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Correction: Sustainable construction: admicellar catalysed synthesis of pyrimido[4,5-*b*]quinolines in an aqueous system

I. R. Siddiqui,^{*a} Pragati Rai,^a Rahila,^a Hoezyfa Sagir^a and Prashant Singh^bCorrection for 'Sustainable construction: admicellar catalysed synthesis of pyrimido[4,5-*b*]quinolines in an aqueous system' by I. R. Siddiqui *et al.*, *RSC Adv.*, 2015, 5, 27603–27609.

The characterization data of compounds **4a–4l** in the Experimental section of the paper is incorrect. The correct characterization data is given below. (Part of this data was previously available as electronic supplementary information (ESI). No additional ESI exists for this work.)

5-(4-Chlorophenyl)benzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4a)

Orange powder; mp 294 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3315, 3244, 1726, 1651, 1596, 1543. ¹H NMR (400 MHz, DMSO-*d*₆): δ_{H} (ppm) 5.09 (s, 1H, CH), 7.28 (d, $J_{\text{HH}} = 8.4$ Hz, 2H), 7.37 (d, $J_{\text{HH}} = 8.5$ Hz, 2H), 7.77–8.04 (m, 4H, H-Ar), 9.39 (s, 1H, NH), 10.22 (s, 1H, NH), 10.95 (s, 1H, NH). ¹³C NMR (100 MHz, DMSO-*d*₆): δ_{C} (ppm) 35.0, 90.1, 118.9, 126.8, 126.9, 128.7, 130.8, 131.5, 132.6, 132.9, 134.3, 135.8, 139.6, 144.5, 148.7, 151.2, 164.4, 179.8, 182.5. MS (EI, 70 eV): m/z (%): 405 (M^+ , 10), 371 (10), 325 (45), 234 (28), 156 (26), 77 (78), 57 (80), 43 (100). For C₂₁H₁₂ClN₃O₄ (405.79): C, 62.16; H, 2.98; N, 10.36; found: C, 62.25; H, 2.85; N, 10.49.

5-(4-Bromophenyl)benzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4b)

Orange powder; mp 299 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3406, 3249, 3054, 1735, 1661, 1605, 1577. ¹H NMR (400 MHz, DMSO-*d*₆): δ_{H} (ppm) 5.14 (s, 1H, CH), 6.91–7.99 (m, 8H, H-Ar), 9.34 (s, 1H, NH), 10.18 (s, 1H, NH), 10.86 (s, 1H, NH). ¹³C NMR (100 MHz, DMSO-*d*₆): δ_{C} (ppm) 36.7, 87.9, 119.8, 125.4, 126.8, 126.9, 129.9, 131.6, 132.3, 134.7, 135.9, 138.8, 149.1, 154.8, 159.3, 163.9, 181.4, 184.7. MS (EI, 70 eV): m/z (%): 449 (M^+ , 8), 371 (12), 373 (50), 278 (30), 156 (22), 76 (80), 57 (80), 43 (100). For C₂₁H₁₂BrN₃O₄ (450.24): C, 56.02; H, 2.69; N, 9.33; found: C, 56.19; H, 2.57; N, 14.34.

5-(4-Nitrophenyl)benzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4c)

Red powder; mp 297 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3358, 3240, 3073, 1719, 1684, 1631, 1577. ¹H NMR (400 MHz, DMSO-*d*₆): δ_{H} (ppm) 5.25 (s, 1H, CH), 7.36 (d, $J_{\text{HH}} = 8.5$ Hz, 2H), 7.48 (d, $J_{\text{HH}} = 8.5$ Hz, 2H), 7.73–8.14 (m, 4H, H-Ar), 9.31 (s, 1H, NH), 10.20 (s, 1H, NH), 10.83 (s, 1H, NH). ¹³C NMR (100 MHz, DMSO-*d*₆): δ_{C} (ppm) 37.2, 88.0, 119.3, 126.8, 126.9, 128.7, 131.0, 131.2, 132.1, 132.8, 134.7, 136.2, 138.9, 145.0, 151.3, 160.1, 163.5, 181.8, 183.6. MS (EI, 70 eV): m/z (%): 416 (M^+ , 15), 371 (16), 340 (54), 245 (34), 156 (18), 76 (84), 57 (76), 43 (100). For C₂₁H₁₂N₄O₆ (416.34): C, 60.58; H, 2.91; N, 13.46; found: C, 60.72; H, 2.85; N, 13.51.

