Electronic Supplementary Material (ESI) for Green Chemistry.

SUPPLEMENTARY SECTION-1

The Synthesis of New 8-Imino-1-one Acridine Derivatives Catalyzed by Calix[4]arene Monoacid Core

Piyali Sarkar[†] and Chhanda Mukhopadhyay[*†]

[†] Department of Chemistry, University of Calcutta, 92 APC Road, Kolkata-700009, India; Tel: +91 9433019610;

*E-mail: cmukhop@yahoo.co.in

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1. General methods: ^{1}H and ^{13}C spectra were obtained on Bruker 300 MHz instrument at 300 MHz and 75 MHz respectively. DEPTQ-135 experiments were performed on Bruker 300 MHz instrument at 75 MHz. Chemical shifts are reported in parts per million (ppm) downfield from an internal TMS (tetramethylsilane) reference. Coupling constants (*J*) are reported in hertz (Hz), and spin multiplicities are represented by the symbols s (singlet), br s (broad singlet), d (doublet), t (triplet), q (quartet) and m (multiplet). IR spectra were recorded on a Perkin Elmer Spectrophotometer RX / FT- IR system. Band positions are reported in reciprocal centimeters (cm^{-1}). The CHN analyses were carried out on a 2400 Series II CHNS Analyzer, Perkin Elmer USA. Melting points were determined on an electrical melting point apparatus with an open capillary. The progress of the reaction was checked by TLC using 300-400 mesh silica gel. All the available reagents were purchased from commercial sources and used without purification. All the solvents used during reactions were distilled for purity.

2. Synthesis of *p-tert*-butylcalix[4]arene:

p-tert-Butylcalix[4]arene was synthesized from the mixture of *p-tert*-butylphenol (2 g, 13.32 mmol), 37% formaldehyde solution (1.24 mL, 16.6 mmol of HCHO), and NaOH (240 mg, 0.6 mmol) according to our reported procedure.[6c]

3. Synthesis of 25, 26, 27-trihydroxy-28-(4-carboxy-1-butoxy)-*p-tert*-butylcalix[4]arene (C4V1):

p-tert-Butylcalix[4]arene (200mg, 0.3 mmol) was mixed with NaH (120 mg, 5 mmol) in a 25 ml round bottom flask, 10 ml of dry DMF was added to it. The mixture was allowed to stir for 30 mins at room temperature (25-30 ºC). 5-Bromovaleric acid (217.2 mg, 1.2 mmol) was diluted with dry DMF (2 ml). Then it was added drop wise (1 drop per 5 sec) maintaining the temperature at 20-25 ºC. After the complete addition the reaction mixture was stirred for 4 h. As the reaction progressed, the suspended particles changed into a form of viscous mass. The disappearance of starting p-tert-Butylcalix[4]arene was checked by TLC. After complete conversion the reaction mixture was placed in an ice bath and was quenched via acidification using 5% HCl solution. Then 20 ml of chilled water was added to it and we got the crude product by filtration. 202.2 mg (90%) pure product, color less solid was gained via column chromatography at 15% ethyl acetate in petroleum ether as eluent. mp. 298 ºC; IR (KBr, υ cm^{-1}): 3350, 2961, 2872, 1710, 1486, 1362, 1201, 1123. ^{1}H NMR (300 MHz, $CDCl_3$): δ 10.28-10.11 (m, 1H, -OH), 9.50 (s, 2H, -OH), 7.01-6.91 (m, 8H, Ar-H), 4.27-4.07 (m, 6H, $-CH_2$), 3.38-3.34 (m, 4H, $-CH_2$), 2.53(brs, 2H, $-CH_2$), 2.14 (brs, 2H, $-CH_2$), 2.14 (brs, 2H, $-CH_2$), 1.18-1.14 (m, 36H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 177.9, 149.2, 148.4, 148.2, 147.7, 143.6, 143.2, 133.4, 128.3, 128.0, 127.7, 127.6, 126.5, 125.9, 125.8, 125.7, 114.7, 53.4, 34.2, 34.0, 33.9, 33.5, 33.0, 32.2, 31.9, 31.5, 31.2, 29.7, 29.2, 22.7, 21.2; HRMS (ESI-TOF) m/z: $[M + Na]^+$ Calcd for $[C_{49}H_{64}O_6Na]$: 771.4595. Found 771.4593. Anal. calcd. for $C_{49}H_{64}O_6$; C: 78.57; H: 8.61. Found: C: 78.59; H: 8.60.[6b]

4. Synthesis of 25, 27-dihydroxy-26, 28-bis(4-carboxy-1-butoxy)-*p-tert*-butylcalix[4]arene (C4V2):

C4V2 was synthesized from *p-tert*-Butylcalix[4]arene with the modified (slight vigorous) procedure than the C4V1. Addition of higher amount (double equivalent) of 5-bromovaleric acid (434.4 mg, 2.4 mmol) at

a higher temperature i.e., 50 ºC produced the di-acid incorporated C4V2. 237 mg (93%) pure product, white solid was gained via column chromatography at 45% ethyl acetate in petroleum ether as eluent. IR (KBr, υ cm^{-1}): 3355, 2959, 2864, 1711, 1485, 1358, 1220, 1110. ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.95 (s, 2H, -OH), 6.95-6.85 (m, 8H, Ar-H), 4.40 (d, *J* = 12.3 Hz, 1H, -CH_2), 4.21 (d, *J* = 12.9 Hz, 3H, -CH_2), 4.03-4.01 (m, 2H, -CH_2), 3.88-3.83 (m, 2H, -CH_2), 3.31-3.27 (m, 4H, -CH_2), 2.48 (brs, 4H, -CH_2), 2.07 (brs, 4H, -CH_2), 1.86-1.83 (m, 4H, -CH_2), 1.15-1.05 (m, 36H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 179.4, 151.3, 148.9, 146.5, 142.6, 133.8, 132.9, 129.0, 128.2, 126.0, 125.4, 125.2, 76.1, 34.0, 33.9, 32.7, 32.6, 31.5, 31.2, 31.0, 30.5, 29.7, 29.4, 21.3; HRMS (ESI-TOF) m/z: $[M + Na]^+$ Calcd for $[C_{54}H_{72}O_8Na]$: 871.5119. Found 871.5121. Anal. calcd. for $C_{54}H_{72}O_8$; C: 76.38; H: 8.55. Found: C: 76.35; H: 8.53.

5. General procedure for the synthesis of 8-imino-1-one acridine derivatives (all entries of Scheme 3):

37.5 mg (0.05 mmol) **C4V1** was added in 2 ml water and stirred for 5 min. A mixture of enaminoketone (2 mmol) and aldehyde (1 mmol) was added to that solution and then it was again stirred at 100 ºC for 4-5 h. After that, the reaction mixture was filtered and the pure product was separated out by preparative TLC from the crude.

6. Spectral and Analytical Data of the products:

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-p-tolyl-8-p-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4a): Yellow solid (74%), mp. 165 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2955, 2927, 2868, 1638, 1599, 1578, 1511, 1367, 1220, 1014, 843; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.49 (d, J = 7.4 Hz, 2H, Ar-H), 7.34 (d, J = 6.6 Hz, 2H, Ar-H), 7.27 (d, J = 7.8 Hz, 2H, Ar-H), 7.12 (d, J = 7.2 Hz, 2H, Ar-H), 7.06 (d, J = 6.6 Hz, 2H, Ar-H), 6.46 (d, J = 7.2 Hz, 2H, Ar-H), 5.62 (s, 1H, Benzylic-CH), 2.48(s, 3H, -CH_3), 2.31 (s, 3H, -CH_3), 2.23-1.73 (m, 8H, -CH_2), 0.98 (s, 3H, -CH_3), 0.86 (s, 3H, -CH_3), 0.83 (s, 3H, -CH_3), 0.72 (s, 3H, -CH_3). ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 162.8, 150.8, 149.5, 145.7, 141.9, 139.0, 136.6, 131.3, 130.7, 130.4, 129.7, 129.1, 127.5, 119.3, 114.4, 112.5, 50.2, 41.7, 41.6, 40.6, 33.2, 32.2, 31.2, 29.8, 29.4, 26.5, 21.2, 20.7; HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $[C_{37}H_{40}ClN_2O]$: 563.2824. Found 563.2828. Anal. calcd. for $C_{37}H_{39}ClN_2O$; C: 78.91; H: 6.98; N: 4.97. Found: C: 78.95; H: 5.01; N: 4.95.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-m-tolyl-8-m-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4b): Yellow solid (73%), mp. 186 ºC ($CDCl_3$) ; IR (KBr, υ cm^{-1}): 2953, 2927, 1638, 1596, 1575, 1370, 1227, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.34-7.21 (m, 6H, Ar-H), 7.02 (t, J = 8.1 Hz, 1H, Ar-H), 6.93 (d, J = 6.3 Hz, 2H, Ar-H), 6.70 (d, J = 7.2 Hz, 2H, Ar-H), 6.27-6.21 (m, 2H, Ar-H), 5.49 (s, 1H, Benzylic-CH), 2.39 (s, 3H, -CH_3), 2.20 (s, 3H, -CH_3), 2.17-1.61 (m, 8H, -CH_2), 0.87 (s, 3H, -CH_3), 0.76 (s, 3H, -CH_3), 0.72 (s, 3H, -CH_3), 0.62 (s, 3H, -CH_3). ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.6, 162.6, 152.1, 150.6, 146.1, 142.0, 140.0, 139.2, 138.2, 130.5, 130.1, 129.8, 129.5, 128.3, 122.8, 120.0, 119.0, 116.3, 114.2, 112.4, 50.2, 41.7, 40.7, 33.3, 32.2, 31.3, 29.8, 29.4, 26.5, 21.4; HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $[C_{37}H_{40}BrN_2O]$: 607.2319. Found 607.2316. Anal. calcd. for $C_{37}H_{39}BrN_2O$; C: 73.14; H: 6.47; N: 4.61. Found: C: 73.11; H: 6.49; N: 4.59.

3,3,6,6-Tetramethyl-10-m-tolyl-9-p-tolyl-8-m-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4c): Yellow solid (66%), mp. 156 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2957, 2930, 2865, 1622, 1599, 1554, 1349, 1195, 1011; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.34-7.10 (m, 4H, Ar-H), 7.00-6.94 (m, 5H, Ar-H), 6.66 (d, J = 6.3 Hz, 1H, Ar-H), 6.29-6.23 (m, 2H, Ar-H), 5.53 (s, 1H, Benzylic-CH), 2.37(s, 3H, $-CH_3$), 2.17 (s, 6H, $-CH_3$), 2.14-1.61 (m, 8H, $-CH_2$), 0.86 (s, 3H, $-CH_3$), 0.73 (s, 6H, $-CH_3$), 0.62 (s, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 162.7, 152.2, 150.6, 143.8, 141.5, 139.4, 138.0, 134.4, 129.6, 128.2, 128.0, 122.7, 120.1, 116.4, 114.8, 112.9, 50.3, 41.6, 41.6, 40.8, 32.8, 32.2, 31.3, 29.8, 29.3, 26.7, 26.6, 21.3, 21.0; Anal. calcd. for $C_{38}H_{42}N_2O$; C: 84.09; H: 7.80; N: 5.16. Found: C: 84.13; H: 7.81; N: 5.18.

