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

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The Raman spectra are shown in Fig. S1. Products A₁, B₂ and C₁ showed very similar spectra, with the exception of an additional band at 983 cm⁻¹ due to sulfate in the CuSO₄: aniline product A₁. The absence of this band in the spectrum of B₂ 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 A₁ and B₂ 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 A₁ decomposed to give something similar to B₂). 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.

![Raman spectra of Cu(II)-aniline products.](image)

**Fig. S1.** Raman spectra of Cu(II)-aniline products. (a) A₁; (b) B₂; (c) C₁; (d) PANi ES.