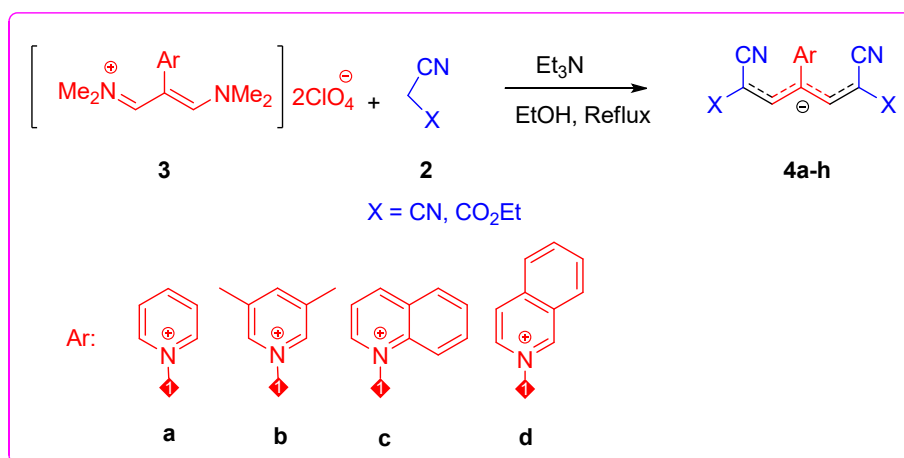


An efficient route to the synthesis of novel zwitterionic pyridinium-cyanopropenides with 3-heteroaryl-substituted trimethinium salts

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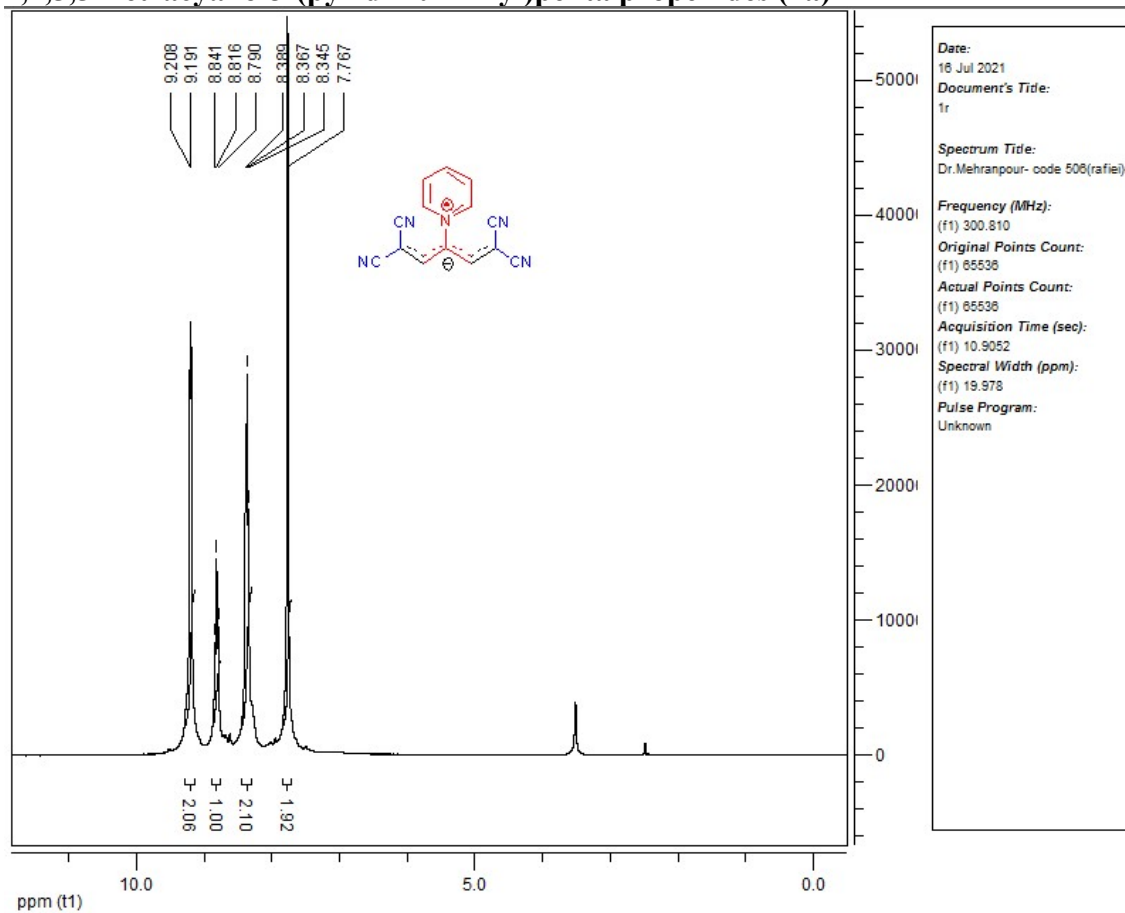


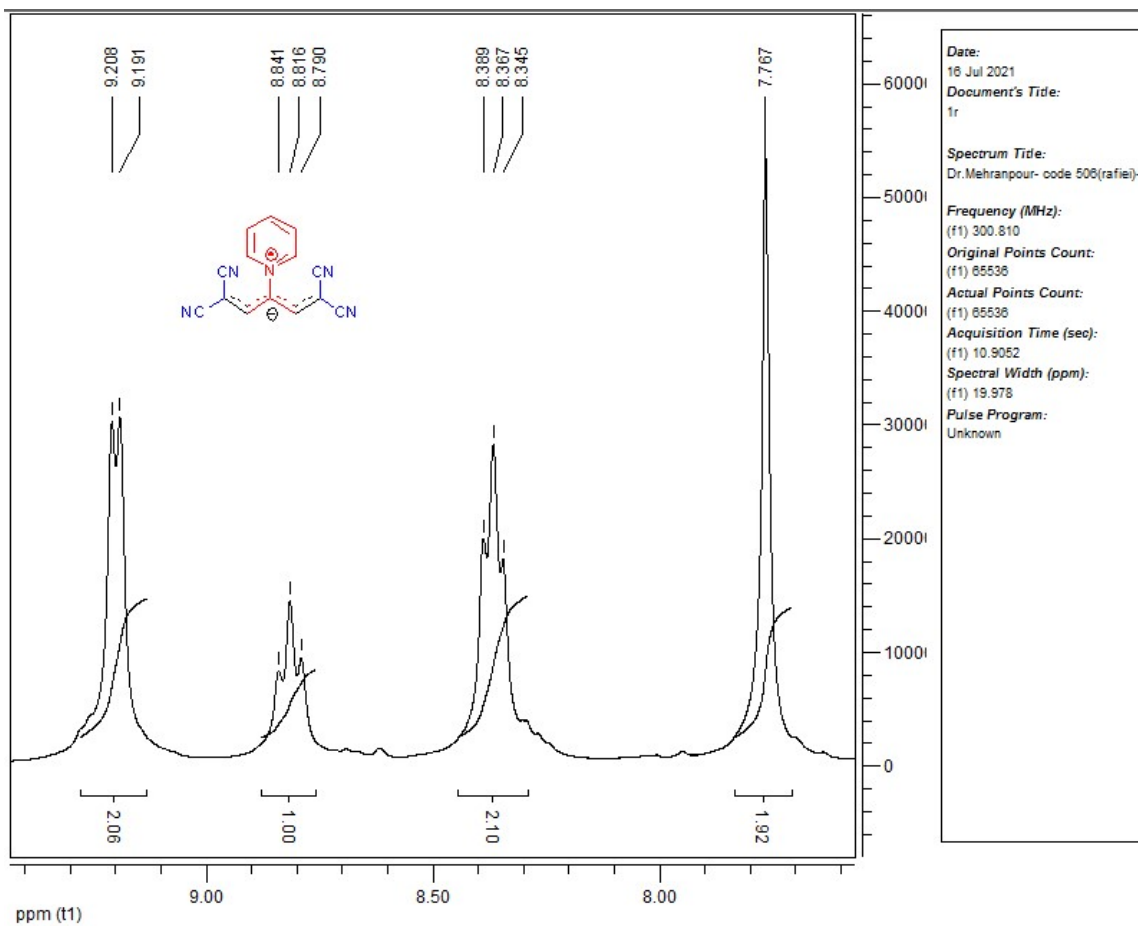
4a	1,1,5,5-Tetracyano-3-(pyridinium-1-yl) penta propenides	C ₁₄ H ₇ N ₅
4b	2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(pyridinium-1-yl) penta-propenides	C ₁₈ H ₁₇ N ₃ O ₄
4c	1,1,5,5-tetracyano-3-(3,5-dimethylpyridinium-1-yl) penta-propenides	C ₁₆ H ₁₁ N ₅
4d	2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(3,5-dimethylpyridinium-1-yl)-penta-propenides	C ₂₀ H ₂₁ N ₃ O ₄
4e	1-(1,1,5,5-tetracyano-3-(quinolinium -1-yl) penta-propenides	C ₁₈ H ₉ N ₅
4f	2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(quinolinium-1-yl) penta-propenides	C ₂₂ H ₁₉ N ₃ O ₄
4g	1,1,5,5-tetracyano-3-(isoquinolinium-2-yl) penta-propenides	C ₁₈ H ₉ N ₅