10-(4-Bromophenyl)-8-(4-bromophenylimino)-9-(4-chlorophenyl)-3,3,6,6-tetramethyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4d): Yellow solid (77%), mp. 220 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2944, 2915, 1601, 1534, 1513, 1349, 1198, 1004; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.59 (d, J = 6.9 Hz, 2H, Ar-H), 7.32 (d, J = 6.6 Hz, 2H, Ar-H), 7.23 (d, J = 7.2 Hz, 2H, Ar-H), 7.12 (d, J = 7.2 Hz, 2H, Ar-H), 7.04 (d, J = 7.2 Hz, 2H, Ar-H), 6.30 (d, J = 7.2 Hz, 2H, Ar-H), 5.44 (s, 1H, Benzylic-CH), 2.17-1.85 (m, 6H, $-CH_2$), 1.78-1.60 (m, 2H, $-CH_2$), 0.88 (s, 3H, $-CH_3$), 0.77 (s, 3H, $-CH_3$), 0.72 (s, 3H, $-CH_3$), 0.62 (s, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 163.4, 150.9, 149.9, 145.1, 141.9, 138.3, 133.2, 131.5, 131.4, 131.0, 129.5, 127.7, 123.2, 121.2, 115.0, 114.5, 113.1, 50.1, 41.8, 40.8, 33.2, 32.3, 31.4, 29.8, 29.4, 26.6; Anal. calcd. for $C_{35}H_{33}Br_2ClN_2O$; C: 60.67; H: 4.80; N: 4.04. Found: C: 60.69; H: 4.79; N: 4.02.

10-(4-Bromophenyl)-8-(4-bromophenylimino)-3,3,6,6-tetramethyl-9-p-tolyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4e): Yellow solid (69%), mp. 208 °C ($CDCl_3$); IR (KBr, υ cm^{-1}): 2956, 2925, 2867, 1642, 1618, 1479, 1369, 1220, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.69 (d, J = 8.1 Hz, 2H, Ar-H), 7.39-7.32 (m, 4H, Ar-H), 7.16 (d, J = 8.4 Hz, 2H, Ar-H), 7.07 (d, J = 7.2 Hz, 2H, Ar-H), 6.44 (d, J = 8.1 Hz, 2H, Ar-H), 5.58 (s, 1H, Benzylic-CH), 2.30 (s, 3H, $-CH_3$), 2.23-1.72 (m, 8H, $-CH_2$), 0.99 (s, 3H, $-CH_3$), 0.88 (s, 3H, $-CH_3$), 0.84 (s, 3H, $-CH_3$), 0.74 (s, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 163.4, 151.1, 149.7, 143.4, 141.6, 138.5, 134.7, 133.0, 131.4, 128.3, 127.8, 122.9, 121.3, 114.9, 114.7, 113.5, 50.1, 41.7, 40.8, 32.8, 32.2, 31.3, 29.8, 29.3, 26.7, 26.6, 21.0; Anal. calcd. for $C_{36}H_{36}Br_2N_2O$; C: 64.30; H: 5.40; N: 4.17. Found: C: 64.33; H: 5.38; N: 4.15.

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-m-tolyl-8-m-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4f): Yellow solid (74%), mp. 162-164 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2952, 2924, 2851, 1632, 1601, 1588, 1247, 1160, 1014; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.40-7.32 (m, 3H, Ar-H), 7.25-7.13 (m, 3H, Ar-H), 7.04 (t, J = 7.6 Hz, 1H, Ar-H), 6.95 (d, J = 6.6 Hz, 2H, Ar-H), 6.73 (d, J = 7.5 Hz, 1H, Ar-H), 6.28-6.23 (m, 2H, Ar-H), 5.50 (s, 1H, Benzylic-CH), 2.41 (s, 3H, $-CH_3$), 2.22 (s, 3H, $-CH_3$), 2.19-1.62 (m, 8H, $-CH_2$), 0.80 (s, 3H, $-CH_3$), 0.78 (s, 3H, $-CH_3$), 0.74 (s, 3H, $-CH_3$), 0.64 (s, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 162.7, 152.2, 150.6, 145.6, 141.9, 139.3, 138.3, 130.8, 129.8, 129.7, 128.4, 127.6, 122.9, 120.1, 116.4, 114.4, 112.6, 50.3, 41.8, 40.8, 33.2, 32.3, 31.3, 29.8, 29.5, 26.9, 26.6, 21.4; Anal. calcd. for $C_{37}H_{39}ClN_2O$; C: 78.91; H: 6.98; N: 4.97. Found: C: 78.95; H: 6.95; N: 4.99.

9-(4-Bromophenyl)-10-(4-methoxyphenyl)-8-(4-methoxyphenylimino)-3,3,6,6-tetramethyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4g): Yellow solid (65%), mp. 151-152 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2957, 2928, 2859, 1638, 1609, 1425, 1369, 1202, 1013; ^{1}H NMR (300 MHz,): δ 7.33-7.25

(m, 4H, Ar-H), 7.06-6.92 (m, 4H, Ar-H), 6.71 (d, J = 8.4 Hz, 2H, Ar-H), 6.39 (d, J = 8.4 Hz, 2H, Ar-H), 5.48 (s, 1H, Benzylic-CH), 3.81 (s, 3H, -OCH_3), 3.68 (s, 3H, -OCH_3), 2.20-1.68 (m, 8H, -CH_2), 0.87 (s, 3H, -CH_3), 0.77 (s, 3H, -CH_3), 0.72 (s, 3H, -CH_3), 0.61 (s, 3H, -CH_3);Anal. calcd. for $C_{37}H_{39}BrN_2O_3$; C: 69.48; H: 6.15; N: 4.38. Found: C: 69.45; H: 6.16; N: 4.40.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-p-tolyl-8-p-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4h): Yellow solid (73%), mp. 184 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2954, 2925, 2855, 1638, 1601, 1576, 1367, 1219, 1009; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.34-7.22 (m, 6H, Ar-H), 7.02-6.94 (m, 4H, Ar-H), 6.35 (d, J = 7.1 Hz, 2H, Ar-H), 5.49 (s, 1H, Benzylic-CH), 2.39 (s, 3H, -CH_3), 2.21 (s, 3H, -CH_3), 2.17-1.60 (m, 8H, -CH_2), 0.87 (s, 3H, -CH_3), 0.76 (s, 3H, -CH_3), 0.72 (s, 3H, -CH_3), 0.61 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 162.8, 150.8, 149.5, 146.2, 142.0, 139.1, 136.8, 131.9, 131.4, 130.6, 130.2, 129.2, 119.4, 119.1, 114.5, 112.6, 50.3, 41.8, 41.7, 40.7, 33.4, 32.3, 31.4, 29.9, 29.5, 26.9, 26.6, 21.3, 20.8; Anal. calcd. for $C_{37}H_{39}BrN_2O$; C: 73.14; H: 6.47; N: 4.61. Found: C: 73.17; H: 6.45; N: 4.60.

9-(4-Chlorophenyl)-10-(4-methoxyphenyl)-8-(4-methoxyphenylimino)-3,3,6,6-tetramethyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4i): Yellow solid (74%), mp. 146 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2929, 1654, 1610, 1501, 1404, 1196, 1026; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.23-6.82 (m, 9H, Ar-H), 6.58 (brs, 2H, Ar-H), 6.26 (brs, 1H, Ar-H), 5.35-5.01 (m, 1H, Benzylic-CH), 3.69 (s, 3H, -OCH_3), 3.55 (s, 3H, -OCH_3), 1.92-1.48 (m, 8H, -CH_2), 0.73-0.47 (m, 12H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 163.2, 159.6, 155.2, 151.1, 150.4, 145.7, 145.4, 144.8, 142.1, 132.0, 131.4, 130.8, 129.7, 129.2, 128.1, 127.6, 120.6, 114.9, 114.6, 114.2, 113.9, 112.6, 55.5, 55.4, 50.3, 50.1, 41.8, 40.7, 33.2, 32.3, 31.3, 29.9, 29.7, 26.7, 26.6; Anal. calcd. for $C_{37}H_{39}ClN_2O_3$; C: 74.67; H: 6.60; N: 4.71. Found: C: 74.64; H: 6.61; N: 4.68.

9,10-Bis-(4-chlorophenyl)-8-(4-chlorophenylimino)-3,3,6,6-tetramethyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4j): Yellow solid (77%), mp. 224 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2955, 2927, 2870, 1644, 1618, 1471, 1379, 1240, 1013; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.51 (d, J = 7.8 Hz, 2H, Ar-H), 7.39 (d, J = 7.2 Hz, 2H, Ar-H), 7.20-7.16 (m, 6H, Ar-H), 6.42 (d, J = 7.8 Hz, 2H, Ar-H), 5.51 (s, 1H, Benzylic-CH), 2.24-1.67 (m, 8H, -CH_2), 0.96 (s, 3H, -CH_3), 0.84 (s, 3H, -CH_3), 0.79 (s, 3H, -CH_3), 0.69 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 163.4, 150.5, 149.9, 145.2, 142.0, 137.8, 135.1, 131.0, 130.2, 129.5, 128.6, 127.7, 127.4, 120.8, 114.5, 113.1, 50.2, 41.8, 40.8, 33.2, 32.3, 3.4, 29.8, 29.4, 26.6; Anal. calcd. for $C_{35}H_{33}Cl_3N_2O$; C: 69.60; H: 5.51; N: 4.64. Found: C: 69.65; H: 5.53; N: 4.66.

