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Supplementary Material

Reactions of Aniline with Copper(II) Compounds in Relation to the Formation of Copper-Polyaniline Composites

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Raman spectroscopy

The Raman spectra are shown in Fig. S1. Products A_1, B_2 and C_1 showed very similar spectra, with the exception of an additional band at 983 cm^{-1} due to sulfate in the $CuSO_4$: aniline product A_1. The absence of this band in the spectrum of B_2 implies an absence of sulfate in this product, which is consistent with the low value for the S content found from the elemental analysis (Table 1). The spectra of products A_1 and B_2 are very similar, whereas their FT-IR spectra are quite different (Fig. 2). The most likely explanation for the similarity of the Raman spectra is that both compounds decomposed in the laser beam to give similar products (or that A_1 deccomposed to give something similar to B_2). The broad bands in the spectrum are unexpected for a simple coordination compound (cf. the sharp bands in the IR spectra), and because of this uncertainty no further use was made of Raman spectroscopy.

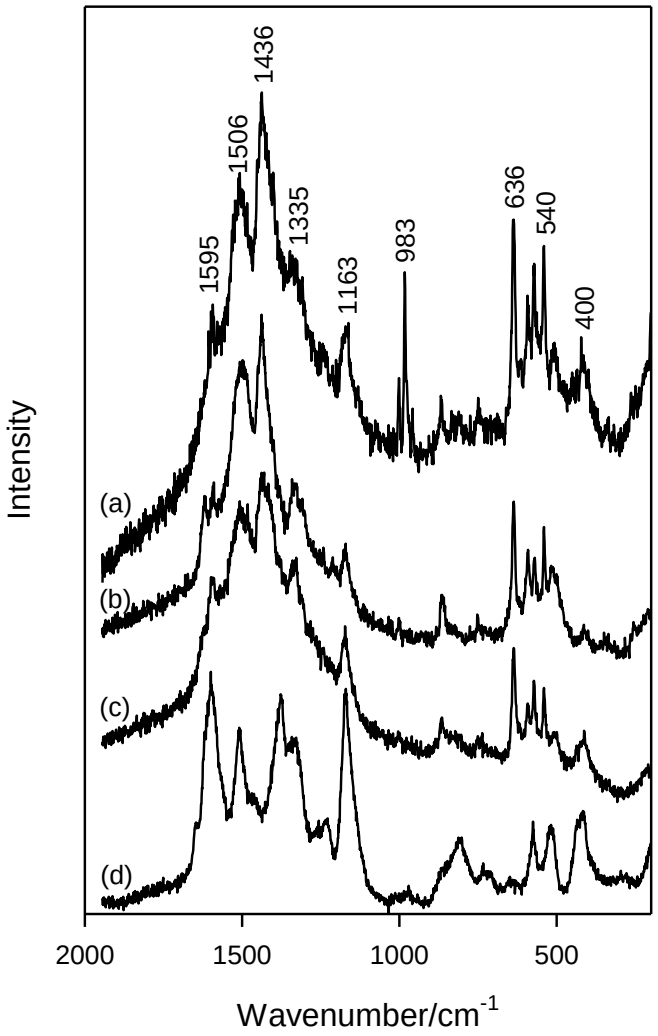

Fig. S1. Raman spectra of Cu(II)-aniline products. (a) A_1; (b) B_2; (c) C_1; (d) PANi ES.