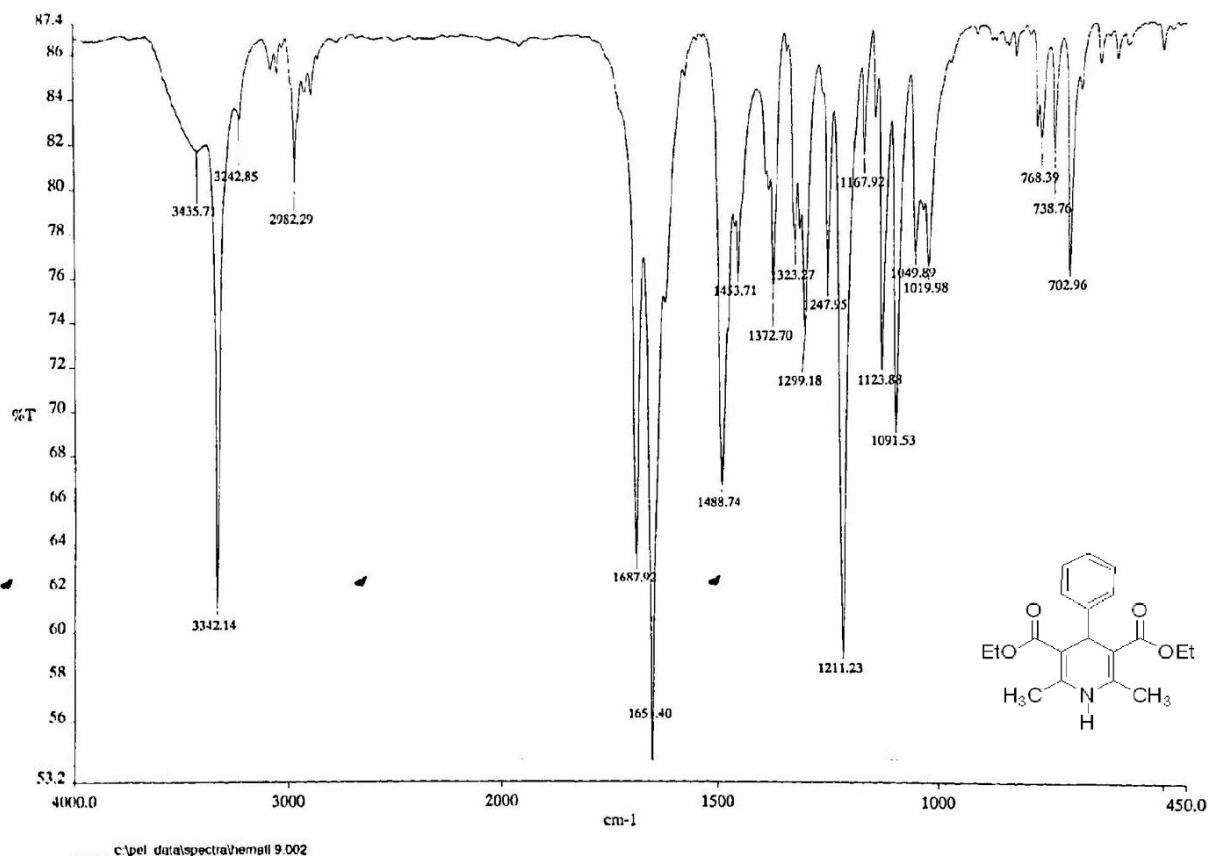


Supporting Information

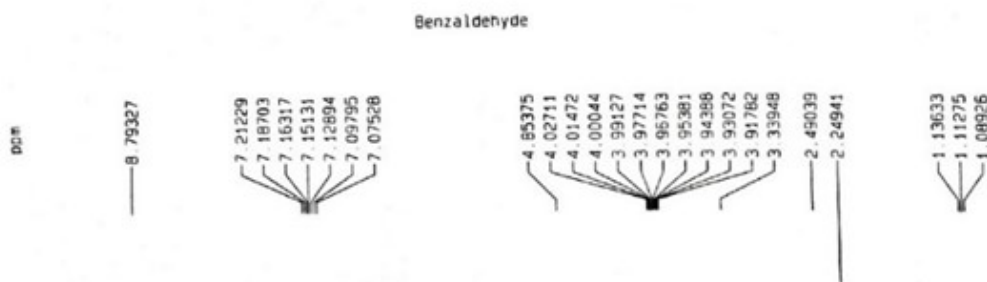
CMC-*g*-poly(AA-*co*-AMPS)/Fe₃O₄ hydrogel nanocomposite as a novel biopolymer-based catalyst in the synthesis of 1,4-dihydropyridines

Elmira Hemmati¹, Somayeh Soleimani-Amiri^{1*}, Mehran Kurdtabar¹

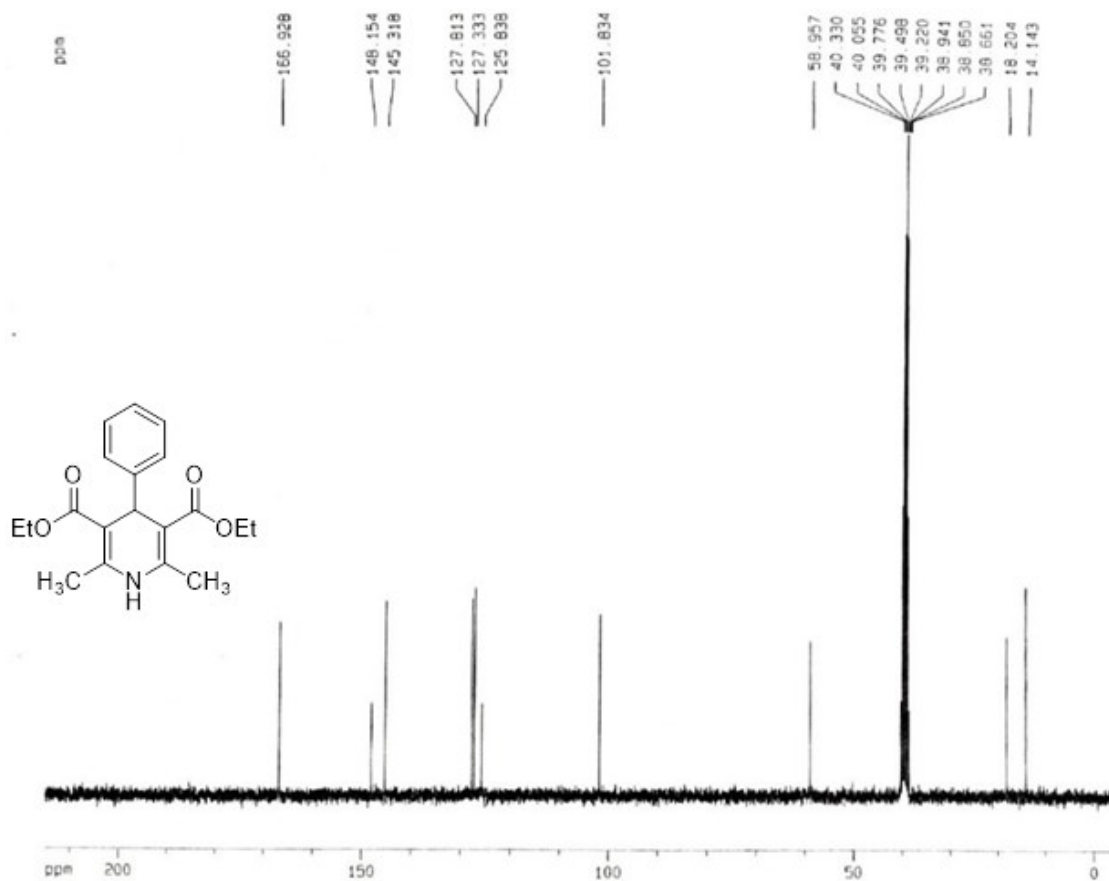
¹Department of Chemistry, Karaj Branch, Islamic Azad University, Karaj, Iran



