

Electronic Supplementary Information

Specific Cu(II) detection using a novel tricarbazolyl-tristriazolotriazine based on photoinduced charge transfer

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Fig. S1. (a) ^1H NMR and (b) ^{13}C NMR spectra of compound 5 (CDCl_3), and (c) ^1H NMR spectra of compound 7 (CDCl_3).

Fig. S2. (a) LRMS and (b) HRMS spectra of compound 5, (c) LRMS spectra of compound 7.

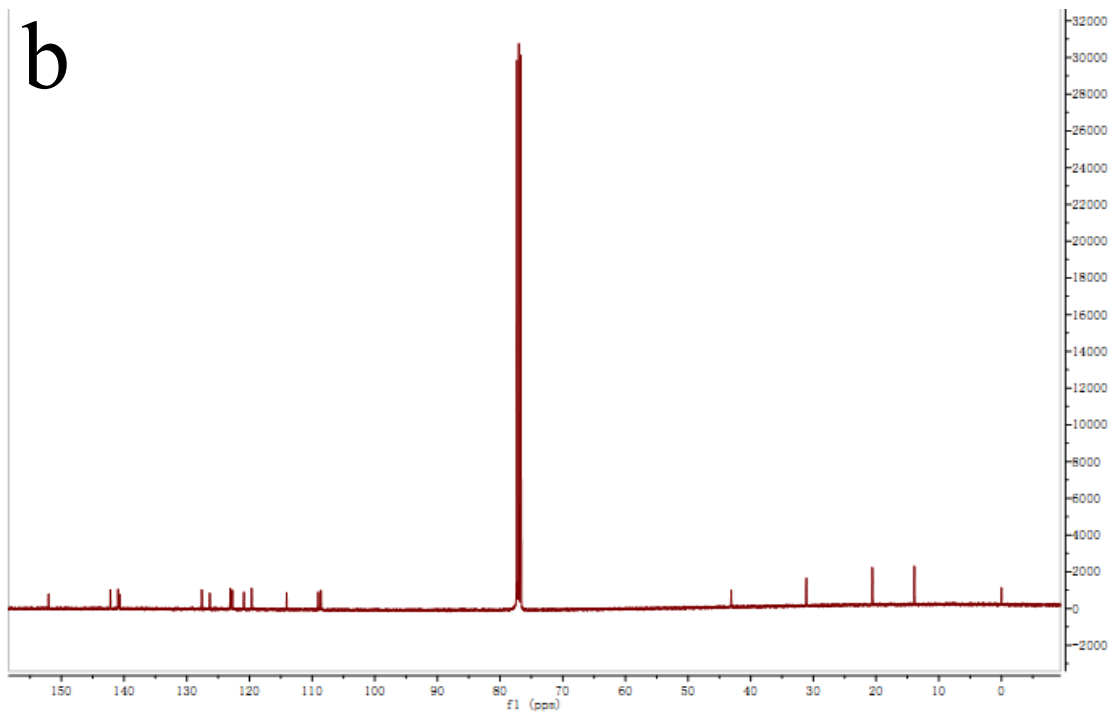
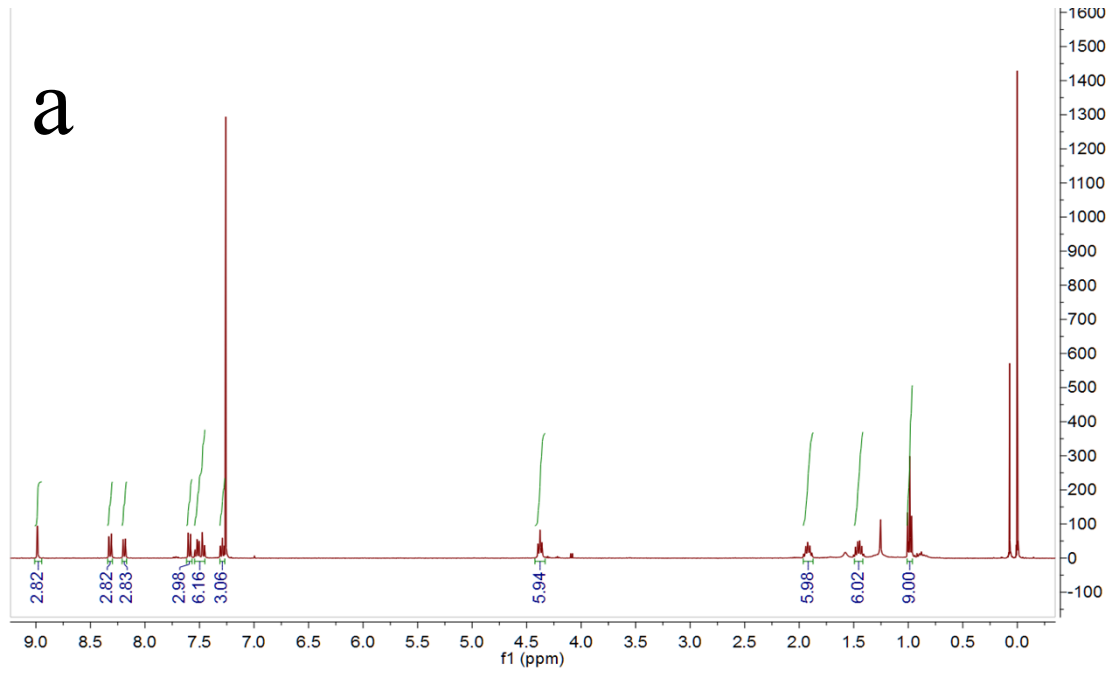
Fig. S3. Fluorescence spectra of compound 7 with varying concentrations of Cu^{2+} (from 0.4 to 2.0 mM); $\lambda_{\text{ex}} = 278$ nm.