3,3,6,6-Tetramethyl-10-(3-nitrophenyl)-8-(3-nitrophenylimino)-9-p-tolyl-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4k): Yellow solid (84%), mp. 236 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2959, 2925, 2845, 1642, 1601, 1573, 1369, 1213, 1008; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.43 (q, J = 7.5 Hz, J = 7.9 Hz, 1H, Ar-H), 8.17 (s, 1H, Ar-H), 7.85-7.79 (m, 2H, Ar-H), 7.68 (d, J = 6.9 Hz, 1H, Ar-H), 7.42-7.35 (m, 4H, Ar-H), 7.09 (d, J = 7.8 Hz, 2H, Ar-H), 6.89-6.87 (m, 1H, Ar-H), 5.55 (s, 1H, Benzylic-CH), 2.31 (s, 3H, -CH_3), 2.24-1.97 (m, 6H, -CH_2), 1.81-1.69 (m, 2H, -CH_2), 1.00 (s, 3H, -CH_3), 0.89 (s, 3H, -CH_3), 0.84 (s, 3H, -CH_3), 0.77 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 164.5, 153.1, 148.9, 148.8, 148.6, 142.9, 141.9, 140.7, 136.1, 135.2, 130.9, 129.4, 128.6, 127.8, 126.0, 125.0, 124.2, 117.1, 115.3, 114.4,

114.2, 50.2, 42.0, 41.0, 32.9, 32.5, 31.7, 29.7, 29.3, 26.9, 26.8, 21.0; Anal. calcd. for $C_{36}H_{36}N_4O_5$; C: 71.50; H: 6.00; N: 9.27. Found: C: 71.55; H: 6.01; N: 9.30.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-(3-nitrophenyl)-8-(3-nitrophenylimino)-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4l): Yellow solid (86%), mp. 254 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2955, 2924, 1637, 1597, 1573, 1358, 1226, 1013; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.35 (d, J = 8.1 Hz, 1H, Ar-H), 8.07 (s, 1H, Ar-H), 7.77-7.72 (m, 2H, Ar-H), 7.58 (d, J = 7.5 Hz, 1H, Ar-H), 7.34-7.26 (m, 6H, Ar-H), 6.76 (d, J = 7.8 Hz, 1H, Ar-H), 5.44 (s, 1H, Benzylic-CH), 2.21-1.90 (m, 6H, -CH_2), 1.73-1.60 (m, 2H, -CH_2), 0.91 (s, 3H, -CH_3), 0.81 (s, 3H, -CH_3), 0.74 (s, 3H, -CH_3), 0.68 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 164.4, 152.8, 149.0, 148.7, 145.1, 142.3, 140.5, 136.0, 131.0, 130.9, 129.9, 129.5, 126.0, 124.9, 124.3, 119.7, 117.3, 114.6, 114.1, 113.9, 50.1, 42.0, 41.0, 33.4, 32.5, 31.6, 29.7, 29.4, 26.7; Anal. calcd. for $C_{35}H_{33}BrN_4O_5$; C: 62.78; H: 4.97; N: 8.37. Found: C: 62.80; H: 4.99; N: 8.35.

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-(3-nitrophenyl)-8-(3-nitrophenylimino)-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4m): Yellow solid (86%), mp. 248 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2959, 2925, 2856, 1645, 1604, 1582, 1332, 1215, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.45 (d, J = 7.5 Hz, 1H, Ar-H), 8.16 (d, J = 1.5 Hz, 1H, Ar-H), 7.87-7.81 (m, 2H, Ar-H), 7.65 (d, J = 6.9 Hz, 1H, Ar-H), 7.43-7.37 (m, 4H, Ar-H), 7.28-7.25 (m, 2H, Ar-H), 6.84 (d, J = 7.2 Hz, 1H, Ar-H), 5.55 (s, 1H, Benzylic-CH), 2.30-1.97 (m, 5H, -CH_2), 1.82-1.68 (m, 3H, -CH_2), 1.00 (s, 3H, -CH_3), 0.90 (s, 3H, -CH_3), 0.84 (s, 3H, -CH_3), 0.77 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.5, 164.1, 152.5, 148.7, 148.4, 144.3, 141.9, 140.3, 135.7, 131.2, 130.8, 129.2, 127.8, 125.8, 124.6, 124.1, 117.1, 114.5, 113.8, 49.8, 41.8, 40.7, 33.0, 32.3, 31.4, 29.4, 29.1, 26.5; Anal. calcd. for $C_{35}H_{33}ClN_4O_5$; C: 67.25; H: 5.32; N: 8.96. Found: C: 67.29; H: 5.30; N: 9.00.

9-(4-Chlorophenyl)-2,2,5,5-tetramethyl-10-p-tolyl-8-p-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4n): Yellow solid (65%), mp. 162 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2931, 2863, 1622, 1601, 1565, 1377, 1220, 1011; ^{1}H NMR (300 MHz, $CDCl_3$): 7.19-6.90 (m, 12H, Ar-H), 5.84 (s, 1H, Benzylic-CH), 2.55 (brs, 2H, -CH_2), 2.25 (s, 6H, -CH_3), 1.73 (brs, 4H, -CH_2), 1.56 (brs, 2H, -CH_2), 1.21-1.02 (m, 12H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 200.9, 139.8, 136.5, 135.2, 130.1, 129.8, 129.5, 127.9, 127.6, 125.1, 39.4, 35.4, 34.8, 25.7, 25.5, 24.5, 20.9; Anal. calcd. for $C_{37}H_{39}ClN_2O$; C: 78.91; H: 6.98; N: 4.97. Found: C: 78.94; H: 5.01; N: 4.93.

9-(4-Chlorophenyl)-3,6-diphenyl-10-p-tolyl-8-p-tolylimino-3,4,5,6,7,8,9,10-octahydro-2H-acridin-1-one (4o): Yellow solid (62%), mp. 246 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2955, 2925, 2860, 1642, 1597, 1567, 1365, 1223, 1023; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.06 (brs, 1H, Ar-H), 7.45-6.93 (m, 20H, Ar-H), 6.54-6.38 (m, 1H, Ar-H), 5.80-5.74 (m, 1H, Benzylic-CH), 3.37-3.11 (m, 2H, Benzylic-CH), 2.78-2.28 (m, 14H, -CH_2 and -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.2, 143.2, 142.6, 131.5, 130.6, 129.8, 129.4, 129.0, 128.8, 128.3, 127.8, 127.0, 126.8, 119.7, 115.3, 114.9, 55.4, 39.6, 39.2, 35.9, 35.2, 21.2; Anal. calcd. for $C_{45}H_{39}ClN_2O$; C: 81.98; H: 5.96; N: 4.25. Found: C: 81.95; H: 5.95; N: 4.26.

(E)-9-(4-bromophenyl)-3,6-dimethyl-10-p-tolyl-8-(p-tolylimino)-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4p): Yellow solid (64%), mp. 175-176 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2930, 2852, 1625, 1599, 1545, 1344, 1263, 1190, 972; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.02 (d, J = 8.4 Hz, 1H, Ar-H), 7.45-7.03 (m, 10H, Ar-H), 6.50 (d, J = 8.1 Hz, 1H, Ar-H), 5.63 (d, J = 17.1 Hz, 1H, Benzylic-CH), 2.46 (s, 3H, -CH_3), 2.30 (s, 3H, -CH_3), 2.20-1.73 (m, 10H, -CH_2 and -CH), 0.90 (s, 3H, -CH_3), 0.89 (s, 3H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.0, 151.8, 149.8, 146.0, 143.9, 139.1, 137.0, 131.7, 131.5, 131.0, 130.4, 129.7, 129.5, 129.2, 128.8, 127.8, 127.7, 127.7, 122.8, 119.8, 119.5, 115.0, 114.4, 113.5, 45.6, 44.7, 36.7, 36.4, 36.1, 35.9, 33.2, 29.7, 29.2, 28.6, 21.2, 21.0, 20.8; Anal. calcd. for $C_{35}H_{35}BrN_2O$; C: 72.53; H: 6.09; N: 4.83. Found: C: 72.59; H: 6.08; N: 4.85.

(E)-3,6-dimethyl-9-propyl-10-p-tolyl-8-(p-tolylimino)-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4q): Yellow solid (72%), mp. 136 ºC ($CDCl_3$) ; IR (KBr, υ cm^{-1}): 2951, 2926, 1648, 1599, 1501, 1377, 1240, 1053; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.17 (d, J = 7.5 Hz, 2H, Ar-H), 7.06-6.95 (m, 4H, Ar-H), 6.51-6.48 (m, 2H, Ar-H), 4.48 (s, 1H, -CH), 2.34 (s, 3H, -CH_3), 2.28-2.26 (m, 1H, -CH_2 or -CH), 2.20 (s, 3H, -CH_3), 2.20-1.90 (m, 5H, -CH_2 or -CH), 1.83-1.69 (m, 2H, -CH_2 or -CH), 1.64-1.16 (m, 6H, -CH_2 or -CH), 0.90-0.77 (m, 9H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.8, 196.6, 196.3, 196.2, 164.4, 164.4, 163.7, 152.6, 152.4, 152.4, 152.2, 151.6, 149.8, 149.7, 144.2, 144.0, 142.9, 138.7, 137.0, 136.9, 136.8, 131.2, 130.1, 129.1, 119.8, 119.6, 116.1, 115.4, 115.3, 115.1, 114.7, 114.5, 45.4, 45.2, 44.6, 44.4, 38.4, 37.9, 37.3, 36.4, 36.2, 35.4, 35.2, 28.9, 28.7, 28.6, 28.5, 27.3, 27.0, 26.9, 26.8, 26.6, 26.4, 21.1, 21.0, 21.0, 20.7, 18.9, 18.6, 14.6; Anal. calcd. for $C_{32}H_{38}N_2O$; C: 82.36; H: 8.21; N: 6.00. Found: C: 82.41; H: 8.19; N: 6.02.

(E)-3,3,6,6-tetramethyl-9-propyl-10-p-tolyl-8-(p-tolylimino)-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4r): Yellow solid (83%), mp. 142 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2957, 2928, 2870, 1633, 1599, 1575, 1366, 1150, 971; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.28-7.26 (m, 2H, Ar-H), 7.08-7.00 (m, 4H, Ar-H), 6.58-6.56 (m, 2H, Ar-H), 4.53 (d, J = 4.5 Hz, 1H, -CH), 2.44 (s, 3H, -CH_3), 2.30 (s, 3H, -CH_3), 2.23 (s, 3H, -CH_2), 2.18 (s, 1H, -CH_2), 2.09-1.81 (m, 4H, -CH_2), 1.66-1.54 (m, 2H, -CH_2), 1.44-1.39 (m, 2H, -CH_2), 0.96-0.84 (m, 15H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.3, 163.7, 151.8, 149.9, 142.6, 138.7, 137.0, 131.2, 130.2, 129.4, 129.1, 119.6, 114.5, 112.2, 50.6, 41.7, 41.6, 40.9, 38.0, 32.0, 31.1, 30.2, 29.8, 26.9, 26.5, 26.4, 21.1, 20.7, 19.0, 14.6; Anal. calcd. for $C_{34}H_{42}N_2O$; C: 82.55; H: 8.56; N: 5.66. Found: C: 82.52; H: 8.58; N: 5.67.

(E)-8-(4-bromophenyl)-4-p-tolyl-7-(p-tolylimino)-2,3,5,6,7,8-hexahydrodicyclopenta[b,e]pyridin-1(4H)-one (4s): Yellow solid (61%), mp. 162-164 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2951, 2910, 1601, 1544, 1395, 1170, 1020; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.38-7.29 (m, 4H, Ar-H), 7.16-7.06 (m, 8H, Ar-H), 5.21 (s, 1H, Benzylic-CH), 2.86 (brs, 2H, -CH_2), 2.54 (brs, 4H, -CH_2), 2.48-2.45 (m, 1H, -CH_2), 2.39 (s, 6H, -CH_3), 2.27 (s, 1H, -CH_2); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.3, 166.2, 149.4, 136.8, 134.5, 131.0, 130.1, 129.8, 129.4, 128.7, 127.6, 121.8, 119.7, 116.3, 39.5, 34.8, 24.9, 23.9, 21.2; Anal. calcd. for $C_{31}H_{27}BrN_2O$; C: 71.13; H: 5.20; N: 5.35. Found: C: 71.08; H: 5.19; N: 5.33.

