Support information for:
# Self-bonding and electrochemical properties of silica-coated nanowire composed of cobalt-coordinated peptide bundles

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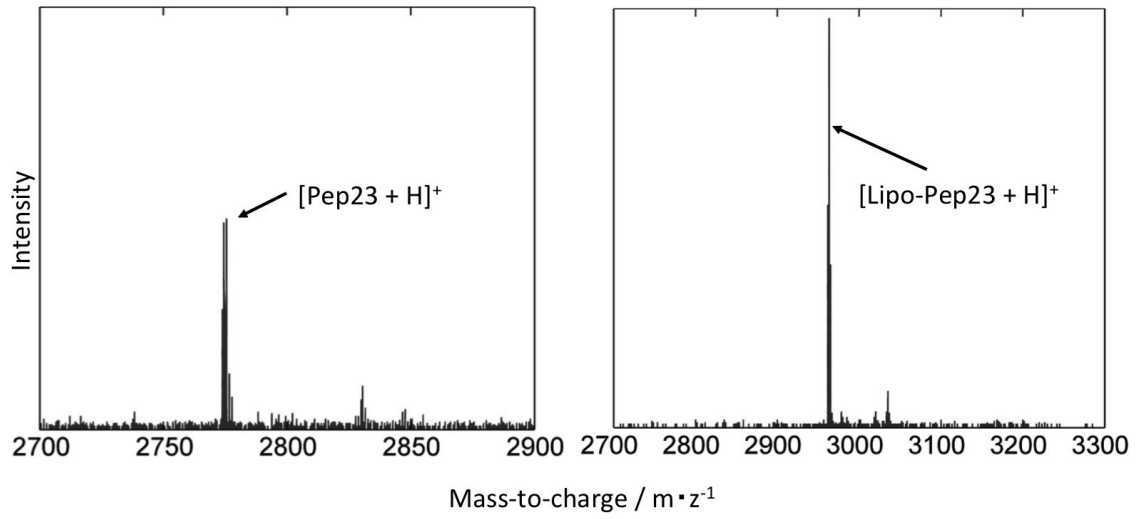

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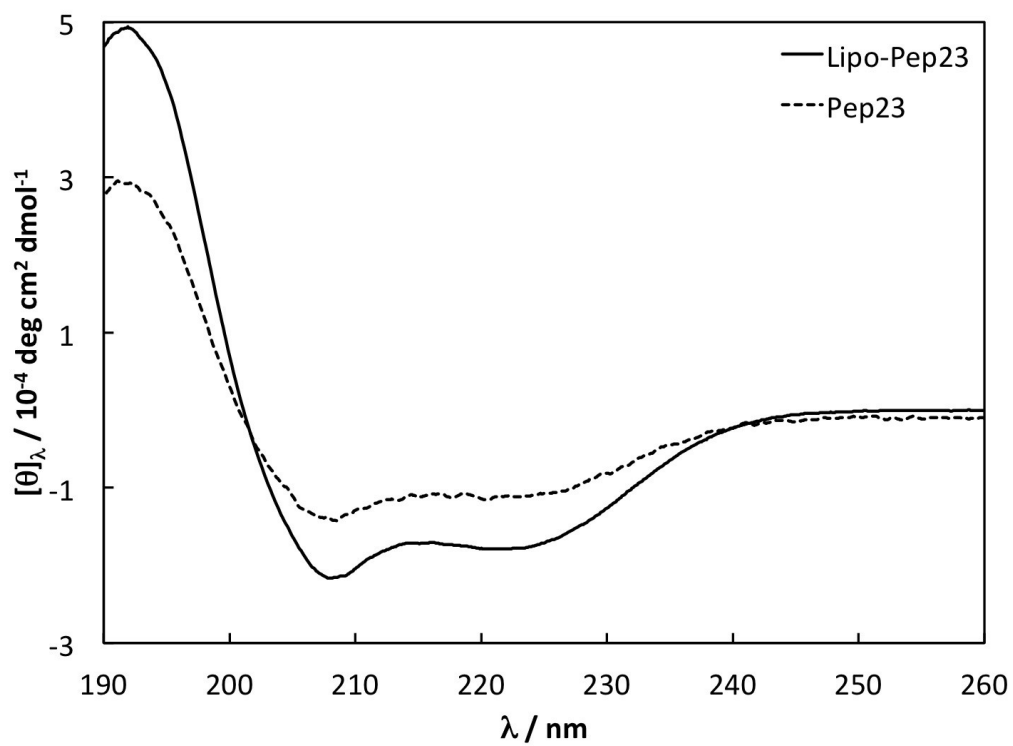*higuchi.masahiro@nitech.ac.jp* (Prof. Dr. M. Higuchi)