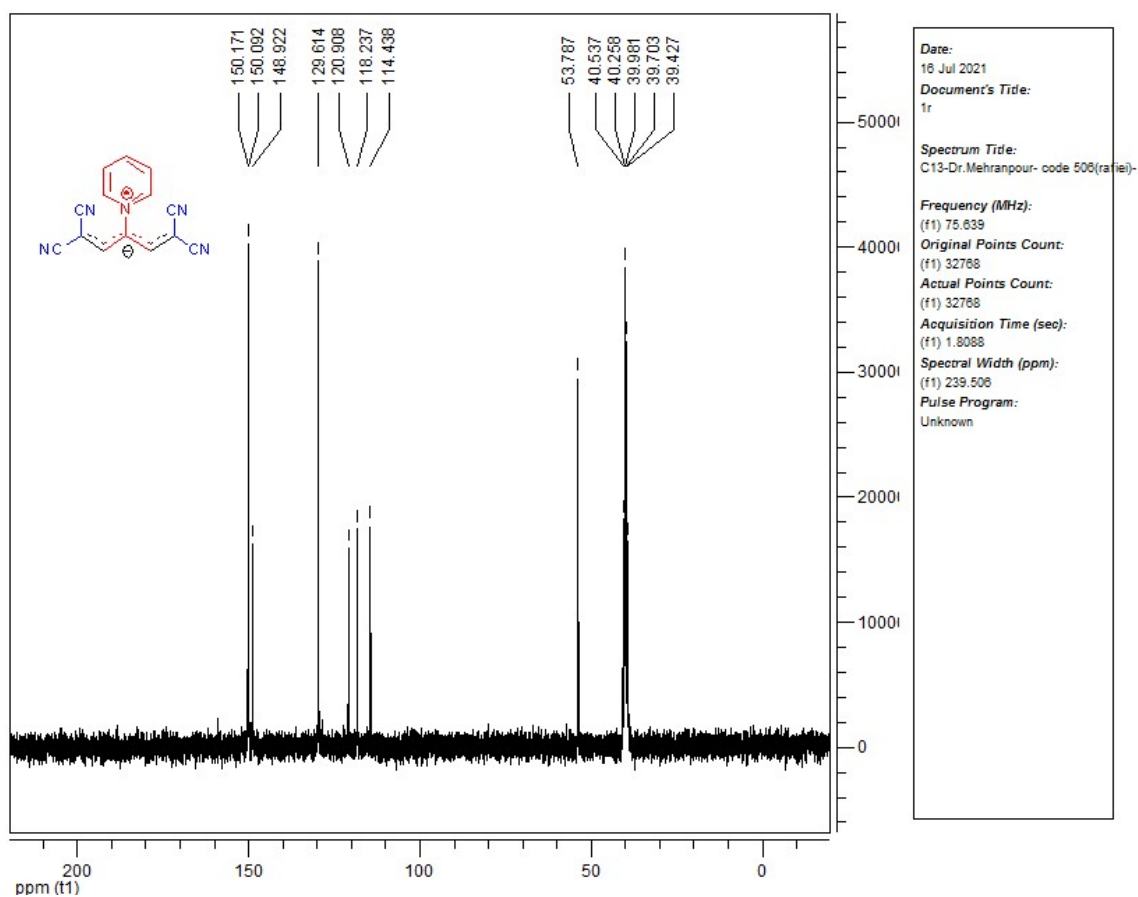
4h	2,6-dicyano-1,7-diethoxy-4-(isoquinolinium-2-yl)-1,7-dioxo-penta-propenides	C ₂₂ H ₁₉ N ₃ O ₄
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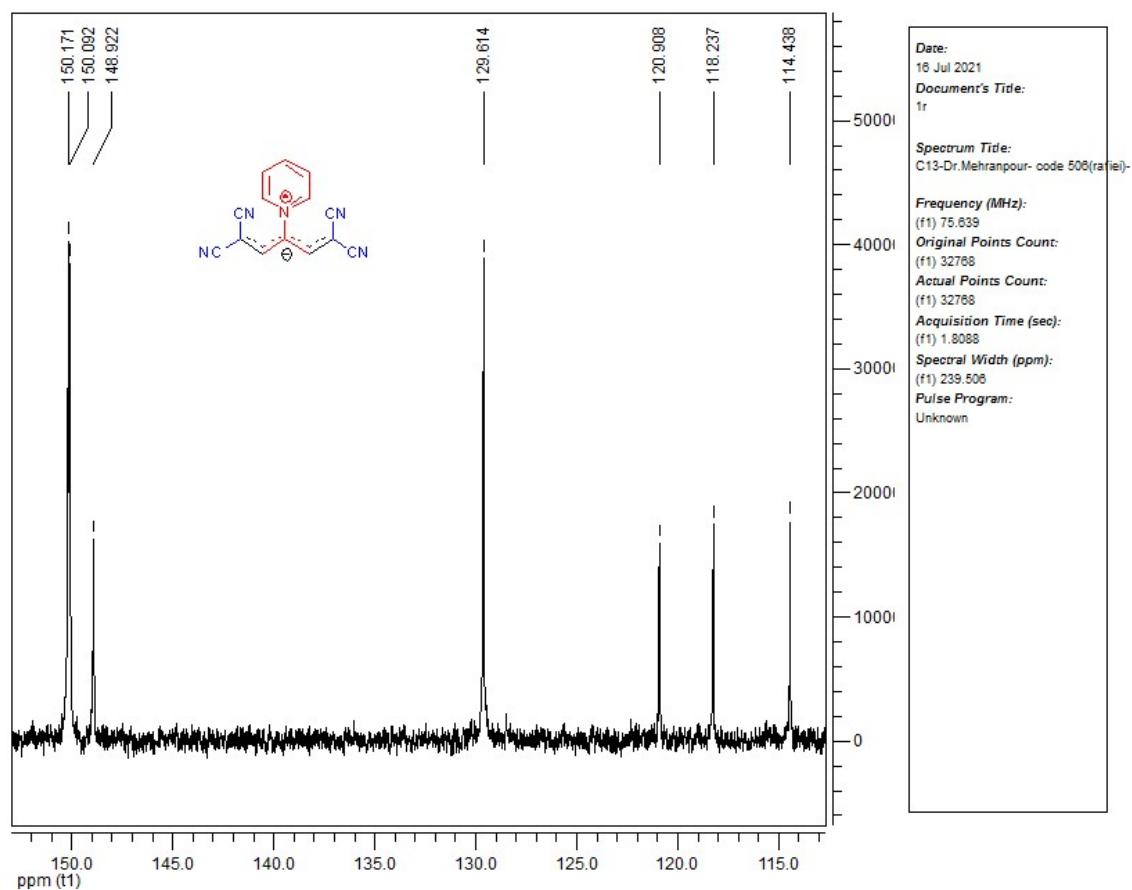
IR, ¹H and ¹³C NMR Spectra

1,1,5,5-Tetracyano-3-(pyridinium-1-yl)penta propenides (4a):