(E)-10-(4-bromophenyl)-8-(4-bromophenylimino)-9-propyl-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4t): Yellow solid (73%), mp. 192-194 °C ($CDCl_3$); IR (KBr, υ cm^{-1}): 2970, 2934, 2868, 1659, 1611,

1479, 1371, 1225, 1016; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.53 (d, J = 8.1 Hz, 2H, Ar-H), 7.26 (d, J = 8.1 Hz, 2H, Ar-H), 7.00 (d, J = 7.8 Hz, 2H, Ar-H), 6.48 (d, J = 8.1 Hz, 2H, Ar-H), 4.44 (s, 1H, -CH), 2.40-2.05 (m, 4H, $-CH_2$), 1.93-1.65 (m, 7H, $-CH_2$), 1.51-1.47 (m, 1H, $-CH_2$), 1.40-1.36 (m, 2H, $-CH_2$), 1.27-1.20 (m, 2H, $-CH_2$), 0.82 (t, J = 6.8 Hz, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.6, 164.7, 152.3, 151.3, 144.1, 138.8, 132.8, 131.5, 131.4, 122.9, 121.7, 115.8, 115.0, 114.0, 38.3, 37.0, 28.3, 28.0, 26.7, 21.6, 21.3, 18.6, 14.6; Anal. calcd. for $C_{28}H_{28}Br_2N_2O$; C: 59.17; H: 4.97; N: 4.93. Found: C: 59.20; H: 4.98; N: 4.92.

(E)-3,3,6,6-tetramethyl-10-(4-nitrophenyl)-8-(4-nitrophenylimino)-9-p-tolyl-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4u): Yellow solid (82%), mp. 162-164 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2921, 2841, 1640, 1601, 1585, 1274, 1137, 1016; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.44 (d, J = 8.7 Hz, 2H, Ar-H), 8.12 (d, J = 8.7 Hz, 2H, Ar-H), 7.48 (d, J = 9 Hz, 2H, Ar-H), 7.32 (d, J = 7.2 Hz, 2H, Ar-H), 7.07 (d, J = 7.5 Hz, 2H, Ar-H), 6.59 (d, J = 8.7 Hz, 2H, Ar-H), 5.50 (s, 1H, Benzylic-CH), 2.30 (s, 3H, $-CH_3$), 2.22-1.75 (m, 8H, $-CH_2$), 0.98 (s, 3H, $-CH_3$), 0.88 (s, 3H, $-CH_3$), 0.83 (s, 3H, $-CH_3$), 0.76 (s, 3H, $-CH_3$); (due to very low solubility ^{13}C could not be done); Anal. calcd. for $C_{36}H_{36}N_4O_5$; C: 71.50; H: 6.00; N: 9.27. Found: C: 71.55; H: 6.01; N: 9.30.

(E)-9-ethyl-3,3,6,6-tetramethyl-10-p-tolyl-8-(p-tolylimino)-3,4,5,6,7,8,9,10-octahydroacridin-1(2H)-one (4v): Yellow solid (81%), mp. 148 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2955, 2930, 2859, 1635, 1609, 1435, 1360, 1197, 1011; ^{1}H NMR (300 MHz,): δ 7.17 (d, J = 8.1 Hz, 2H, Ar-H), 6.97-6.91 (m, 4H, Ar-H), 6.47 (d, J = 8.1 Hz, 2H, Ar-H), 4.46 (s, 1H, -CH), 2.24 (s, 3H, $-CH_3$), 2.28-2.24 (m, 1H, $-CH_2$), 2.20 (s, 3H, $-CH_3$), 2.14-2.10 (m, 2H, $-CH_2$), 2.01-1.81 (m, 3H, $-CH_2$), 1.73-1.53 (m, 2H, $-CH_2$), 1.04-0.74 (m, 17H, $-CH_2$ and $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.2, 163.7, 151.9, 149.7, 142.8, 138.6, 136.8, 131.0, 130.1, 129.4, 129.2, 129.0, 119.4, 113.4. 111.2, 50.4, 41.5, 41.4, 40.8, 31.8, 31.0, 30.0, 29.7, 27.8, 27.1, 26.4, 26.2, 21.0, 20.6, 9.8; Anal. calcd. for $C_{33}H_{40}N_2O$; C: 82.46; H: 8.39; N: 5.83. Found: C: 82.50; H: 8.41; N: 5.82.

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3a): Off white solid (72%), mp. 276 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2971, 2933, 2856, 1640, 1580, 1485, 1360, 1221, 1156,1015; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.28 (brs, 4H, Ar-H), 7.14 (brs, 2H, Ar-H), 7.03 (brs, 2H, Ar-H), 5.16 (s, 1H, Benzylic-CH), 2.41 (s, 3H, $-CH_3$), 2.09-1.98 (m, 6H, $-CH_2$), 1.79-1.74 (m, 2H, $-CH_2$), 0.86 (s, 6H, $-CH_3$), 0.72 (s, 6H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 150.2, 144.8, 139.6, 136.1, 131.3, 130.7, 129.2, 128.0, 114.0, 50.1, 41.7, 32.4, 32.3, 29.6, 26.6, 21.2; Anal. calcd. for $C_{30}H_{32}ClNO_2$; C: 76.01; H: 6.80; N: 2.95. Found: C: 76.05; H: 6.82; N: 2.96.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-m-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3b): Off white solid (71%), mp. 238 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2960, 2929, 1639, 1571, 1488, 1357, 1222, 1155, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.37-7.24 (m, 6H, Ar-H), 6.94 (d, J = 6.0 Hz, 2H, Ar-H), 5.15 (s, 1H, Benzylic-CH), 2.42 (s, 3H, $-CH_3$), 2.15-1.98 (m, 6H, $-CH_2$), 1.79-1.73 (m, 2H, $-CH_2$), 0.87 (s, 6H, $-CH_3$), 0.73 (s, 6H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 150.0, 145.3, 138.6, 131.0, 130.2, 129.6, 119.6, 113.9, 50.1, 41.6, 32.4, 32.3, 29.6, 26.7, 21.4; Anal. calcd. for $C_{30}H_{32}BrNO_2$; C: 69.50; H: 6.22; N: 2.70. Found: C: 69.46; H: 6.21; N: 2.69.

3,3,6,6-Tetramethyl-10-m-tolyl-9-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3c): Off white solid (77%), mp. 234 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2962, 2925, 2868, 1642, 1567, 1489, 1361, 1217, 1164, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.34-7.22 (m, 4H, Ar-H), 6.98-6.92 (m, 4H, Ar-H), 5.15 (s, 1H, Benzylic-CH), 2.39 (s, 3H, -CH_3), 2.17 (s, 3H, -CH_3), 2.14-1.94 (m, 6H, -CH_2), 1.76-1.70 (m, 2H, -CH_2), 0.86 (s, 6H, -CH_3), 0.72 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 149.6, 143.4, 139.1, 135.2, 130.1, 129.6, 128.8, 127.8, 127.7, 114.7, 50.3, 41.8, 32.4, 32.3, 29.7, 26.9, 21.4, 21.0; Anal. calcd. for $C_{31}H_{35}NO_2$; C: 82.08; H: 7.78; N: 3.09. Found: C: 82.11; H: 7.75; N: 3.11.

10-(4-Bromophenyl)-9-(4-chlorophenyl)-3,3,6,6-tetramethyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3d): Off white solid (65%), mp. 294 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2962, 2933, 1644, 1568, 1516, 1358, 1214, 1109; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.67 (d, J = 8.4 Hz, 2H, Ar-H), 7.31 (d, J = 8.1 Hz, 2H, Ar-H), 7.17 (d, J = 8.1 Hz, 2H, Ar-H), 7.09 (d, J = 8.1 Hz, 2H, Ar-H), 5.18 (s, 1H, Benzylic-CH), 2.19-2.00 (m, 6H, -CH_2), 1.81-1.75 (m, 2H, -CH_2), 0.92 (s, 6H, -CH_3), 0.77 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 149.4, 144.5, 137.9, 133.5, 131.6, 131.2, 129.2, 128.2, 123.6, 114.4, 50.1, 41.8, 32.4, 29.7, 26.7; Anal. calcd. for $C_{29}H_{29}BrClNO_2$; C: 64.63; H: 5.42; N: 2.60. Found: C: 64.66; H: 5.45; N: 2.62.

10-(4-Bromophenyl)-3,3,6,6-tetramethyl-9-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3e): Off white solid (74%), mp. 250 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2954, 2926, 2868, 1639, 1578, 1488, 1362, 1223, 1154,1011; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.62 (d, J = 8.4 Hz, 2H, Ar-H), 7.21 (d, J = 8.1 Hz, 2H, Ar-H), 7.06 (d, J = 8.4 Hz, 2H, Ar-H), 6.97 (d, J = 7.5 Hz, 2H, Ar-H), 5.14 (s, 1H, Benzylic-CH), 2.18 (s, 3H, -CH_3), 2.15-1.95 (m, 6H, -CH_2), 1.76-1.70 (m, 2H, -CH_2), 0.88 (s, 6H, -CH_3), 0.74 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.5, 148.7, 142.7, 137.9, 135.1, 133.1, 131.0, 128.5, 127.4, 123.1, 114.7, 49.9, 41.5, 32.2, 31.9, 29.4, 26.6, 20.8; Anal. calcd. for $C_{30}H_{32}BrNO_2$; C: 69.50; H: 6.22; N: 2.70. Found: C: 69.53; H: 6.21; N: 2.71.

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-m-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3f): Off white solid (73%), mp. 266 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2962, 2931, 2869, 1658, 1571, 1510, 1355, 1220, 1133, 989; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.42-7.34 (m, 4H, Ar-H), 7.18 (d, J = 7.2 Hz, 2H, Ar-H), 7.00 (d, J = 6.6 Hz, 2H, Ar-H), 5.22 (s, 1H, Benzylic-CH), 2.47 (s, 3H, -CH_3), 2.20-2.04 (m, 6H, -CH_2), 1.84-1.77 (m, 2H, -CH_2), 0.92 (s, 6H, -CH_3), 0.78 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.8, 150.1, 114.9, 138.7, 131.4, 130.3, 129.7, 129.3, 128.1, 126.0, 114.1, 50.2, 41.7, 32.4, 32.4, 32.3, 29.7, 26.7, 21.4; Anal. calcd. for $C_{30}H_{32}ClNO_2$; C: 76.01; H: 6.80; N: 2.95. Found: C: 76.06; H: 6.81; N: 2.96.

