

Suporting Information

***Org.Commun.* 10:2 (2017) 90-98**

Synthesis and anti-bacterial activity of novel 1,3-phenylene-bis-N-acetyl- and N-phenylpyrazole derivatives

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60250, Tokat, Türkiye*

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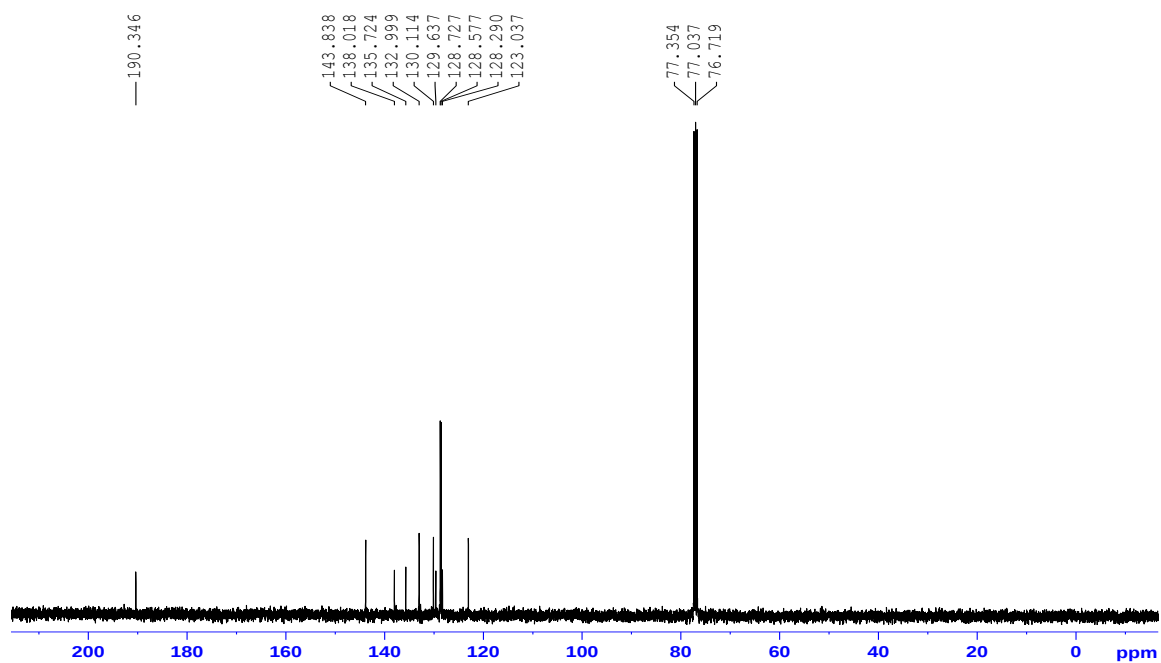
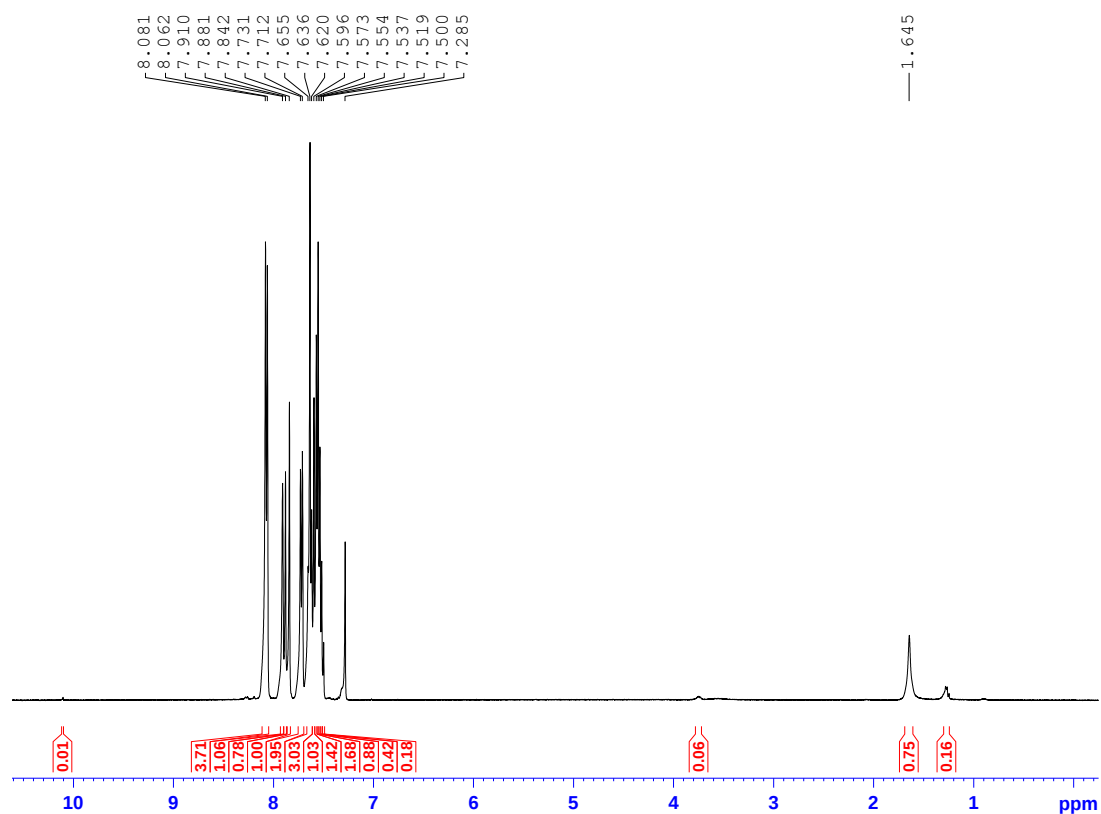
General Procedure for the Synthesis of Bis-Chalcone Derivatives (3a-e):¹⁸⁻²²

Arilketones derivatives (**1a-h**) (1 mmol) in EtOH (20 ml) were added to NaOH (2.5m, 6 ml). The mixture was stirred for 3 min and was added teraftaldehyt (**2**) (1 mmol) and was stirred for 4 h at r.t. Start mixing a few minutes after it was observed that the collapse occurred. By reaction the precipitate formed was filtered off. After washing with ethanol several times with methylene chloride / hexane (3/7) mixture was crystallized.