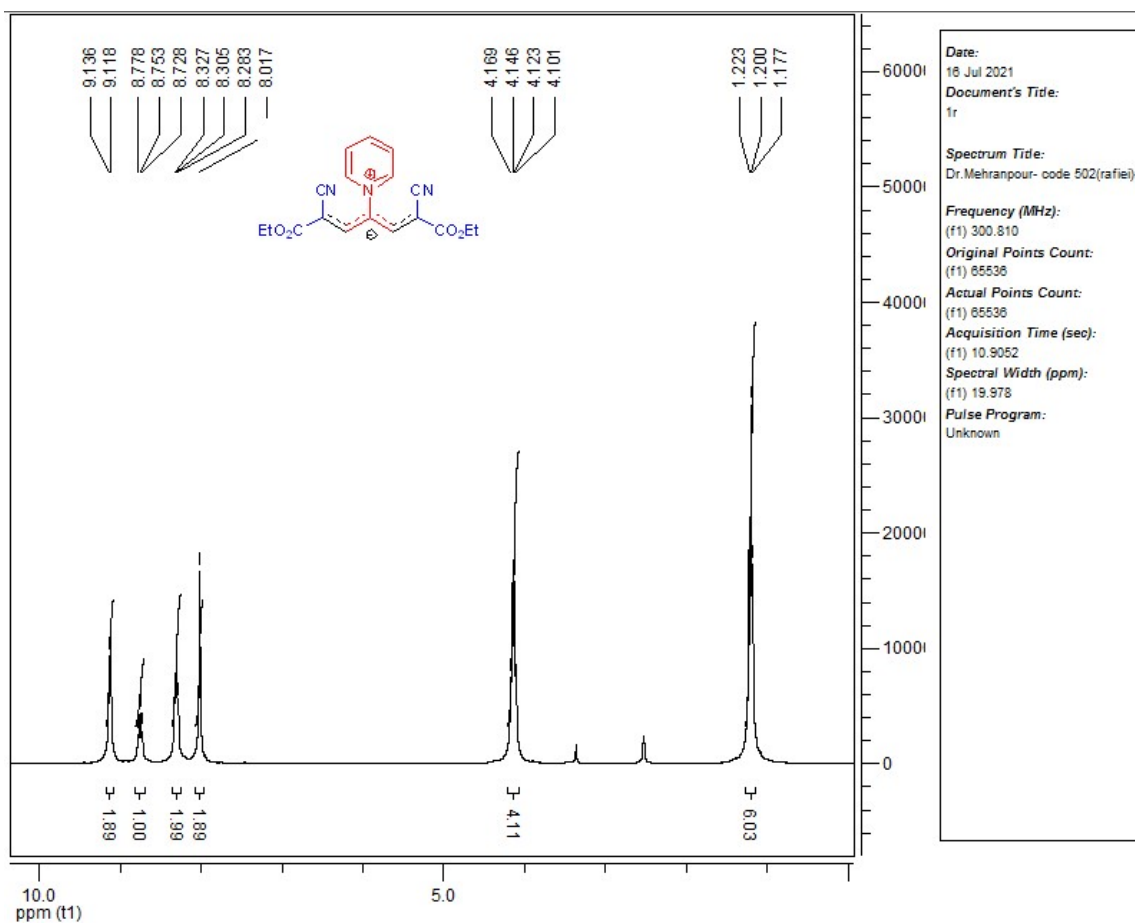


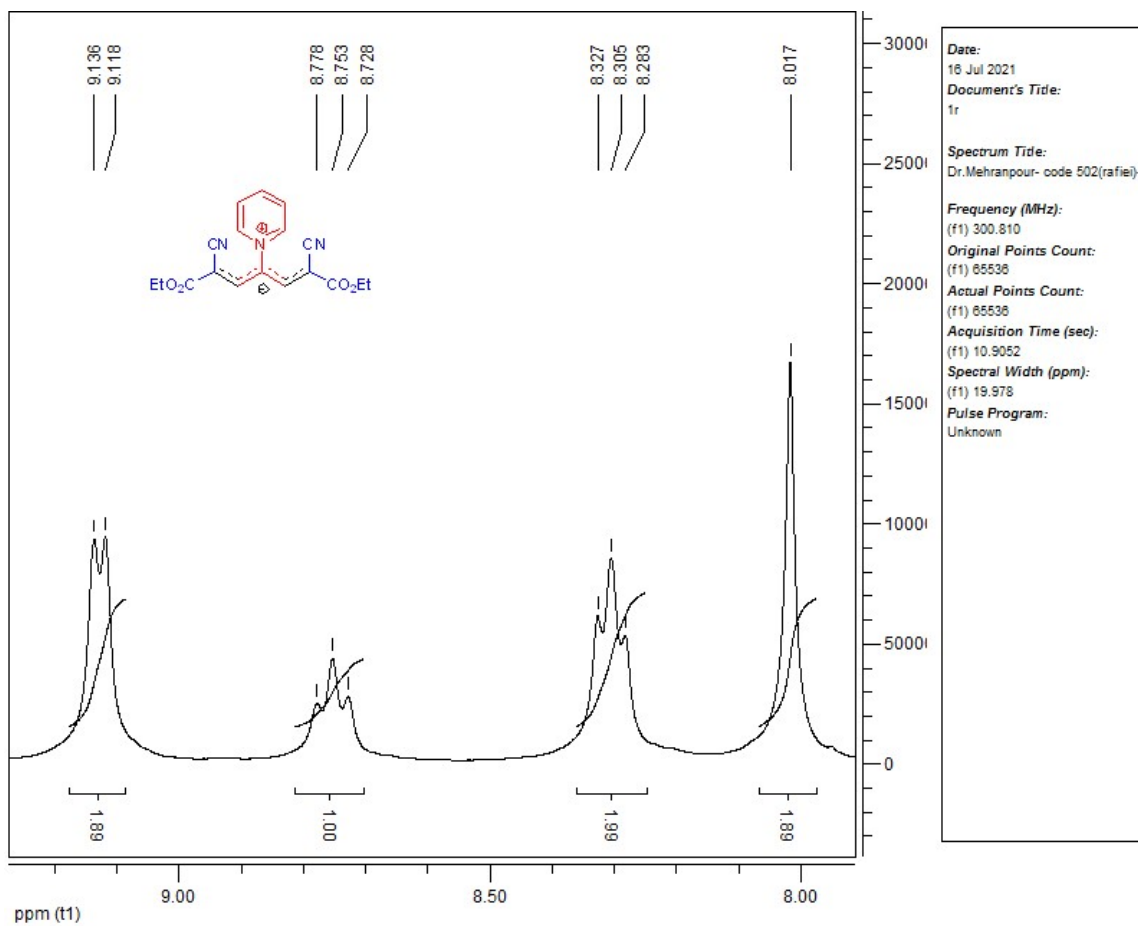


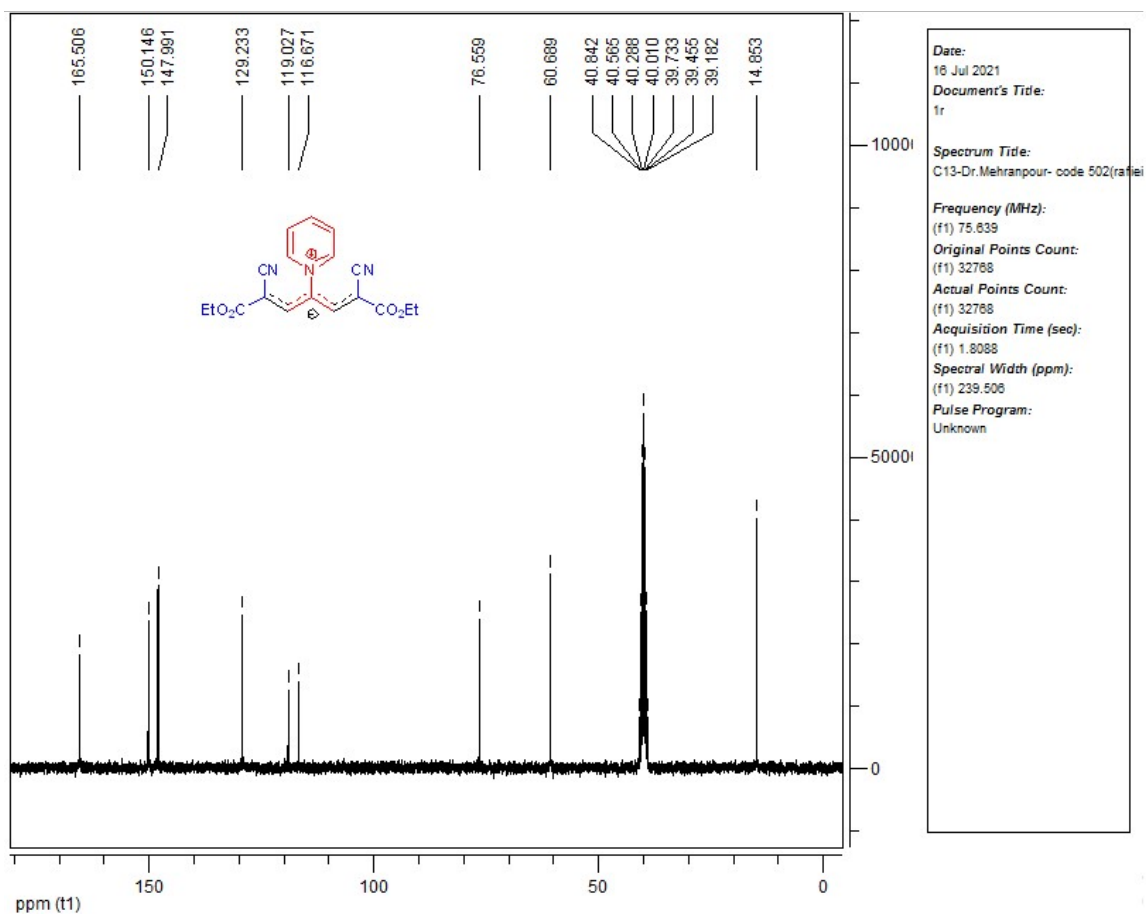




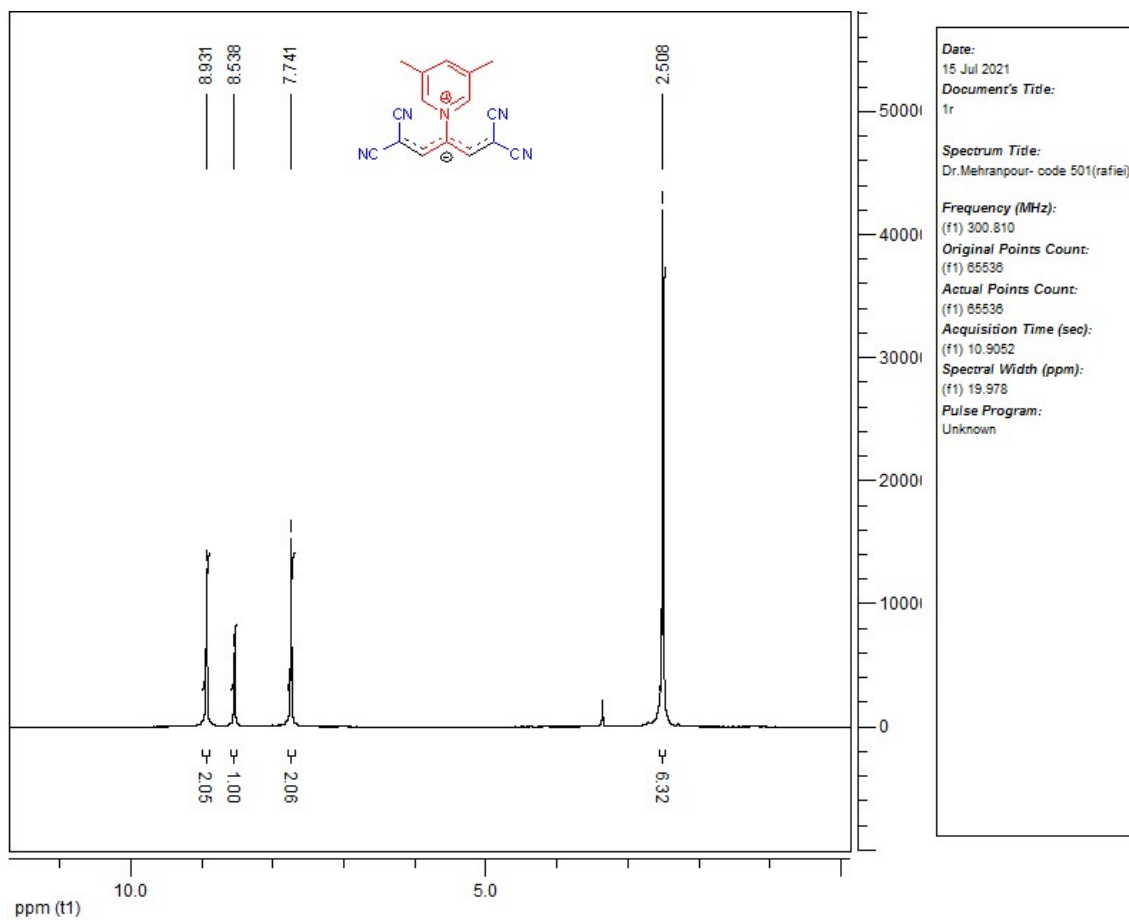
2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(pyridinium-1-yl)penta-propenides (4b):