9-(4-Bromophenyl)-10-(4-methoxyphenyl)-3,3,6,6-tetramethyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3g): Off white solid (77%), mp. 198 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2875, 1641, 1565, 1510, 1359, 1233, 1122, 1014; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.38-7.27 (m, 4H, Ar-H), 7.10 (d, J = 8.7 Hz, 2H, Ar-H), 7.02 (d, J = 6.9 Hz, 2H, Ar-H), 5.19 (s, 1H, Benzylic-CH), 3.88 (s, 3H, -OCH_3), 2.20-2.03 (m, 6H, -CH_2), 1.86-1.81 (m, 2H, -CH_2), 0.92 (s, 6H, -CH_3), 0.78 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 200.4, 164.5, 155.1, 150.0, 135.9, 135.6, 134.3, 124.2, 119.9, 119.6, 118.6, 60.2, 54.7, 46.3,

37.1, 36.69, 34.3, 31.3; Anal. calcd. for $C_{30}H_{32}BrNO_3$; C: 67.41; H: 6.03; N: 2.62. Found: C: 67.44; H: 6.01; N: 2.61.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3h): Off white solid (72%), mp. 244 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2960, 2930, 2872, 1640, 1574, 1511, 1361, 1223, 1141; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.36-7.31 (m, 6H, Ar-H), 7.09 (d, J = 7.2 Hz, 2H, Ar-H), 5.23 (s, 1H, Benzylic-CH), 2.49 (s, 3H, -CH_3), 2.23-2.05 (m, 6H, -CH_2), 1.87-1.81 (m, 2H, -CH_2), 0.95 (s, 6H, -CH_3), 0.80 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.6, 150.1, 145.3, 139.5, 136.1, 131.0, 129.6, 119.6, 114.0, 50.1, 41.7, 32.4, 32.3, 29.6, 26.6, 21.2; Anal. calcd. for $C_{30}H_{32}BrNO_2$; C: 69.50; H: 6.22; N: 2.70. Found: C: 69.47; H: 6.19; N: 2.71.

9-(4-Chlorophenyl)-10-(4-methoxyphenyl)-3,3,6,6-tetramethyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3i): Off white solid (73%), mp. 222 ºC (EtOAc); IR (KBr, υ cm^{-1}): 2960, 2869, 1638, 1572, 1512, 1360, 1250, 1221, 1143; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.29 (d, J = 8.1 Hz, 2H, Ar-H), 7.13 (d, J = 8.4 Hz, 2H, Ar-H), 7.05 (d, J = 7.8 Hz, 2H, Ar-H), 6.97 (d, J = 7.8 Hz, 2H, Ar-H), 5.16 (s, 1H, Benzylic-CH), 3.85 (s, 3H, -OCH_3), 2.10-1.98 (m, 6H, -CH_2), 1.81-1.75 (m, 2H, -CH_2), 0.88 (s, 6H, -CH_3), 0.73 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.7, 159.8, 150.4, 144.8, 131.4, 131.4, 129.2, 128.1, 114.2, 55.6, 50.1, 41.8, 32.4, 32.3, 29.7, 26.7; Anal. calcd. for $C_{30}H_{32}ClNO_3$; C: 73.53; H: 6.58; N: 2.86. Found: C: 73.57; H: 6.56; N: 2.84.

9,10-Bis-(4-chlorophenyl)-3,3,6,6-tetramethyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3j): Off white solid (66%), mp. 274 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2870, 1642, 1578, 1523, 1365, 1250, 1173, 1013; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.49-7.47 (m, 2H, Ar-H), 7.27 (d, J = 5.1 Hz, 2H, Ar-H), 7.19-7.13 (m, 4H, Ar-H), 5.15 (s, 1H, Benzylic-CH), 2.15-1.96 (m, 6H, -CH_2), 1.77-1.71 (m, 2H, -CH_2), 0.88 (s, 6H, -CH_3), 0.74 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.6, 149.4, 144.5, 137.4, 135.6, 131.6, 130.9, 130.4, 129.2, 128.2, 114.5, 50.1, 41.8, 32.4, 29.7, 26.8; Anal. calcd. for $C_{29}H_{29}Cl_2NO_2$; C: 70.44; H: 5.91; N: 2.83. Found: C: 70.39; H: 5.89; N: 2.85.

3,3,6,6-Tetramethyl-10-(3-nitrophenyl)-9-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3k): Yellowish solid (61%), mp. 276 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2964, 2936, 2876, 1643, 1363, 1234, 1137, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.35 (d, J = 7.5 Hz, 1H, Ar-H), 8.07 (s, 1H, Ar-H), 7.76 (t, J = 8.0 Hz, 1H, Ar-H), 7.60 (d, J = 6.9 Hz, 1H, Ar-H), 7.22 (d, J = 7.8 Hz, 2H, Ar-H), 6.99 (d, J = 7.5 Hz, 2H, Ar-H), 5.16 (s, 1H, Benzylic-CH), 2.18 (s, 3H, -CH_3), 2.11-1.97 (m, 6H, -CH_2), 1.71-1.66 (m, 2H, -CH_2), 0.88 (s, 6H, -CH_3), 0.75 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.6, 149.0, 148.4, 142.7, 140.4, 136.1, 135.6, 131.2, 129.0, 127.7, 124.8, 124.5, 115.4, 50.1, 42.0, 32.6, 32.2, 29.7, 27.0, 21.1; Anal. calcd. for $C_{30}H_{32}N_2O_4$; C: 74.36; H: 6.66; N: 5.78. Found: C: 74.34; H: 6.65; N: 5.76.

9-(4-Bromophenyl)-3,3,6,6-tetramethyl-10-(3-nitro-phenyl)-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3l): Yellowish solid (60%), mp. 258 ºC (EtOAc); IR (KBr, υ cm^{-1}): 2968, 2930, 1643, 1565, 1522, 1372, 1241, 1146, 1019; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.46 (d, J = 7.8 Hz, 1H, Ar-H), 8.14 (s, 1H, Ar-H), 7.86 (d, J = 7.8 Hz, 1H, Ar-H), 7.64 (d, J = 7.2 Hz, 1H, Ar-H), 7.40 (d, J = 8.4 Hz, 2H, Ar-H), 7.31

(d, J = 8.4 Hz, 2H, Ar-H), 5.24 (s, 1H, Benzylic-CH), 2.21-2.04 (m, 5H, -CH_2), 1.80-1.72 (m, 3H, -CH_2), 0.98 (s, 6H, -CH_3), 0.84 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.5, 149.1, 148.5, 144.7, 140.2, 135.9, 131.3, 129.7, 124.8, 124.6, 120.0, 115.0, 50.0, 42.1, 32.6, 29.6, 26.9; Anal. calcd. for $C_{29}H_{29}BrN_2O_4$; C: 63.39; H: 5.32; N: 5.10. Found: C: 63.43; H: 5.31; N: 5.11.

9-(4-Chlorophenyl)-3,3,6,6-tetramethyl-10-(3-nitrophenyl)-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3m): Yellowish solid (62%), mp. 280 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2957, 2926, 1639, 1564, 1517, 1364, 1241, 1145, 1011; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.45 (d, J = 8.1 Hz, 1H, Ar-H), 8.14 (s, 1H, Ar-H), 7.84 (t, J = 8.0 Hz, 1H, Ar-H), 7.66 (d, J = 7.2 Hz, 1H, Ar-H), 7.36 (d, J = 8.4 Hz, 2H, Ar-H), 7.24-7.21 (m, 2H, Ar-H), 5.24 (s, 1H, Benzylic-CH), 2.25-2.05 (m, 6H, -CH_2), 1.83-1.74 (m, 2H, -CH_2), 0.97 (s, 6H, -CH_3), 0.83 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.5, 149.0, 148.5, 144.2, 140.1, 135.8, 131.7, 131.2, 129.2, 128.2, 124.7, 124.5, 114.9, 50.0, 42.0, 32.5, 32.4, 29.6, 26.8; Anal. calcd. for $C_{29}H_{29}ClN_2O_4$; C: 68.97; H: 5.79; N: 5.55. Found: C: 68.94; H: 5.77; N: 5.57.

9-(4-Chlorophenyl)-2,2,5,5-tetramethyl-10-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3n): White solid (83%), mp. 256 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2962, 2931, 1643, 1580, 1515, 1348, 1220, 1119, 997; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.13 (d, J = 7.2 Hz, 4H, Ar-H), 6.96 (d, J = 7.5 Hz, 4H, Ar-H), 5.01 (s, 1H, Benzylic-CH), 2.24 (s, 3H, -CH_3), 2.06-2.00 (m, 2H, -CH_2), 1.83-1.77 (m, 2H, -CH_2), 1.45 (brs, 4H, -CH_2), 0.84 (s, 6H, -CH_3), 0.74 (s, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 200.7, 149.8, 145.6, 139.4, 135.8, 131.0, 130.7, 130.1, 129.5, 129.0, 128.7, 127.9, 113.0, 39.3, 34.5, 32.8, 24.7, 23.7, 21.0; Anal. calcd. for $C_{30}H_{32}ClNO_2$; C: 76.01; H: 6.80; N: 2.95. Found: C: 75.98; H: 6.79; N: 2.94.

9-(4-Chlorophenyl)-3,6-diphenyl-10-p-tolyl-3,4,6,7,9,10-hexahydro-2H,5H-acridine-1,8-dione (3o): Off white solid (81%), mp. 262 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2954, 2934, 1626, 1576, 1512, 1358, 1233, 1134, 1014; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.49 (d, J = 8.4 Hz, 1H, Ar-H), 7.39-7.27 (m, 12H, Ar-H), 7.15-7.08 (m, 5H, Ar-H), 5.48-5.43 (m, 1H, Benzylic-CH), 3.37-3.18 (m, 2H, Benzylic-CH), 2.66-2.35 (m, 11H, -CH_2 and –CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.1, 151.3, 151.1, 150.7, 145.0, 144.6, 142.5, 142.4, 139.8, 135.7, 135.6, 131.8, 131.6, 130.9, 130.7, 129.3, 129.2, 128.7, 128.6, 128.4, 128.2, 127.0, 126.7, 115.9, 114.8, 43.8, 43.1, 39.5, 39.2, 35.8, 35.1, 32.3, 31.8, 21.2; Anal. calcd. for $C_{38}H_{32}ClNO_2$; C: 80.05; H: 5.66; N: 2.46. Found: C: 80.08; H: 5.67; N: 2.45.

