





Supplementary Material: Near-Field Optical Examination of Potassium *n*-Butyl Xanthate/Halcopyrite Flotation Products

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Figure S1. Complementary to the data depicted in Figure 3 of the main manuscript, we present further s-SNIM scans of a CCPX-2a sample examined with the free-electron laser. These scans represent a full set of data for the spectral range examined in this work whereas Figure 3 showed results at selected frequencies only. Specifically, we here display near-field images recorded at FEL frequencies of (a) 760 cm⁻¹, (b) 800 cm⁻¹, (c) 840 cm⁻¹, (d) 880 cm⁻¹, (e) 920 cm⁻¹, (f) 965 cm⁻¹, (g) 1035 cm⁻¹, (h) 1110 cm⁻¹, (i) 1185 cm⁻¹, and (j) 1260 cm⁻¹. No contrast is observed in images (a), (b), (f), (i), and (j), while elongated patches at (c) 840 cm⁻¹, (d) 880 cm⁻¹, (e) 920 cm⁻¹, (g) 1035 cm⁻¹, and (h) 1110 cm⁻¹ show an increased/reduced near-field signal, that can be associated with the presence of KBX molecules.