Supplementary material

Synthesis, Structure and Magnetic Properties of Two Bis(oxalato)cuprate(II) Salts with Pyridinium Type Counter Ions

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Fig. S1 Cu-NRH ₂ distances found in the CSD (r<10%, no errors and no disorder)	2
Fig. S2 IR spectra of left: 1 and right: 2	2
Fig. S3 UV-vis spectra of left: 1 and right: 2.	2
Fig. S4 Experimental and simulated PXRD spectra of left: 1 and right: 2	3
Fig. S5 EDS spectra of left 1 and rigth 2	3
Fig. S6 Top: TGA and DSC of 1 and 2 . Bottom PXRD patterns of TGA residuals after heating to 800°C (in red) of left 1 and right 2 compared to the expected residual product CuO (in blue)	2 3
Fig. S7. The zigzag Cu(II) chain that runs along the crystallographic <i>z</i> -axis, Cu…Cu = 5.348 Å, in $C_{13}H_{16}N_2[Cu(C_2O_4)_2]$ 2	4
Fig. S8. The opposite charges (red for the pyridinium cation and blue for the complex anion) form a kind of chess board pattern in the xy-plane in $C_{13}H_{16}N_2[Cu(C_2O_4)_2]$ (2) shown by a space filling model. The other way to think about the organisation in the xy-plane is weak hydrogen bonds.	4
Fig. S9. Scanning electron microscopy of 1 and 2 (Cu-1 and Cu-2).	4



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Fig. S3 UV-vis spectra of left: 1 and right: 2.



Fig. S4 Experimental and simulated PXRD spectra of left: 1 and right: 2.



Fig. S5 EDS spectra of left 1 and rigth 2.



Fig. S6 Top: TGA and DSC of **1** and **2**. Bottom PXRD patterns of TGA residuals after heating to 800°C (in red) of left **1** and right **2** compared to the expected residual product CuO (in blue).



Fig. S7. The zigzag Cu(II) chain that runs along the crystallographic *z*-axis, Cu···Cu = 5.348 Å, in $C_{13}H_{16}N_2[Cu(C_2O_4)_2]$ **2**.



Fig. S8. The opposite charges (red for the pyridinium cation and blue for the complex anion) form a kind of chess board pattern in the xy-plane in $C_{13}H_{16}N_2[Cu(C_2O_4)_2]$ (2) shown by a space filling model. The other way to think about the organisation in the xy-plane is weak hydrogen bonds.



Fig. S9. Scanning electron microscopy of **1** and **2** (Cu-1 and Cu-2).