9-(4-bromophenyl)-3,6-dimethyl-10-p-tolyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3p): Off white solid (74%), mp. 248 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2967, 2930, 2856, 1644, 1577, 1485, 1351, 1219, 1156, 993; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.28-7.20 (m, 4H, Ar-H), 7.12-7.09 (m, 4H, Ar-H), 5.24-5.14 (m, 1H, Benzylic-CH), 2.39 (s, 3H, -CH_3), 2.33-2.07 (m, 5H, -CH_2 or -CH), 1.92-1.69 (m, 5H, -CH_2 or -CH), 0.83-0.78 (m, 6H, -CH_3); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.0, 195.8, 195.7, 151.8, 151.6, 151.0, 150.7, 145.0, 144.9, 139.6, 135.9, 131.3, 130.5, 129.3, 129.1, 129.0, 128.0, 127.9, 115.3, 115.0, 114.5, 44.9, 44.5, 44.3, 36.3, 35.6, 35.3, 32.6, 32.1, 31.5, 29.0, 28.6, 28.4, 21.2, 20.8, 20.6, 20.3; Anal. calcd. for $C_{28}H_{28}BrNO_2$; C: 68.57; H: 5.75; N: 2.86. Found: C: 68.61; H: 5.74; N: 2.87.

3,6-dimethyl-9-propyl-10-p-tolyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3q): Off white solid (65%), mp. 185-186 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2929, 1633, 1574, 1358, 1232, 1159, 1010; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.29 (d, J = 7.2 Hz, 2H, Ar-H), 7.06 (brs, 2H, Ar-H), 4.23 (s, 1H, -CH), 2.45 (s, 3H, $-CH_3$), 2.45-2.40 (m, 2H, $-CH_2$ or -CH), 2.29-1.95 (m, 7H, $-CH_2$ or -CH), 1.89-1.69 (m, 1H, $-CH_2$ or -CH), 1.41-1.24 (m, 4H, $-CH_2$), 0.94 (s, 6H, $-CH_3$), 0.87-0.84 (m, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.6, 196.3, 196.2, 152.6, 152.3, 151.4, 139.2, 136.3, 130.3, 129.1, 115.4, 114.8, 114.5, 114.1, 45.3, 44.6, 44.4, 38.6, 37.9, 37.4, 36.4, 35.5, 35.1, 28.9, 28.6, 28.5, 26.4, 26.1, 25.6, 21.2, 21.0, 20.5, 20.4, 18.6, 18.3, 14.4; Anal. calcd. for $C_{25}H_{31}NO_2$; C: 79.54; H: 8.28; N: 3.71. Found: C: 79.50; H: 8.30; N: 3.70.

3,3,6,6-tetramethyl-9-propyl-10-p-tolyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3r): Off white solid (68%), mp. 192 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2964, 2930, 2862, 1655, 1567, 1476, 1370, 1223, 1144, 1011; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.27 (d, J = 7.5 Hz, 2H, Ar-H), 7.05 (d, J = 5.7 Hz, 2H, Ar-H), 4.19 (s, 1H, -CH), 2.43-2.36 (m, 4H, $-CH_3$ or $-CH_2$), 2.17 (s, 3H, $-CH_3$ or $-CH_2$), 2.01 (d, J = 17.4 Hz, 2H, $-CH_2$), 1.73 (d, J = 17.4 Hz, 2H, $-CH_2$), 1.41-1.39 (m, 2H, $-CH_2$), 1.27 (brs, 2H, $-CH_2$), 0.92 (s, 12H, $-CH_3$), 0.84 (t, J = 6.8 Hz, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.4, 151.3, 139.2, 136.3, 129.6, 123.9, 113.8, 50.4, 41.6, 32.1, 29.9, 28.2, 26.5, 18.7, 14.4; Anal. calcd. for $C_{27}H_{35}NO_2$; C: 79.96; H: 8.70; N: 3.45. Found: C: 79.98; H: 8.72; N: 3.46.

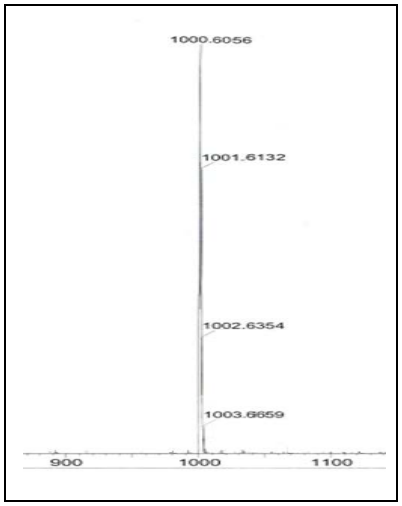
8-(4-bromophenyl)-4-p-tolyl-2,3,5,6-tetrahydrodicyclopenta[b,e]pyridine-1,7(4H,8H)-dione (3s): Off white solid (61%), mp. 194 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2966, 1655, 1538, 1495, 1304, 1214, 1109; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.35 (brs, 4H, Ar-H), 7.24 (brs, 4H, Ar-H), 4.80 (s, 1H, Benzylic-CH), 2.45 (brs, 5H, $-CH_2$), 2.36 (brs, 6H, $-CH_3$ or $-CH_2$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 201.8, 166.2, 142.2, 140.0, 133.9, 131.1, 130.6, 129.7, 127.9, 127.5, 120.2, 120.1, 34.1, 33.9, 24.7, 21.1; Anal. calcd. for $C_{24}H_{20}BrNO_2$; C: 66.37; H: 4.64; N: 3.22. Found: C: 66.41; H: 4.65; N: 3.21.

10-(4-bromophenyl)-9-propyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3t): Off white solid (67%), mp. 194 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2961, 2879, 1636, 1581, 1480, 1357, 1224, 1136, 1003; ^{1}H NMR (300 MHz, $CDCl_3$): δ 7.64 (d, J = 8.4 Hz, 2H, Ar-H), 7.09 (d, J = 8.4 Hz, 2H, Ar-H), 4.25 (d, J = 4.2 Hz, 1H, -CH), 2.56-2.41 (m, 3H, $-CH_2$), 2.29-1.99 (m, 9H, $-CH_2$), 1.42-1.18 (m, 4H, $-CH_2$), 0.86 (t, J = 6.4 Hz, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.5, 151.9, 133.0, 132.3, 131.2, 125.2, 115.4, 110.1, 38.5, 36.8, 28.2, 25.7, 21.2, 18.3, 14.3; Anal. calcd. for $C_{22}H_{24}BrNO_2$; C: 63.77; H: 5.84; N: 3.38. Found: C: 63.74; H: 5.85; N: 3.39.

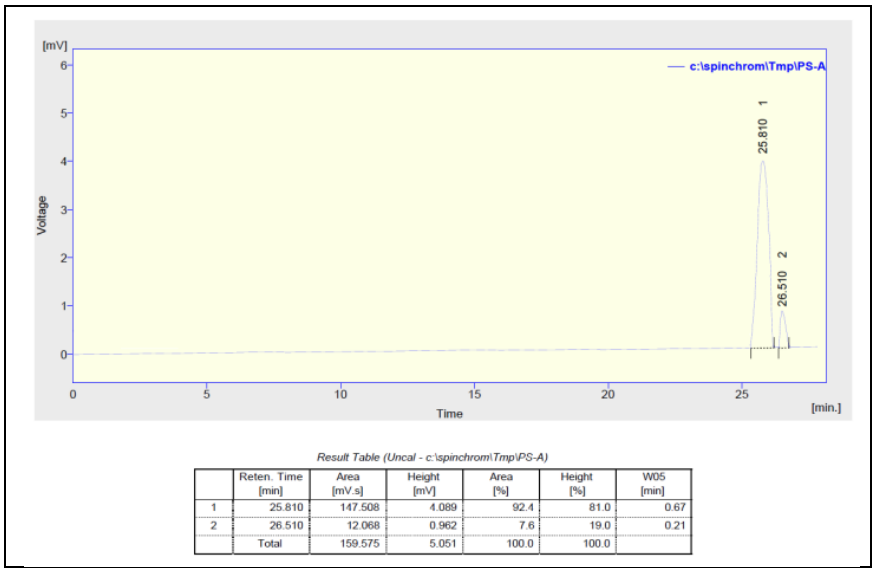
3,3,6,6-tetramethyl-10-(4-nitrophenyl)-9-p-tolyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3u): Off white solid (63%), mp. 254-256 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2963, 2931, 2868, 1660, 1574, 1518, 1359, 1220, 1135, 996; ^{1}H NMR (300 MHz, $CDCl_3$): δ 8.43 (d, J = 8.7 Hz, 2H, Ar-H), 7.53 (d, J = 8.7 Hz, 2H, Ar-H), 7.28 (d, J = 7.8 Hz, 2H, Ar-H), 7.04 (d, J = 7.8 Hz, 2H, Ar-H), 5.21 (s, 1H, Benzylic-CH), 2.24 (s, 3H, $-CH_3$), 2.17-2.03 (m, 6H, $-CH_2$), 1.78 (d, J = 17.1 Hz, 2H, $-CH_2$), 0.95 (s, 6H, $-CH_3$), 0.82 (s, 6H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 195.6, 148.3, 147.9, 144.9, 142.6, 135.4, 131.2, 128.8, 127.6, 125.3, 115.2, 50.1, 41.8, 32.5, 32.5, 32.1, 29.6, 26.8, 21.0; Anal. calcd. for $C_{30}H_{32}N_2O_4$; C: 74.36; H: 6.66; N: 5.78. Found: C: 74.31; H: 6.68; N: 5.80.

9-ethyl-3,3,6,6-tetramethyl-10-p-tolyl-3,4,6,7,9,10-hexahydroacridine-1,8(2H,5H)-dione (3v): Off white solid (68%), mp. 178 ºC ($CDCl_3$); IR (KBr, υ cm^{-1}): 2958, 2878, 1635, 1569, 1511, 1354, 1269, 1143, 1012; ^1H NMR (300 MHz, $CDCl_3$): δ 7.29 (d, J = 8.1 Hz, 2H, Ar-H), 7.00 (d, J = 8.1 Hz, 2H, Ar-H), 4.24 (brs, 1H, -CH), 2.46 (s, 3H, $-CH_3$), 2.22 (s, 4H, $-CH_2$), 2.06-2.00 (m, 2H, $-CH_2$), 1.78-1.73 (m, 1H, $-CH_2$), 1.54-1.50 (m, 1H, $-CH_2$), 1.27 (brs, 2H, $-CH_2$), 0.96 (s, 12H, $-CH_3$), 0.86 (t, J = 7.8 Hz, 3H, $-CH_3$); ^{13}C NMR (75 MHz, $CDCl_3$): δ 196.4, 151.4, 136.5, 129.8, 124.0, 113.3, 50.3, 41.7, 32.1, 30.0, 28.3, 27.6, 27.0, 26.6, 21.2, 14.0, 9.6; Anal. calcd. for $C_{26}H_{33}NO_2$; C: 79.76; H: 8.50; N: 3.58. Found: C: 79.81; H: 8.49; N: 3.59.