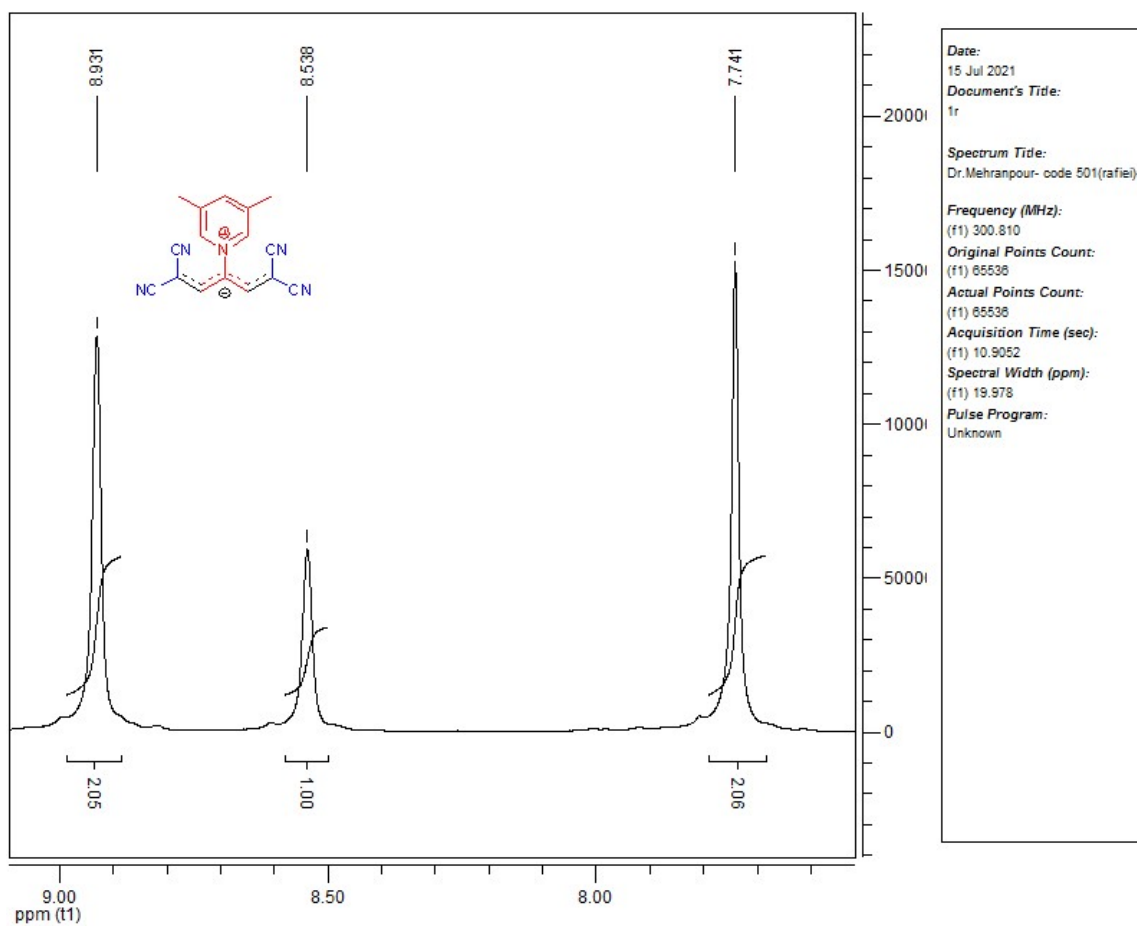


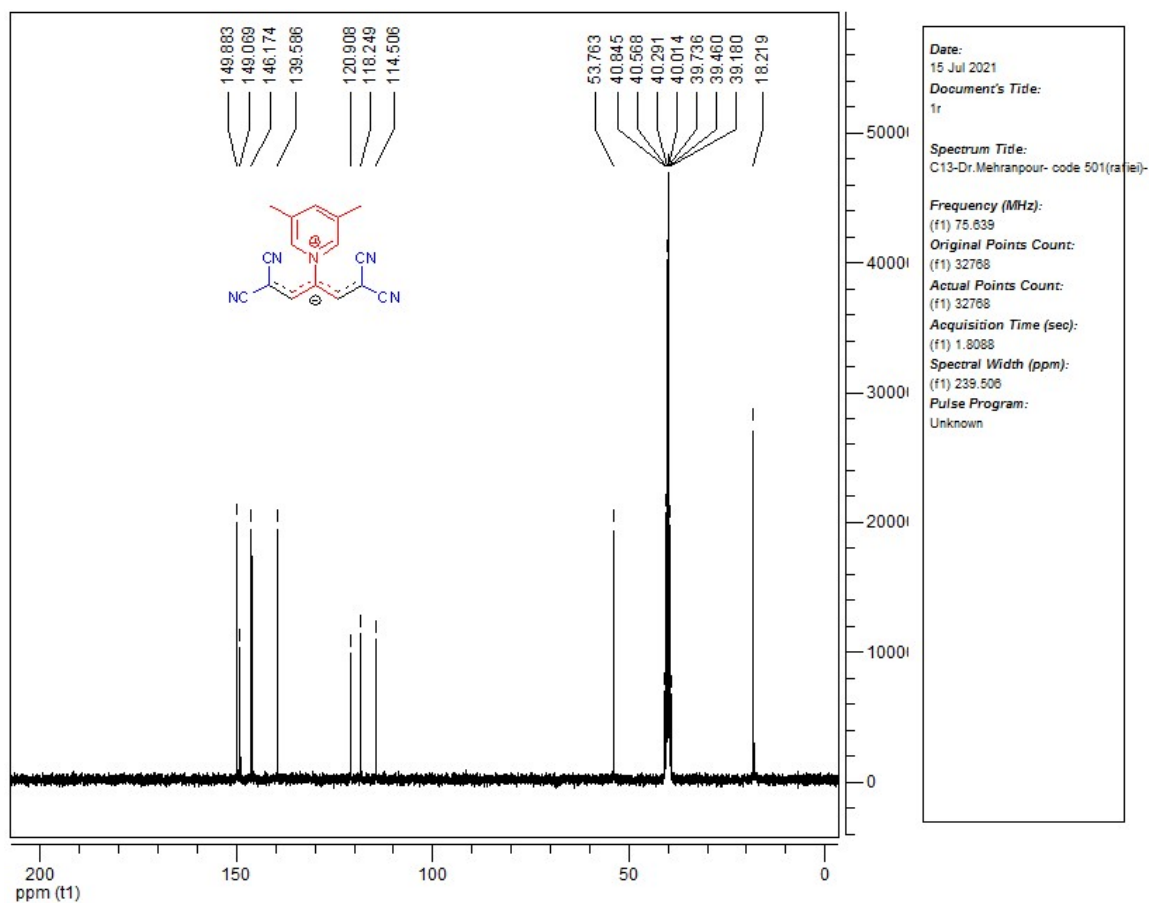


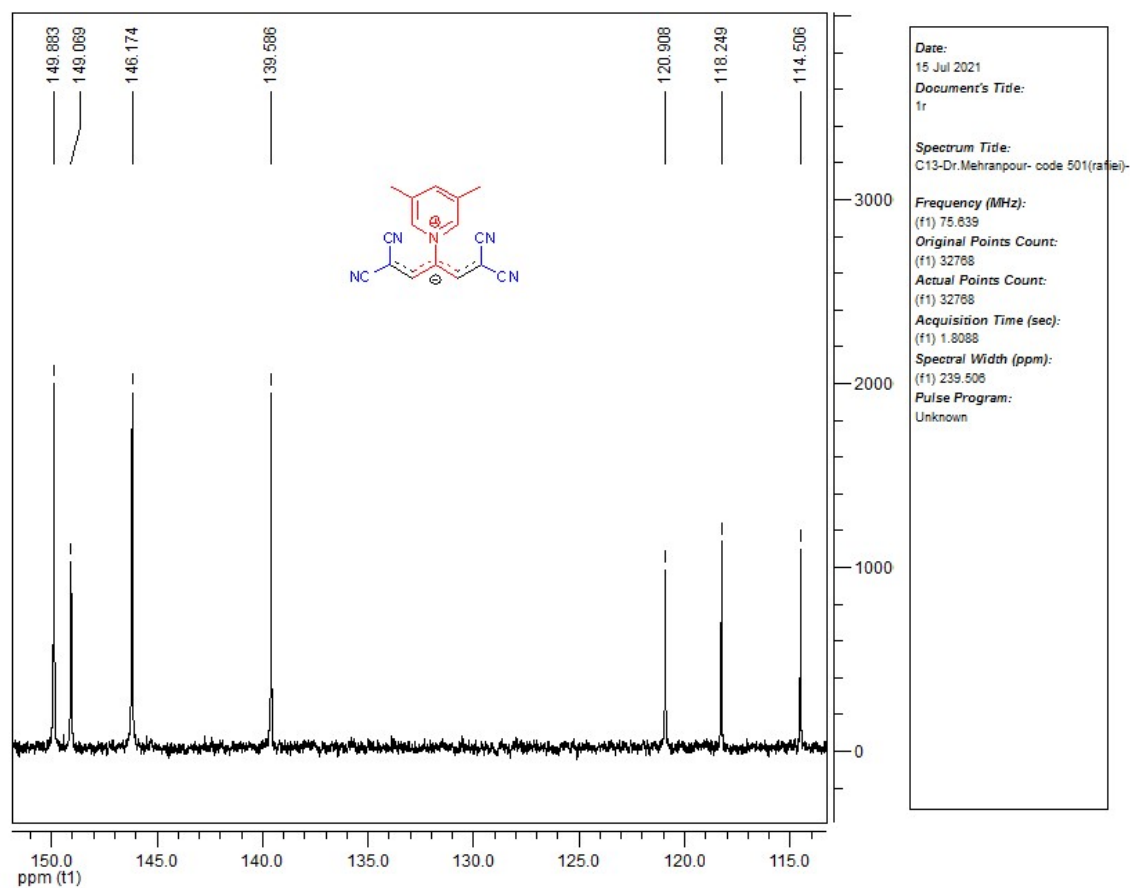


1,1,5,5-tetracyano-3-(3,5-dimethylpyridinium-1-yl)penta-propenides (4c):