FT-IR of 4a



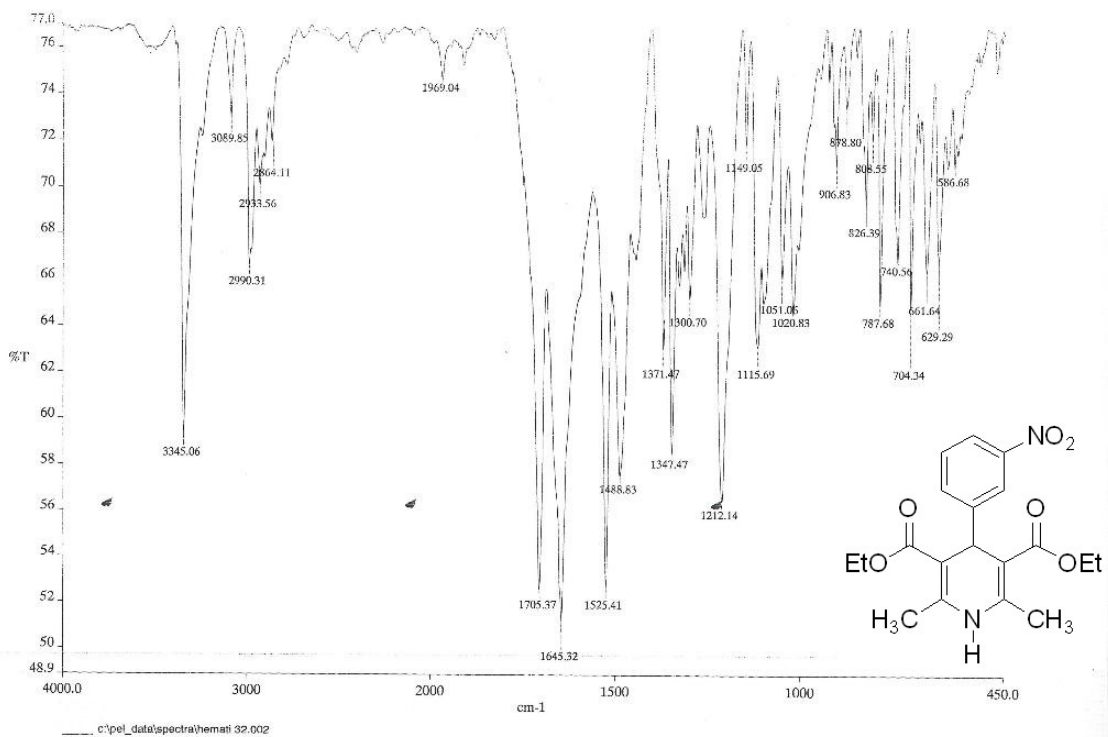
¹HNMR of **4a**



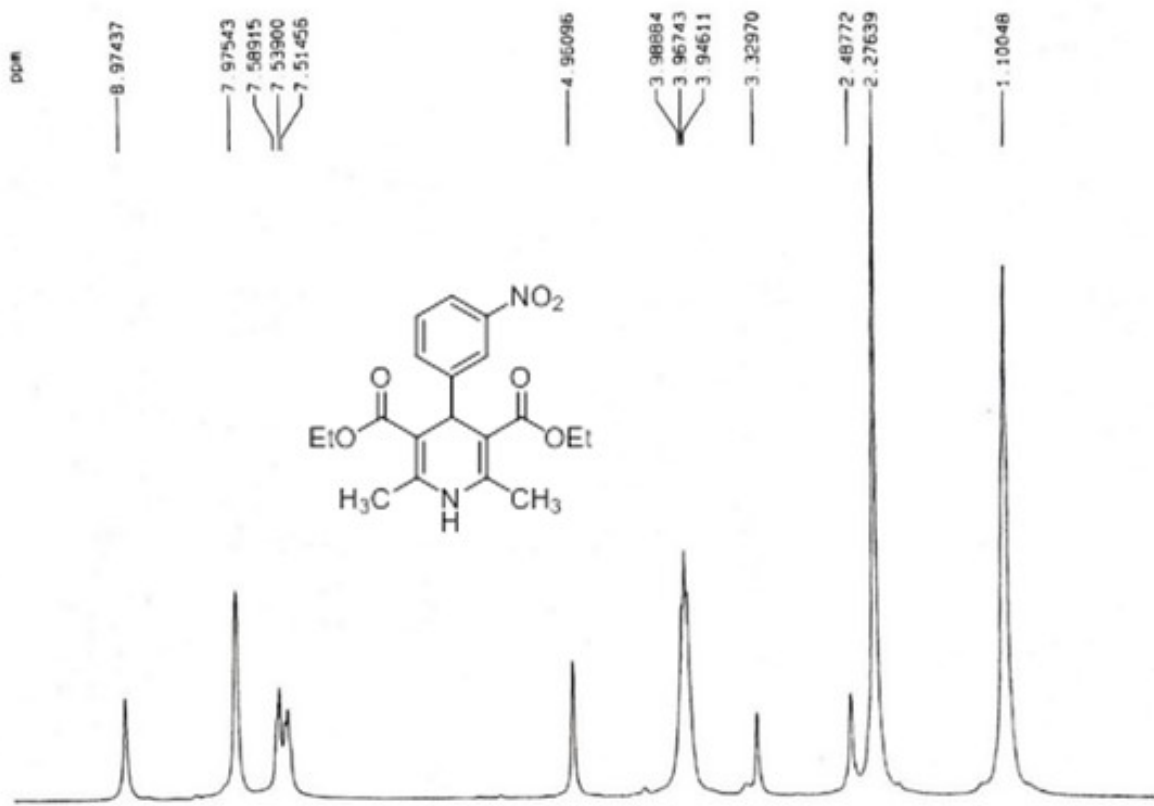
¹³CNMR of **4a**

* Corresponding author.

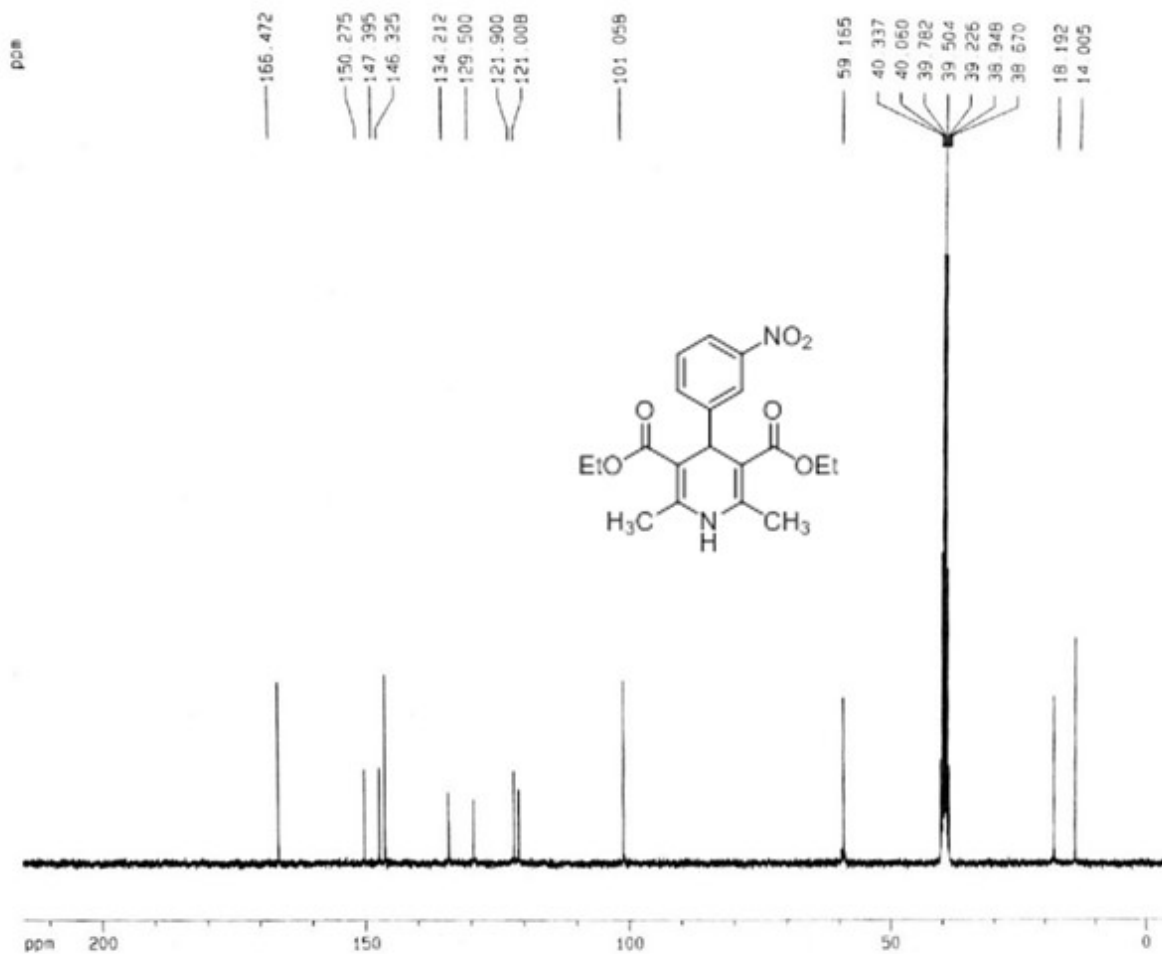
E-mail addresses: s.soleimani@kiau.ac.ir (Somayeh Soleimani-Amiri).