7. The mass peak for 1:1 enaminoketone 2a ⊂ calixarene C4V1:



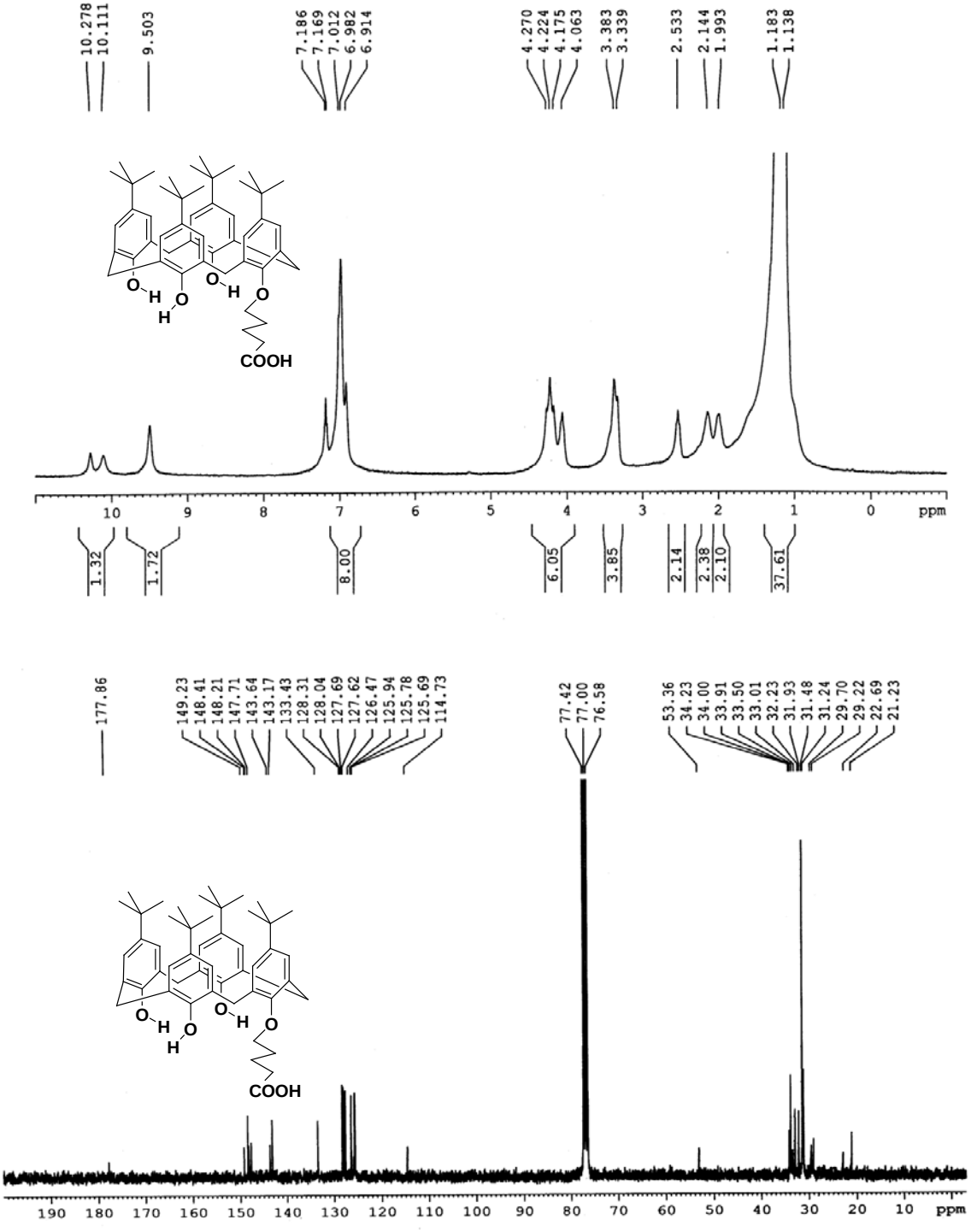
8. HPLC data of the crude product of reaction of 1b and 2b:



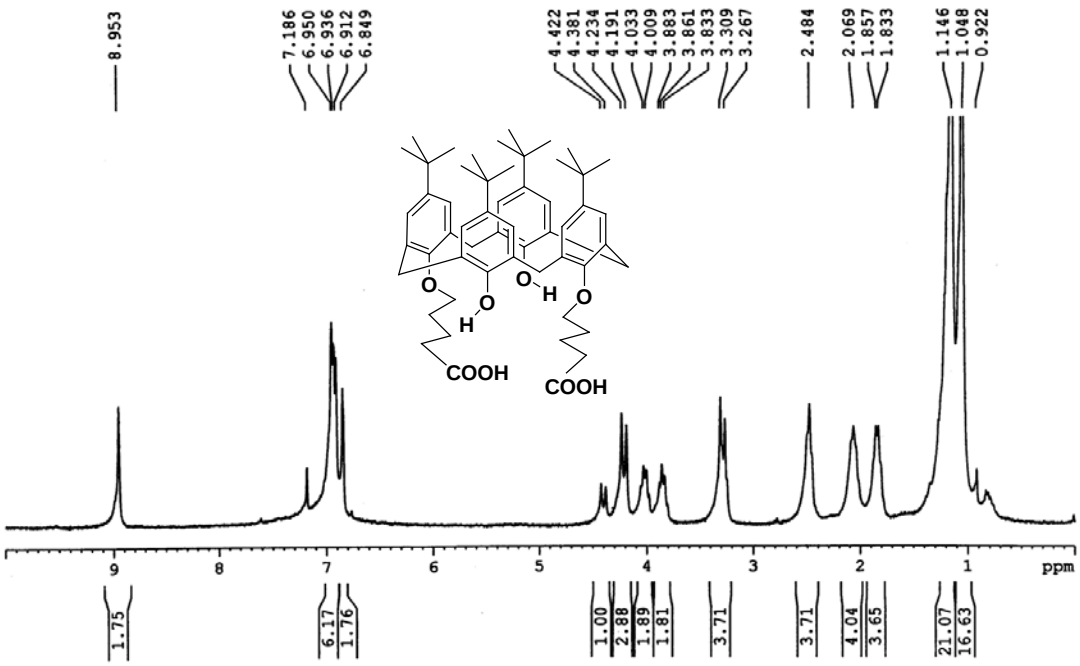
Result Table (Uncal - c:\spinchrom\Tmp\PS-A)

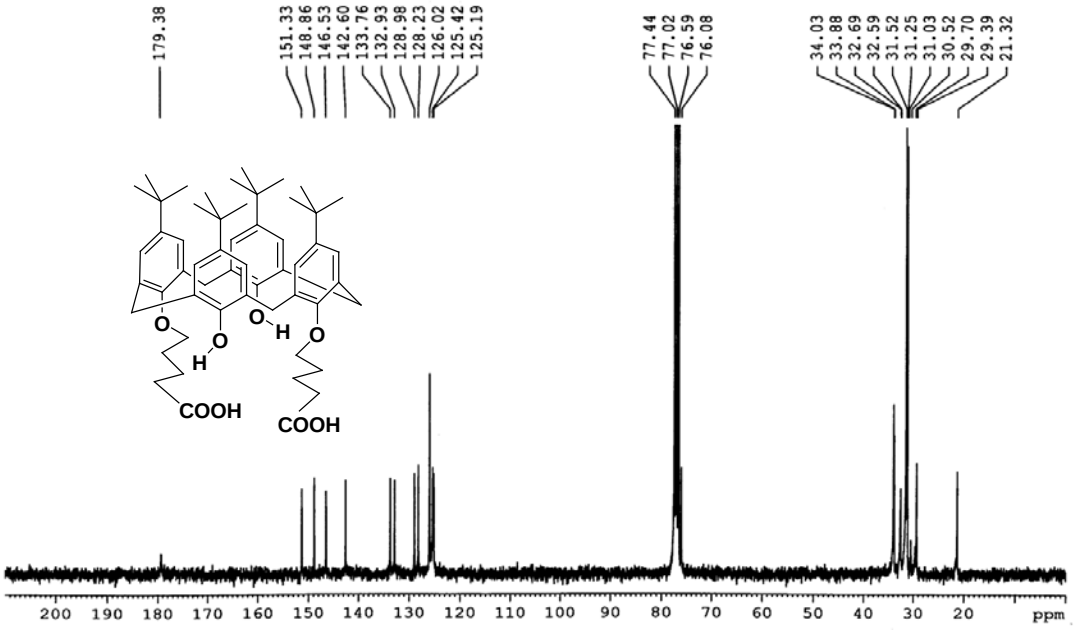
	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]
1	25.810	147.508	4.089	92.4	81.0	0.67
2	26.510	12.068	0.962	7.6	19.0	0.21
	Total	159.575	5.051	100.0	100.0	

9. ^{1}H and ^{13}C -NMR spectra of the mono acid grafted *p-tert*-butylcalix[4]arene (C4V1)



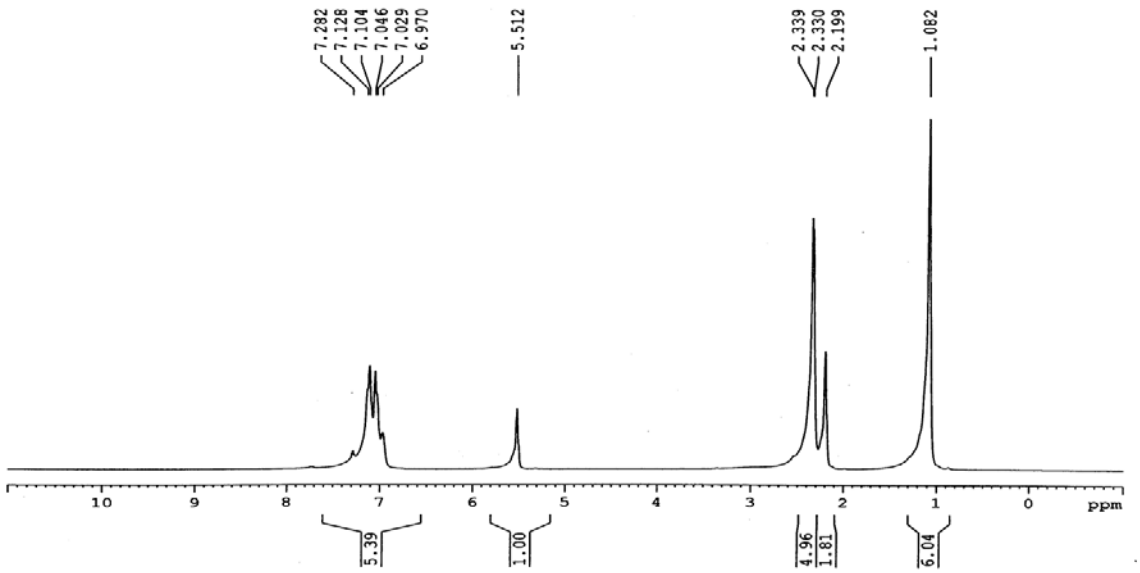
10. ^{1}H and ^{13}C -NMR spectra of the di acid grafted *p-tert*-butylcalix[4]arene (C4V2):