**Contents**

**S1.** *MALDI-TOF-MS spectra of the Pep23 and Lipo-Pep23.*

*S2. CD spectra of Pep23 and Lipo-Pep23 in ethanol.*



| Peptide | Conformation / % | | |
|---|---|---|---|
| | $\alpha$-helix | $\beta$-sheet | Random coil |
| Pep23 | 50 | 25 | 25 |
| Lipo-Pep23 | 47 | 21 | 32 |

*S3.* UV-vis spectrum of the mixture containing the Pep23 and Co(II) ion.
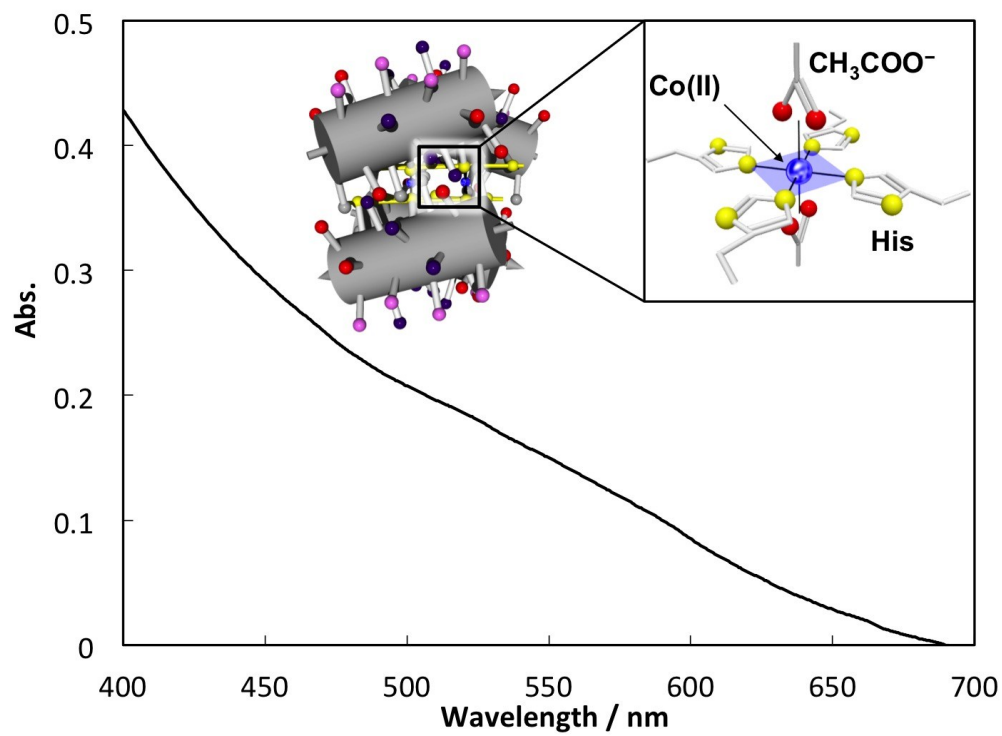


The molar ration of the Pep23 to Co(II), [Co(II)]/[His], was 0.25. The measurement was performed immediately after the added Co(II) ion.

*S4. Time dependence changes of absorbance at 530 nm of the Pep23 in ethanol after the addition of Co(II).*
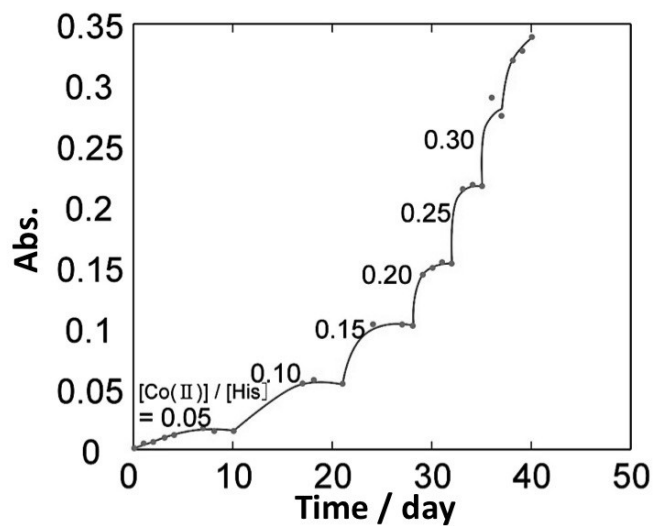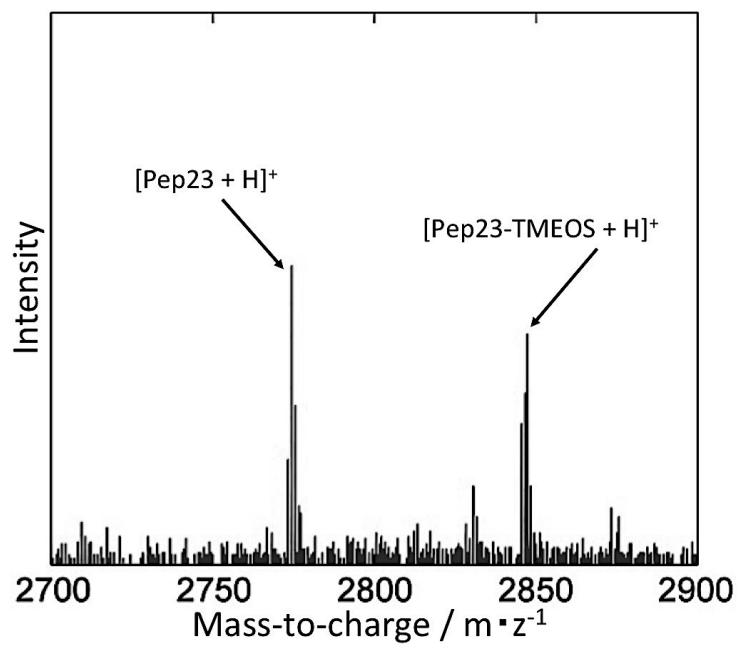


