Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2017

**Supporting Information** 

## Combining vitamin B<sub>12</sub> to cisplatin-loaded porous silica nanoparticles *via* coordination: A facile approach to prepare targeted drug delivery system

Nattanida Thepphankulngarm,<sup>a</sup> Piyanuch Wonganan,<sup>b</sup> Chaweewan Sapcharoenkun,<sup>c</sup> Thawatchai Tuntulani,<sup>a</sup> Pannee Leeladee<sup>a,\*</sup>

<sup>a</sup>Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand <sup>b</sup>Department of Pharmacology, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, Thailand <sup>c</sup>National Nanotechnology Center, National Science and Technology Development Agency, Pathumthani 12120, Thailand



Figure S1. The SEM images of (a) PSNs-C-250 and (b) PSNs-C-300



Figure S2. FT-IR spectra of PSNs and PSNs-C





Figure S3. (a) The nitrogen sorption isotherm, Inset: MP-plot, and (b) XRD pattern of PSNs-C

(a)

(b)



Figure S4. UV-visible spectra of B12 and [B12-CDDP]<sup>+</sup>



**Figure S5.** Photographs for the solution of (a) B12, (b) reduced B12 (B12 + NaBH<sub>4</sub>), and (c) CDDP@PSNs-C-B12 + NaBH<sub>4</sub>



Figure S6. UV-vis spectra and calibration curve for [(Co<sup>3+</sup>)[B12-CDDP]]<sup>+</sup>