Fig. S4. Calibration plots of relative F/F_0 of the compound 5 and 7 against different concentrations of Cu^{2+} . F_0 and F stand for the fluorescent intensities in the absence and presence of Cu^{2+} .

Fig. S5. TGA and DSC (inset) thermograms of compound 5 recorded under nitrogen atmosphere at the heating rate of $10^\circ\text{C min}^{-1}$.

Fig. S6. Representative cyclic voltammogram of compound 5 measured in dry dichloromethane solution, containing 0.1 M TBAPF₆ at 25°C . Scan rate 200 mV s.

Fig. S7. SEM microphotographs of compound 5 formed in the DCM/EA mixtures.



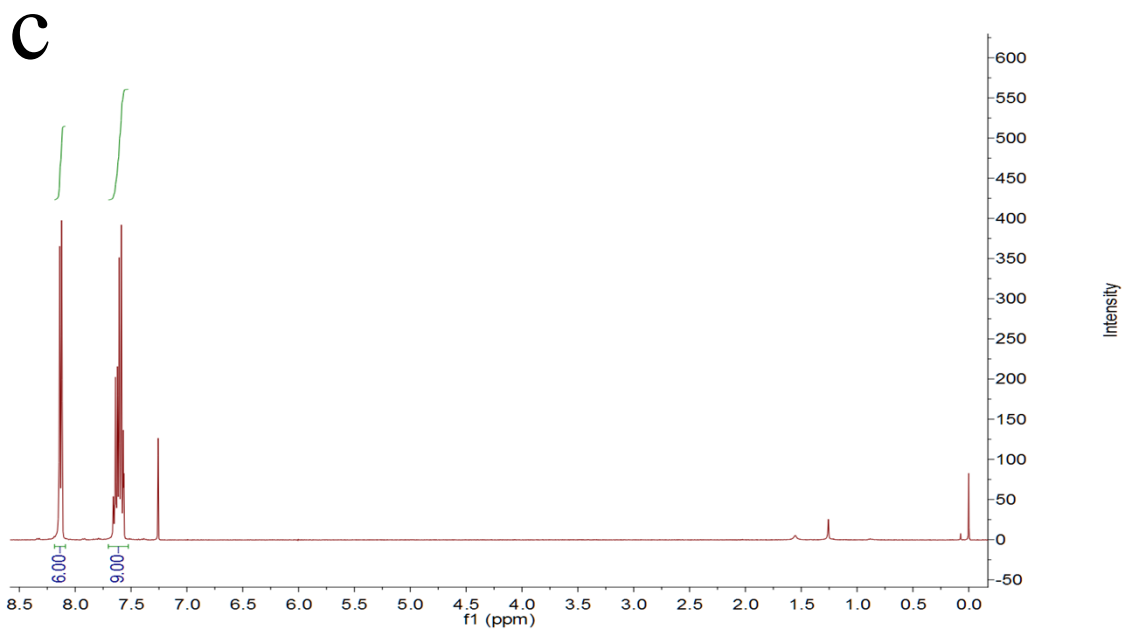
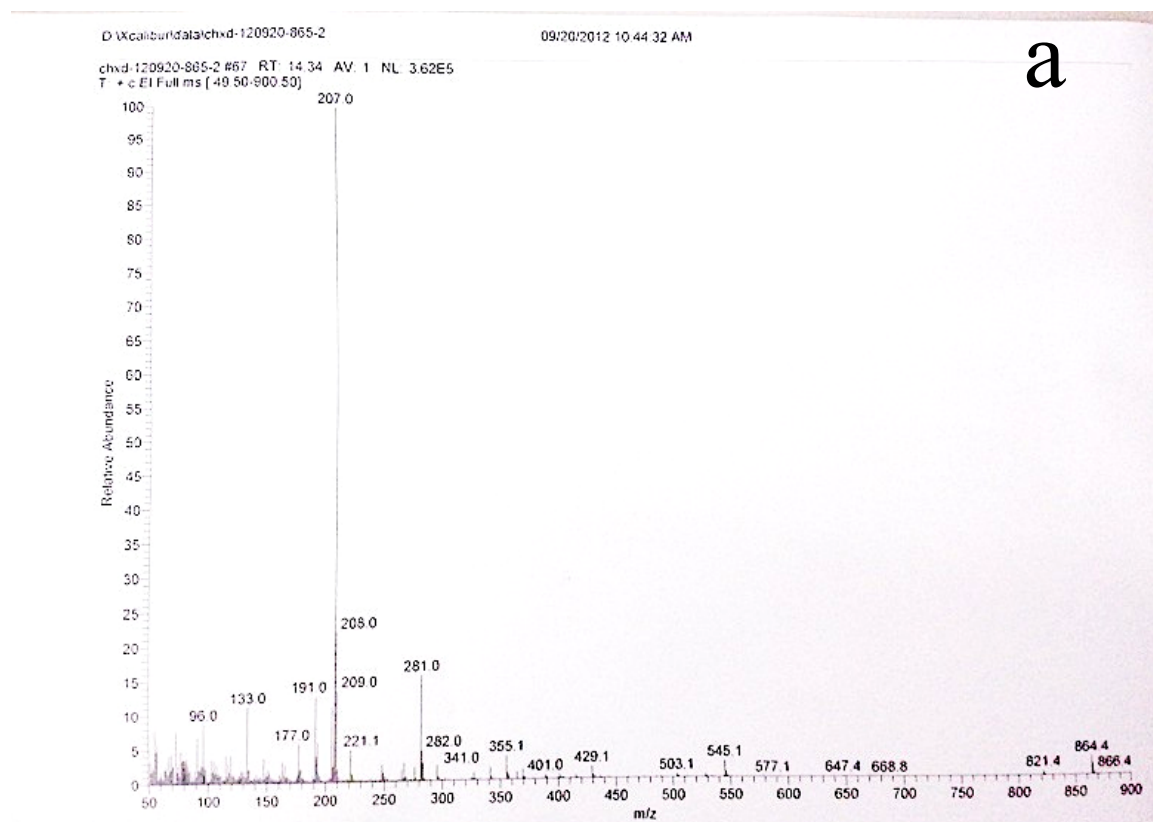
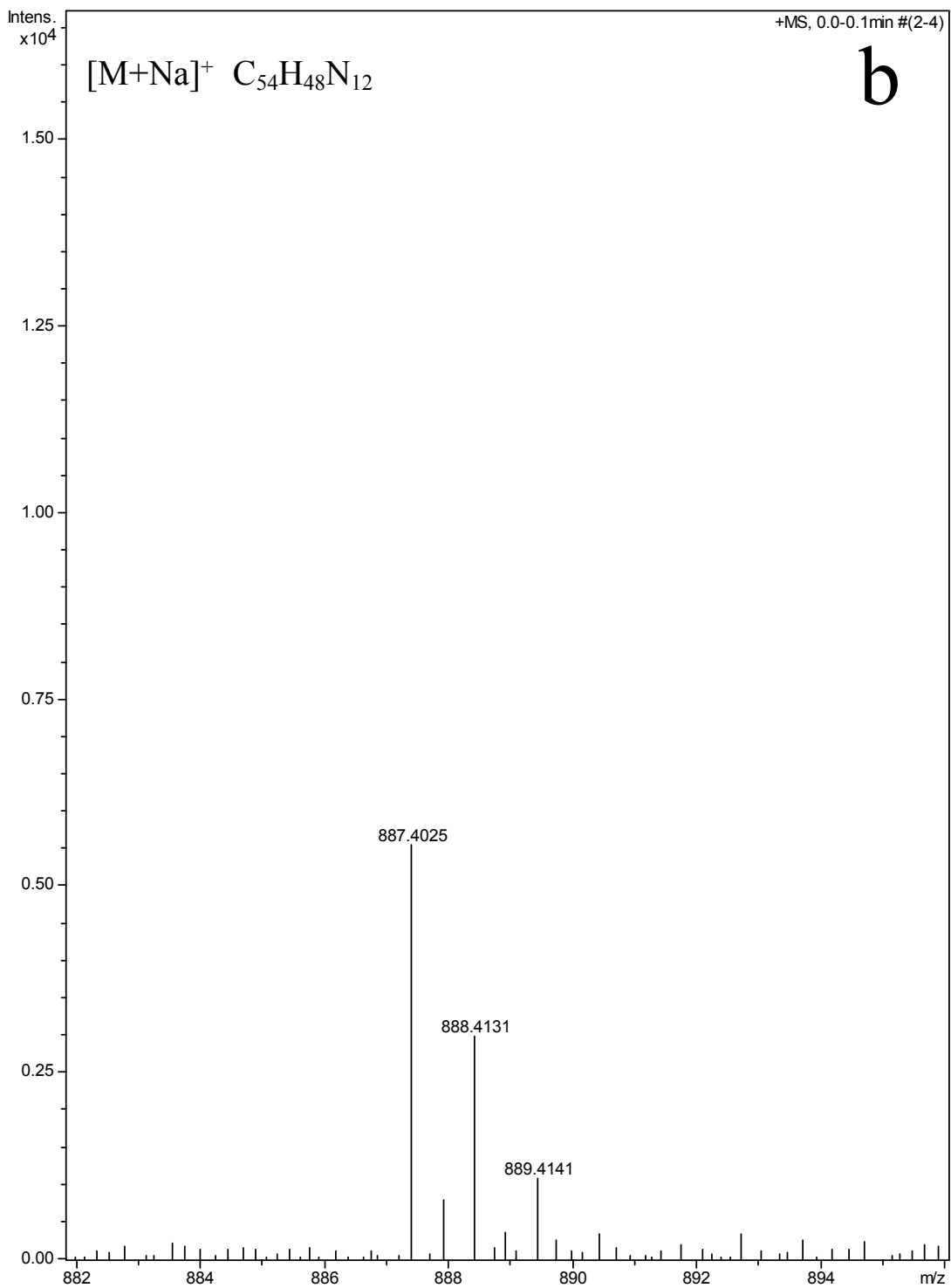