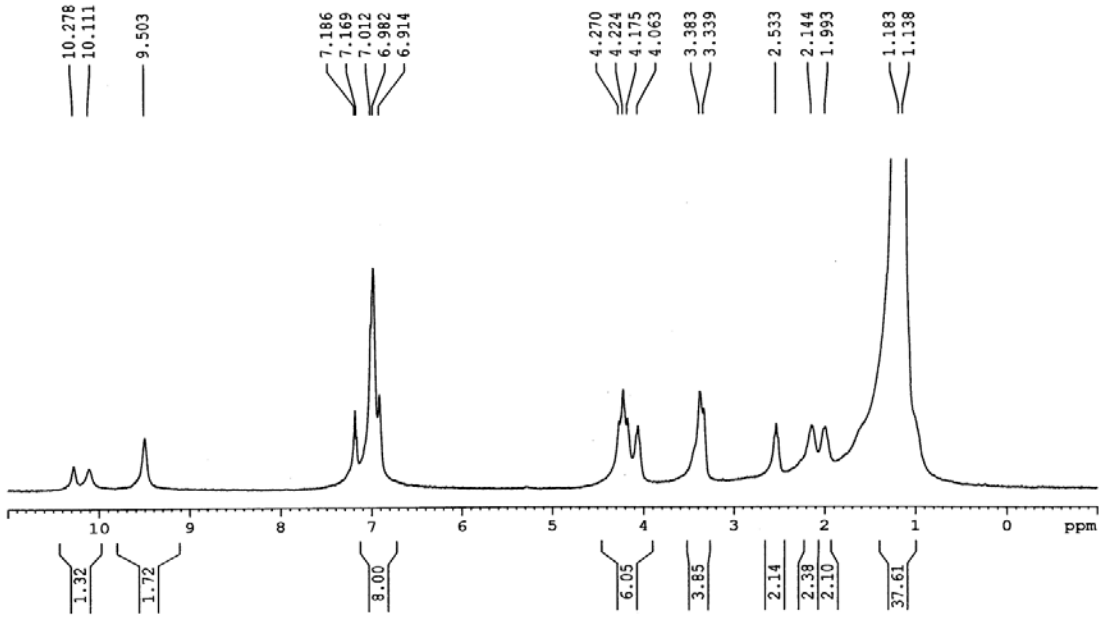


11. Corresponding 1H-NMRs of Fig. 1 (Manuscript) [Stacked ^{1}H NMR spectra ($CDCl_3$, room temperature; 303 K) of the guest enaminoketone **2a**, the host cavitand **C4V1**, and enaminoketone **2a** ⊂ calixarene **C4V1**]

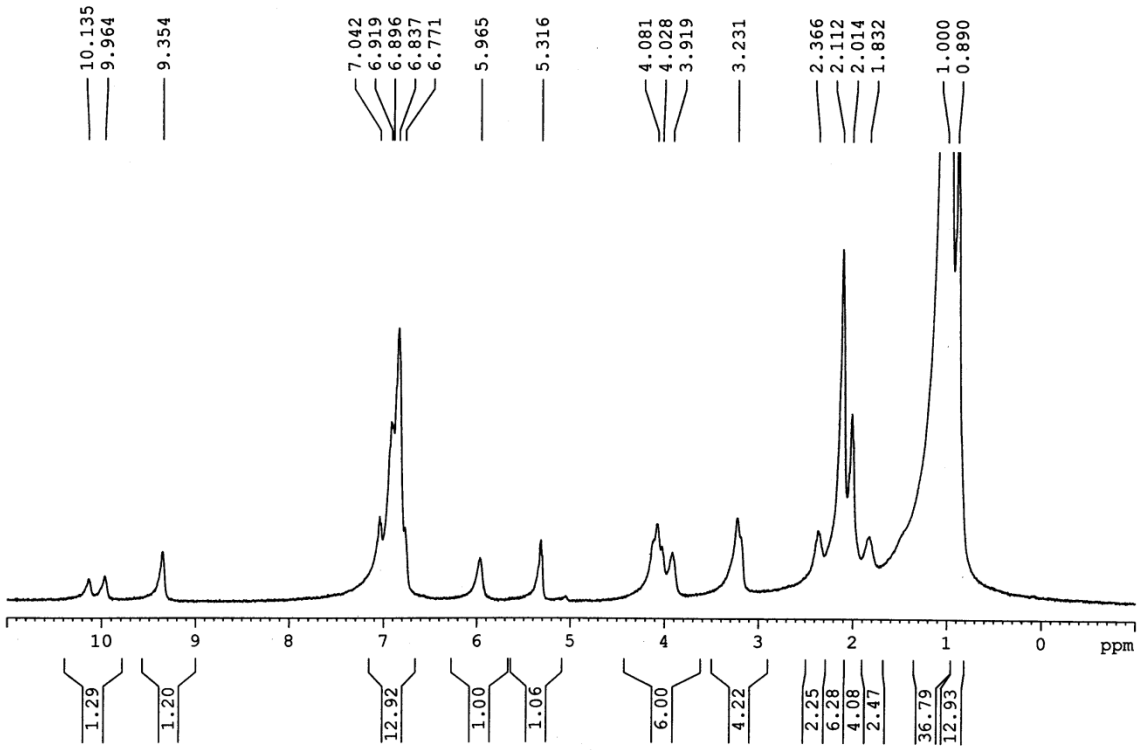
Enaminoketone 1a



Cavitand C4V1

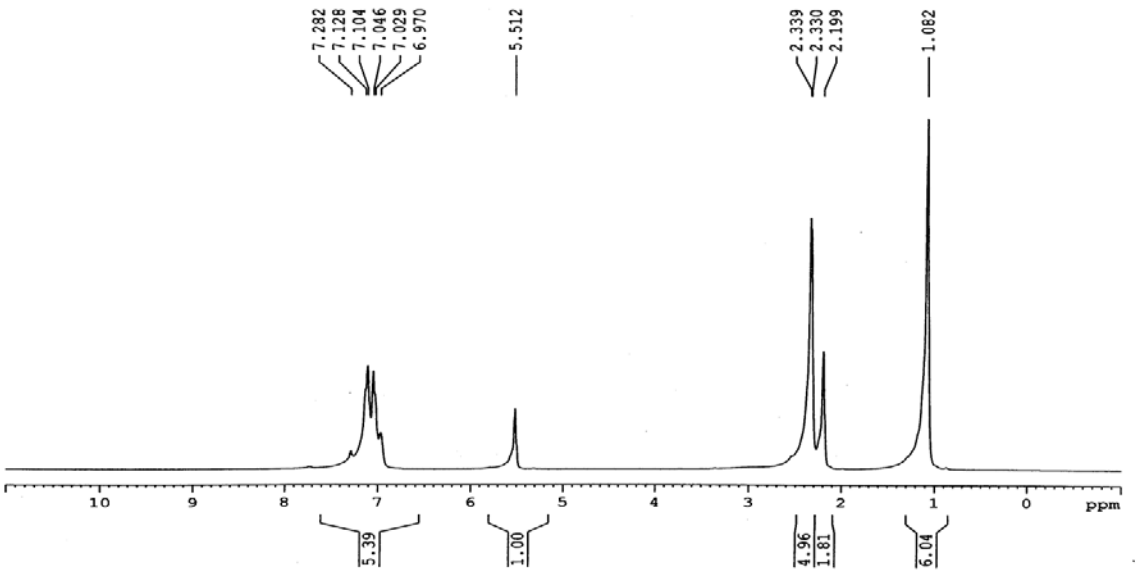


Enaminoketone 1a ⊂ Calixarene C4V1

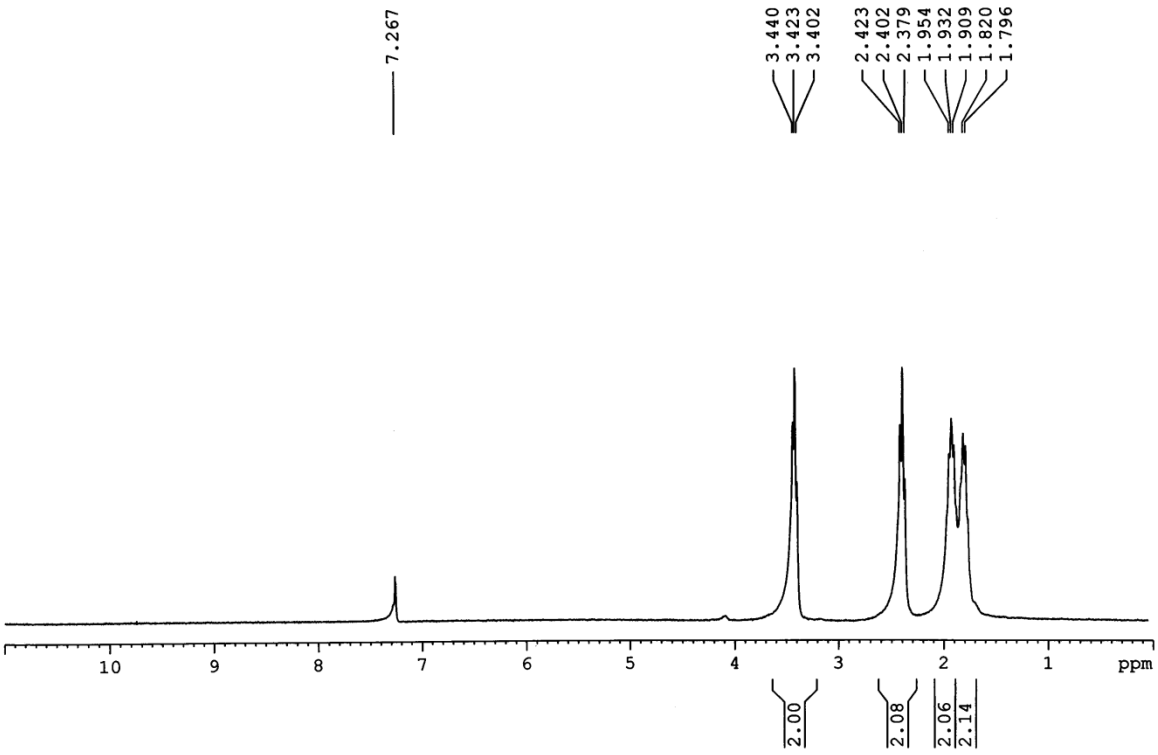


12. Corresponding 1H-NMRs of Fig. 3 (Manuscript) [Stacked ^{1}H NMR spectra ($CDCl_3$, room temperature; 303 K) of the enaminoketone **1a**, 5-bomovaleric acid **5-BVA**, and **5-BVA** + enaminoketone **1a**]

Enaminoketone 1a



5-bomovaleric acid 5-BVA



5-BVA + enaminoketone 1a