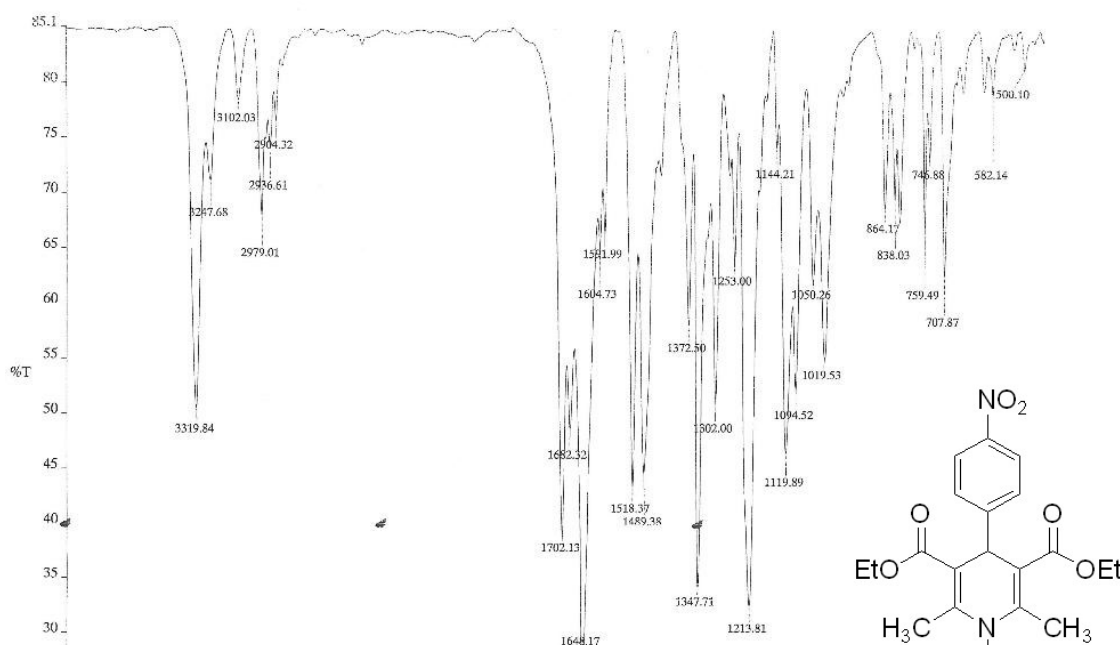
FT-IR of 4b



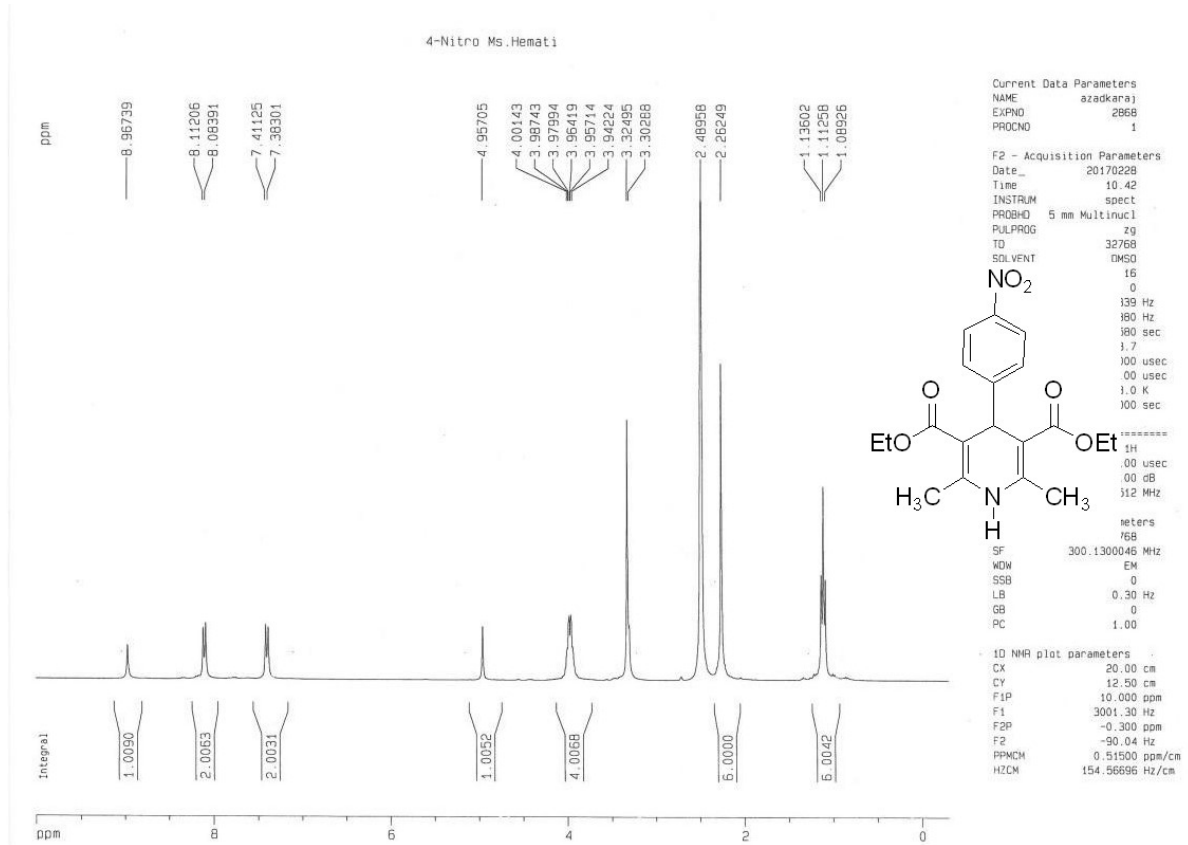
¹H NMR of 4b



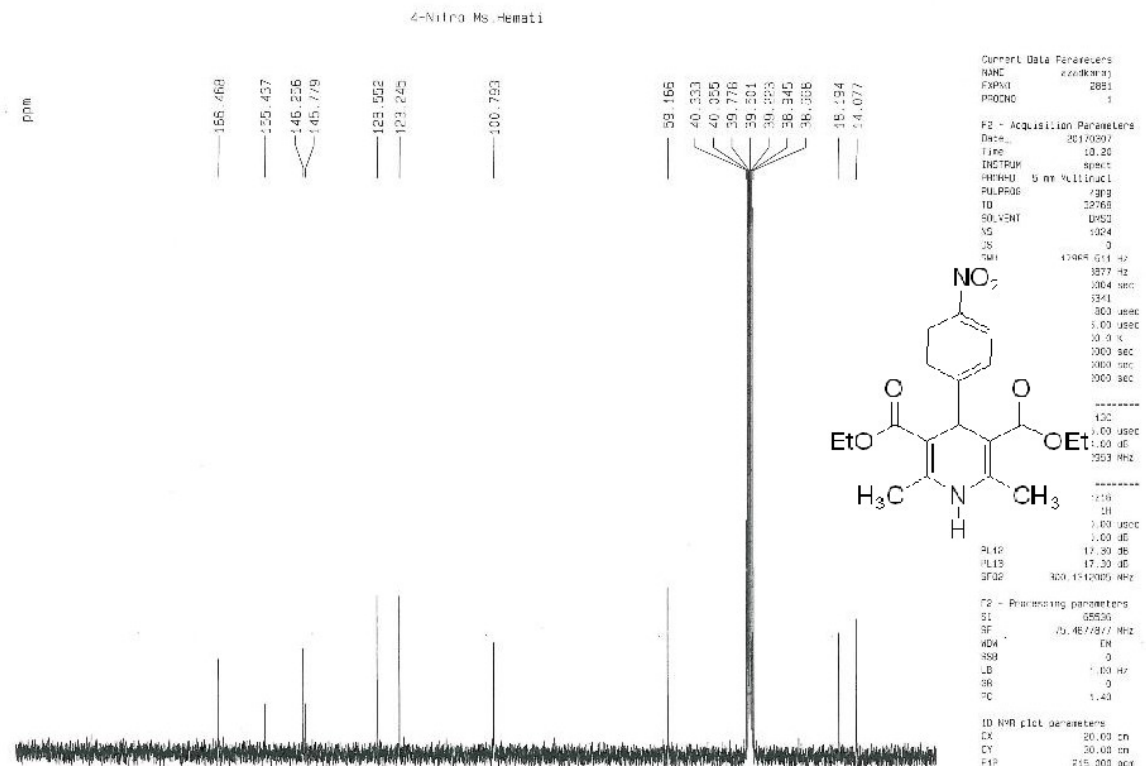
¹³C NMR of 4b



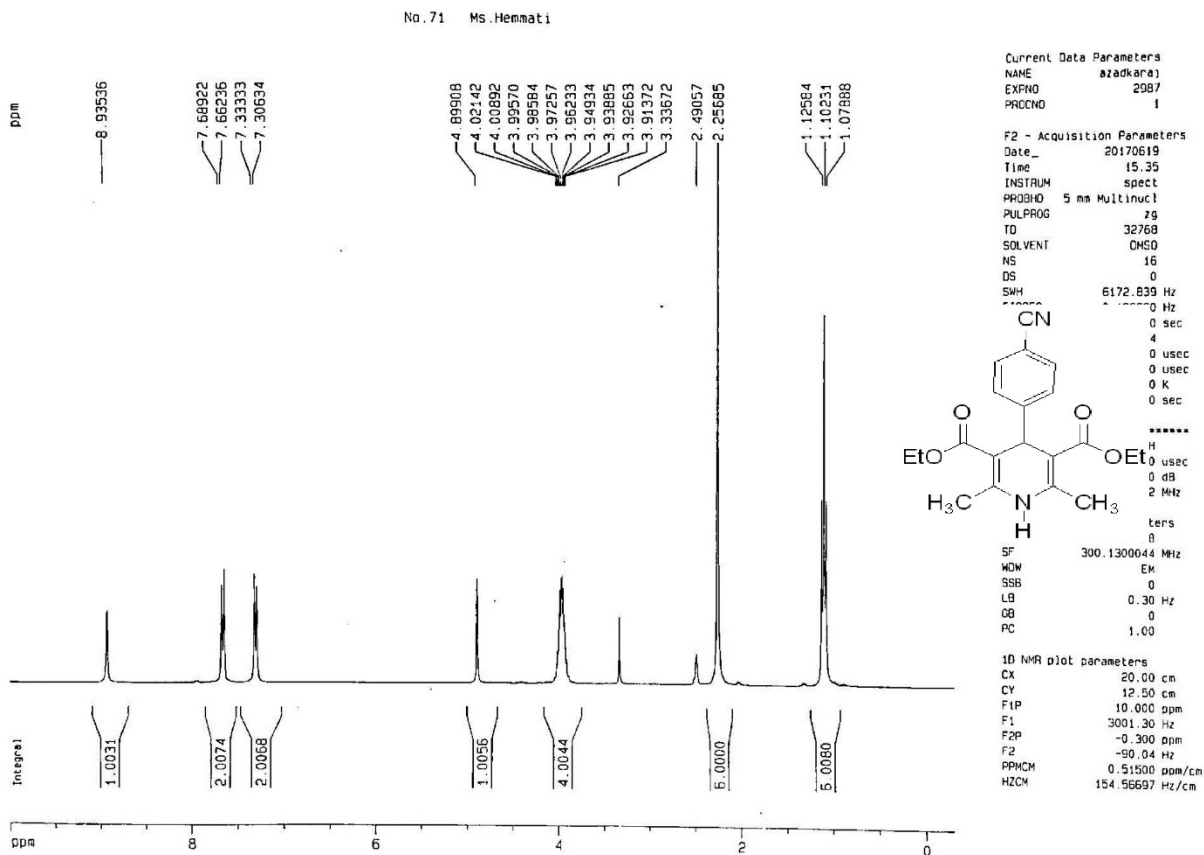
