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CORRECTION

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

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Correction 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) (ν_{max}/cm^{-1}): 3315, 3244, 1726, 1651, 1596, 1543. ^{1}H NMR (400 MHz, DMSO-d$_6$): δ_H (ppm) 5.09 (s, 1H, CH), 7.28 (d, J_{HH} = 8.4 Hz, 2H), 7.37 (d, J_{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). ^{13}C 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 $C_{21}H_{12}ClN_3O_4$ (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) (ν_{max}/cm^{-1}): 3406, 3249, 3054, 1735, 1661, 1605, 1577. ^{1}H 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). ^{13}C 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 $C_{21}H_{12}BrN_3O_4$ (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) (ν_{max}/cm^{-1}): 3358, 3240, 3073, 1719, 1684, 1631, 1577. ^{1}H NMR (400 MHz, DMSO-d$_6$): δ_H (ppm) 5.25 (s, 1H, CH), 7.36 (d, J_{HH} = 8.5 Hz, 2H), 7.48 (d, J_{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). ^{13}C 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 $C_{21}H_{12}N_4O_6$ (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) (ν_{max}/cm^{-1}): 3411, 3250, 3065, 1717, 1645, 1608, 1561. ^{1}H 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). ^{13}C 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 $C_{21}H_{13}N_3O_4$ (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) (ν_{max}/cm^{-1}): 3327, 3268, 3050, 1723, 1657, 1610, 1529. ^{1}H 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 $C_{22}H_{15}N_3O_4$ (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) (ν_{max}/cm^{-1}): 3417, 3248, 3055, 1714, 1657, 1609, 1533. ^{1}H 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 $C_{22}H_{15}N_3O_4$ (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) (ν_{max}/cm^{-1}): 3408, 3253, 3059, 1717, 1656, 1608, 1517. ^{1}H NMR (400 MHz, DMSO-d$_6$): δ_H (ppm) 2.19 (s, 3H, Me), 5.07 (s, 1H, CH), 7.02 (d, J_{HH} = 7.7 Hz, 2H), 7.19 (d, J_{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 $C_{22}H_{15}N_3O_4$ (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) (ν_{max}/cm^{-1}): 3423, 3178, 3057, 1704, 1681, 1611, 1533. ^{1}H NMR (400 MHz, DMSO-d$_6$): δ_H (ppm) 3.64 (s, 3H, OMe), 5.03 (s, 1H, CH), 6.76 (d, J_{HH} = 7.7 Hz, 2H, H-Ar), 7.21 (d, J_{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 $C_{22}H_{15}N_3O_5$ (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) (ν_{max}/cm^{-1}): 3402, 1716, 1654, 1580, 1517. ^{1}H 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 $C_{23}H_{16}ClN_3O_4$ (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) (ν_{max}/cm^{-1}): 3398, 1705, 1656, 1575, 1511. ^{1}H 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 $C_{23}H_{16}BrN_3O_4$ (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) (ν_{max}/cm^{-1}): 3359, 1720, 1657, 1568. ^{1}H 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_{HH} = 7.8 Hz, H-Ar), 7.21 (d, J_{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 $C_{24}H_{19}N_3O_4$ (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) (ν_{max}/cm^{-1}): 3327, 1705, 1656, 1569, 1529. ^{1}H 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.