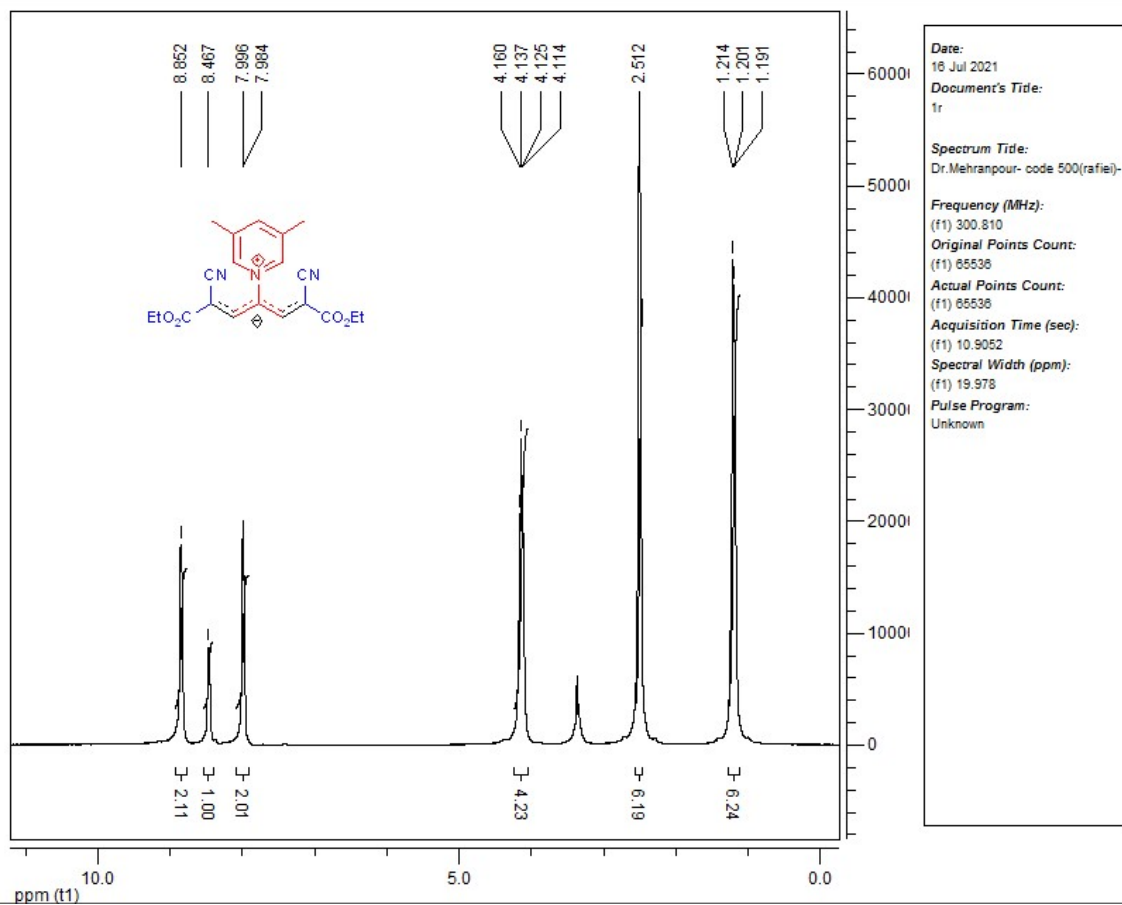


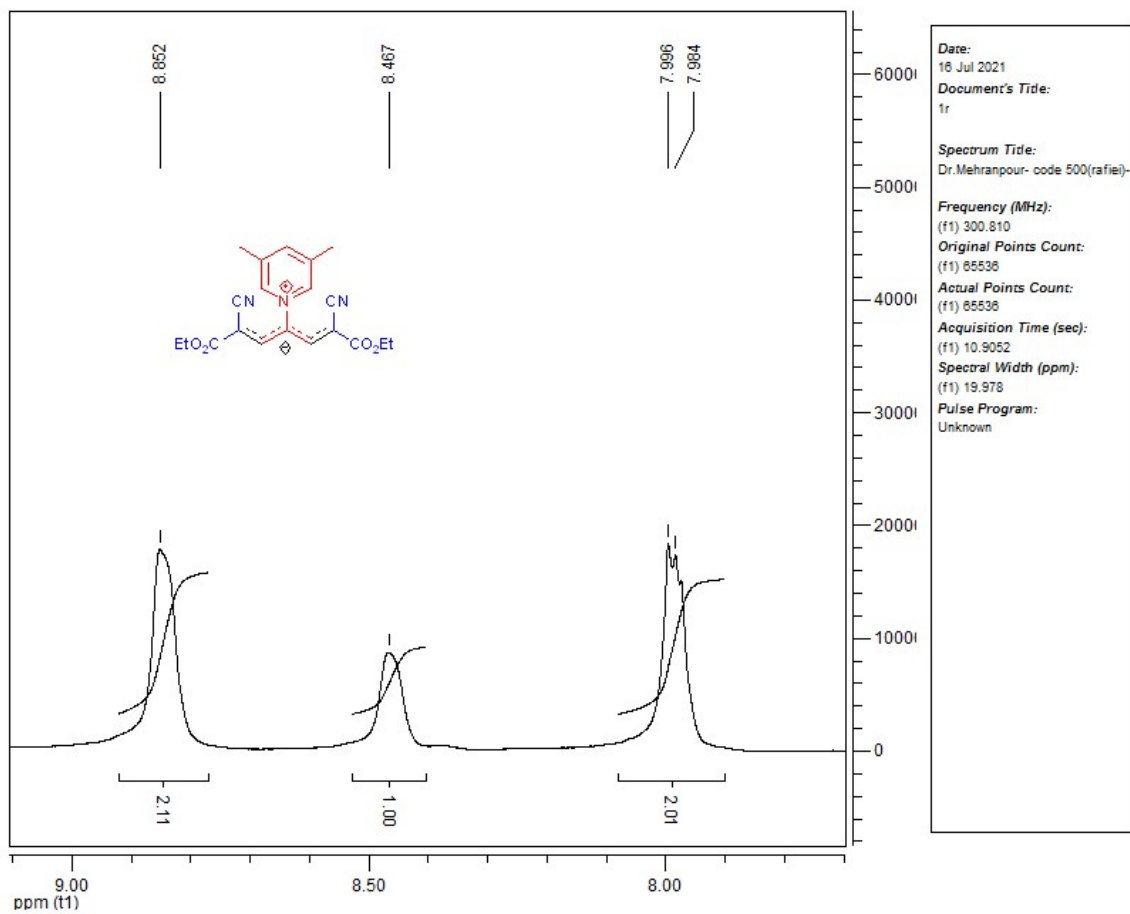


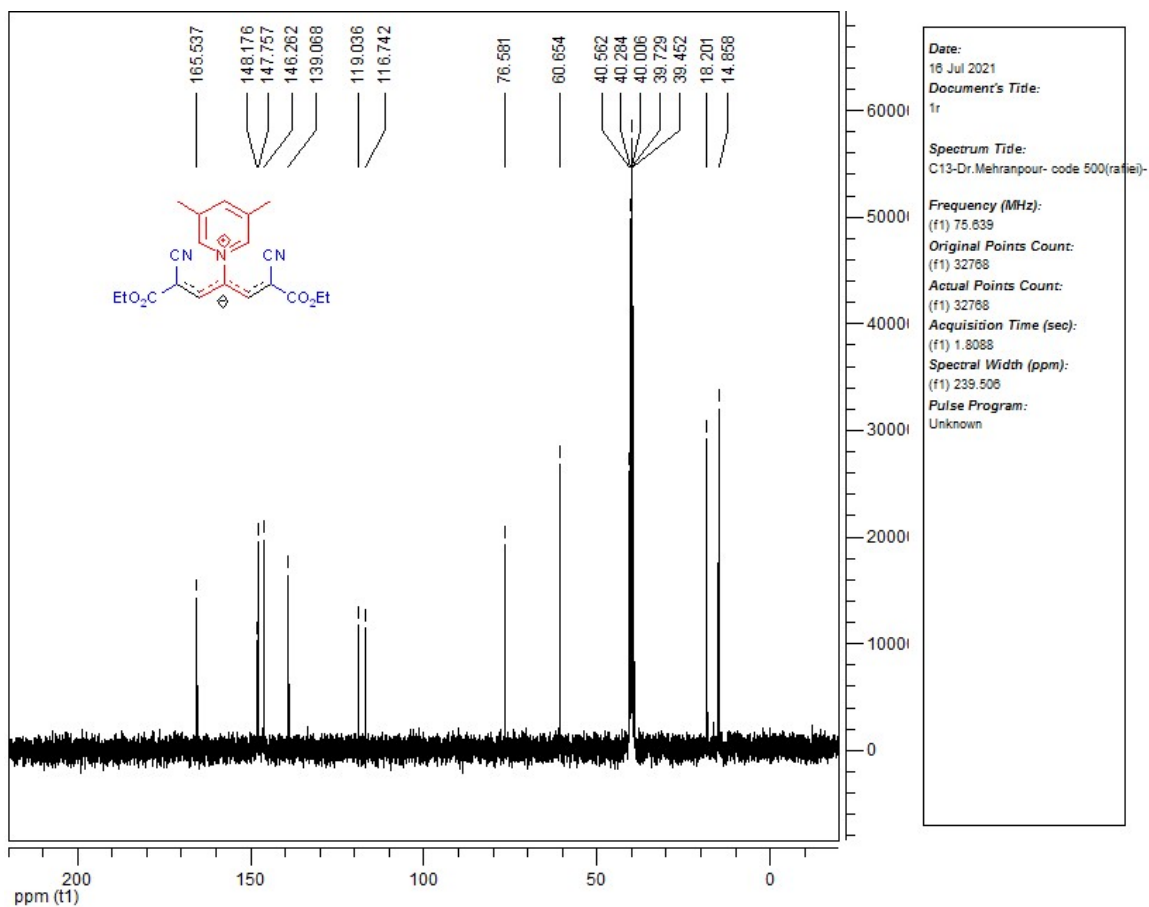


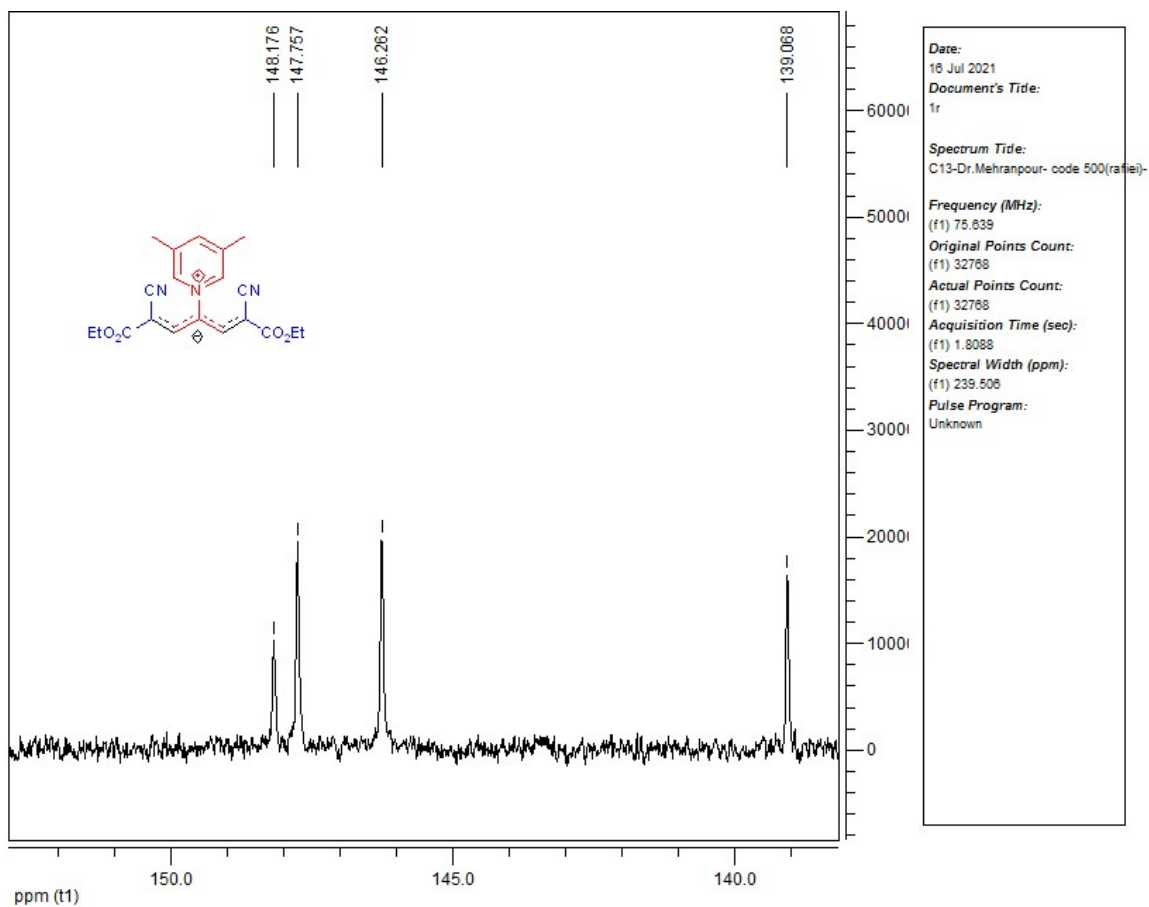


2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(3,5-dimethylpyridinium-1-yl)-penta-propenides (4d):

