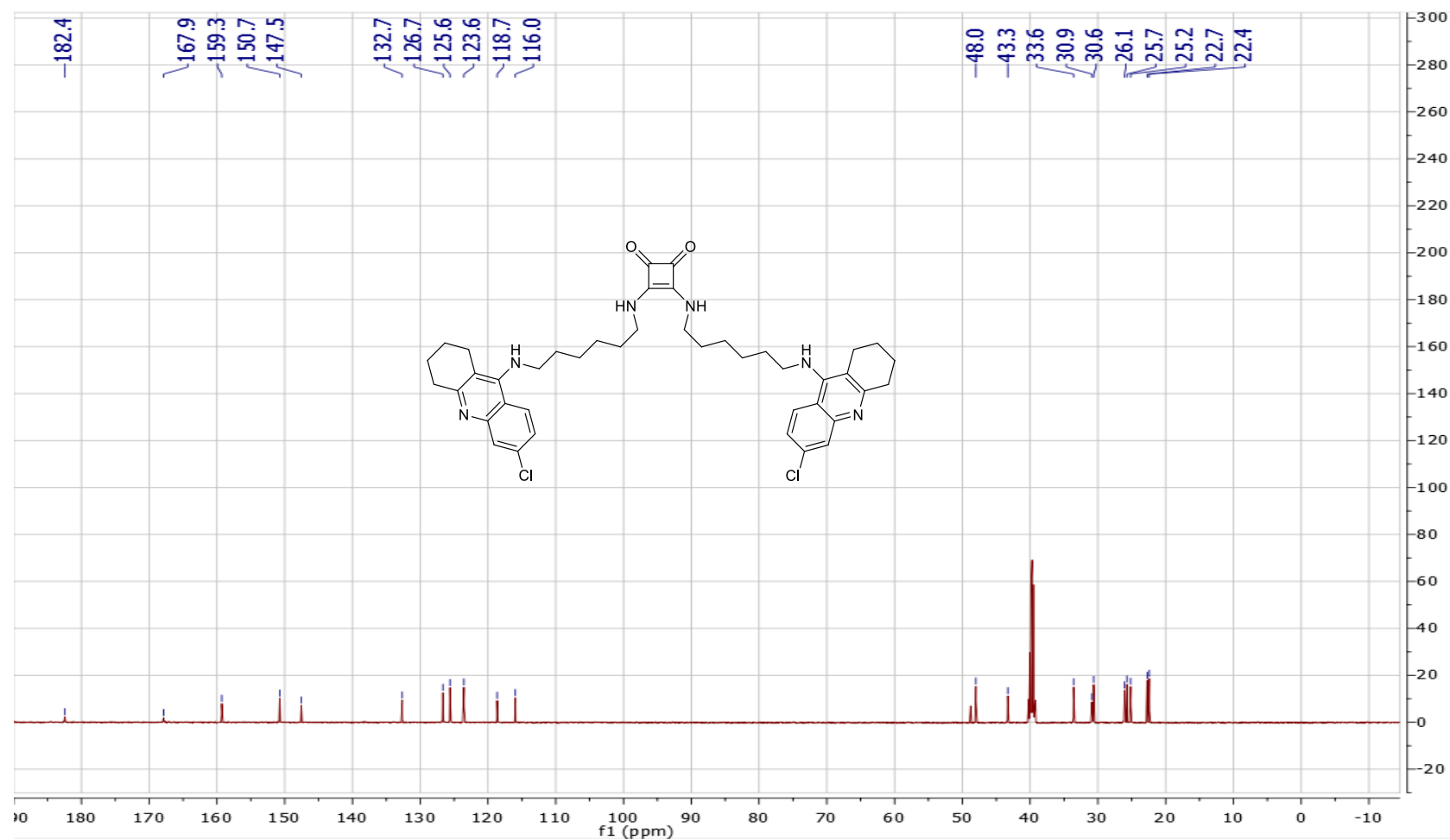
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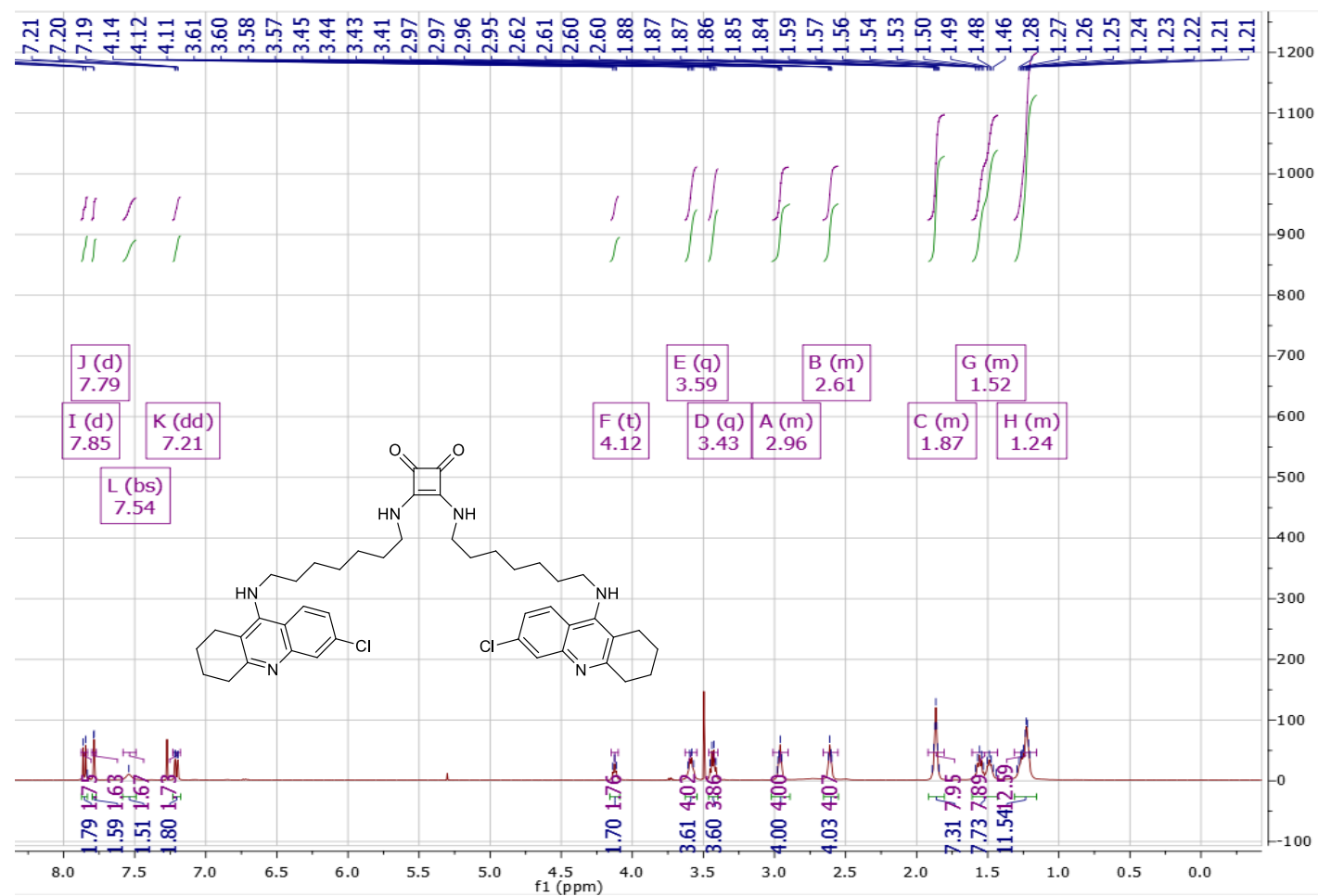
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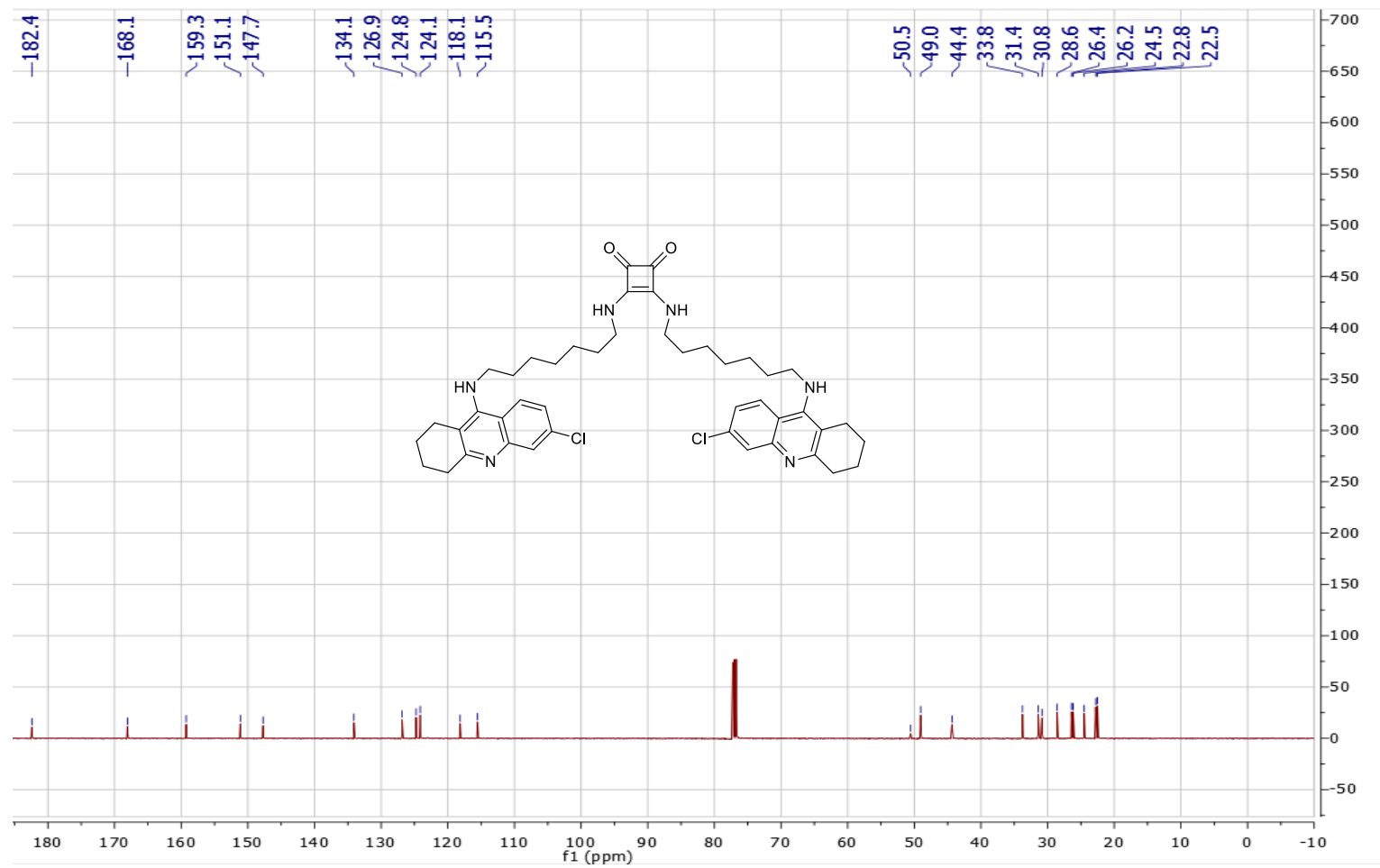