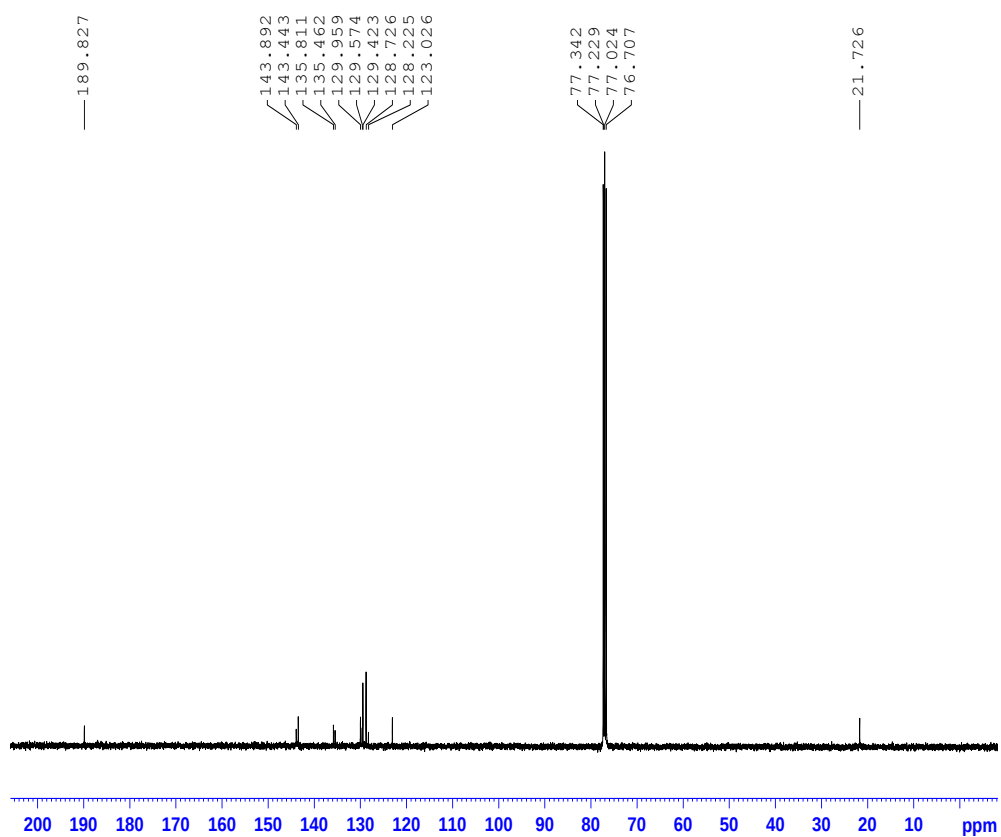
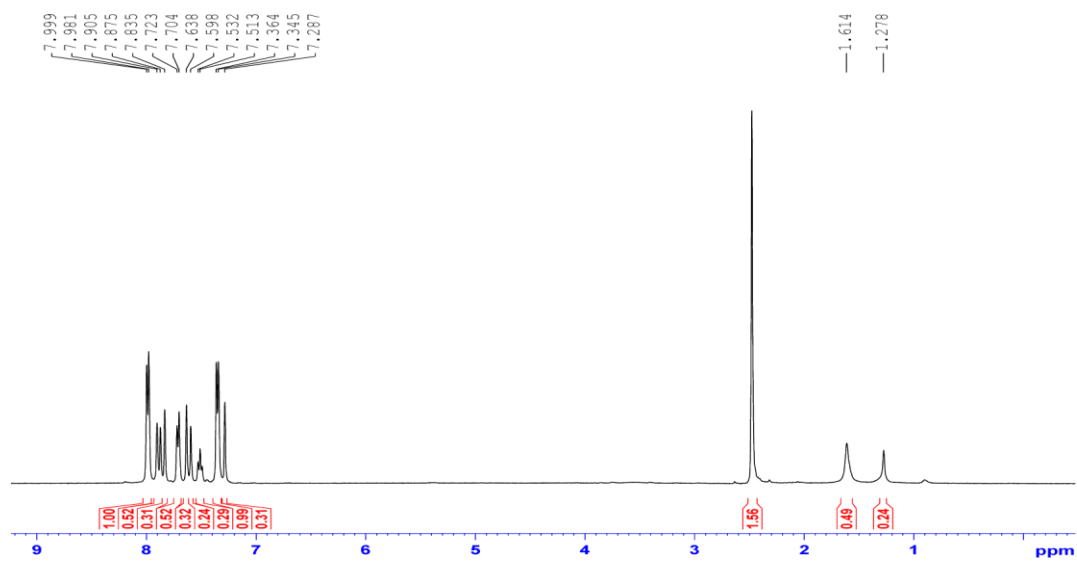
General Method for the Synthesis of 1,4-Phenylene-bis-N-acetylpyrazole (5a-h) and 1,4-Phenylene-bis-N-phenylpyrazole Derivatives (7a-h):²³⁻²⁷

Bis-chalcone (**1a-h**) (1 mmol) and hydrazine hydrate (4 mmol) in acetic acid and/or phenylhydrazine (4 mmol) in acetic acid/ethanol mixture were refluxed for 4 and 8 hours, respectively. The reaction mixture was poured into ice-bath, at the end of the reaction and was checked with pH paper to ensure neutralization of the medium by addition of ammonia. It was observed that the collapse occurs in the mixture to stand overnight and the precipitate formed was filtered off, was allowed to dry. The resulting material was obtained as a pure.

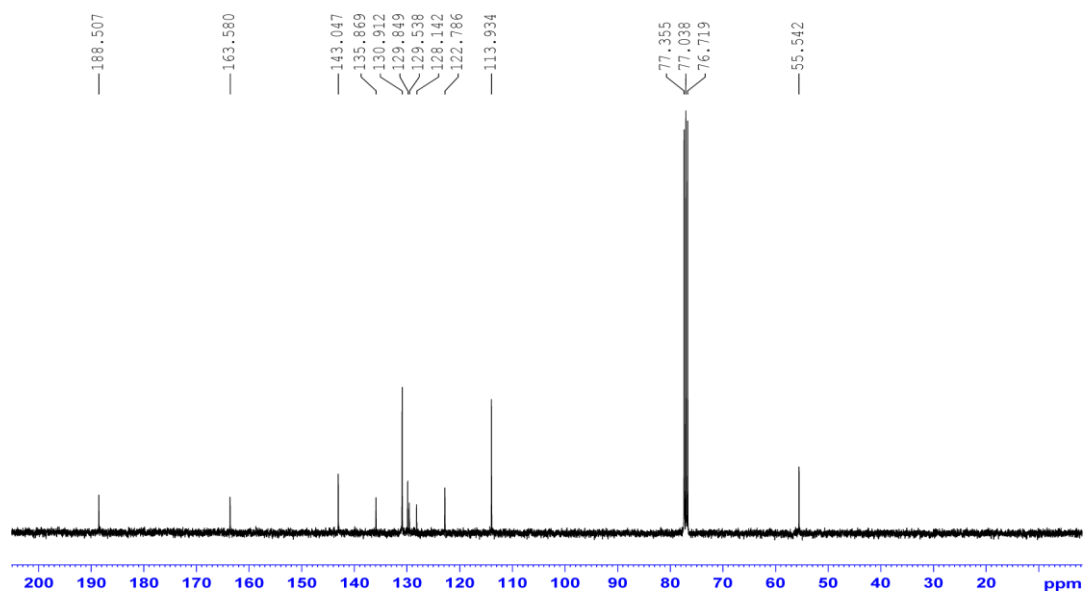
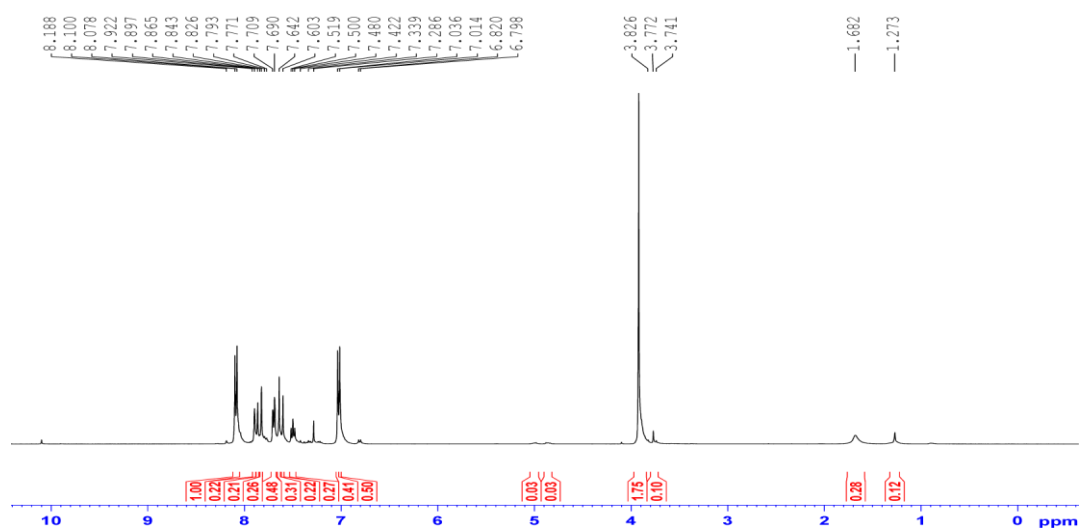
(2E,2'E)-3,3'-(1,3-phenylene)bis(1-phenylprop-2-en-1-one) (3a):