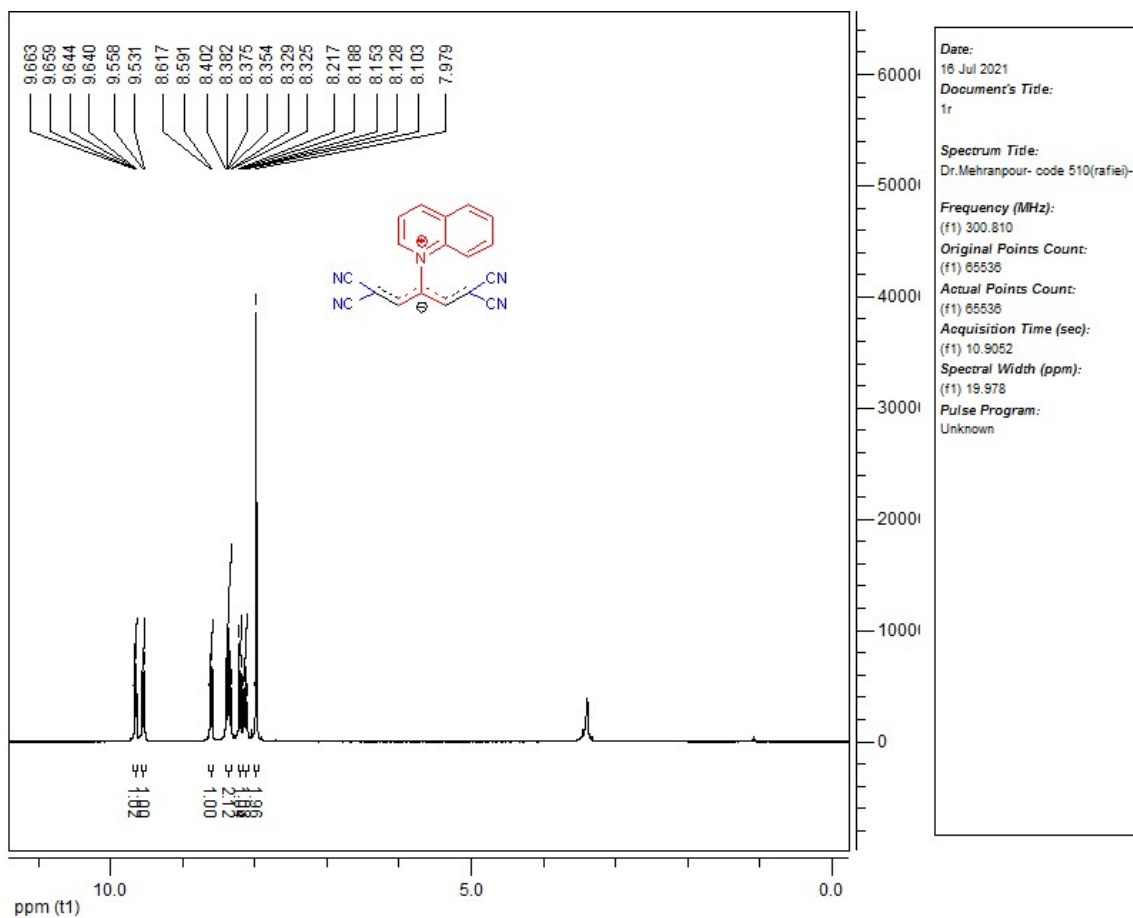


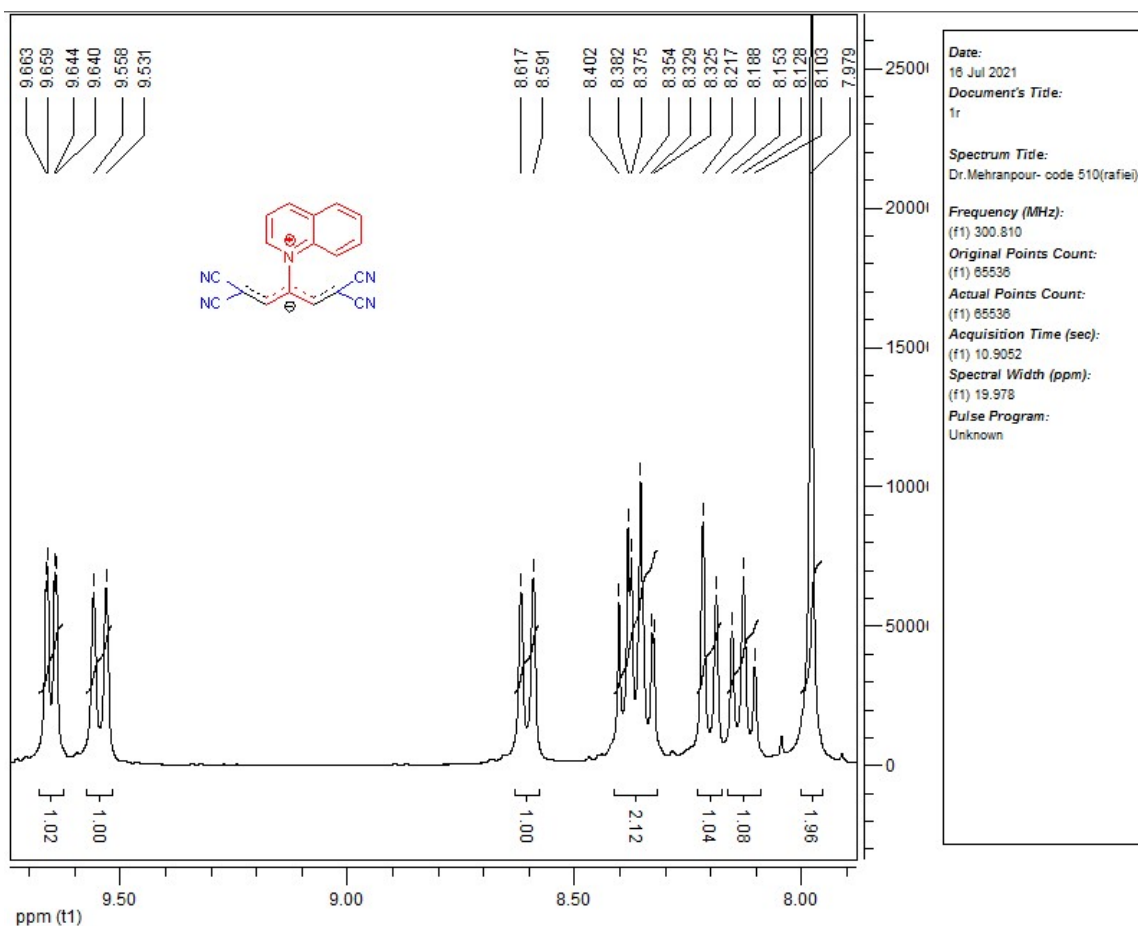


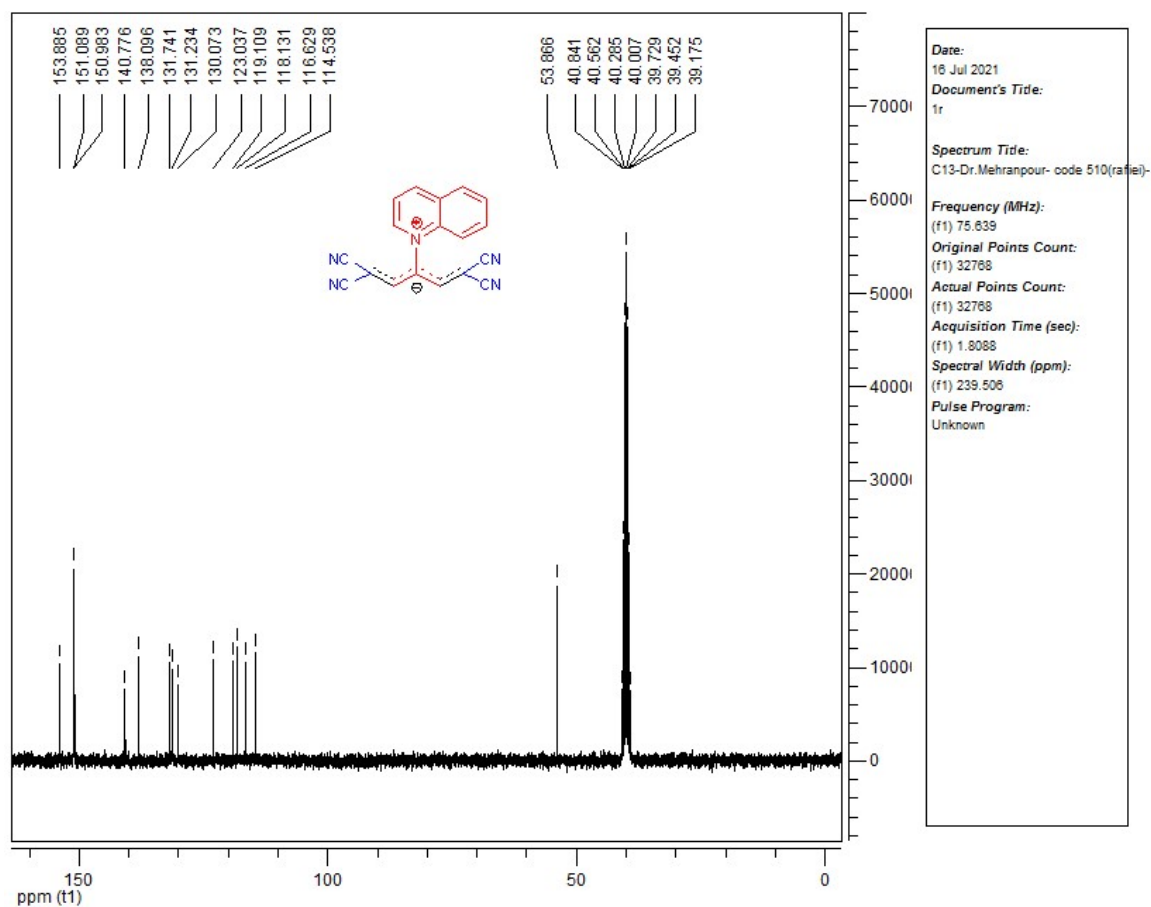




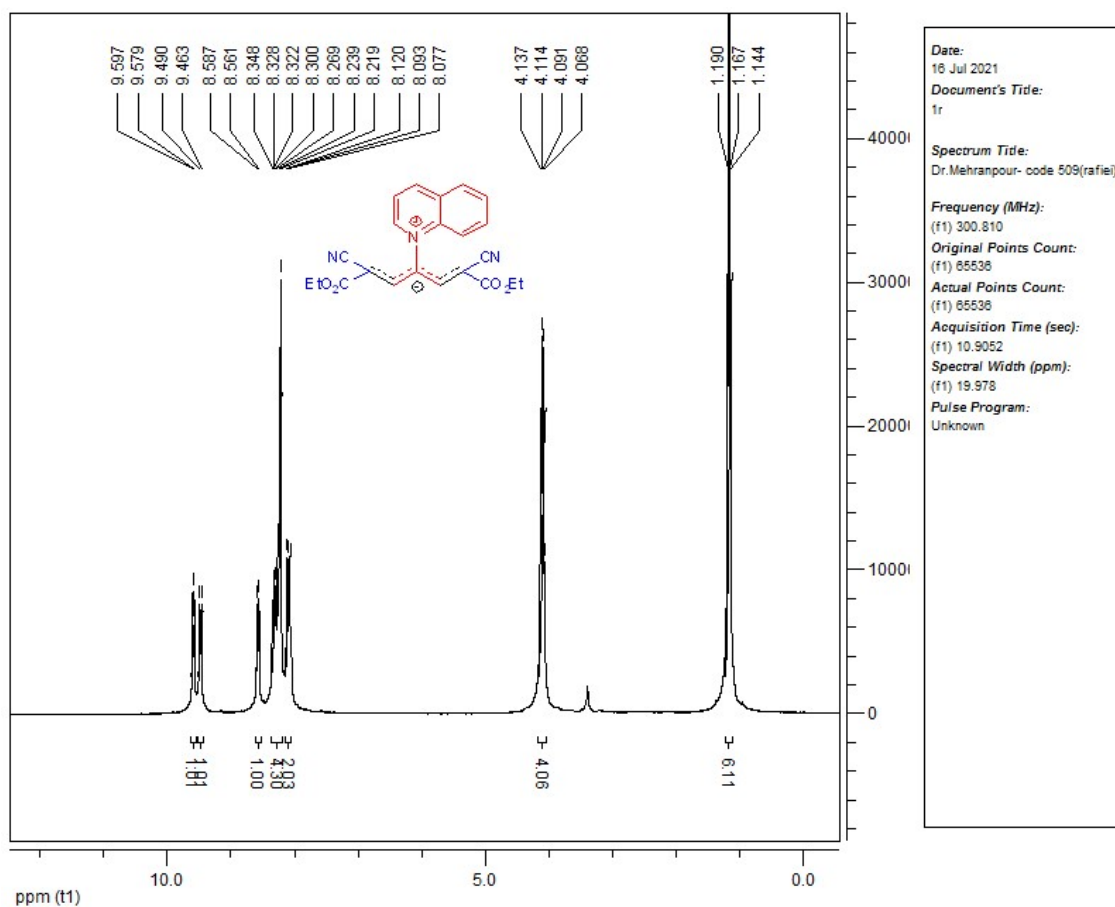
1-(1,1,5,5-tetracyano-3-(quinolinium -1-yl) penta-propenides (4e):