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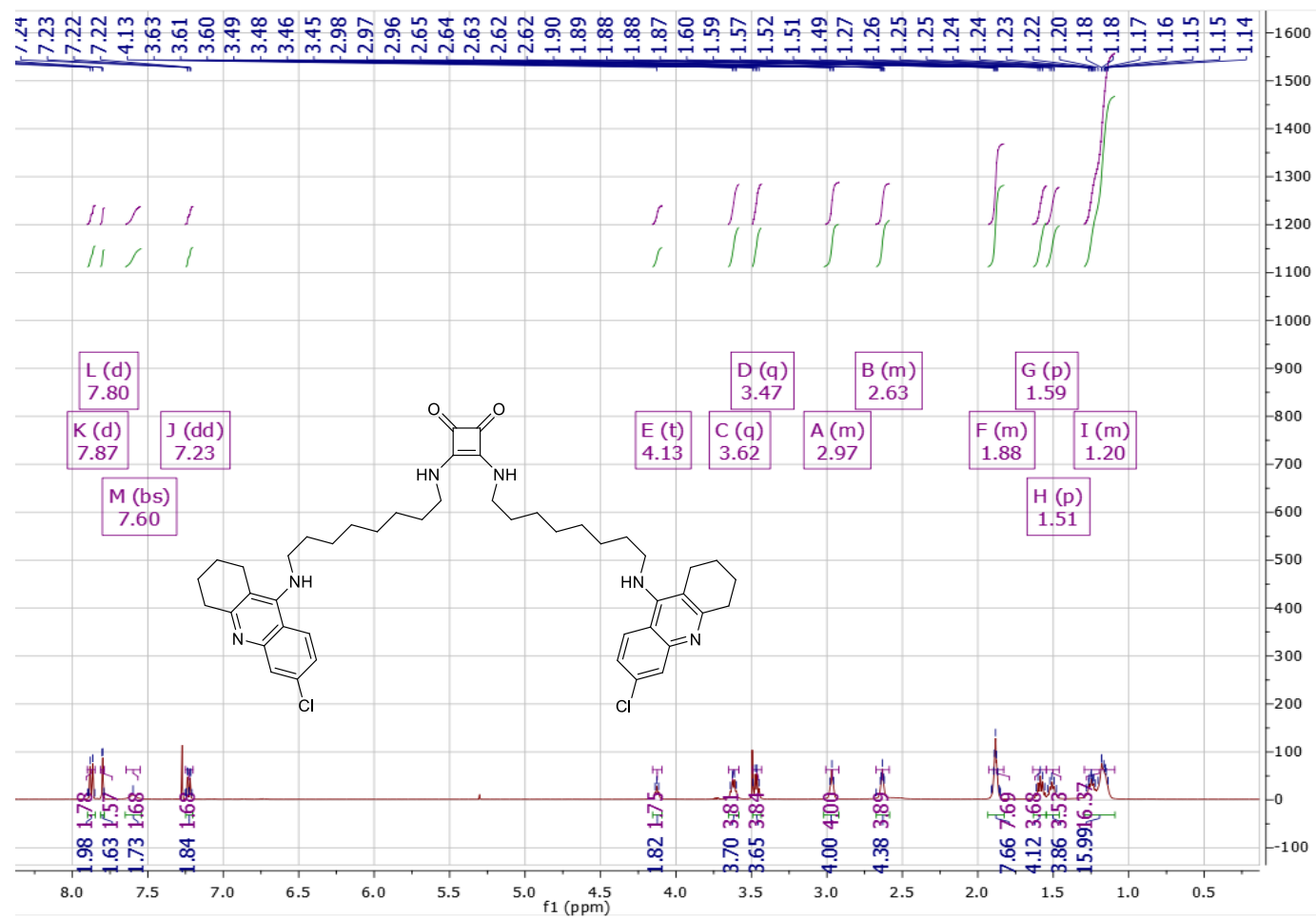
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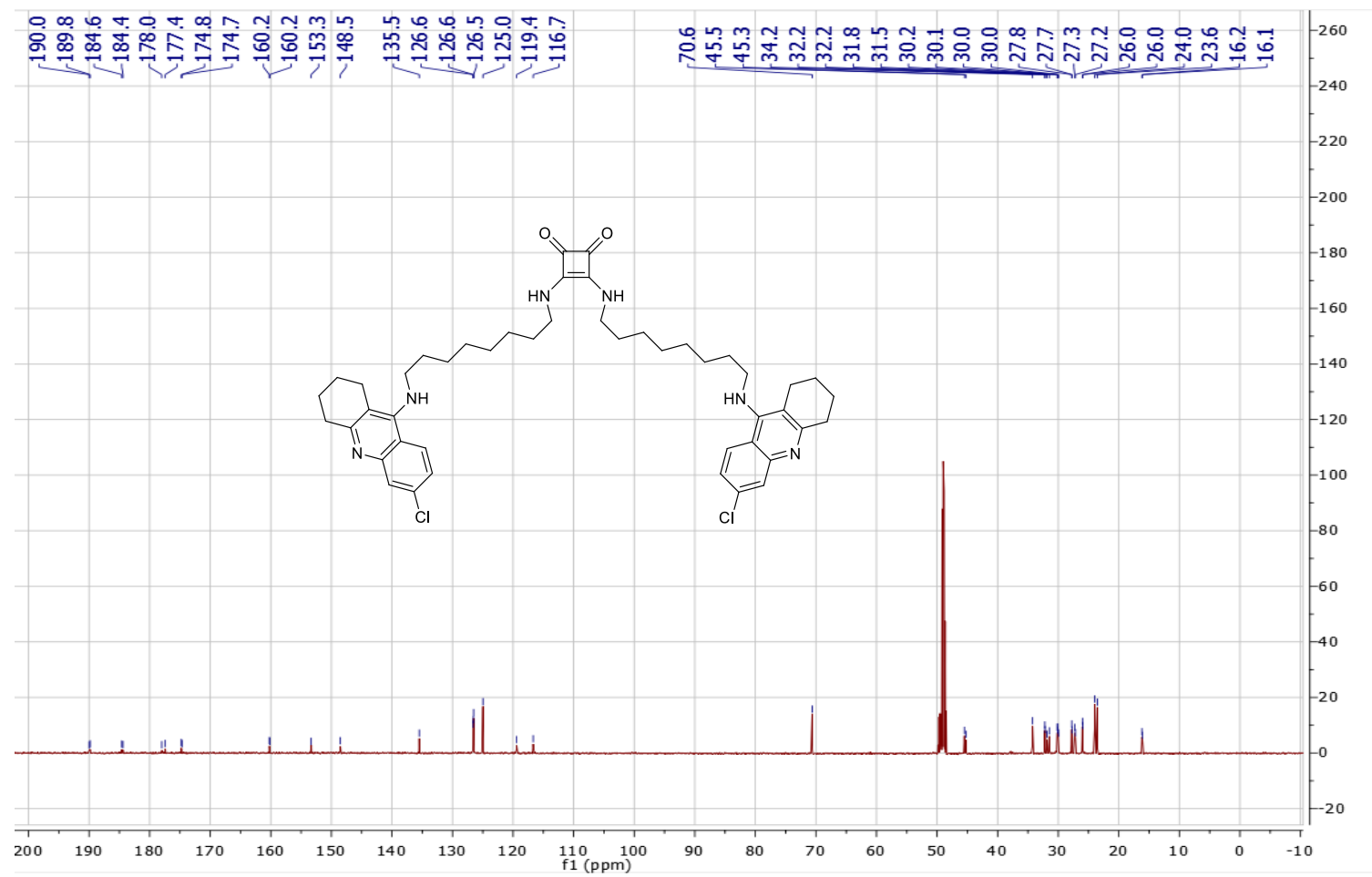