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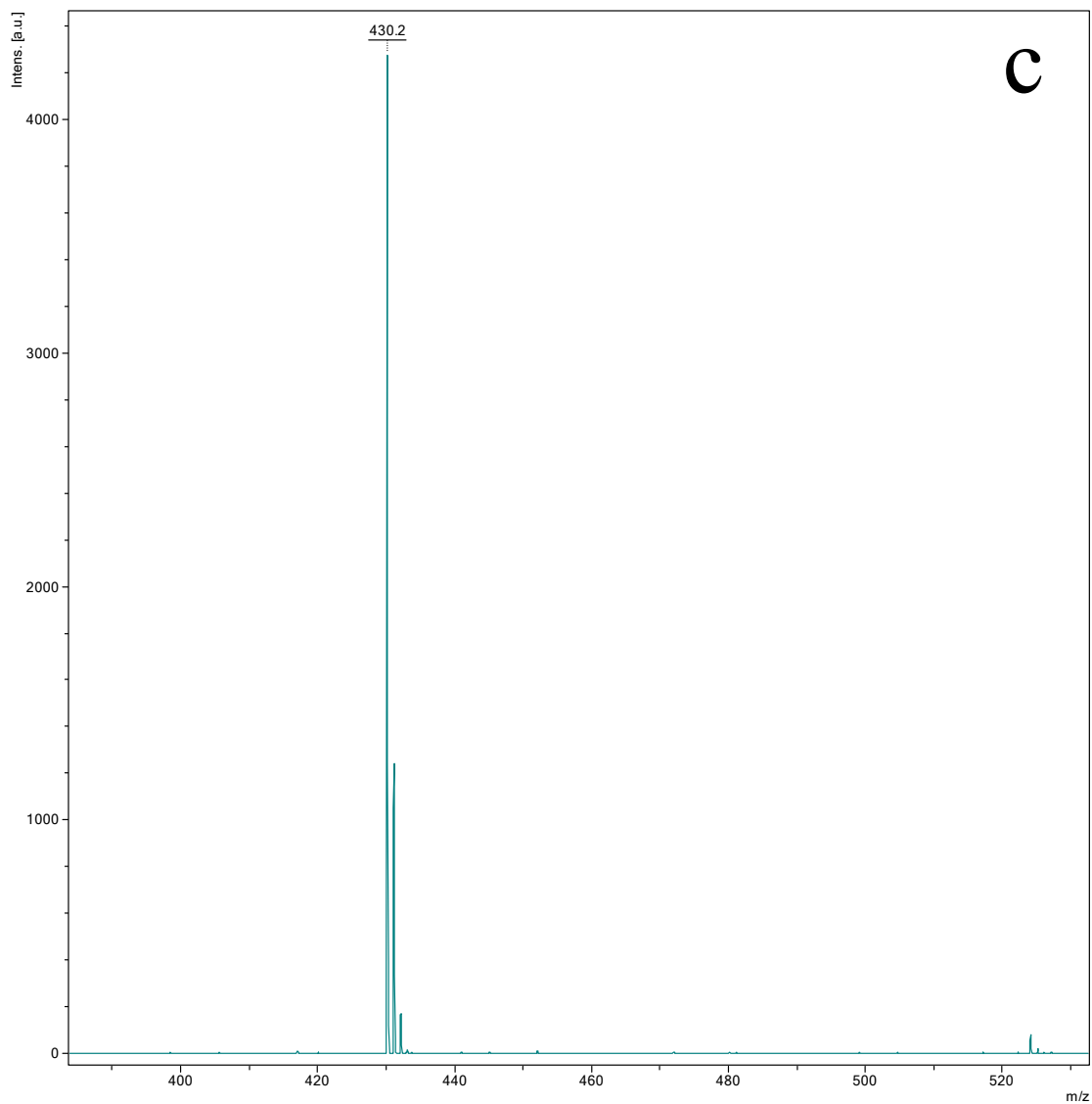