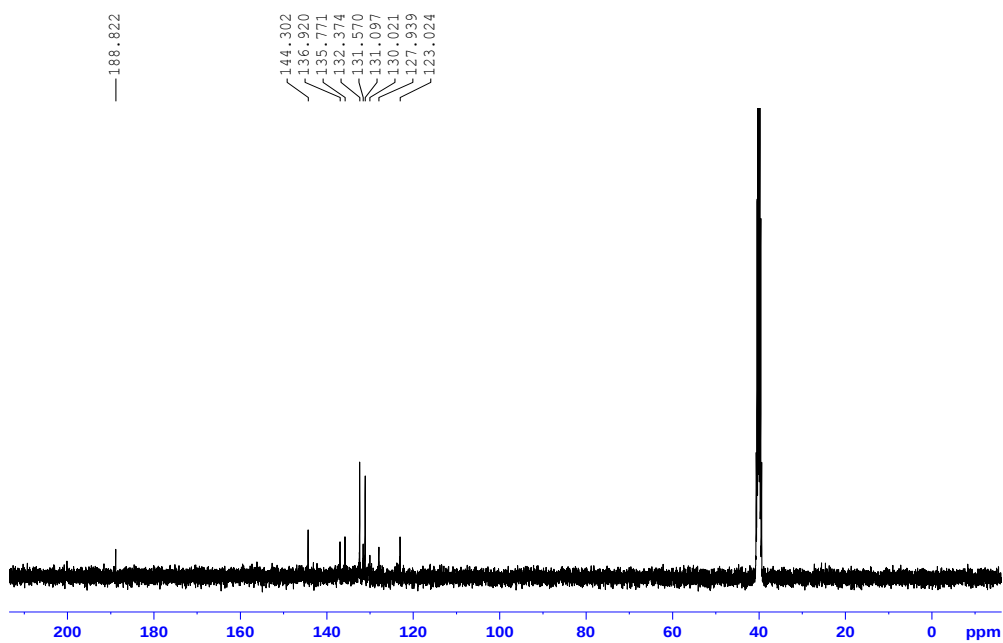
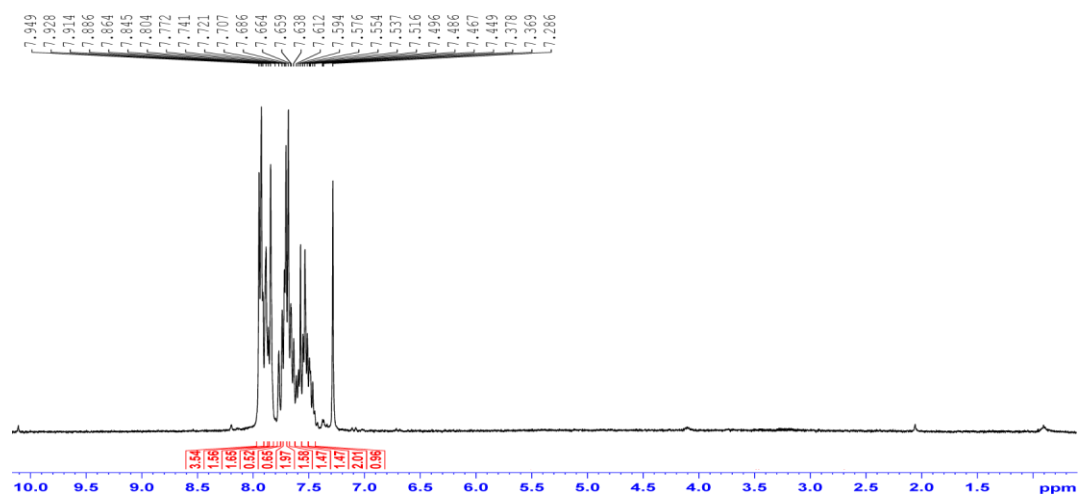
(2E,2'E)-3,3'-(1,3-phenylene)bis[1-(4-methylphenyl)prop-2-en-1-one] (3b):



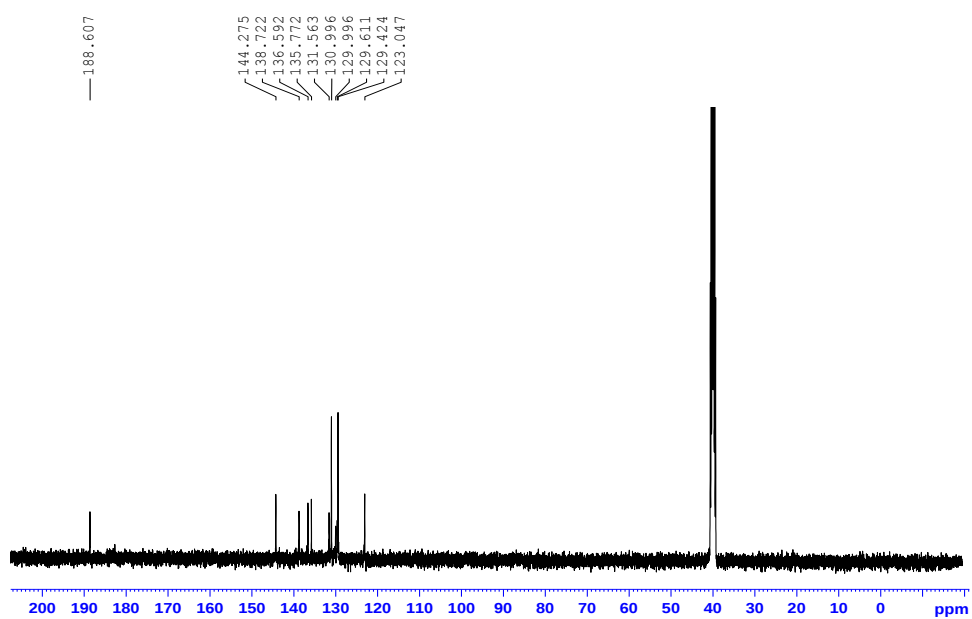
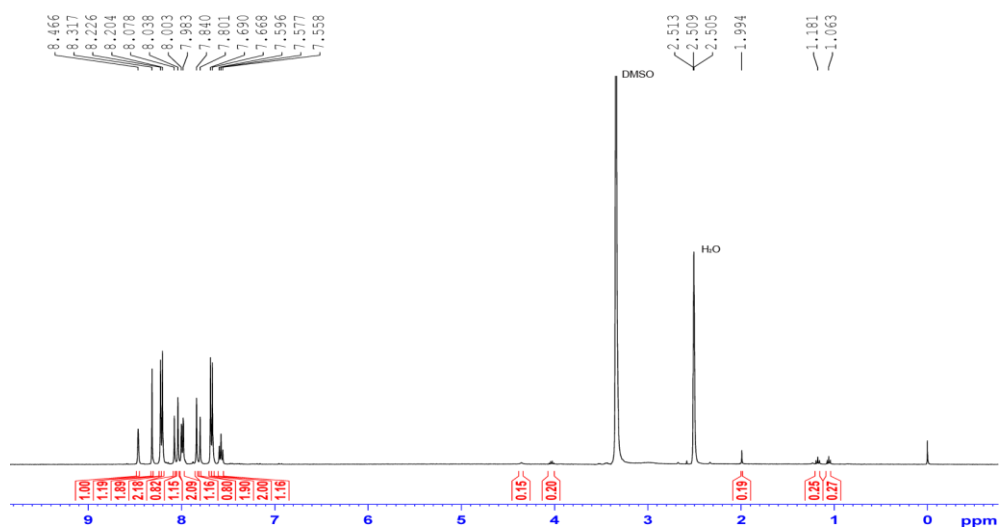
(2E,2'E)-3,3'-(1,3-phenylene)bis[1-(4-methoxyphenyl)prop-2-en-1-one] (3c):