*Co(II) ion was serially added to ethanol solution containing the Pep23.*

**S5.** *TEM image of the (a) Co(II)-coordinated Pep23 bundle and schematic pictures of (b) α-helical Pep23 and (c) Co(II)-coordinated Pep23 bundle.*
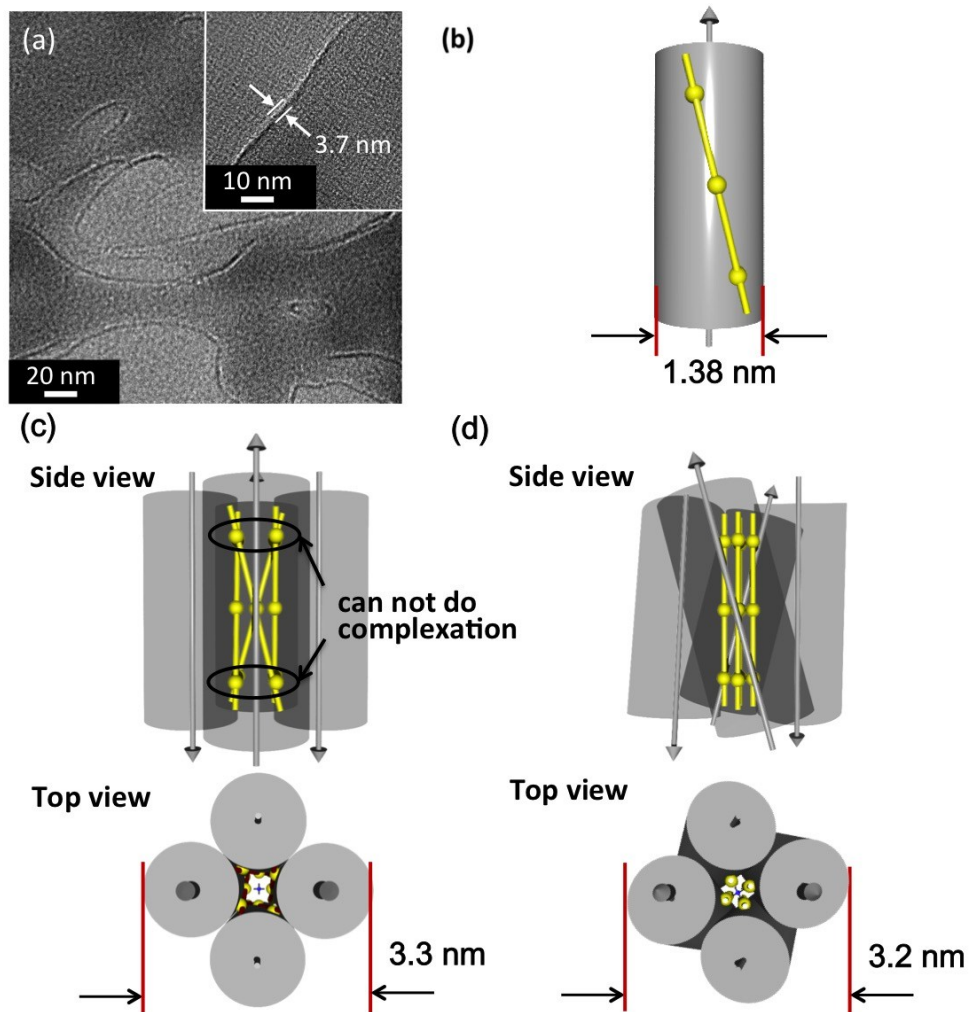
**S6.** *MALDI-TOF-MS spectrum of the product obtained by mixing of the Pep23 and TMEOS.*

*S7.* *I-V curves of the Co(II)-coordinated Pep23 nanowires bonded between the Lipo-Pep23-modified IDA electrodes prepared under the same experimental condition. We used the IDA electrode that showed the blue I-V curve for the silica mineralization.*