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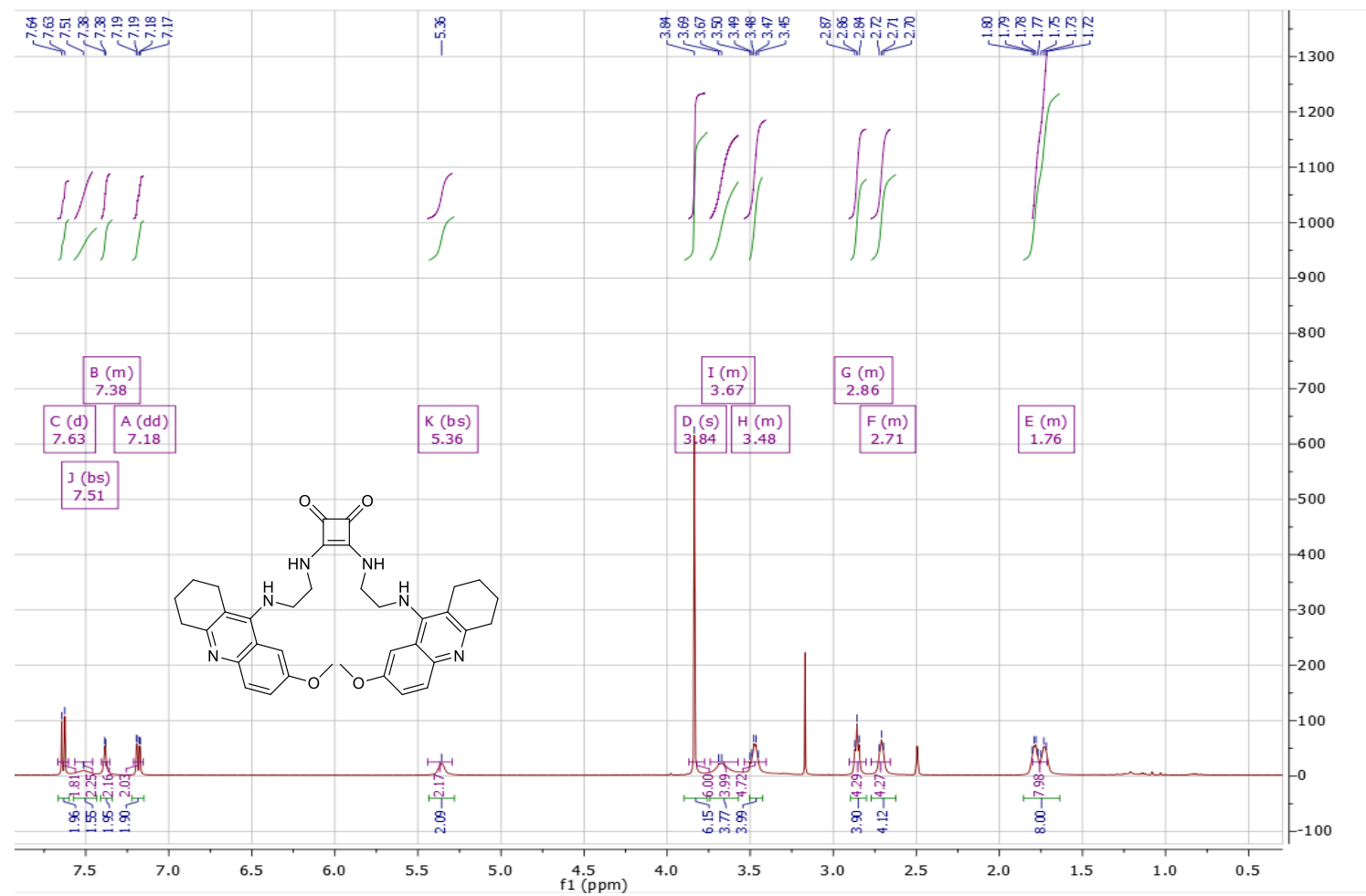
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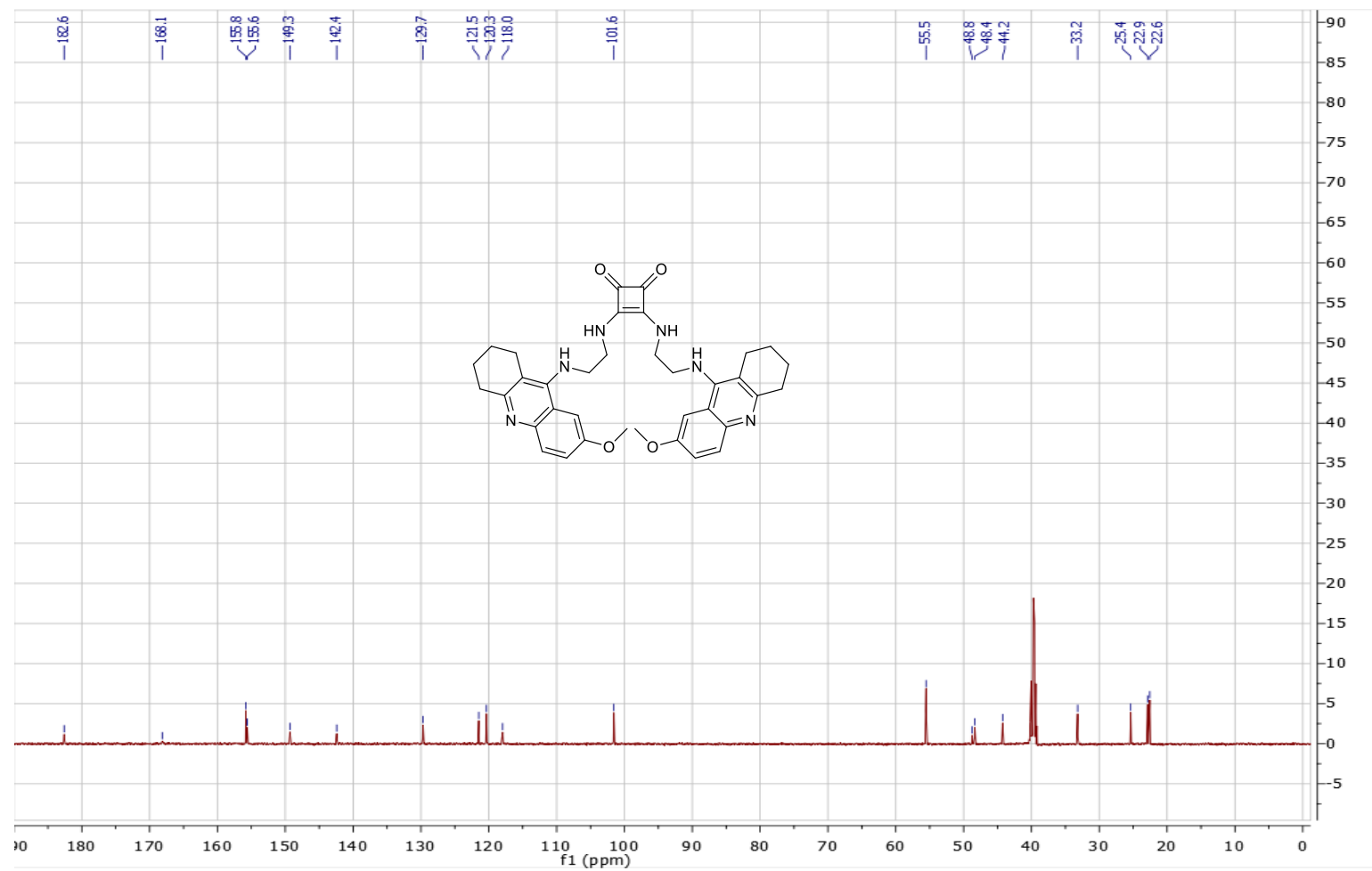
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