FT-IR of 4c



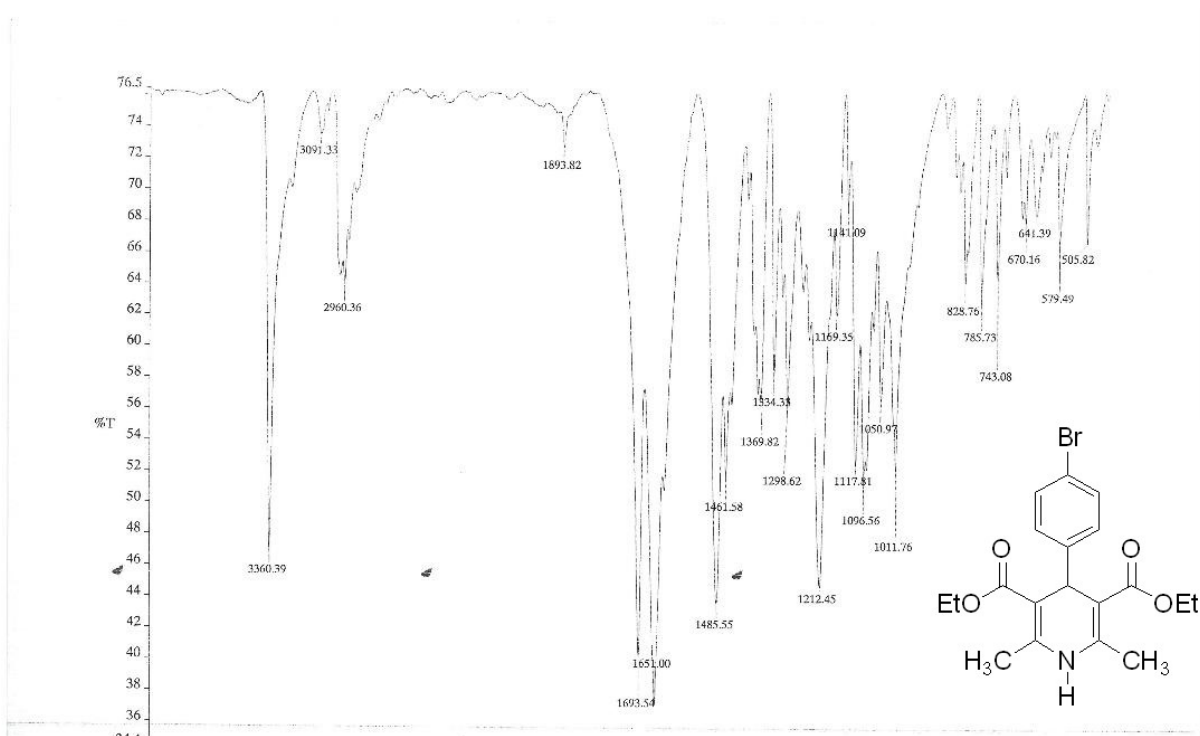
¹³C NMR of 4c



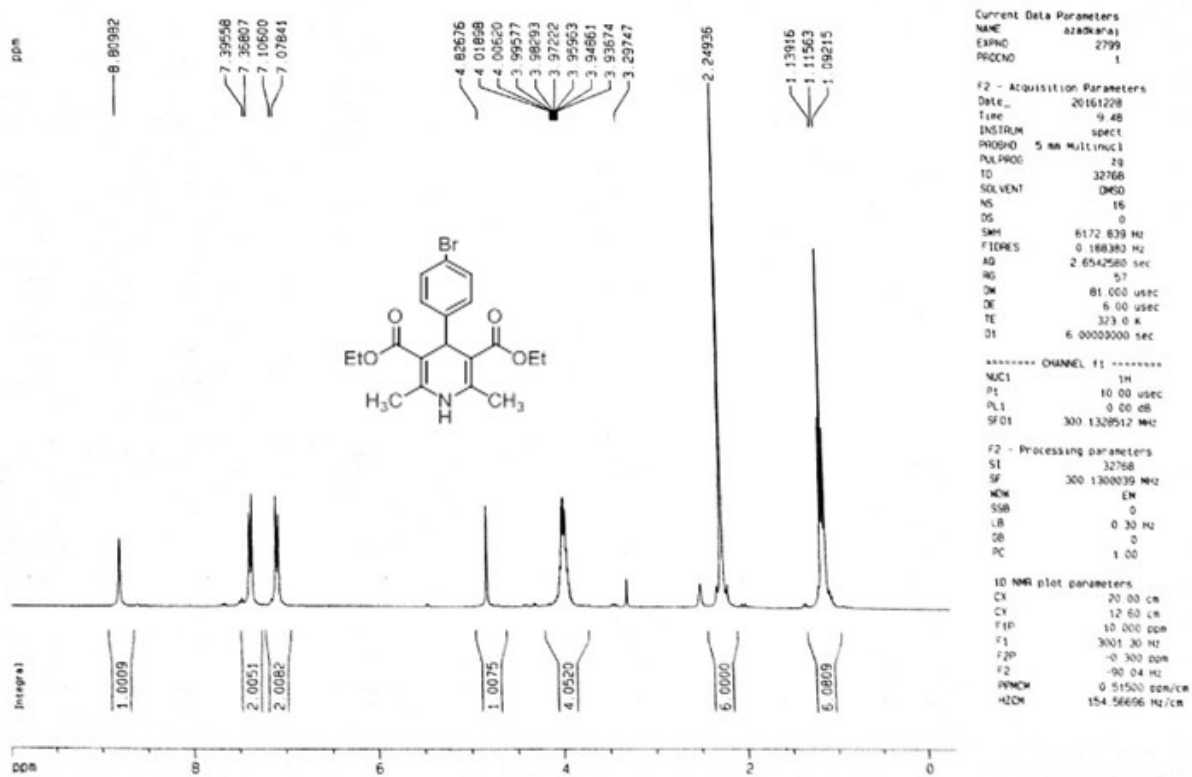
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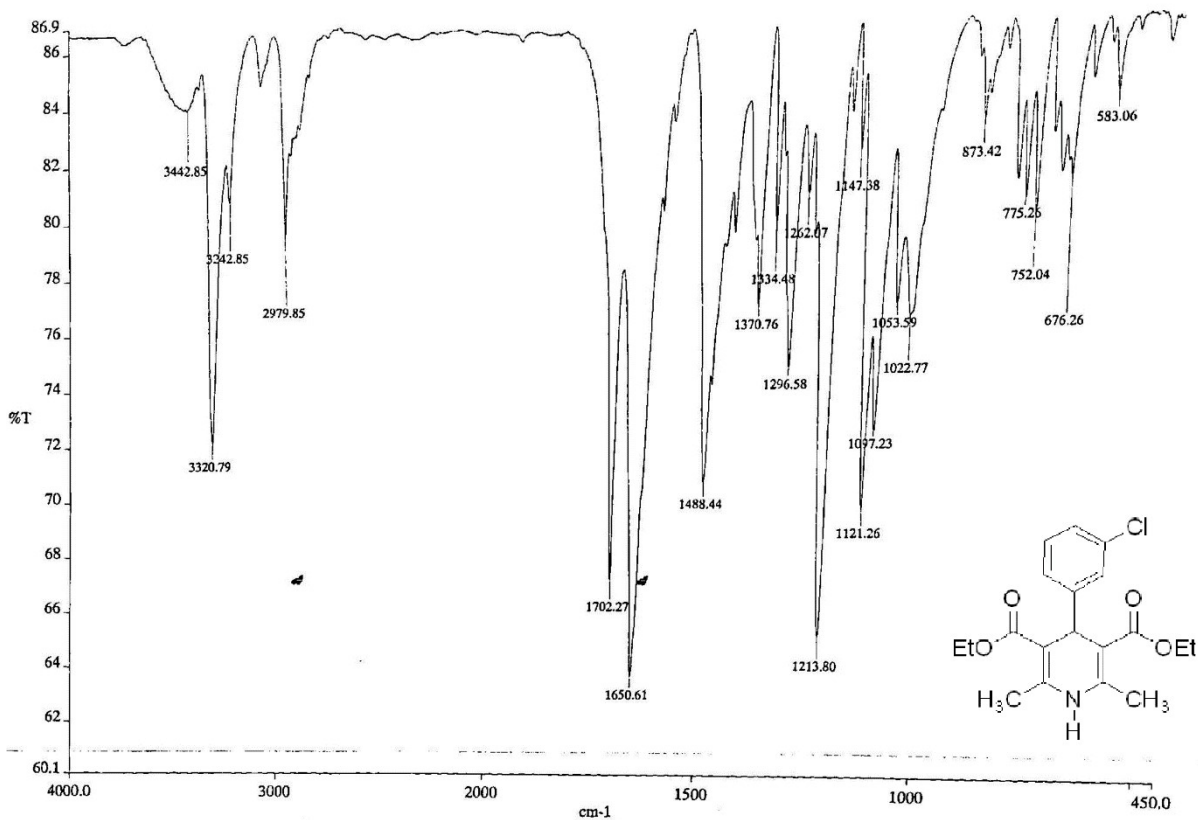