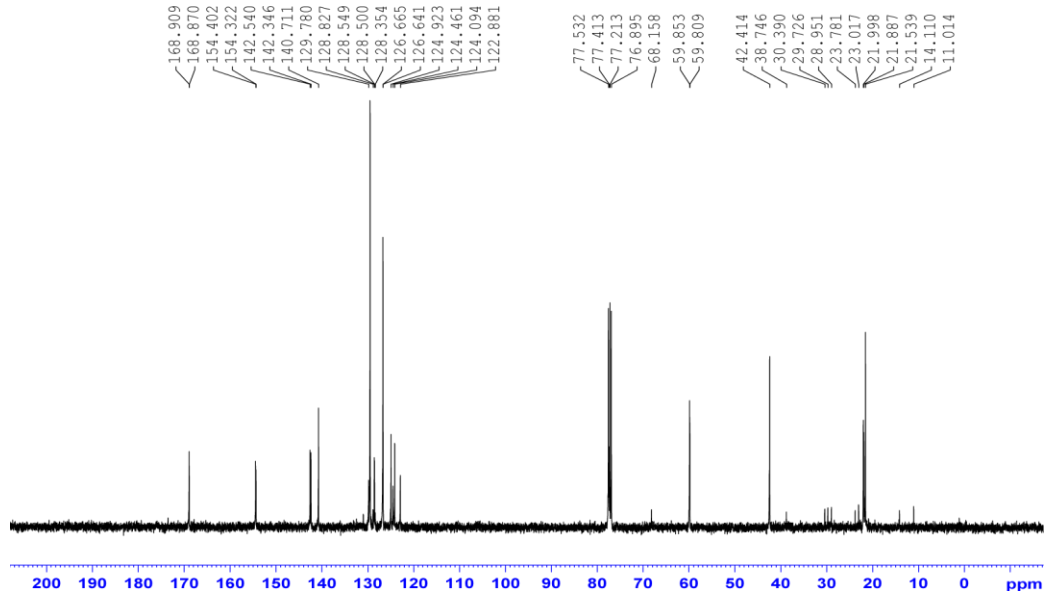
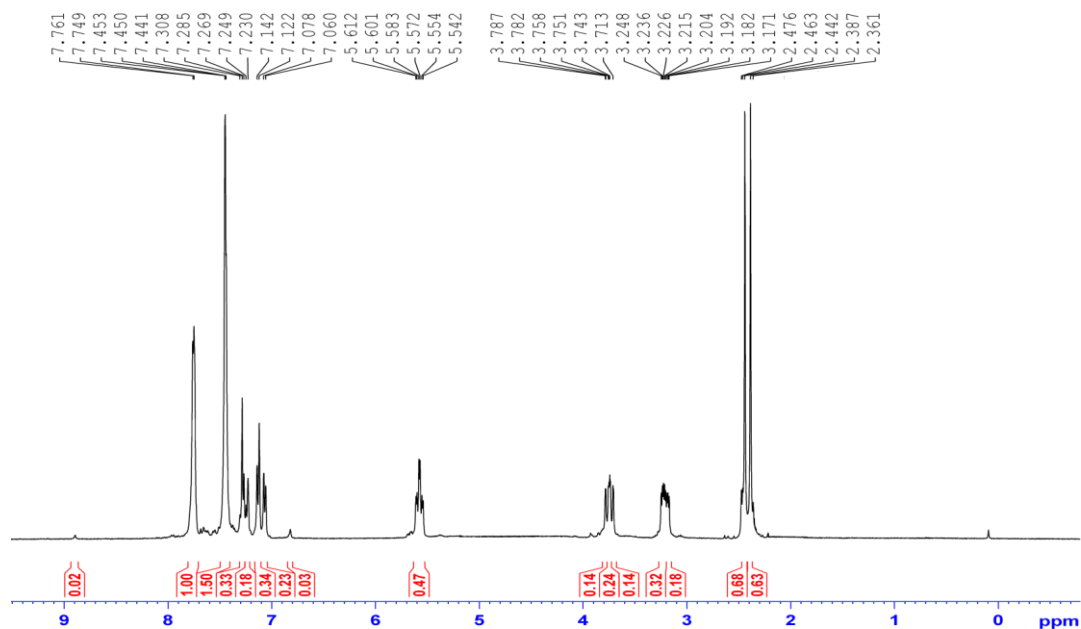
(2E,2'E)-3,3'-(1,3-phenylene)bis[1-(4-bromophenyl)prop-2-en-1-one] (3d):



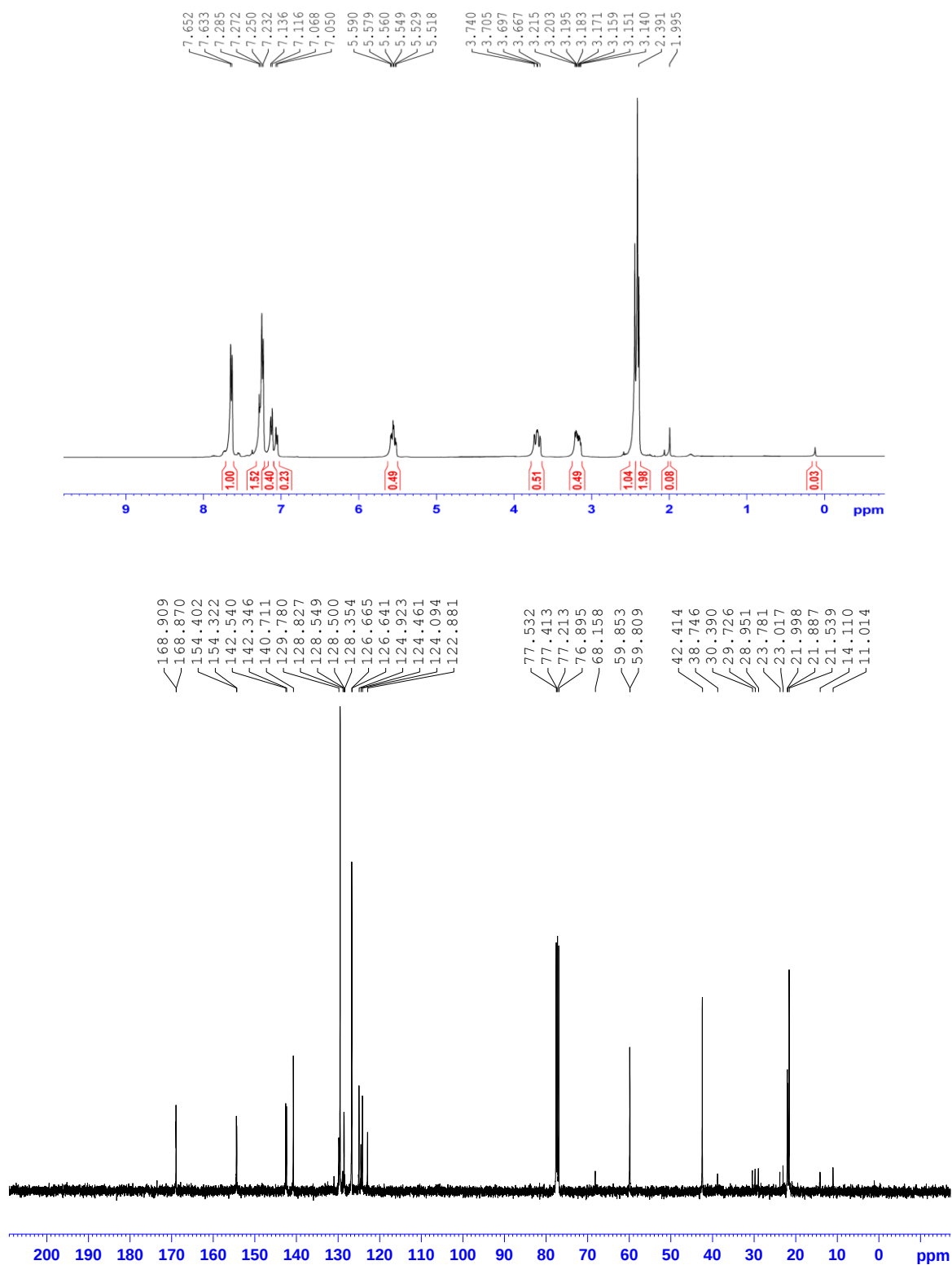
(2E,2'E)-3,3'-(1,3-phenylene)bis[1-(4-chlorophenyl)prop-2-en-1-one] (3e):