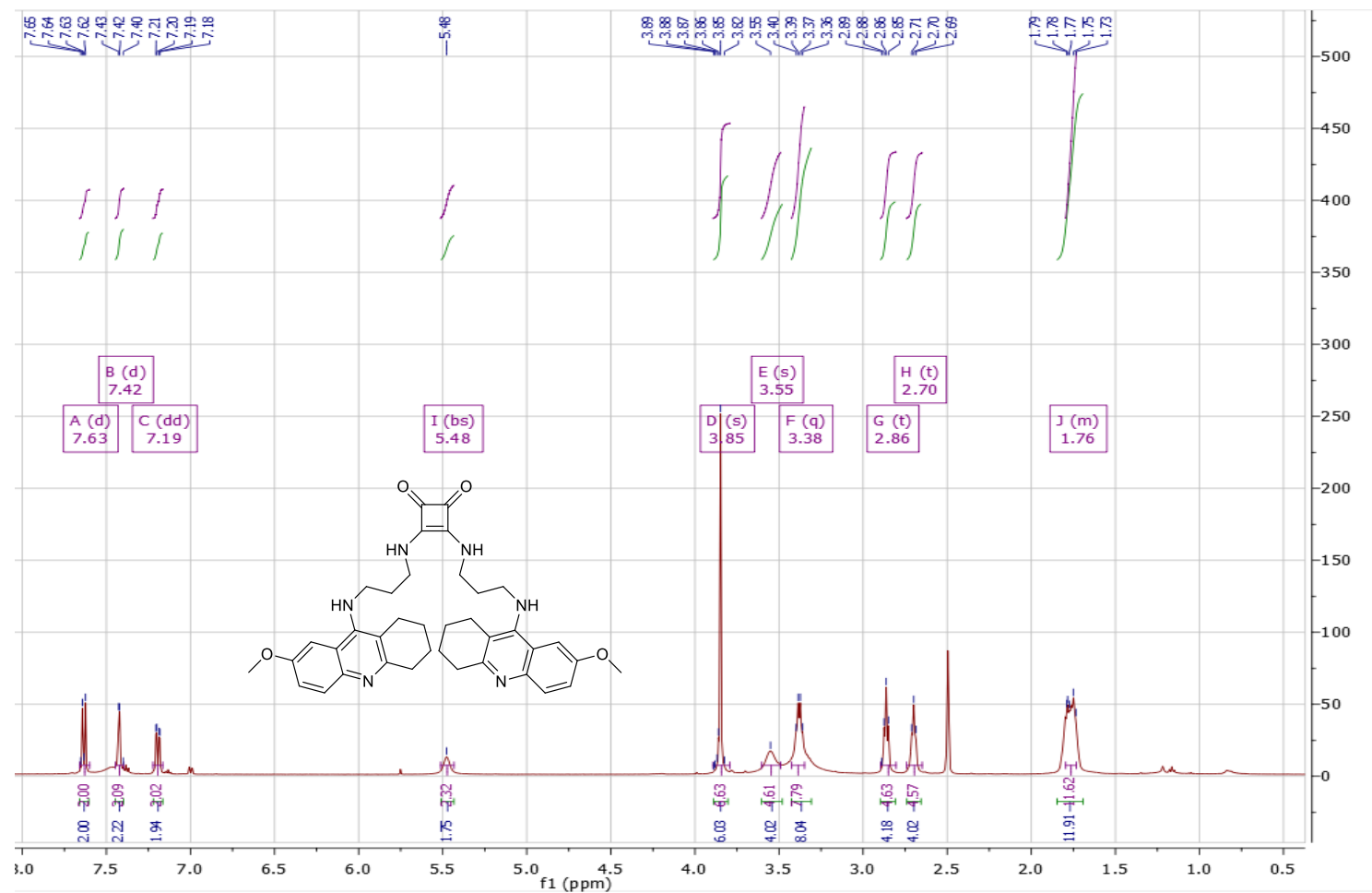
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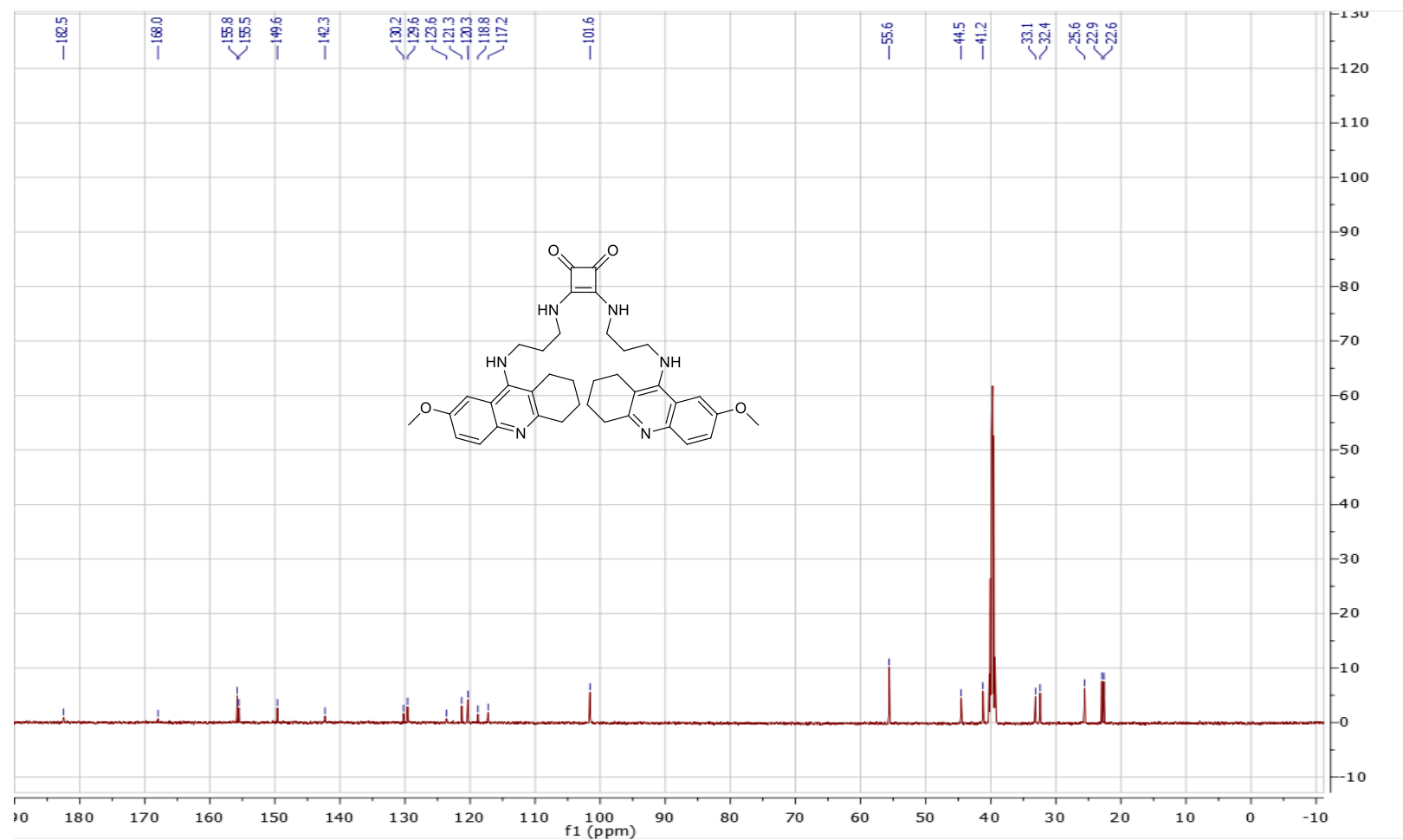
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