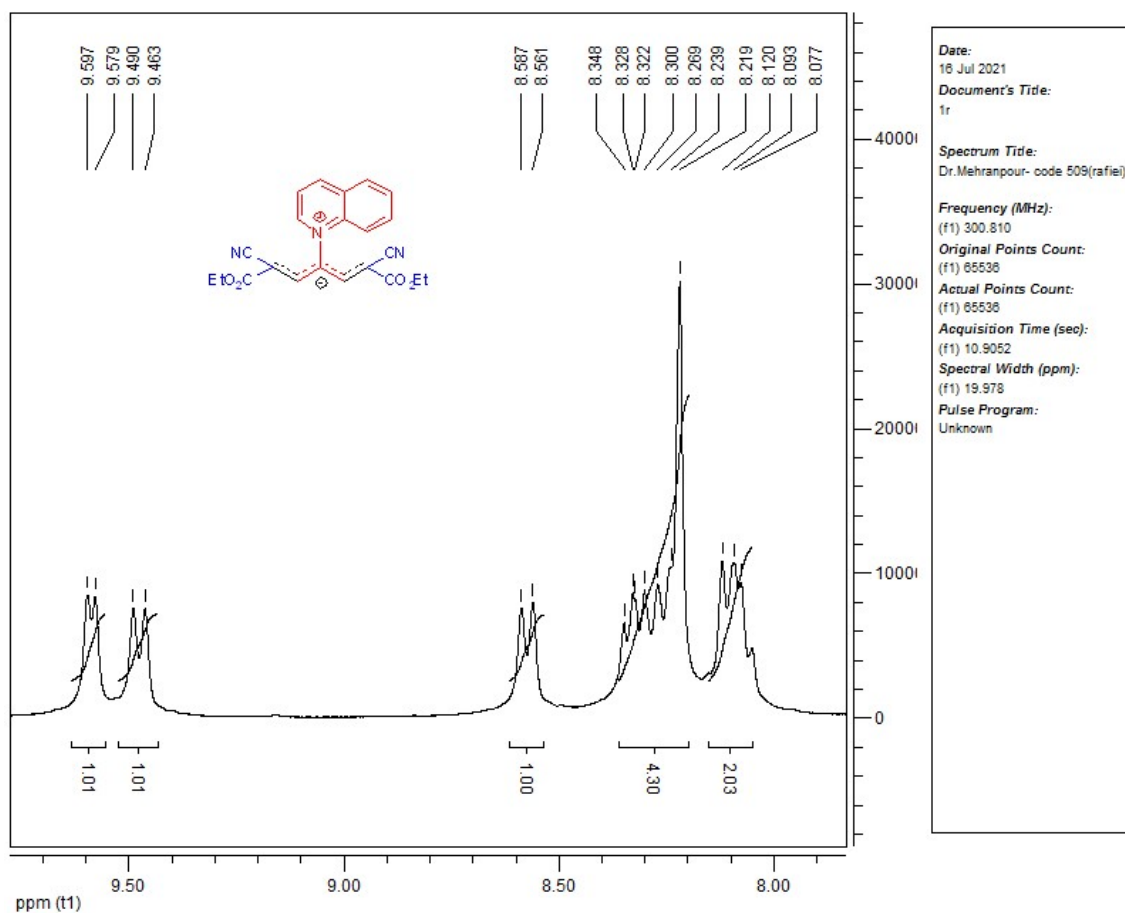


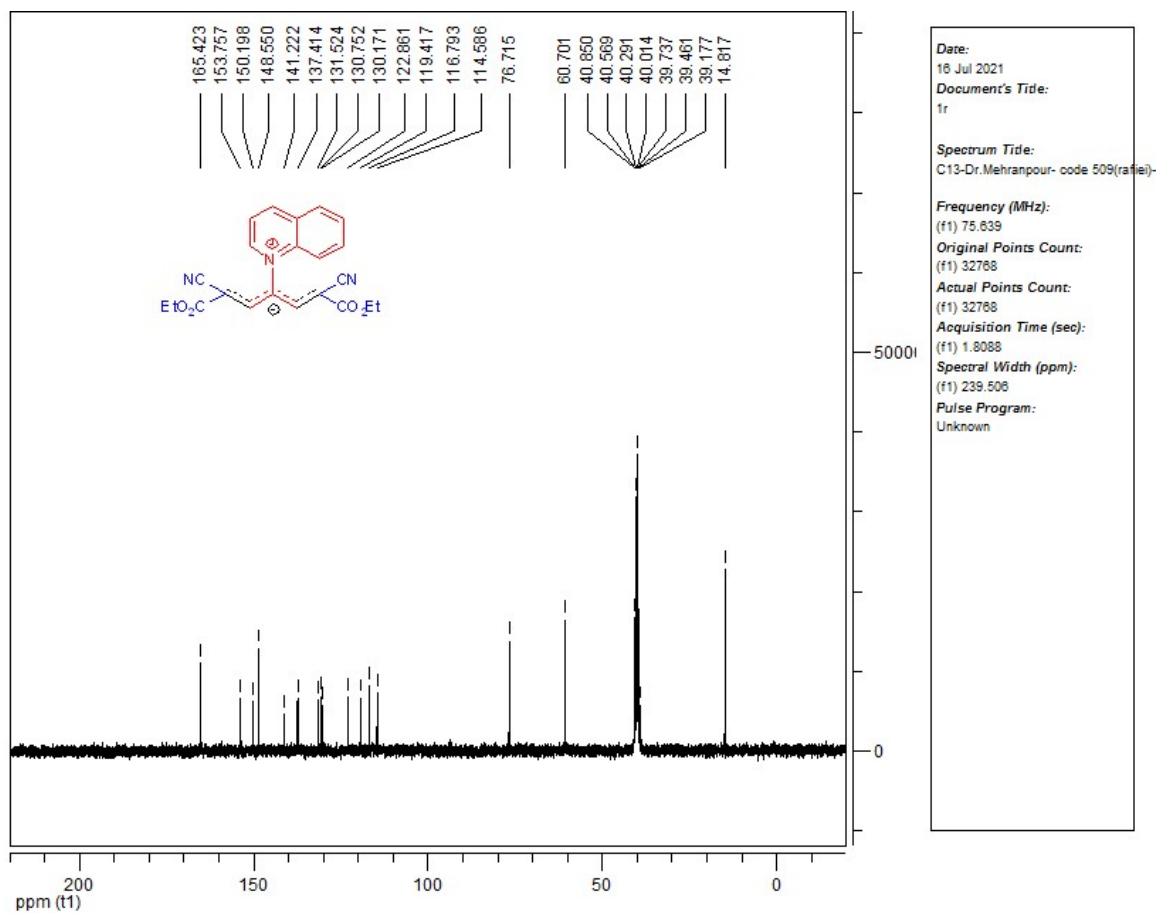




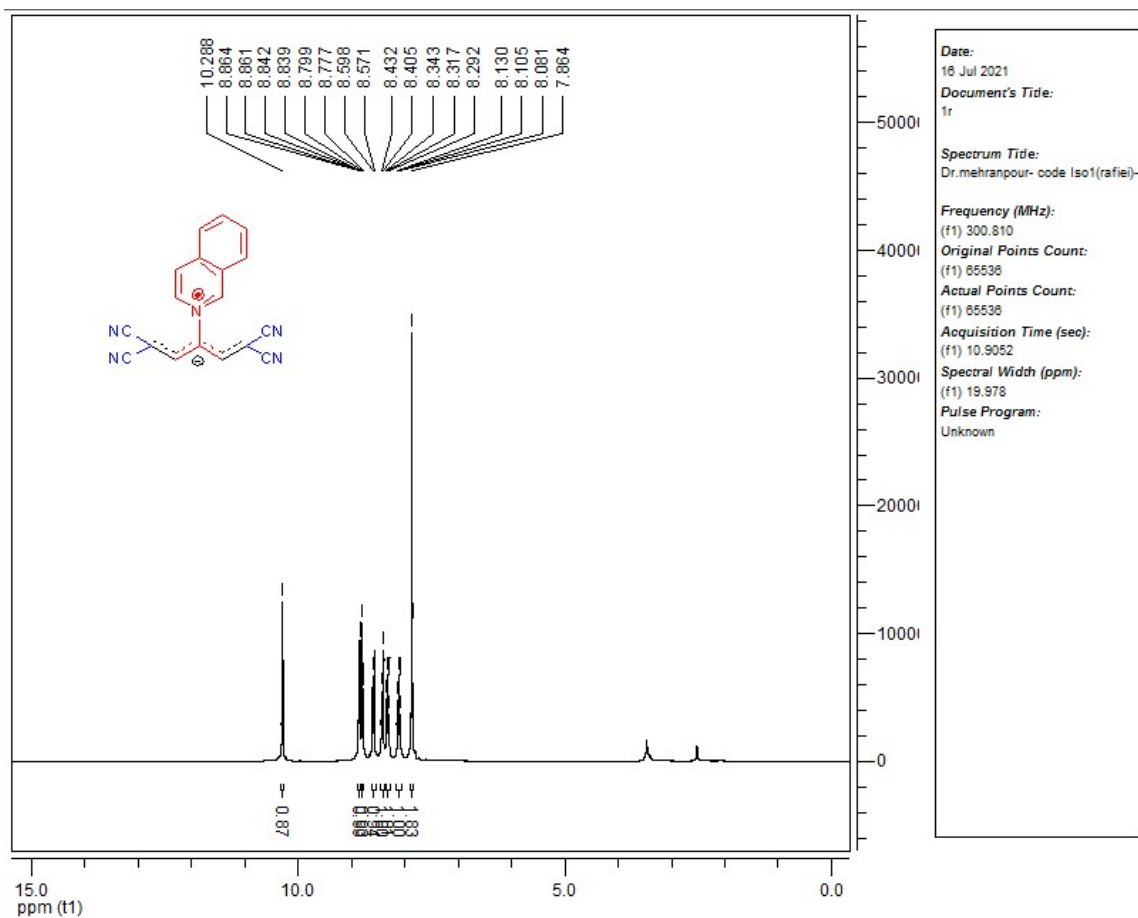
2,6-dicyano-1,7-diethoxy-1,7-dioxo-4-(quinolinium-1-yl)penta-propenides (4f):