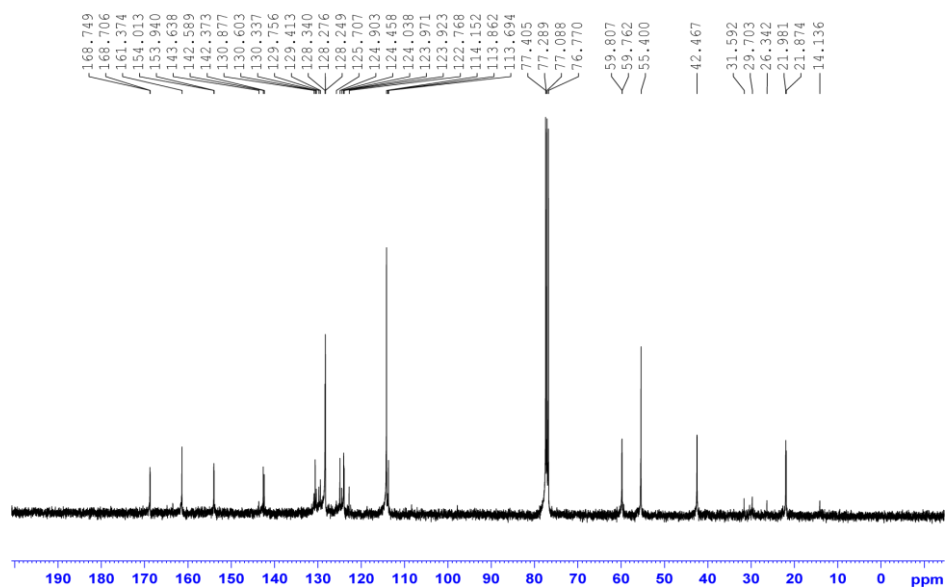
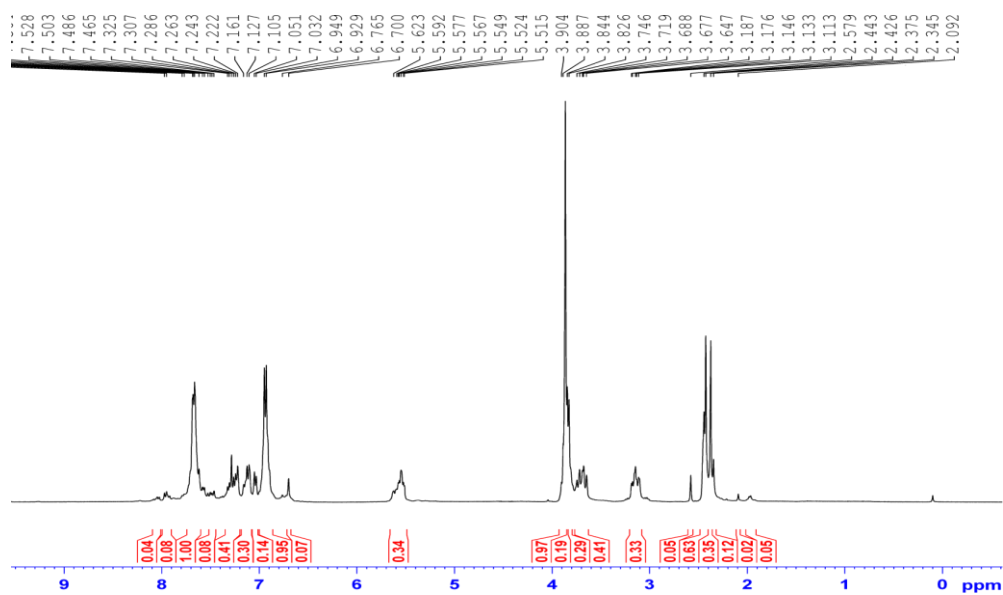
5,5'-(1,3-phenylene)bis(1-acetyl-3-phenyl-4,5-dihydro-1H-pyrazole) (5a):



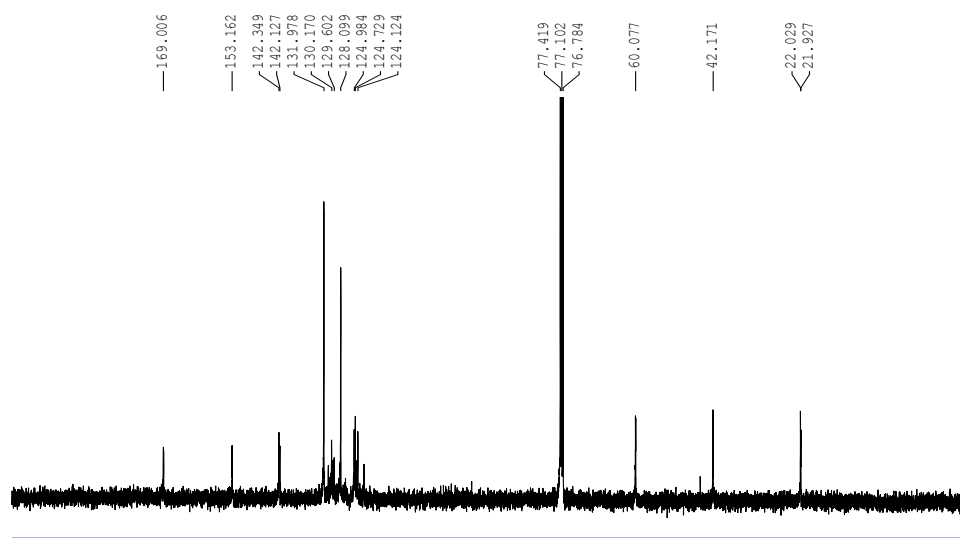
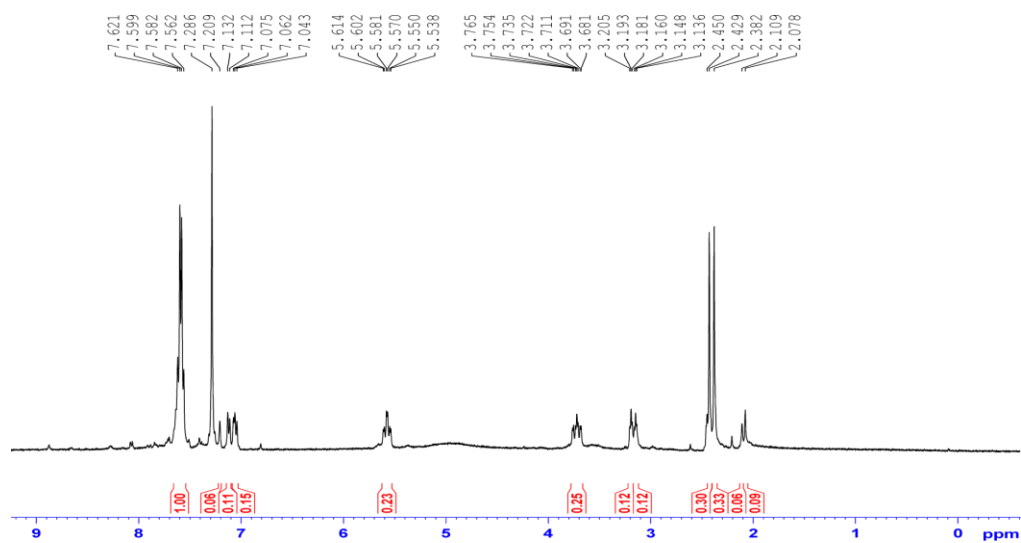
5,5'-(1,3-phenylene)bis[1-acetyl-3-(4-methylphenyl)-4,5-dihydro-1H-pyrazole] (5b):