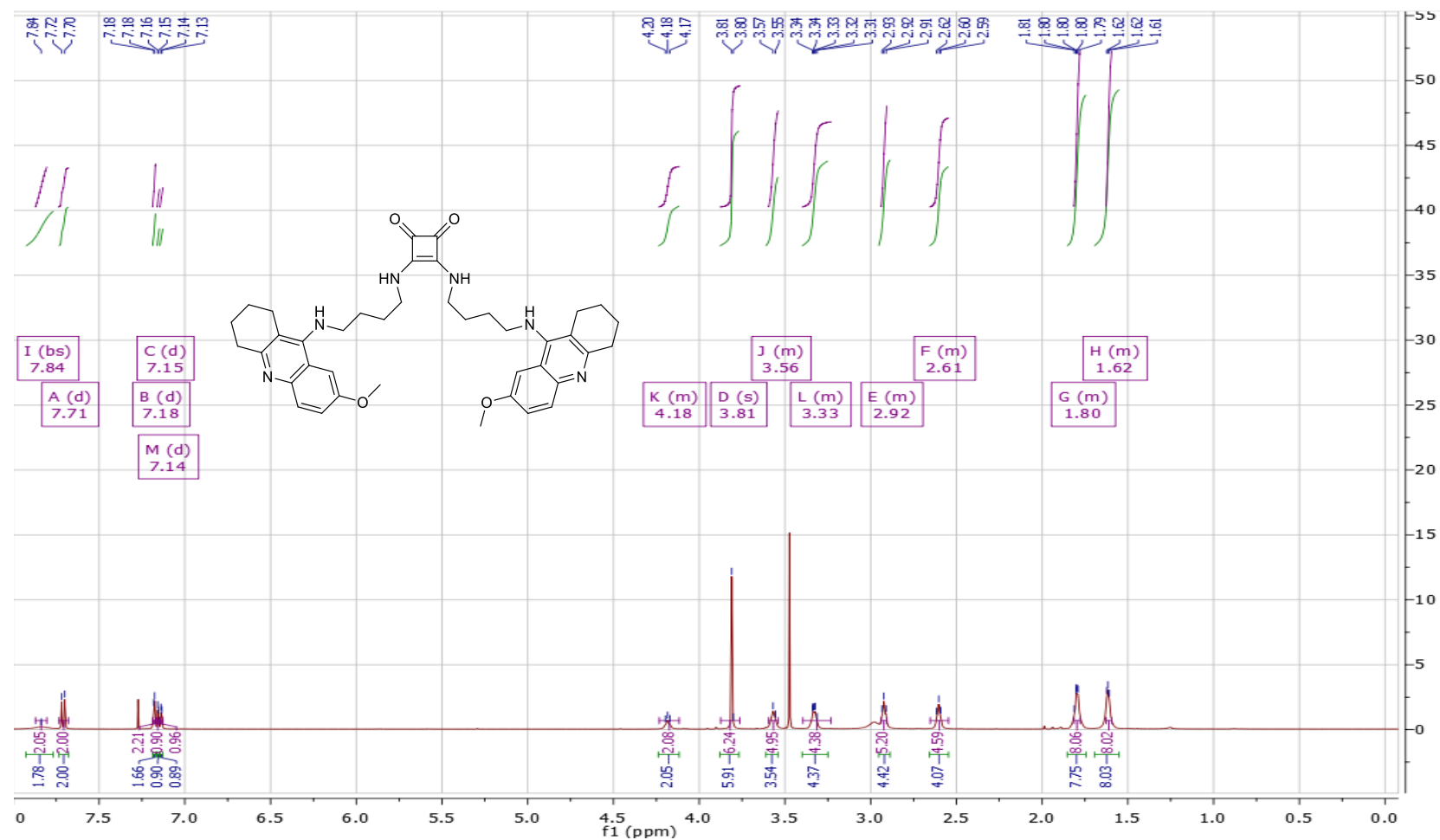
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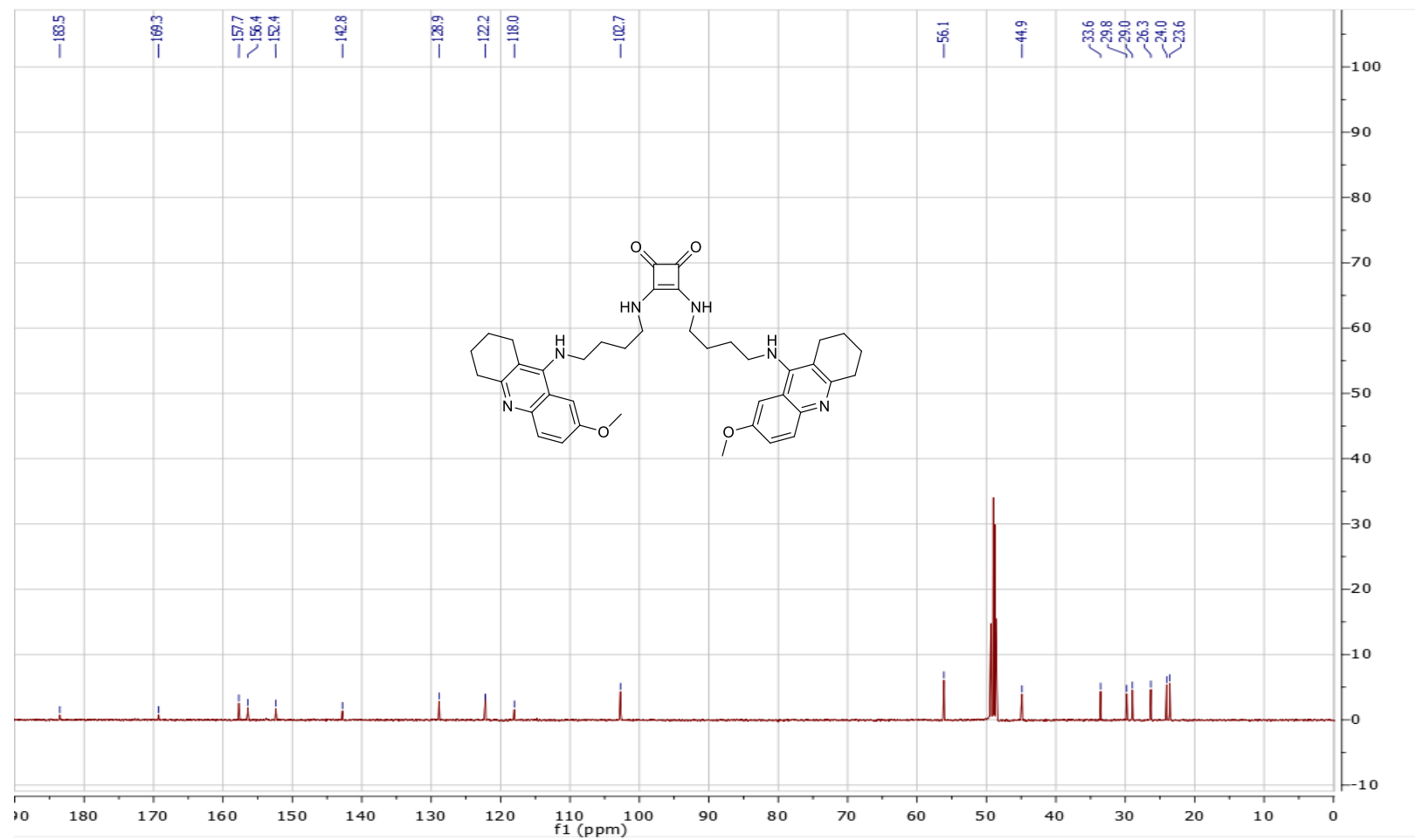
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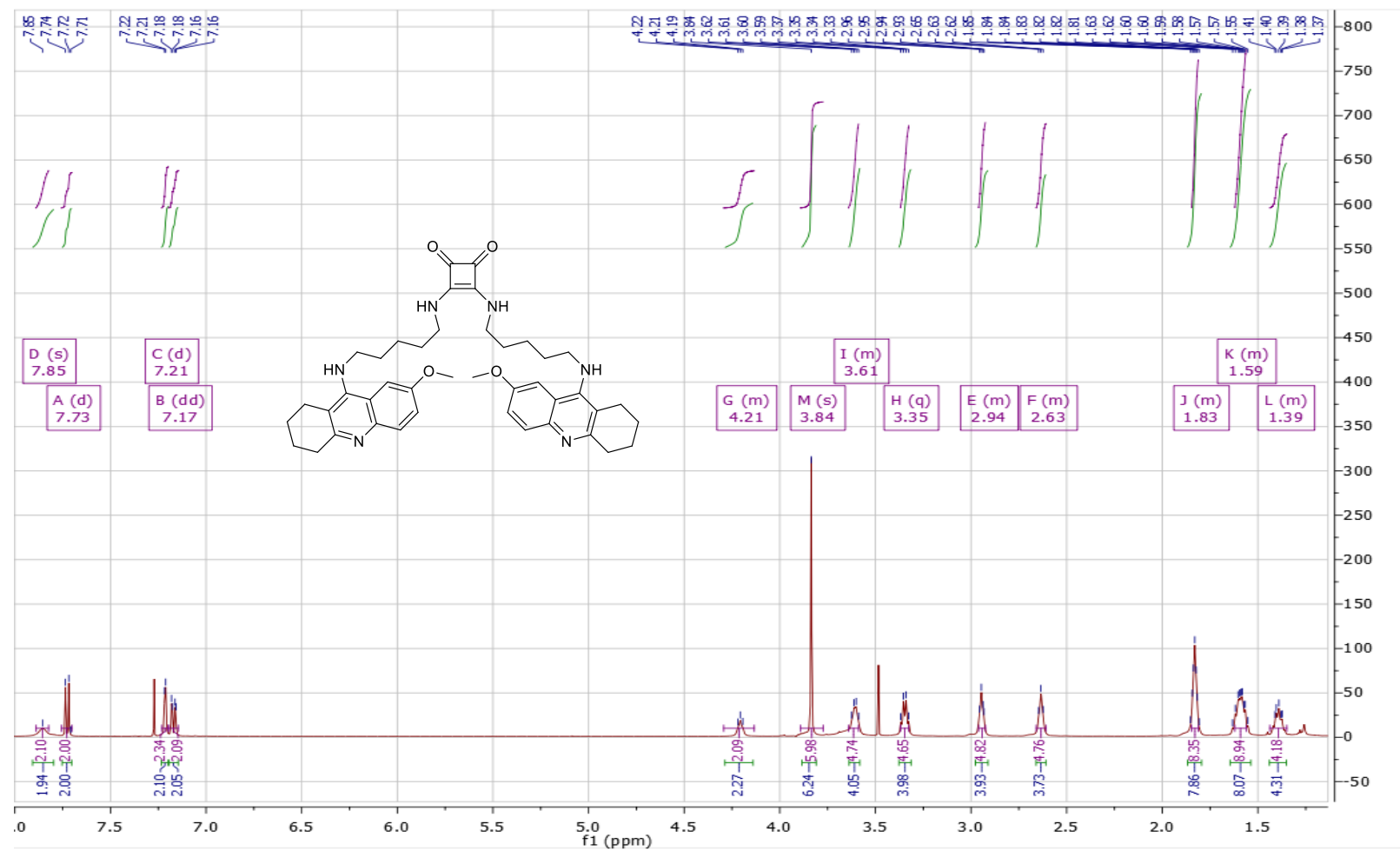