Fig. S2. (a) LRMS and (b) HRMS spectra of compound 5, (c) LRMS spectra of compound 7

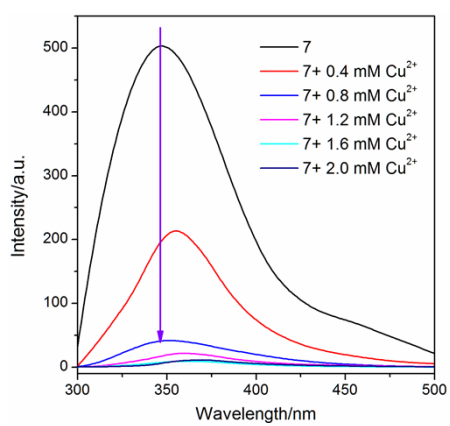


Fig. S3. Fluorescence spectra of compound 7 with varying concentrations of Cu^{2+} (from 0.4 to 2.0 mM); $\lambda_{\text{ex}} = 278$ nm.

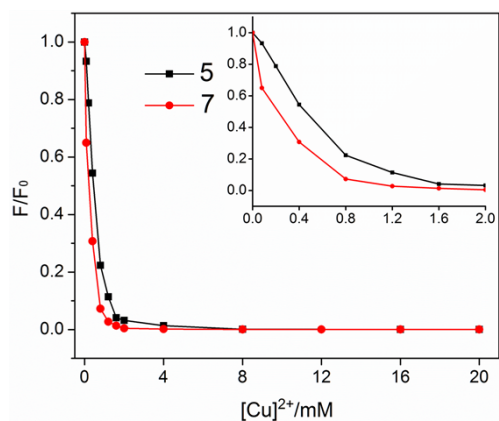


Fig. S4. Calibration plots of relative F/F_0 of the compound 5 and 7 against different concentrations of Cu^{2+} . F_0 and F stand for the fluorescent intensities in the absence and presence of Cu^{2+} .

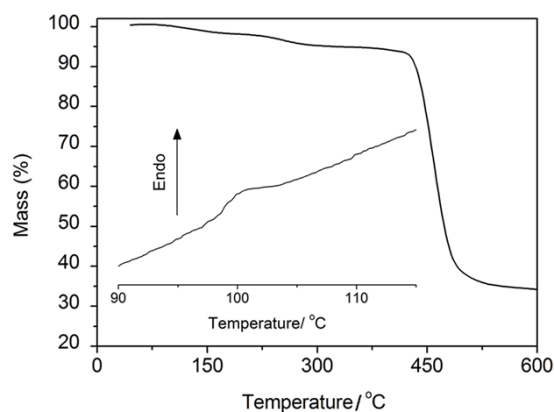


Fig. S5. TGA and DSC (inset) thermograms of compound 5 recorded under nitrogen atmosphere at the heating rate of $10\text{ }^\circ\text{C min}^{-1}$.

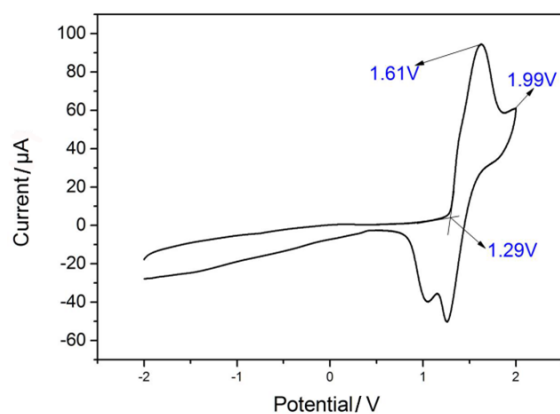


Fig. S6. Representative cyclic voltammogram of compound 5 measured in dry dichloromethane solution, containing 0.1 M TBAPF_6 at $25\text{ }^\circ\text{C}$. Scan rate 200 mV s .

$$E_{\text{HOMO}} = -(1.29 + 4.38)\text{ eV} = -5.67\text{ eV}; E_{\text{LUMO}} = E_{\text{HOMO}} + E_g = -5.67 + 4.09 = -1.58\text{ eV}$$

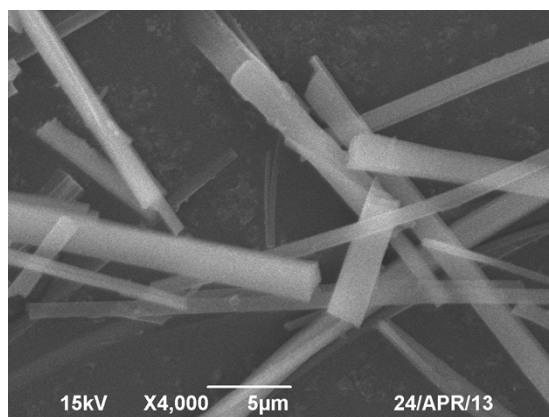


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