Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B

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Title

Biologically Responsive, Sustainable Release from Metallo-Drug Coordinated 1D Nanostructures

Authors

Naohiro Kameta,* Soo Jin Lee, Mitsutoshi Masuda and Toshimi Shimizu

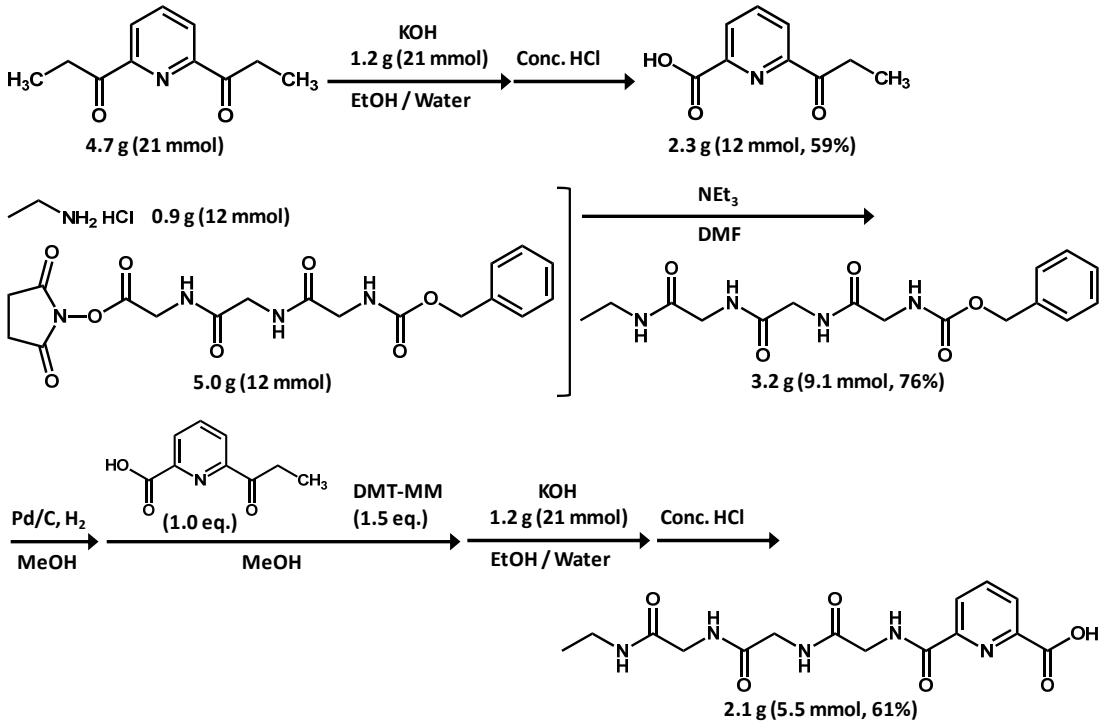

Figure S1. Synthetic scheme of the ligand.

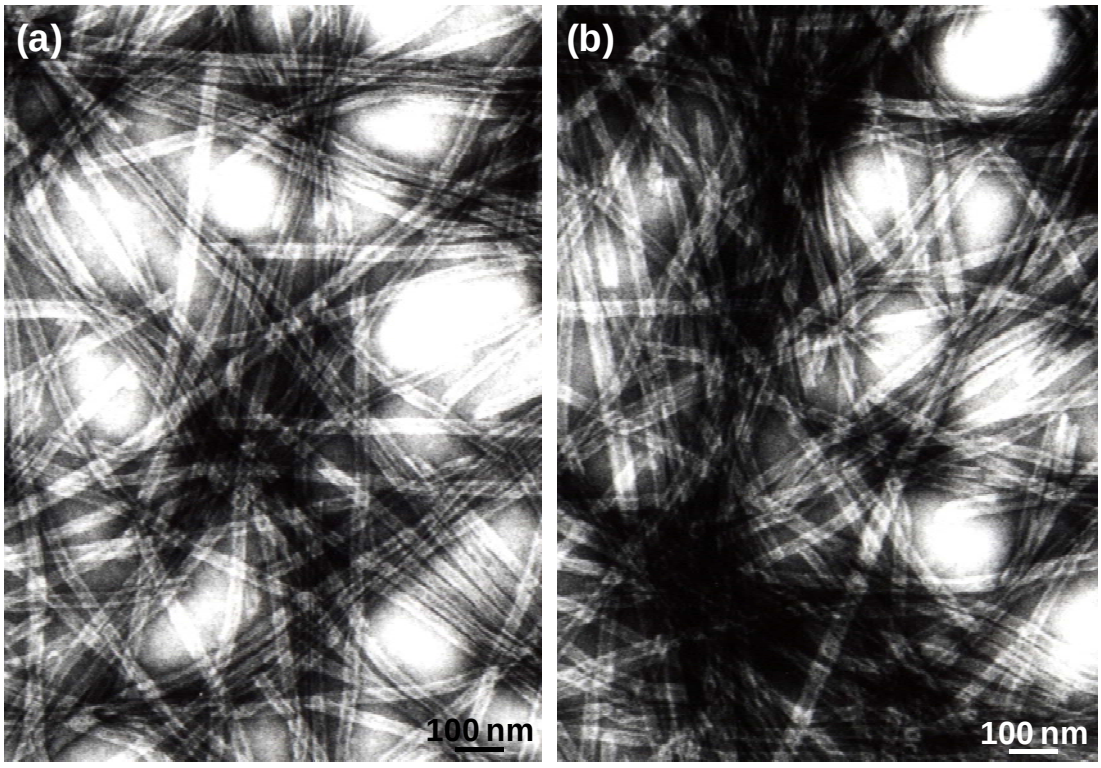

Figure S2. TEM images of the (a) 1-nanotubes and (b) 2-nanotubes, which were negatively stained with phosphotungstate. The nanochannel of the nanotubes is visible and is characterized by a relatively darker contrast to the background.

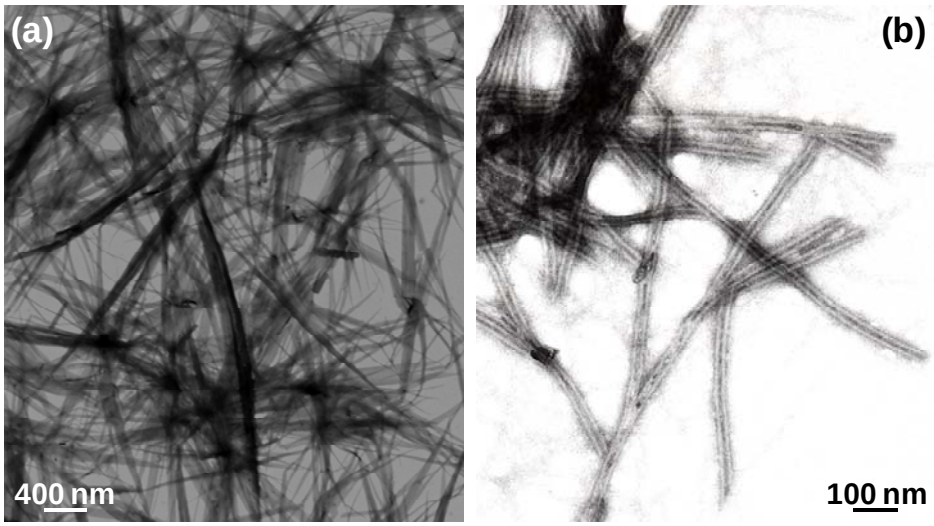

Figure S3. TEM images of the (a) 1L3-nanotapes and (b) 2L3-nanotubes, which were negatively stained with phosphotungstate. The nanochannel of the 2L3-nanotubes is visible and is characterized by a relatively darker contrast to the background.

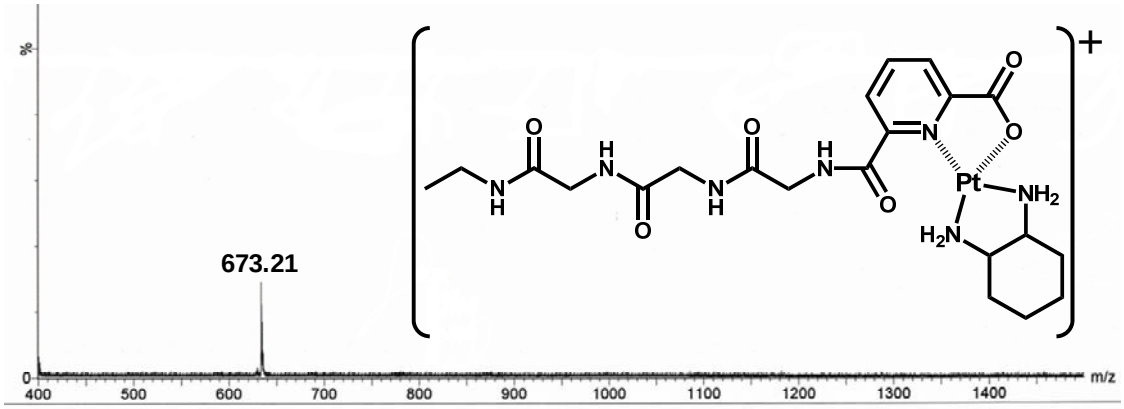

Figure S4. ESI-MS spectrum of the Pt-2L3-nanotube.