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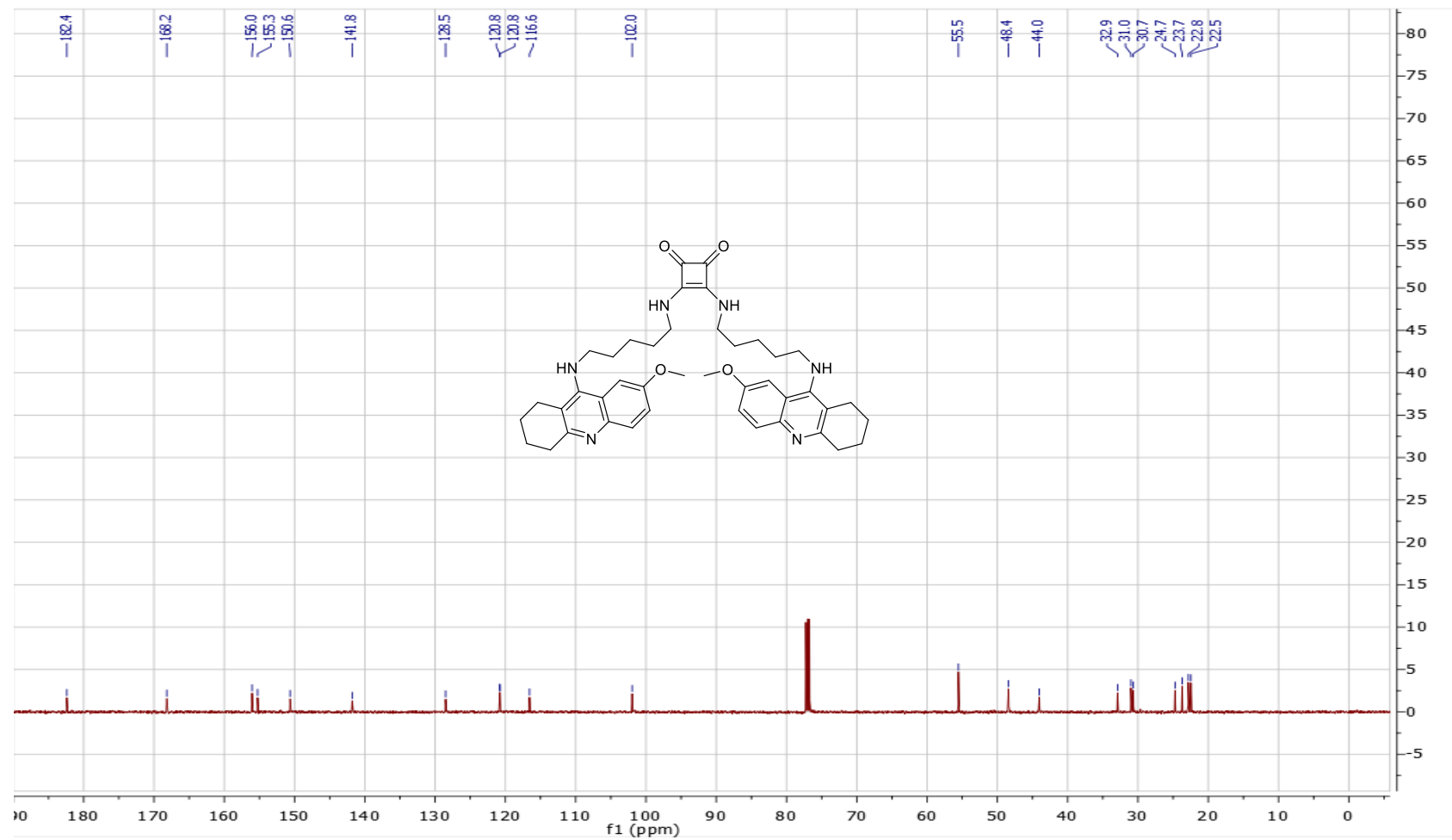
Bis({4-[7-methoxy-1,2,3,4-tetrahydroacridin-9-yl]amino}butyl)amino)cyclobut-3-ene-1,2-dione (5c) ¹³C NMR:



Bis({5-[7-methoxy-1,2,3,4-tetrahydroacridin-9-yl]amino}pentyl)amino)cyclobut-3-ene-1,2-dione (5d) ¹H NMR:



Bis({5-[(7-methoxy-1,2,3,4-tetrahydroacridin-9-yl)amino]pentyl}amino)cyclobut-3-ene-1,2-dione (5d) ¹³C NMR:



182.4

168.2

156.0

153.3

150.6

141.8

128.5

120.8

120.8

116.6

102.0

55.5

48.4

44.0

32.9

31.0

30.7

24.7

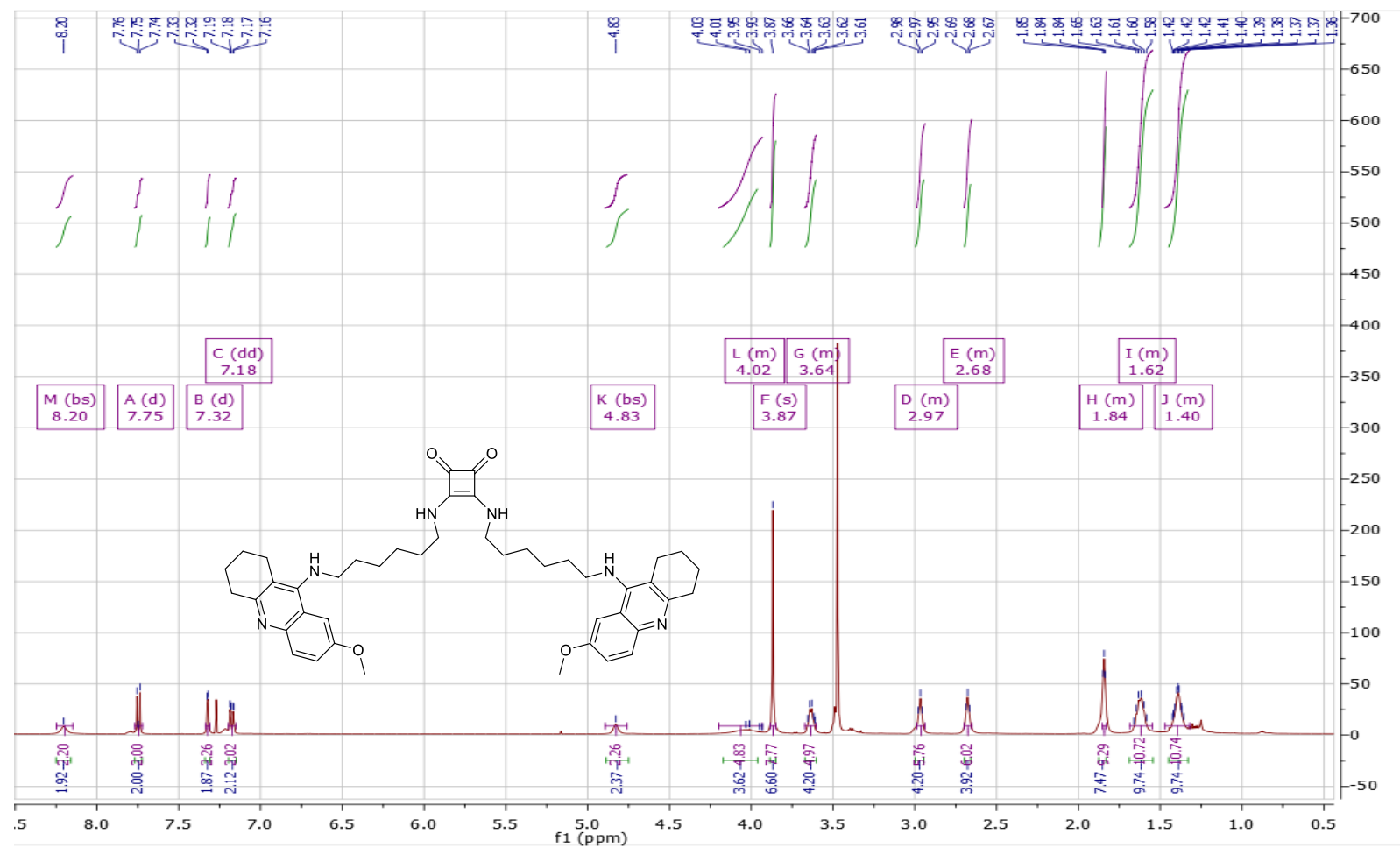
23.7

22.8

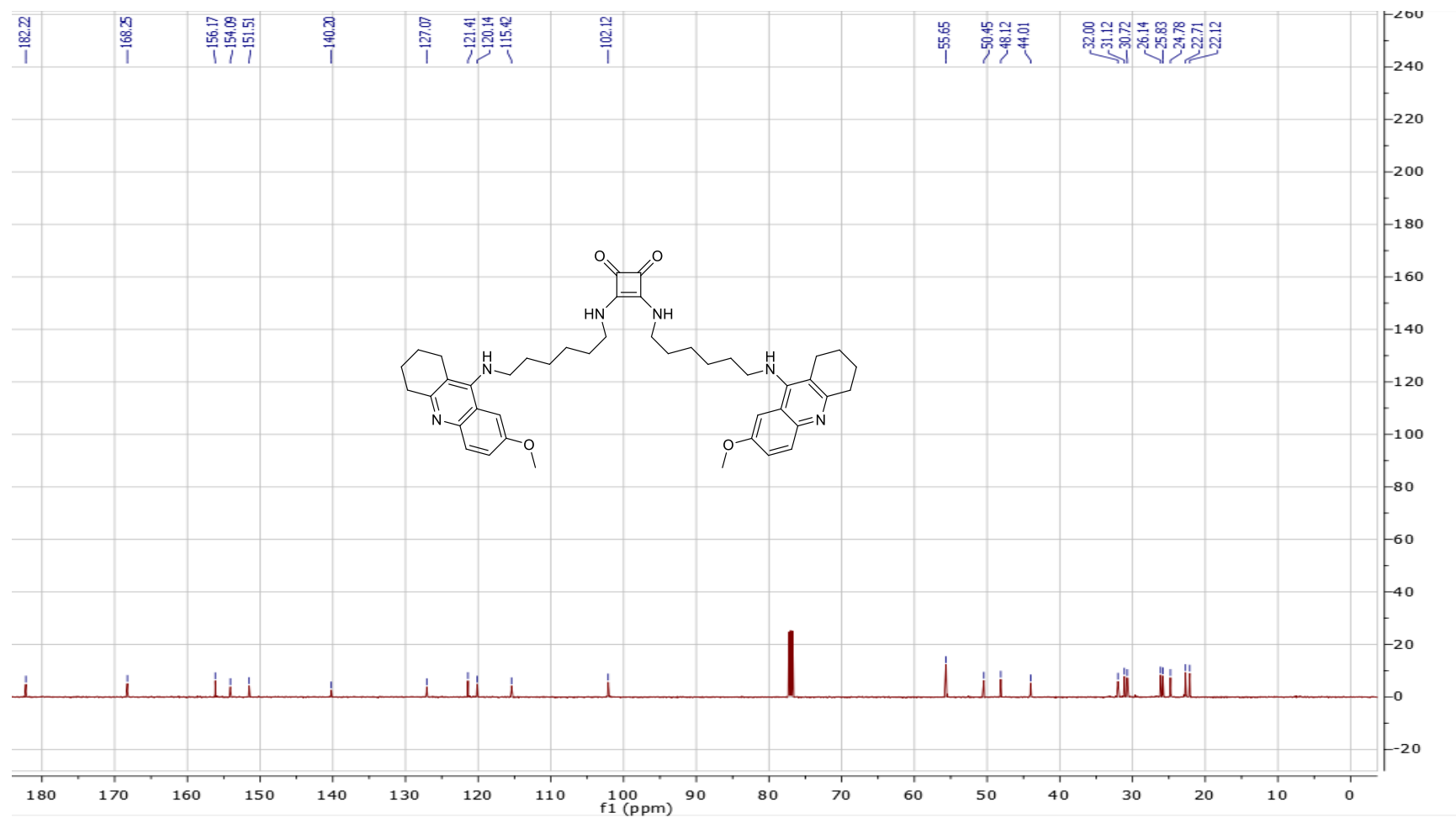
22.5

f1 (ppm)

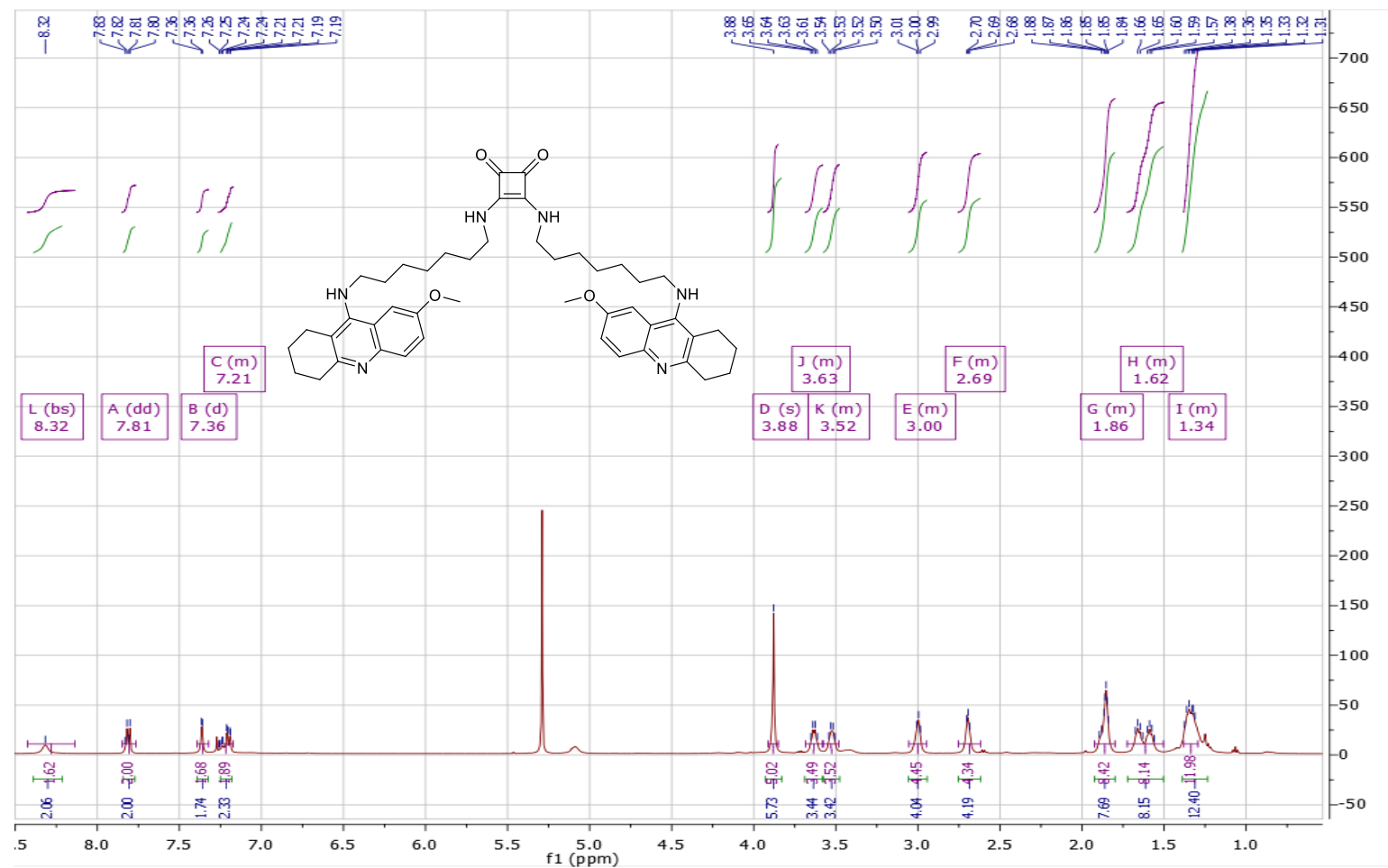
Bis({6-[(7-methoxy-1,2,3,4-tetrahydroacridin-9-yl)amino]hexyl}amino)cyclobut-3-ene-1,2-dione (5e) ¹H NMR:



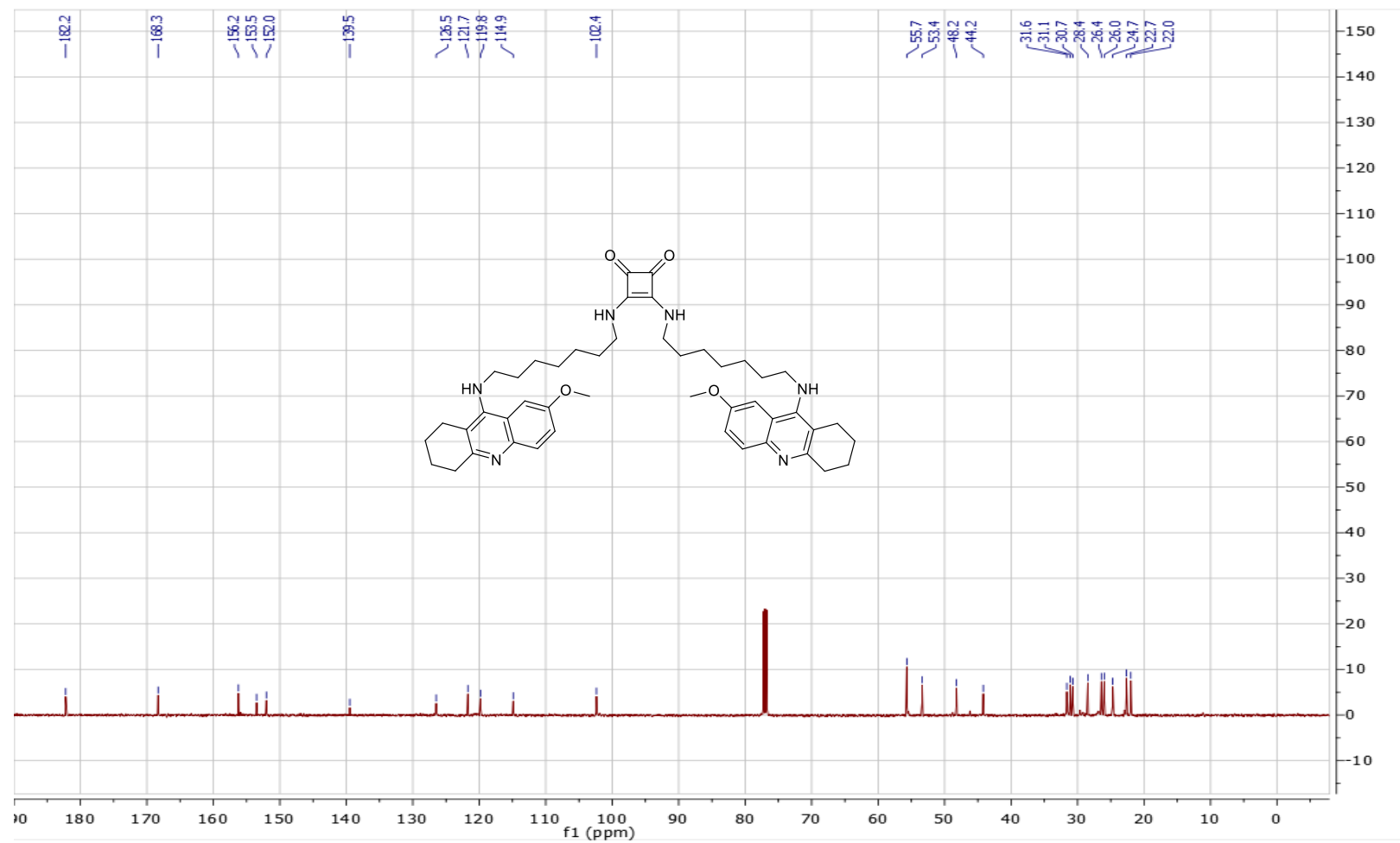
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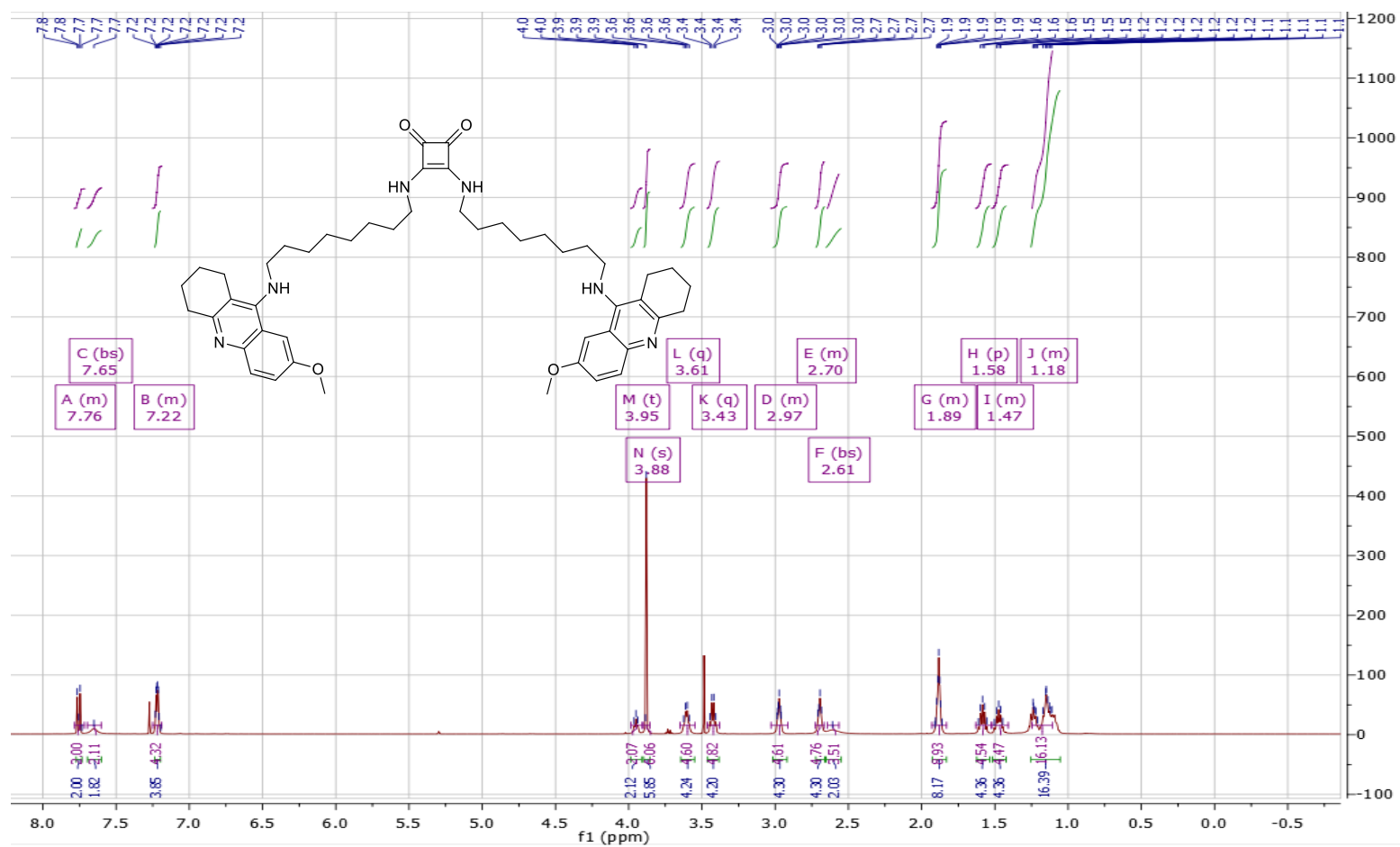
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Bis({7-[(7-methoxy-1,2,3,4-tetrahydroacridin-9-yl)amino]heptyl}amino)cyclobut-3-ene-1,2-dione (5f) ¹³C NMR:



Bis((8-[(7-methoxy-1,2,3,4-tetrahydroacridin-9-yl)amino]octyl)amino)cyclobut-3-ene-1,2-dione (5g) ¹H NMR:



Bis({8-[(7-methoxy-1,2,3,4-tetrahydroacridin-9-yl)amino]octyl}amino)cyclobut-3-ene-1,2-dione (5g) ¹³C NMR:

