



SUPPLEMENTARY MATERIAL TO  
**Cu(II) complexes of an ionic liquid-based Schiff base  
[1-{2-((2-hydroxybenzylidene)amino)ethyl}-3-methyl-  
imidazolium]PF<sub>6</sub>: Synthesis, characterization and  
biological activities**

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PHYSICAL, ANALYTIC AND SPECTRAL DATA OF THE PREPARED COMPOUNDS

[2-Aemim]PF<sub>6</sub>. Yield: 67 %; yellow oil; Anal. Calcd. for C<sub>6</sub>H<sub>12</sub>F<sub>6</sub>N<sub>3</sub>P: C, 57.11; H, 9.59; N, 33.30 %. Found: C, 57.02; H, 9.42; N, 32.88 %; FT-IR (KBr, cm<sup>-1</sup>): 3412, 3086, 2896, 1581, 1452, 1175, 847; <sup>1</sup>H-NMR (500 MHz, D<sub>2</sub>O, δ / ppm): 3.25 (2H, *m*, NH<sub>2</sub>–CH<sub>2</sub>), 4.12 (3H, *s*, CH<sub>3</sub>), 4.49 (1H, *t*, N–CH<sub>2</sub>), 4.52 (1H, *t*, N–CH<sub>2</sub>), 7.68 (1H, *s*, NCH), 7.75 (1H, *s*, NCH), 8.63 (2H, *s*, NH<sub>2</sub>), 8.99 (1H, *s*, N(H)CN); <sup>13</sup>C-NMR (400 MHz, D<sub>2</sub>O, δ / ppm): 35.34, 41.04, 53.36, 122.30, 123.29, 136.87; ESI-MS (*m/z* (relative abundance, %)): 126.20 (92.6), M<sup>+</sup>.

LH (**1**). Yield: 65–70 %; yellow solid; m. p.: 132–133 °C, Anal. Calcd. for C<sub>13</sub>H<sub>16</sub>N<sub>3</sub>OPF<sub>6</sub>: C, 40.81; H, 4.19; N, 10.99 %. Found: C, 41.61; H, 4.29; N, 11.20 %; FT-IR (KBr, cm<sup>-1</sup>): 3430.12, 3151.5, 2923.9, 2866, 1640, 1616.2, 1569.9, 1508.2, 1465.50, 1278.31, 1167.87, 837; <sup>1</sup>H-NMR (500 MHz, DMSO-*d*<sub>6</sub>, δ / ppm): 3.89 (3H, *s*, CH<sub>3</sub>), 4.01 (2H, *t*, *J* = , CH<sub>2</sub>), 4.48 (2H, *t*, CH<sub>2</sub>), 6.79–6.85 (4H, *m*, Ar-H), 7.66 (1H, *s*, NCH), 7.76 (1H, *s*, NCH), 8.56 (1H, *s*, N=CH), 9.12 (1H, *s*, CH), 12.56 (1H, *s*, OH); <sup>13</sup>C-NMR (400 MHz, DMSO-*d*<sub>6</sub>, δ / ppm): 36.92, 43.54, 51.45, 116.25, 121.56, 122.41, 123.75, 124.62, 130.67, 135.59, 137.31, 159.91, 161.29; ESI-MS (*m/z* (relative abundance, %)): 231 (30.6), [M+1].

Cu(II) complex (**2**). Yield: 75 %; green solid; m. p.: 139–141 °C; Anal. Calcd for C<sub>26</sub>H<sub>34</sub>CuF<sub>12</sub>N<sub>6</sub>O<sub>4</sub>P<sub>2</sub>: C, 36.82; H, 4.04; N, 9.91 %. Found: C, 36.12; H, 3.92; N, 9.39 %; FT-IR (KBr, cm<sup>-1</sup>): 3449.5, 1628, 1545, 1445, 1136, 842.49, 634, 548; ESI-MS (*m/z* (relative abundance, %)): 557 (29.5), [M+2].

Cu(II) complex (**3**). Yield: 77 %; green solid; m.p.: 145–147 °C; Anal. Calcd for C<sub>26</sub>H<sub>30</sub>CuF<sub>12</sub>N<sub>6</sub>O<sub>2</sub>P<sub>2</sub>: C, 38.46; H, 3.72; N, 10.35 %. Found: C, 38.01; H,

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3.69; N, 10.11 %; FT-IR (KBr,  $\text{cm}^{-1}$ ): 3152, 3093, 2867, 1622, 1505, 1448, 1100, 844.5, 620, 558; ESI-MS ( $m/z$  (relative abundance, %)): 523 (28.6),  $[\text{M}+2]$ .