¹HNMR of 4d



FT-IR of 4i

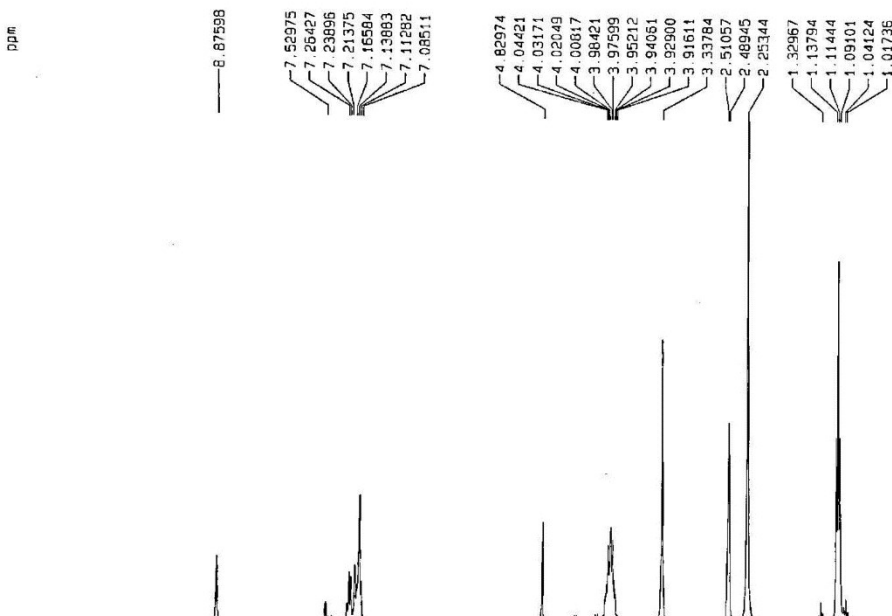


¹H NMR of 4i



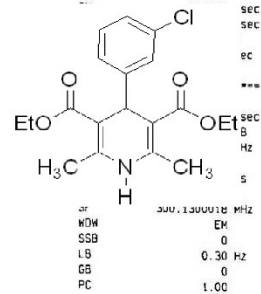
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 FT-IR of 4f

No. 73 Ms.Hemmati

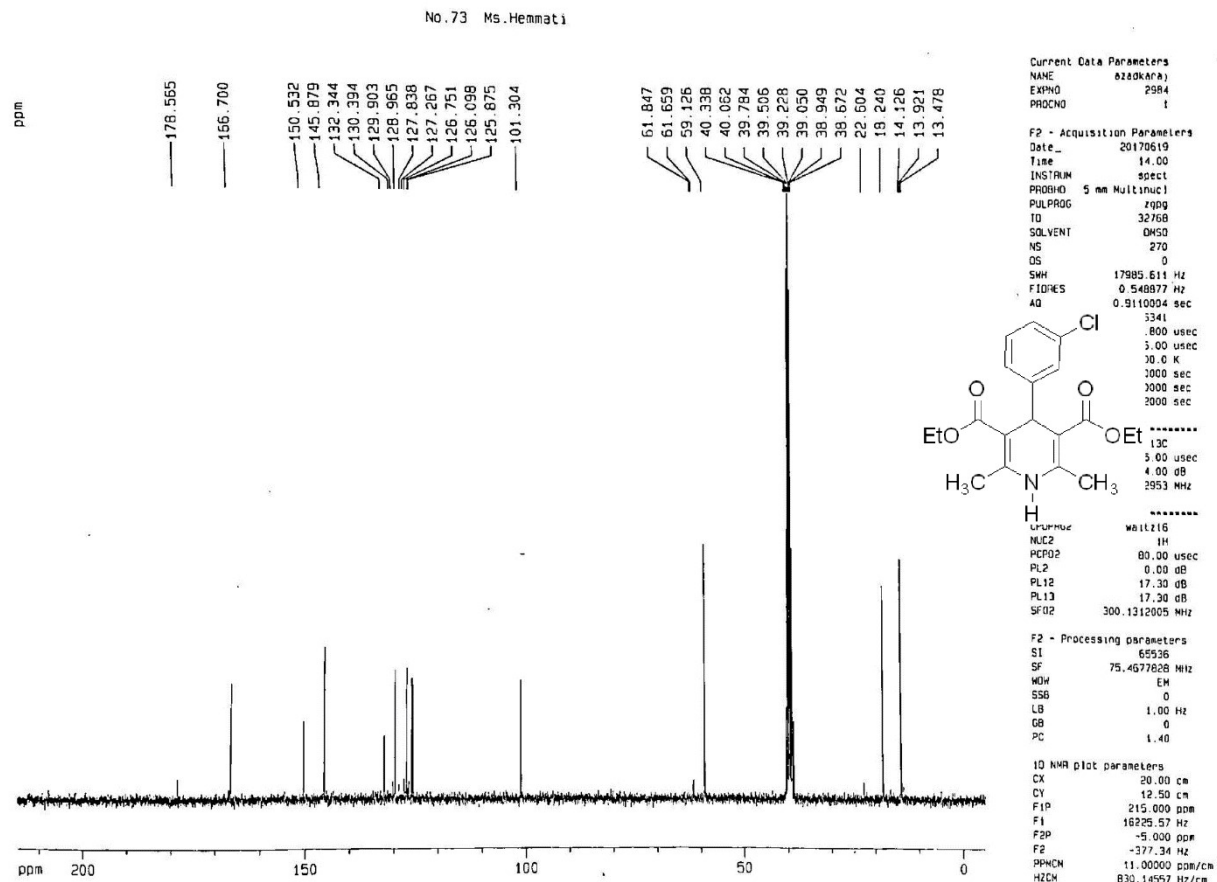


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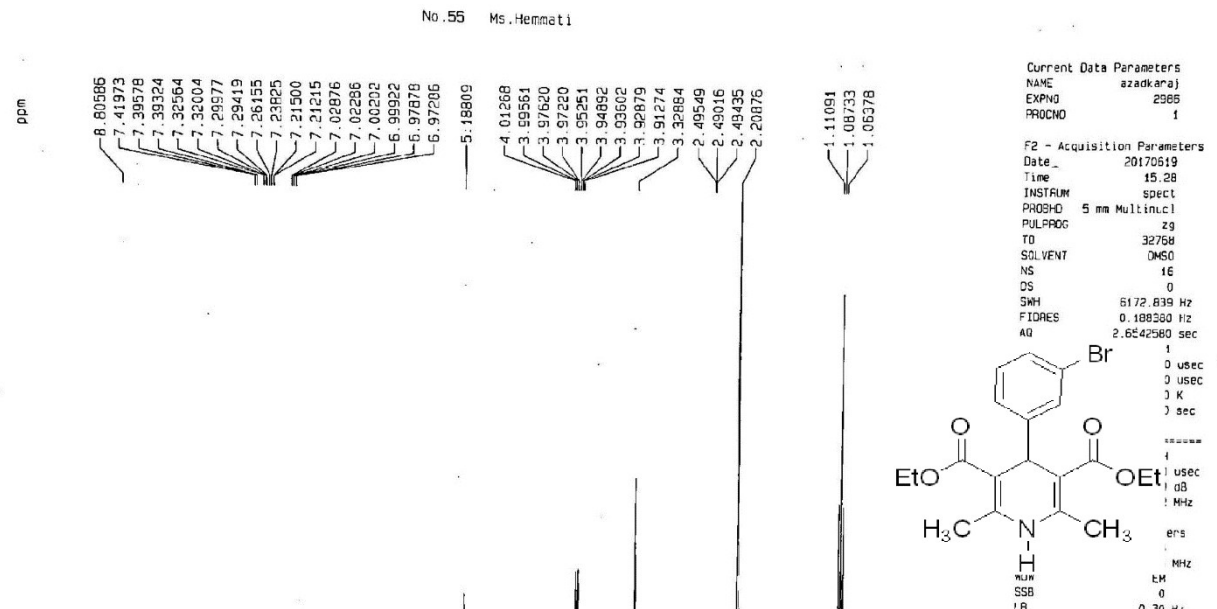
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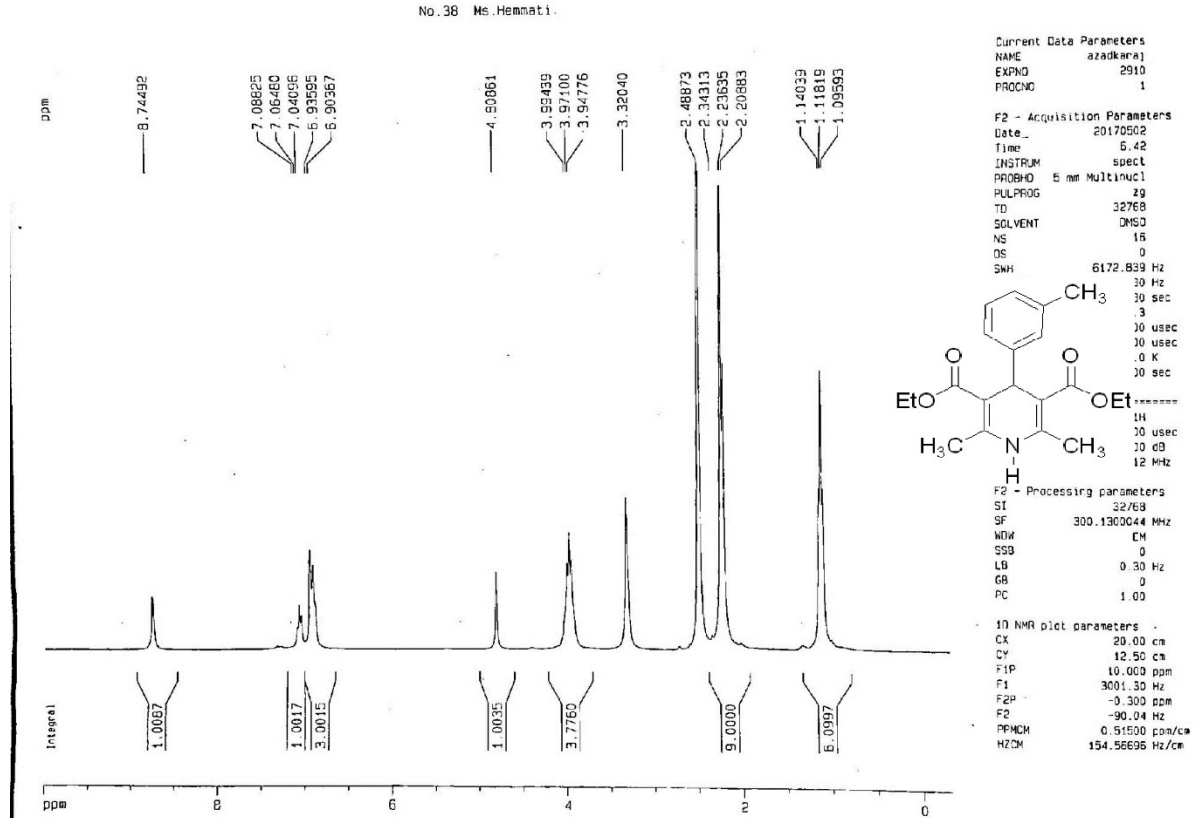