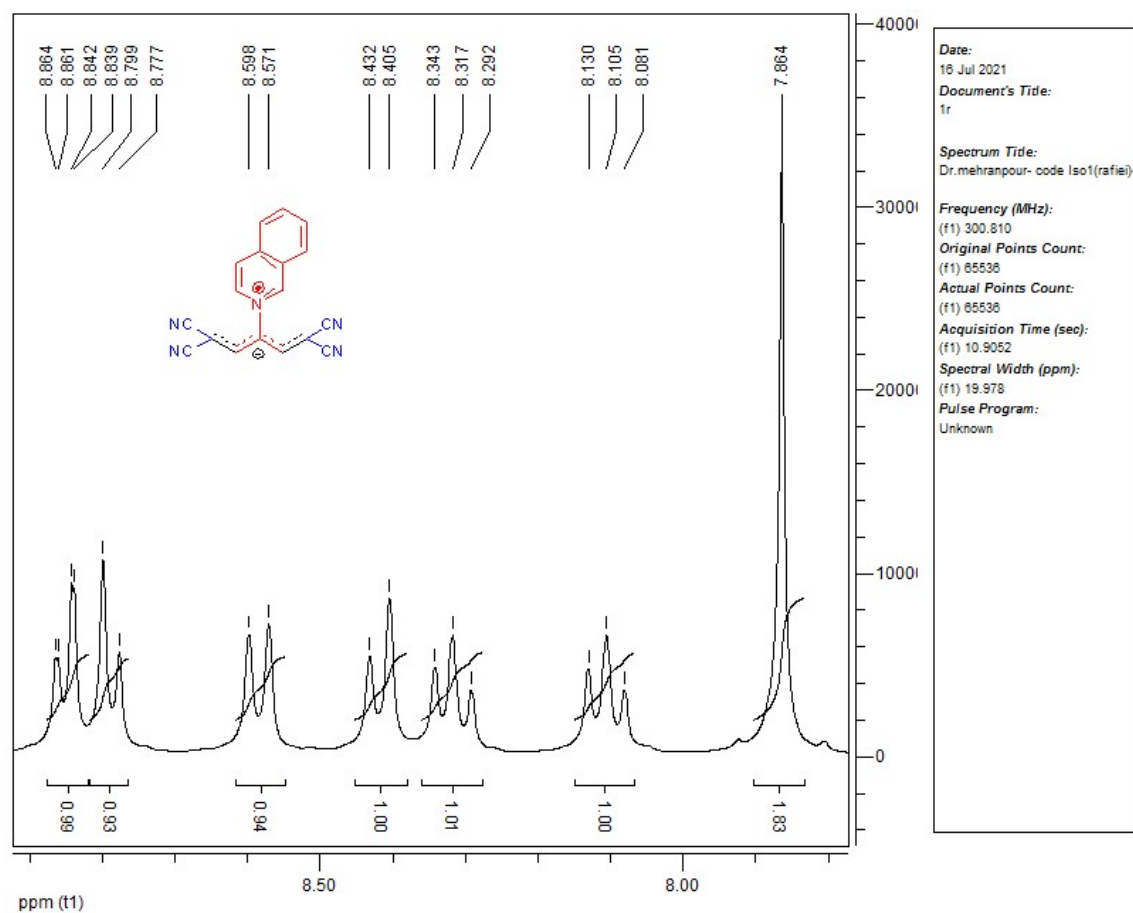


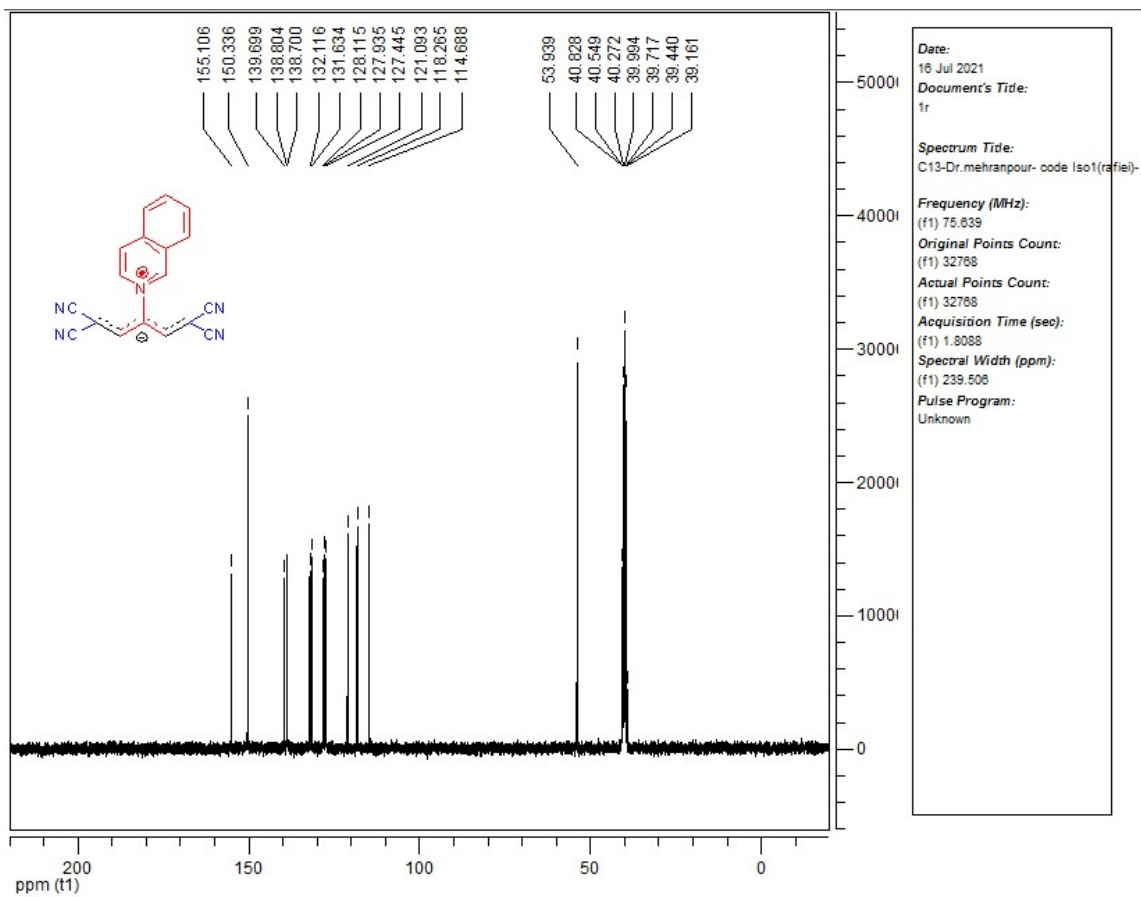


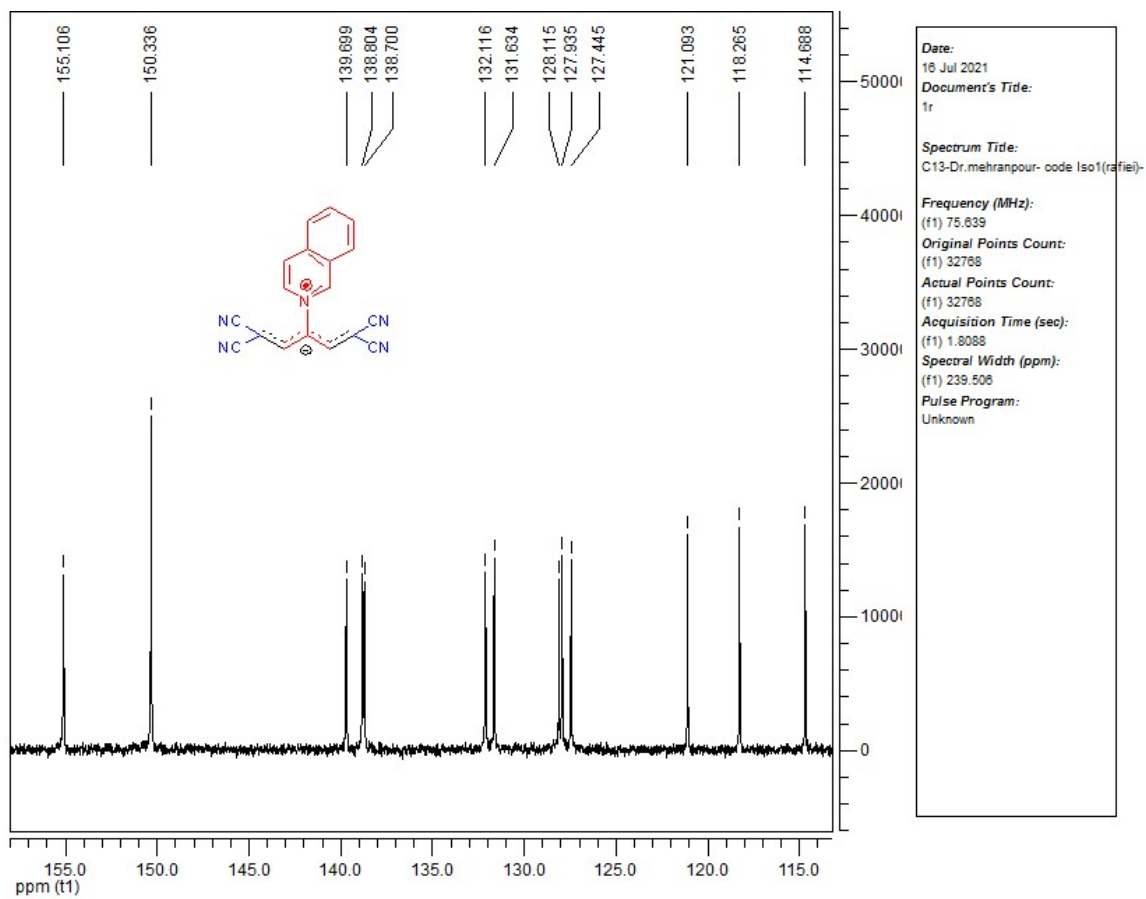


1,1,5,5-tetracyano-3-(isoquinolinium-2-yl)penta-propenides (4g):









2,6-dicyano-1,7-diethoxy-4-(isoquinolinium-2-yl)-1,7-dioxo-penta-propenides (4h):