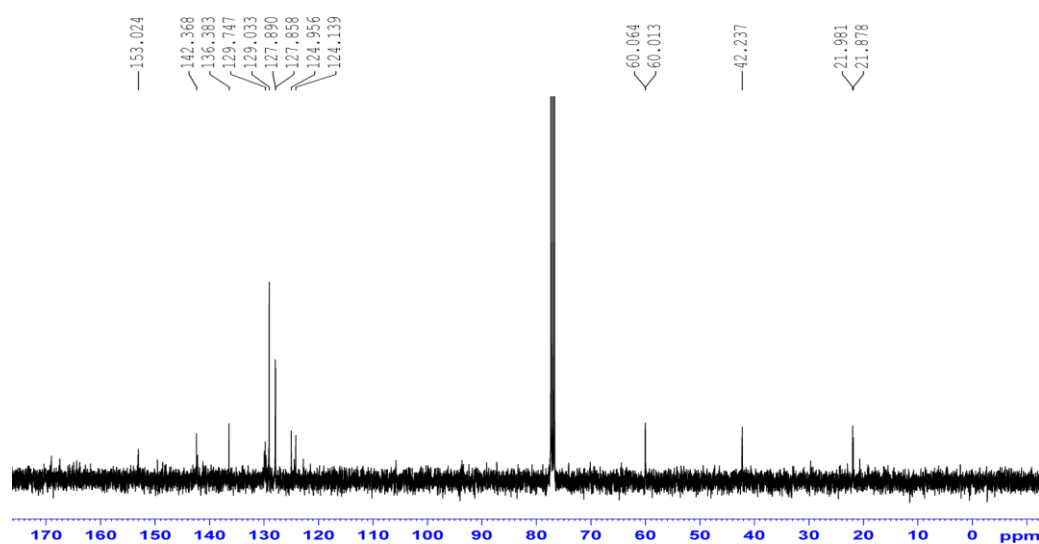
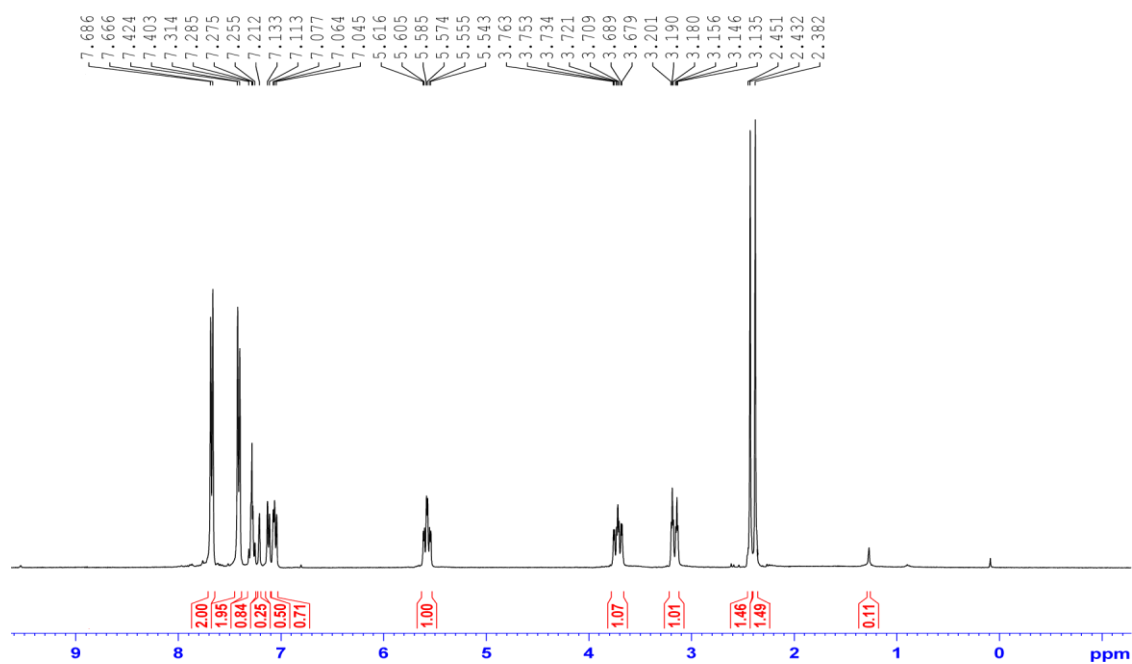
5,5'-(1,3-phenylene)bis[1-acetyl-3-(4-methoxyphenyl)-4,5-dihydro-1H-pyrazole] (5c):



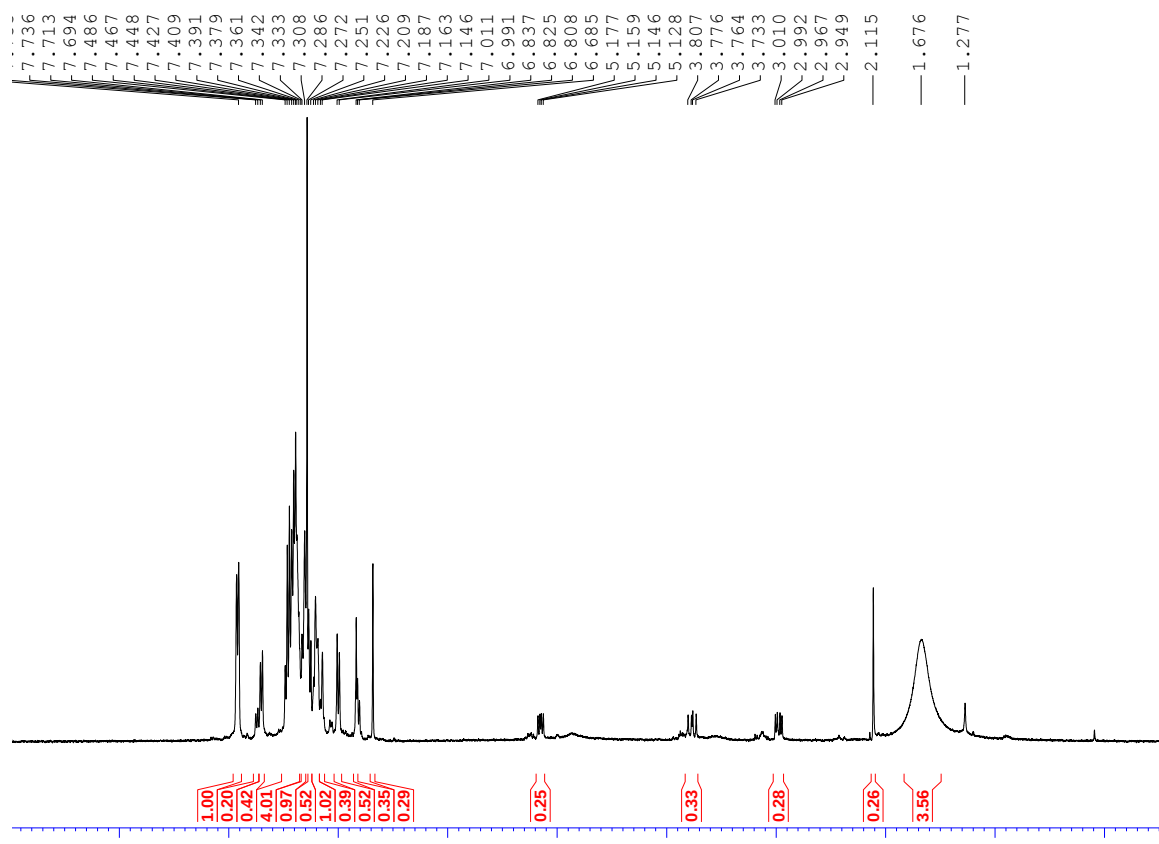
5,5'-(1,3-phenylene)bis[1-acetyl-3-(4-bromophenyl)-4,5-dihydro-1H-pyrazole] (5d):