5-Phenylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4d)

Red powder; mp 300 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3411, 3250, 3065, 1717, 1645, 1608, 1561. ¹H NMR (400 MHz, DMSO-*d*₆): δ_{H} (ppm) 5.22 (s, 1H, CH), 7.11–8.11 (m, 9H, H-Ar), 9.29 (s, 1H, NH), 10.11 (s, 1H, NH), 10.82 (s, 1H, NH). ¹³C NMR (100 MHz, DMSO-*d*₆): δ_{C} (ppm) 35.6, 86.7, 119.6, 124.4, 126.6, 126.8, 127.9, 128.9, 131.6, 132.4, 134.4, 135.7, 139.8, 151.2, 155.7, 159.3, 163.4, 181.8, 185.6. MS (EI, 70 eV): m/z (%): 371 (M^+ , 5), 328 (12), 295 (42), 200 (30), 156 (22), 76 (80), 43 (100). For C₂₁H₁₃N₃O₄ (371.35): C, 67.92; H, 3.53; N, 11.32; found: C, 68.06; H, 3.51; N, 11.46.

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5-*m*-Tolylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4e)

Red powder; mp 282 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3327, 3268, 3050, 1723, 1657, 1610, 1529. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 2.71 (s, 3H, Me), 5.25 (s, 1H, CH), 7.03–8.15 (m, 8H, H-Ar), 9.24 (s, 1H, NH), 10.16 (s, 1H, NH), 10.89 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 24.5, 35.5, 86.6, 117.6, 124.0, 126.4, 127.0, 127.4, 128.0, 128.7, 131.4, 132.5, 134.1, 135.4, 135.7, 138.1, 139.9, 152.5, 161.2, 163.3, 182.9, 183.8. MS (EI, 70 eV): m/z (%): 385 (M^+ , 8), 294 (40), 214 (22), 156 (28), 91 (70), 57 (78), 43 (100). For $\text{C}_{22}\text{H}_{15}\text{N}_3\text{O}_4$ (385.37): C, 68.57; H, 3.92; N, 10.90; found: C, 68.71; H, 3.86; N, 10.85.

5-*o*-Tolylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4f)

Red powder; mp 277 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3417, 3248, 3055, 1714, 1657, 1609, 1533. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 2.77 (s, 3H, Me), 5.17 (s, 1H, CH), 7.01–8.04 (m, 8H, H-Ar), 9.31 (s, 1H, NH), 10.17 (s, 1H, NH), 10.87 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 22.2, 35.6, 86.8, 117.1, 124.0, 126.3, 126.9, 127.5, 127.9, 128.7, 131.3, 132.6, 134.2, 135.3, 135.4, 138.0, 139.1, 151.2, 158.1, 163.8, 182.4, 183.3. MS (EI, 70 eV): m/z (%): 385 (M^+ , 10), 309 (44), 214 (26), 156 (20), 91 (74), 57 (82), 43 (100). For $\text{C}_{22}\text{H}_{15}\text{N}_3\text{O}_4$ (385.37): C, 68.57; H, 3.92; N, 10.90; O, 16.61; found: C, 68.80; H, 3.76; N, 10.92.

5-*p*-Tolylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4g)

Red powder; mp 311 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3408, 3253, 3059, 1717, 1656, 1608, 1517. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 2.19 (s, 3H, Me), 5.07 (s, 1H, CH), 7.02 (d, $J_{\text{HH}} = 7.7$ Hz, 2H), 7.19 (d, $J_{\text{HH}} = 7.7$ Hz, 2H), 7.79–8.04 (m, 4H, H-Ar), 9.21 (s, 1H, NH), 10.14 (s, 1H, NH), 10.89 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 21.2, 35.4, 86.5, 114.6, 126.5, 126.8, 129.2, 130.5, 130.9, 131.4, 132.5, 134.4, 135.8, 138.7, 144.5, 148.8, 159.1, 163.4, 179.9, 183.2. MS (EI, 70 eV): m/z (%): 385 (M^+ , 5), 294 (45), 214 (30), 156 (20), 76 (78), 57 (82), 43 (100). For $\text{C}_{22}\text{H}_{15}\text{N}_3\text{O}_4$ (385.37): C, 68.57; H, 3.92; N, 10.90; found: C, 68.51; H, 3.86; N, 10.80.

5-(4-Methoxyphenyl)benzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4h)

Orange powder; mp 301 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3423, 3178, 3057, 1704, 1681, 1611, 1533. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 3.64 (s, 3H, OMe), 5.03 (s, 1H, CH), 6.76 (d, $J_{\text{HH}} = 7.7$ Hz, 2H, H-Ar), 7.21 (d, $J_{\text{HH}} = 7.6$ Hz, 2H, H-Ar), 7.81–8.02 (m, 4H, H-Ar), 9.32 (s, 1H, NH), 10.16 (s, 1H, NH), 10.91 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 32.5, 56.7, 86.5, 114.9, 124.5, 126.2, 126.9, 129.7, 130.0, 130.5, 133.9, 133.1, 133.7, 135.4, 138.0, 144.7, 159.1, 163.6, 179.7, 183.1. MS (EI, 70 eV): m/z (%): 401 (M^+ , 15), 358 (14), 325 (30), 230 (26), 156 (22), 57 (76), 43 (100). For $\text{C}_{22}\text{H}_{15}\text{N}_3\text{O}_5$ (401.37): C, 65.83; H, 3.77; N, 10.47; found: C, 65.88; H, 3.74; N, 10.58.