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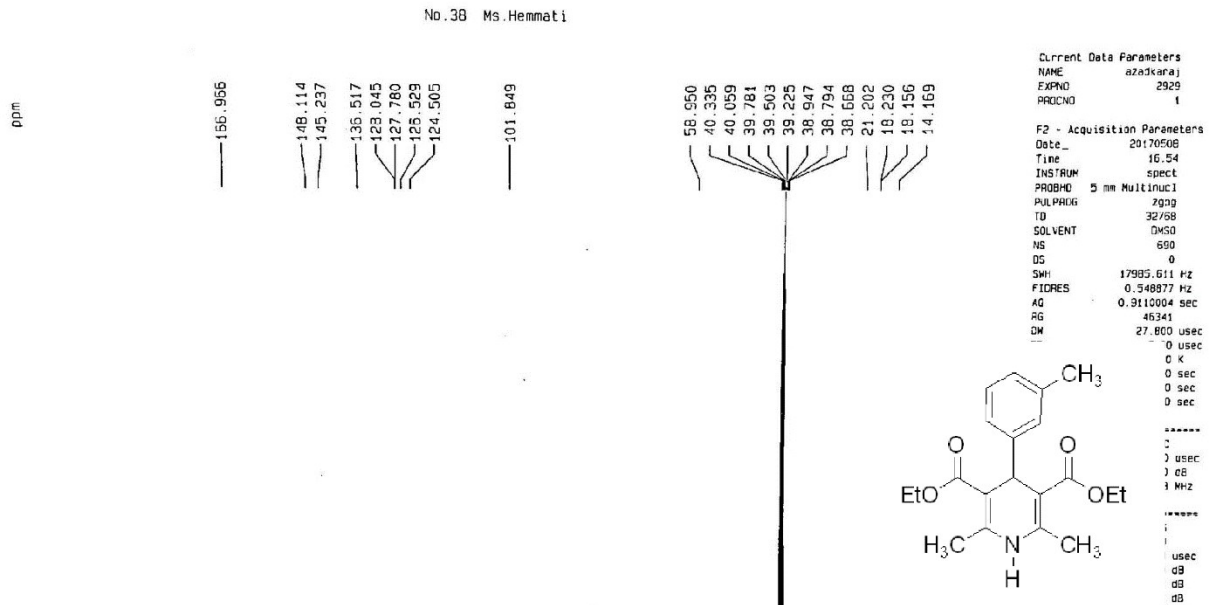
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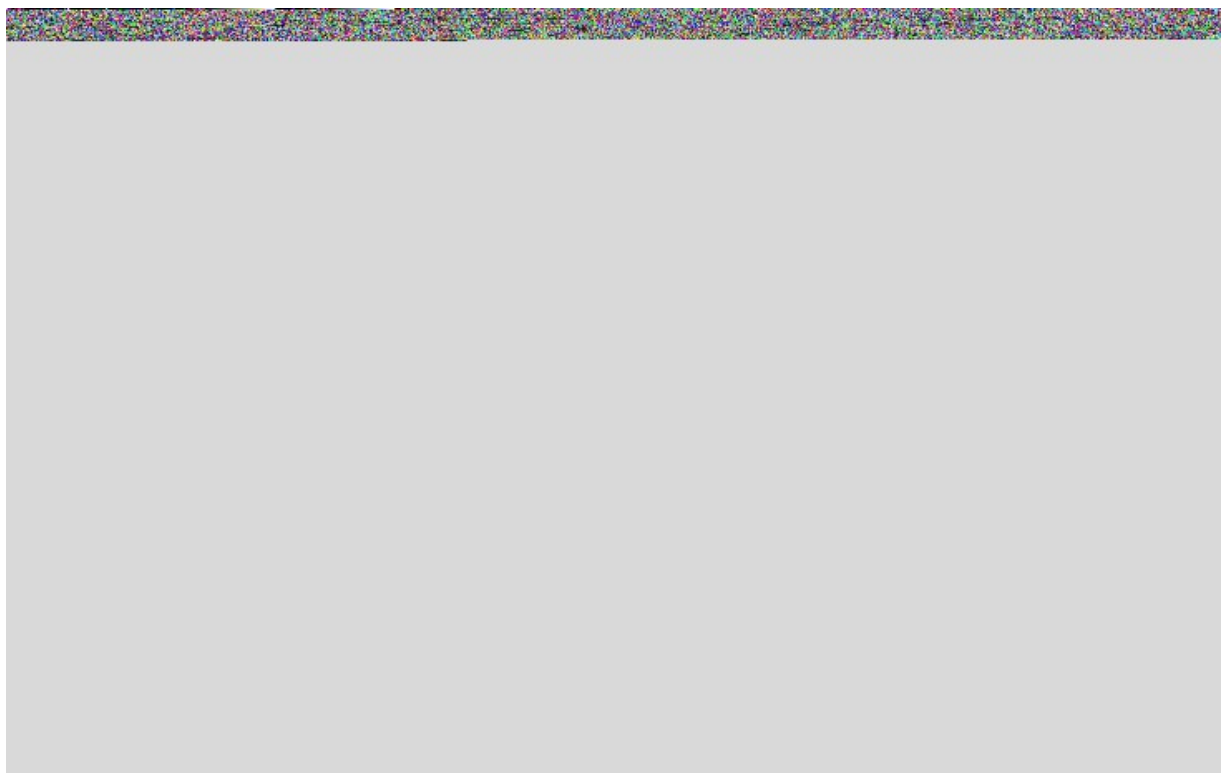
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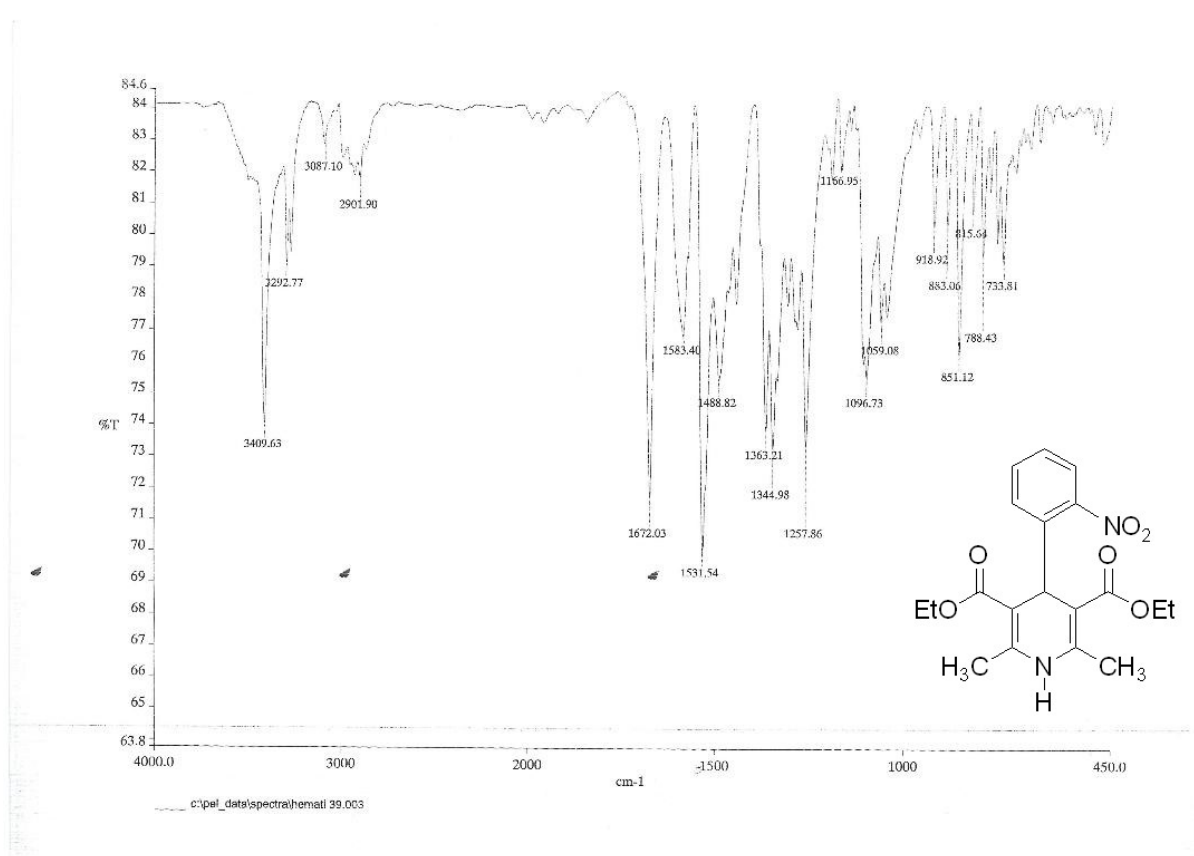
¹H NMR of 4k