$$\text{2L3-nanotube} + \text{Aqueous DACH-Pt} \overset{\beta_1}{\rightleftharpoons} \text{Pt-2L3-nanotube}$$

$$A = \varepsilon[\text{Pt-2L3-nanotube}] + \varepsilon_{tube}[\text{2L3-nanotube}]$$

$$= \left(\frac{(\beta_1 C_{tube} + \beta_1 C_{Pt} + 1) - \sqrt{(\beta_1 C_{tube} + \beta_1 C_{Pt} + 1)^2 - 4\beta_1^2 C_{tube} C_{Pt}}}{2\beta_1} \right) (\varepsilon - \varepsilon_{tube}) + \varepsilon_{tube} C_{tube}$$

ε: Molar absorptivity of Pt-2L3-nanotube

ε_{tube} : Molar absorptivity of 2L3-nanotube

C_{tube} : Total concentration of 2L3-nanotube

C_{Pt} : Total concentration of aqueous DACH-Pt

Figure S5. The general equation of the stability constant (β_1) derived from the apparent absorbance (A) and total concentrations (C_{tube} and C_{Pt}) of the 2L3-nanotube and aqueous DACH-Pt.

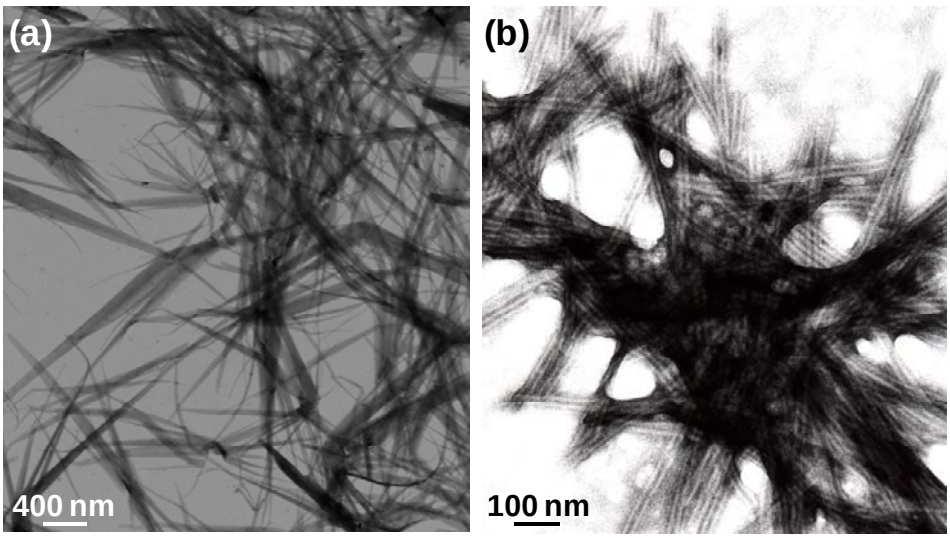

Figure S6. TEM images of the (a) nanotapes and (b) nanotubes after release of the DACH-Pt, which were negatively stained with phosphotungstate. The nanochannel of the nanotubes is visible and is characterized by a relatively darker contrast to the background.

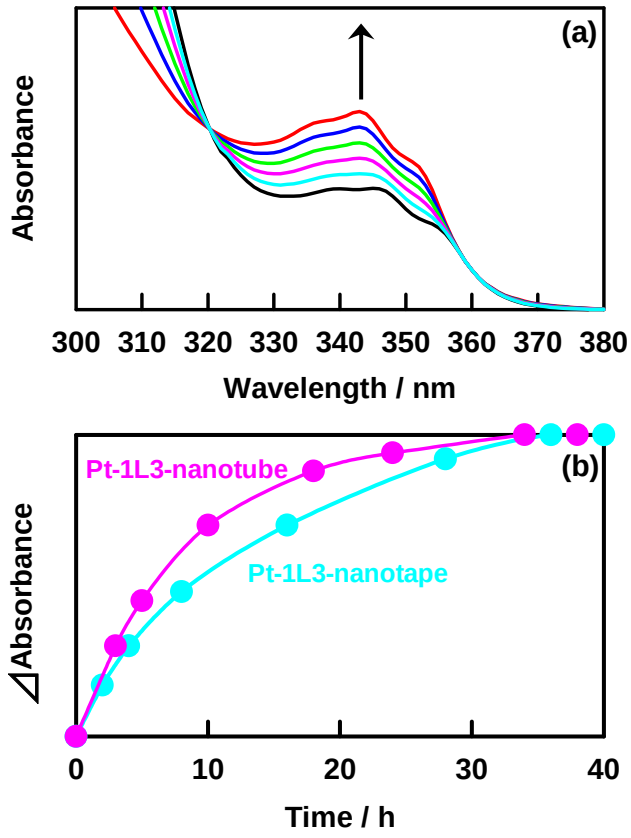

Figure S7. (a) The absorption spectral change of the Pt-2L3-nanotube and in the phosphate buffer saline from 0 (black line) to 40 h (red line). (b) Time dependence of the variation of the absorbance at 343 nm.