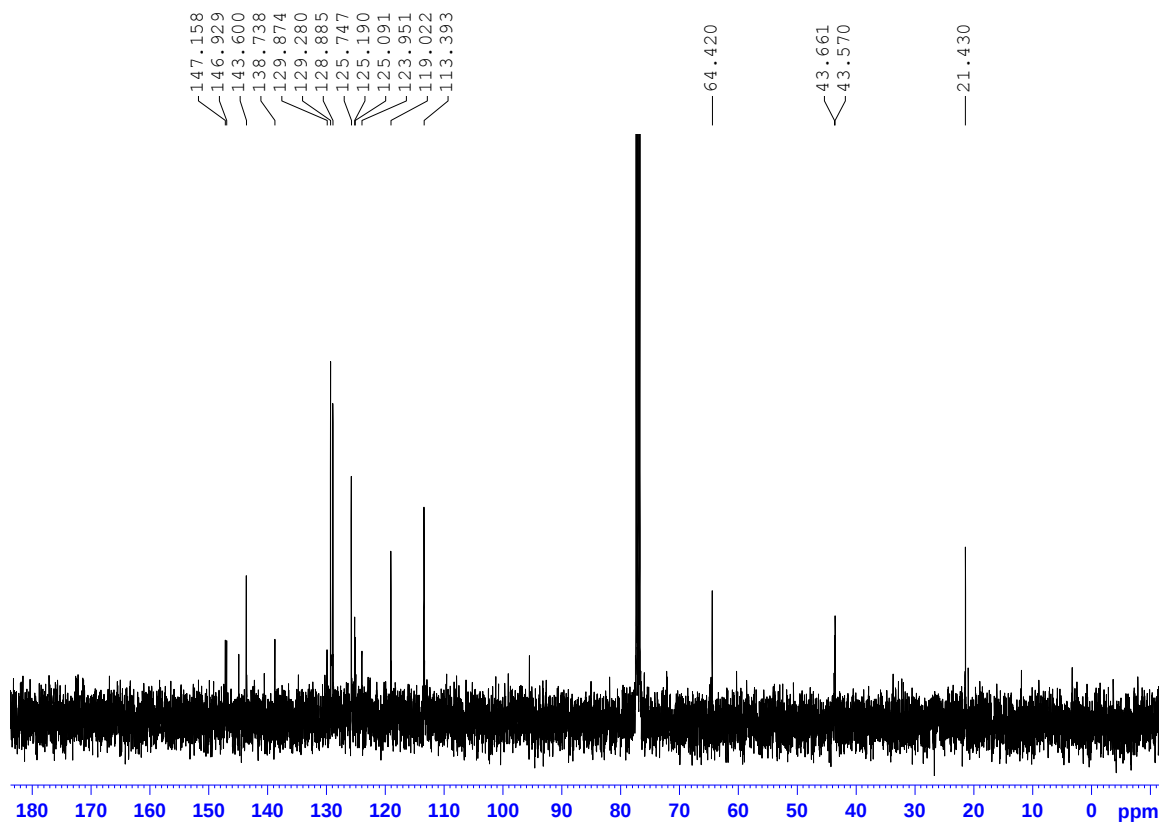
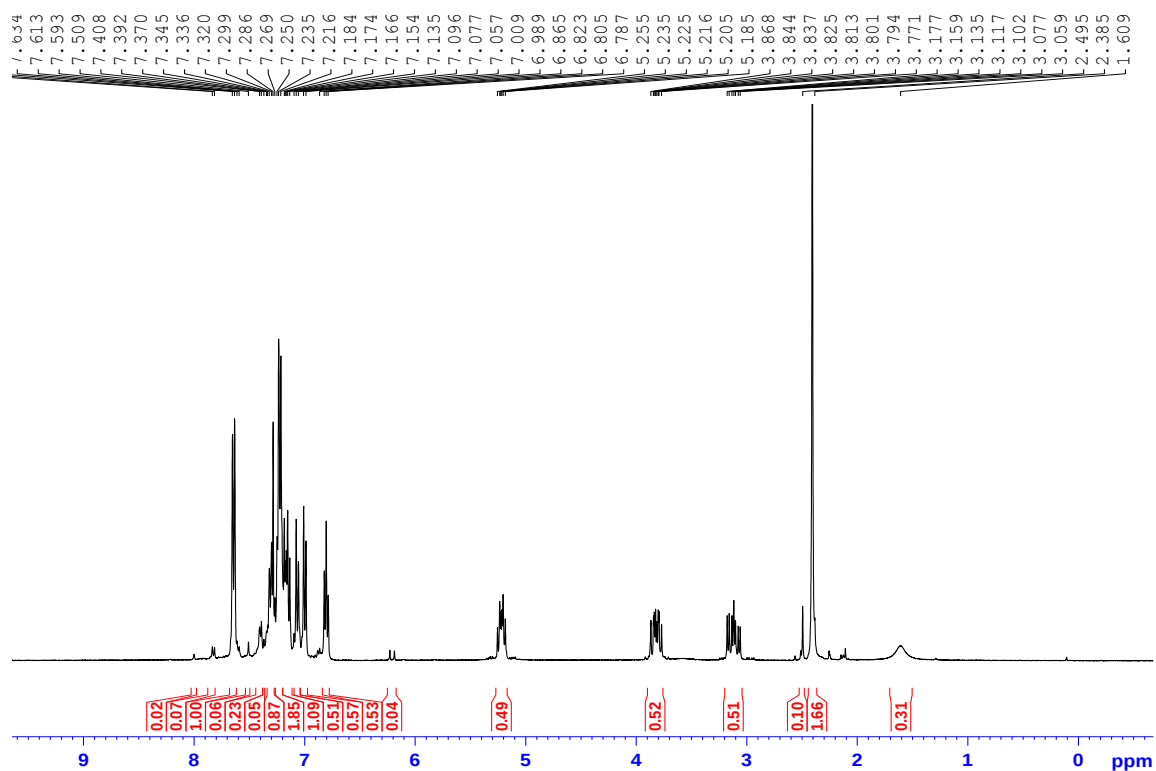
**5,5'-(1,3-phenylene)bis[1-acetyl-3-(4-chlorophenyl)-4,5-dihydro-1H-pyrazole]
(5e):**



