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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.

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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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3315, 3244, 1726, 1651, 1596, 1543. <sup>1</sup>H NMR (400 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{H}}$  (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). <sup>13</sup>C NMR (100 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{C}}$  (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<sup>+</sup>, 10), 371 (10), 325 (45), 234 (28), 156 (26), 77 (78), 57 (80), 43 (100). For C<sub>21</sub>H<sub>12</sub>ClN<sub>3</sub>O<sub>4</sub> (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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3406, 3249, 3054, 1735, 1661, 1605, 1577. <sup>1</sup>H NMR (400 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{H}}$  (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). <sup>13</sup>C NMR (100 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{C}}$  (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<sup>+</sup>, 8), 371 (12), 373 (50), 278 (30), 156 (22), 76 (80), 57 (80), 43 (100). For C<sub>21</sub>H<sub>12</sub>BrN<sub>3</sub>O<sub>4</sub> (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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3358, 3240, 3073, 1719, 1684, 1631, 1577. <sup>1</sup>H NMR (400 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{H}}$  (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). <sup>13</sup>C NMR (100 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{C}}$  (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<sup>+</sup>, 15), 371 (16), 340 (54), 245 (34), 156 (18), 76 (84), 57 (76), 43 (100). For C<sub>21</sub>H<sub>12</sub>N<sub>4</sub>O<sub>6</sub> (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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3411, 3250, 3065, 1717, 1645, 1608, 1561. <sup>1</sup>H NMR (400 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{H}}$  (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). <sup>13</sup>C NMR (100 MHz, DMSO-*d*<sub>6</sub>):  $\delta_{\text{C}}$  (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<sup>+</sup>, 5), 328 (12), 295 (42), 200 (30), 156 (22), 76 (80), 43 (100). For C<sub>21</sub>H<sub>13</sub>N<sub>3</sub>O<sub>4</sub> (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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3327, 3268, 3050, 1723, 1657, 1610, 1529.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3417, 3248, 3055, 1714, 1657, 1609, 1533.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3408, 3253, 3059, 1717, 1656, 1608, 1517.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3423, 3178, 3057, 1704, 1681, 1611, 1533.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3402, 1716, 1654, 1580, 1517.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3398, 1705, 1656, 1575, 1511.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3359, 1720, 1657, 1568.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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, 135.5, 135.7, 136.9, 139.4, 151.1, 158.1, 163.4, 181.7, 184.6. MS (EI, 70 eV):  $m/z$  (%): 413 ( $\text{M}^+$ , 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) ( $\nu_{\max}/\text{cm}^{-1}$ ): 3327, 1705, 1656, 1569, 1529.  $^1\text{H}$  NMR (400 MHz, DMSO- $d_6$ ):  $\delta_{\text{H}}$  (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).  $^{13}\text{C}$  NMR (100 MHz, DMSO- $d_6$ ):  $\delta_{\text{C}}$  (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.