THE IR SPECTRA OF THE FREE SCHIFF BASE AND ITS Cu(II) COMPLEXES

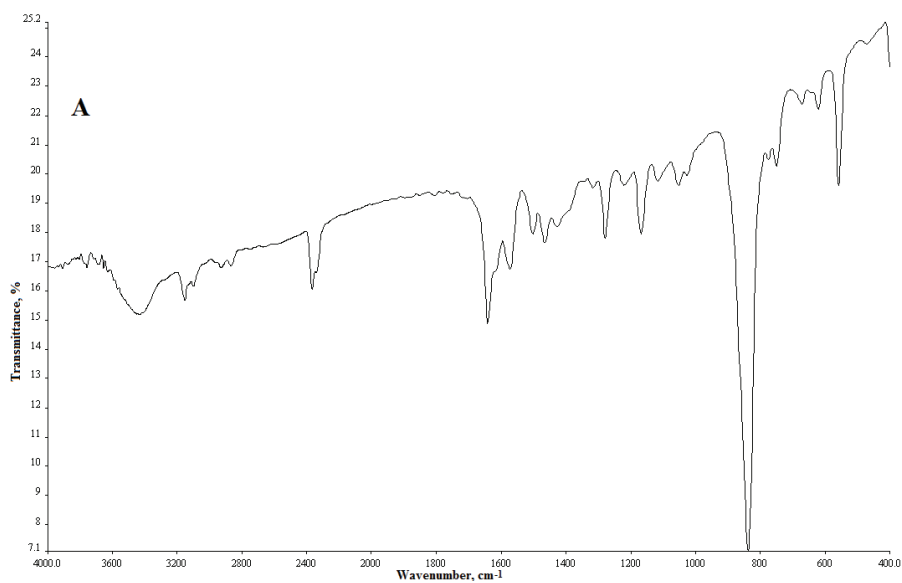


Fig. S-1. IR spectrum of 1-{2-[(2-hydroxybenzylidene)amino]ethyl}-3-methylimidazolium hexafluorophosphate (**1**).

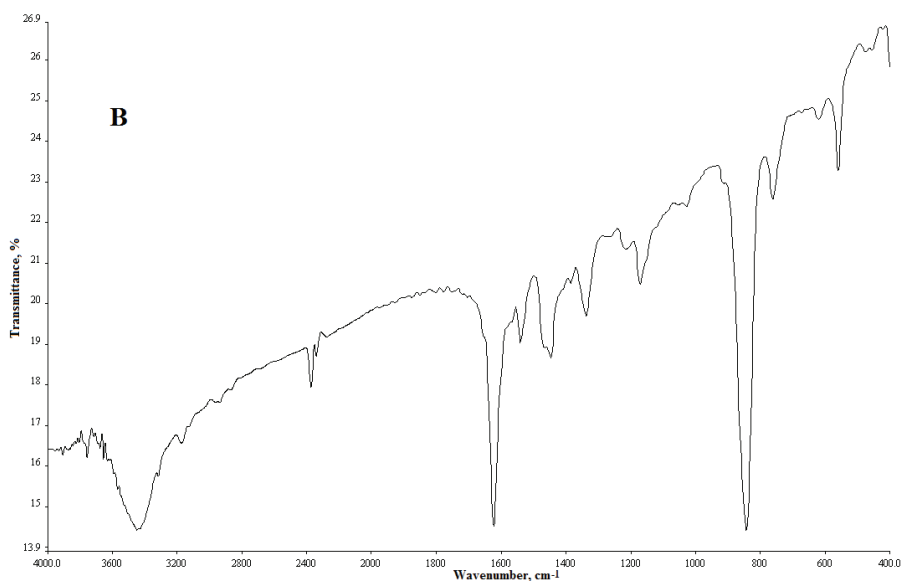


Fig. S-2. IR spectra of Cu(II) complex **2**.

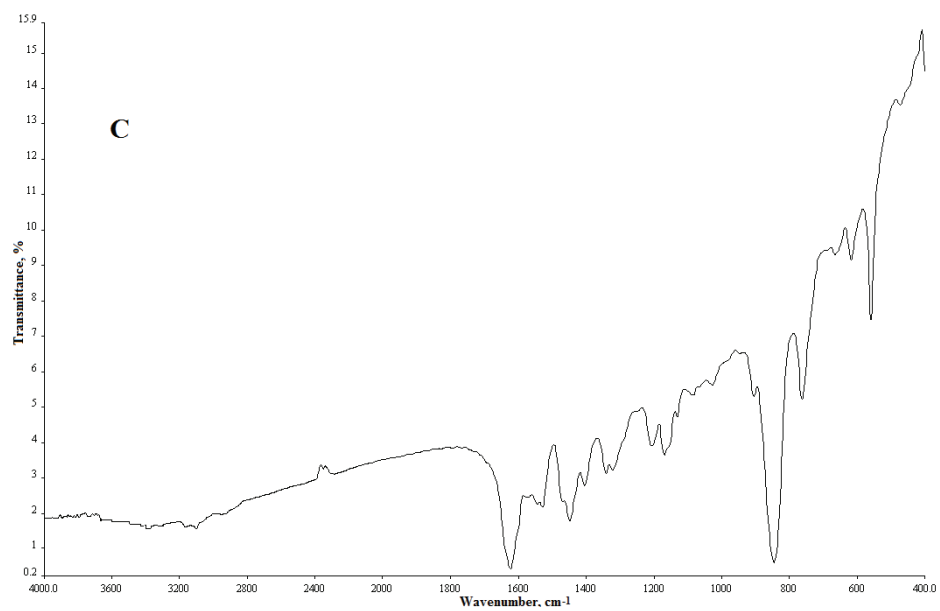


Fig. S-3. IR spectra of Cu(II) complex 3.