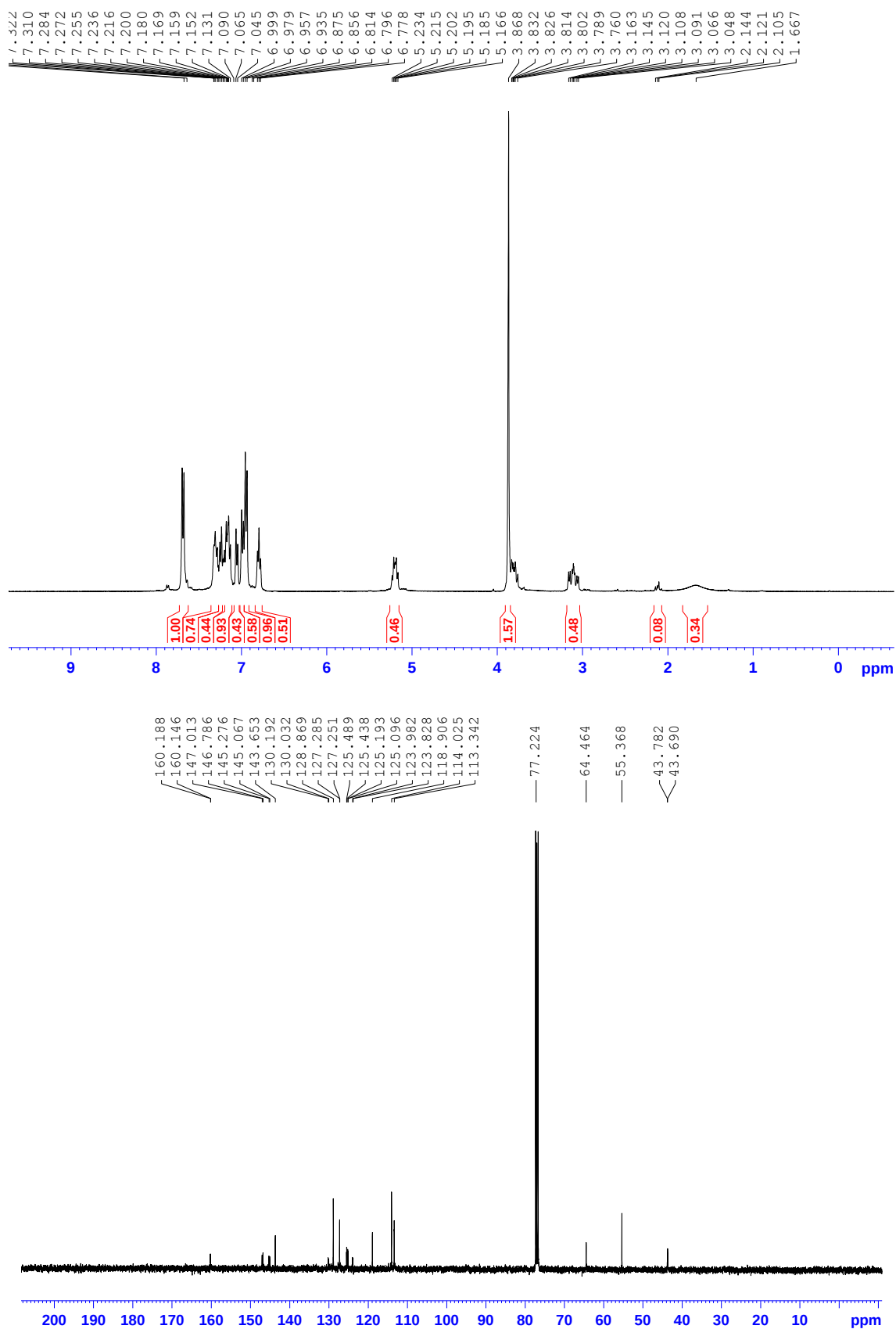
1,3-bis(1,3-diphenyl-4,5-dihydro-1H-pyrazol-5-yl)benzene (7a):



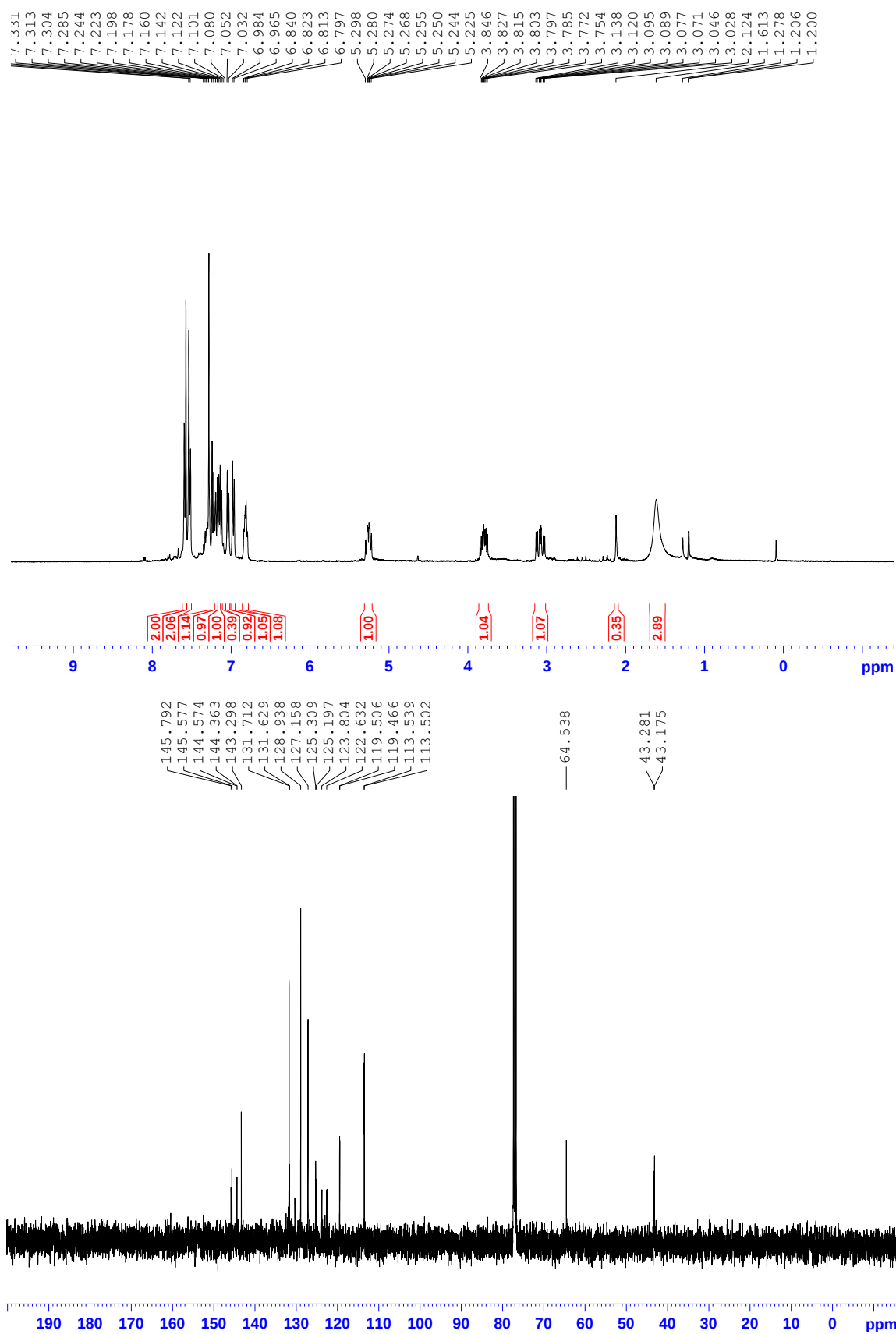
1,3-bis(1-phenyl-3-(p-tolyl)-4,5-dihydro-1H-pyrazol-5-yl)benzene (7b):



1,3-bis(3-(4-methoxyphenyl)-1-phenyl-4,5-dihydro-1H-pyrazol-5-yl)benzene (7c):



1,3-bis(3-(4-bromophenyl)-1-phenyl-4,5-dihydro-1H-pyrazol-5-yl)benzene (7d):



1,3-bis(3-(4-chlorophenyl)-1-phenyl-4,5-dihydro-1H-pyrazol-5-yl)benzene (7e):