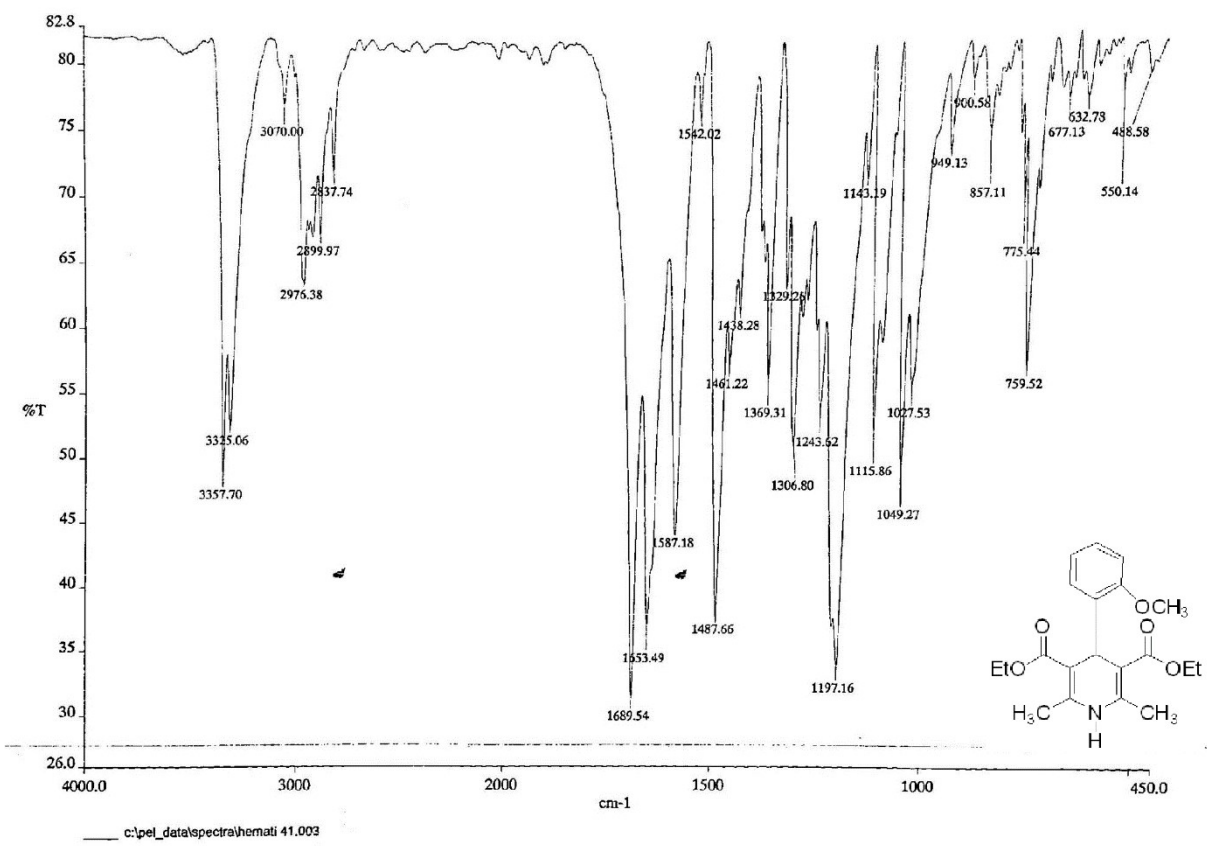
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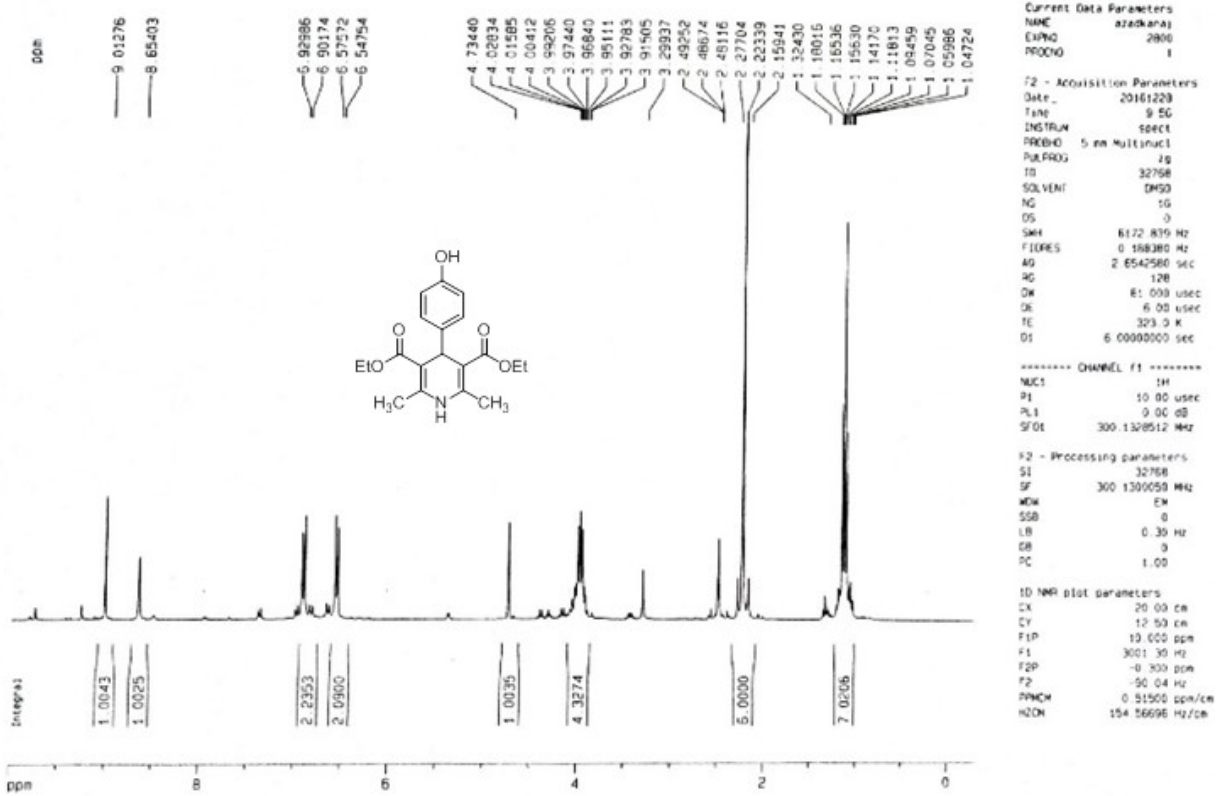
^1H NMR of **4l**



FT-IR of 5d



FT-IR of 4m



¹H NMR of 4p

Figure S1: FT-IR, ¹H and ¹³C NMR spectra of the 1,4-dihydropyridine (1,4-DHP) derivatives.