5-(4-Chlorophenyl)-1,3-dimethylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4i)

Orange powder; mp 251 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3402, 1716, 1654, 1580, 1517. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 3.19 (s, 3H, NMe), 3.36 (s, 3H, NMe), 5.66 (s, 1H, CH), 7.10–7.88 (m, 8H, H-Ar), 13.11 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 29.7, 31.4, 35.3, 86.2, 118.9, 124.0, 126.8, 126.9, 130.4, 131.2, 131.6, 132.6, 134.4, 135.1, 138.9, 150.1, 155.1, 156.4, 164.1, 181.6, 186.9. MS (EI, 70 eV): m/z (%): 433 (M^+ , 5), 322 (8), 271 (30), 235 (100), 156 (72), 76 (82), 57 (26). For $\text{C}_{23}\text{H}_{16}\text{ClN}_3\text{O}_4$ (433.84): C, 63.67; H, 3.72; Cl, 8.17; N, 9.69; found: C, 63.83; H, 3.54; N, 8.29.

5-(4-Bromophenyl)-1,3-dimethylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4j)

Orange powder; mp 229 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3398, 1705, 1656, 1575, 1511. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 3.11 (s, 3H, NMe), 3.37 (s, 3H, NMe), 5.81 (s, 1H, CH), 7.18–7.91 (m, 8H, H-Ar), 13.12 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 29.2, 32.3, 35.3, 89.0, 119.4, 124.1, 126.7, 127.0, 131.0, 131.2, 131.6, 132.4, 134.6, 135.6, 139.1, 151.0, 155.3, 156.4, 164.5, 181.8, 186.7. MS (EI, 70 eV): m/z (%): 477 (M^+ , 5), 338 (22), 321 (32), 235 (100), 156 (76), 76 (80). For $\text{C}_{23}\text{H}_{16}\text{BrN}_3\text{O}_4$ (478.29): C, 57.76; H, 3.37; N, 8.79; found: C, 57.87; H, 3.36; N, 8.84.

1,3-Dimethyl-5-*p*-tolylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4k)

Red powder; mp 263 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3359, 1720, 1657, 1568. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 2.27 (s, 3H, Me), 3.11 (s, 3H, NMe), 3.33 (s, 3H, NMe), 5.52 (s, 1H, CH), 6.99 (d, $J_{\text{HH}} = 7.8$ Hz, H-Ar), 7.21 (d, $J_{\text{HH}} = 7.9$ Hz, H-Ar), 7.77–8.06 (m, 4H, H-Ar), 9.04 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 22.8, 28.9, 31.7, 36.6, 88.7, 116.1, 124.4, 126.4, 126.8, 128.9, 130.8, 131.5, 134.5, 135.5135.7, 136.9, 139.4, 151.1, 158.1, 163.4, 181.7, 184.6. MS (EI, 70 eV): m/z (%): 413 (M^+ , 10), 322 (6), 275 (20), 235 (100), 156 (72), 76 (80). For $\text{C}_{24}\text{H}_{19}\text{N}_3\text{O}_4$ (413.43): C, 69.72; H, 4.63; N, 10.16; found: C, 69.79; H, 4.46; N, 10.20.

1,3-Dimethyl-5-*m*-tolylbenzo[*G*]pyrimido[4,5-*b*]quinoline-2,4,6,11(1*h*,3*h*,5*h*,12*h*)-tetraone (4l)

Red powder; mp 195 °C. IR (KBr) ($\nu_{\text{max}}/\text{cm}^{-1}$): 3327, 1705, 1656, 1569, 1529. ^1H NMR (400 MHz, DMSO- d_6): δ_{H} (ppm) 2.24 (s, 3H, Me), 3.17 (s, 3H, NMe), 3.38 (s, 3H, NMe), 5.82 (s, 1H, CH), 6.94–8.01 (m, 8H, H-Ar), 13.02 (s, 1H, NH). ^{13}C NMR (100 MHz, DMSO- d_6): δ_{C} (ppm) 22.5, 29.9, 31.2, 35.6, 86.8, 111.9, 124.7, 126.6, 127.0, 127.3, 128.2, 128.8, 131.5, 132.7, 134.3, 135.4, 135.3, 137.9, 139.2,

151.2, 155.3, 164.5, 181.8, 184.4. MS (EI, 70 eV): m/z (%): 413 (M^+ , 8), 275 (16), 257 (22), 235 (100). For $C_{24}H_{19}N_3O_4$ (413.43): C, 69.72; H, 4.63; N, 10.16; found: C, 69.85; H, 4.52; N, 10.07.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.