Electronic Supplementary Material (ESI) for RSC Advances.

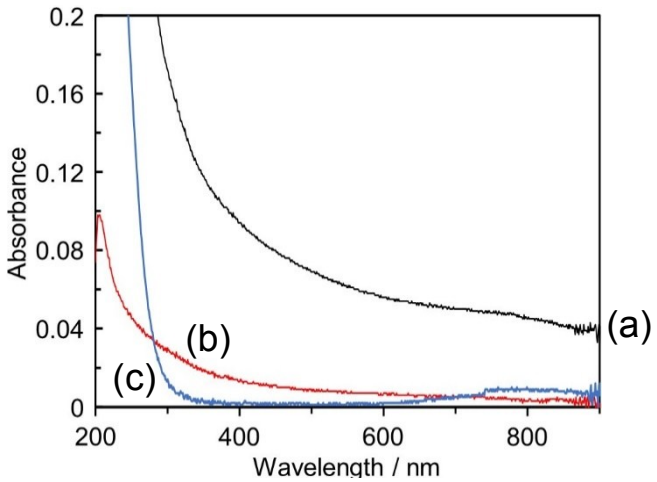

Figure S1. UV-vis-NIR absorbance spectra of (a) the Cu−Sapo solution before the UV irradiation (black), (b) the Sapo dispersion without copper acetate (red), and (c) the copper acetate solution without Sapo (blue), respectively.

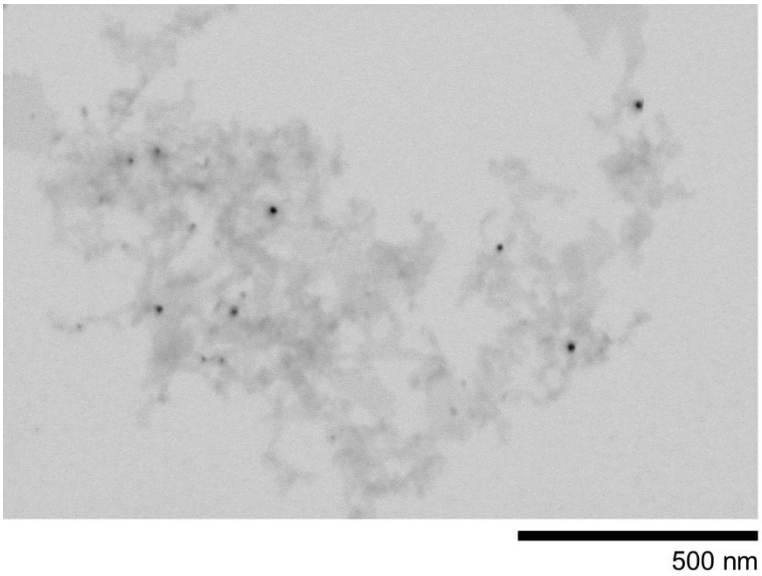

Figure S2. A TEM image in low magnification of {0.5:0.5}.

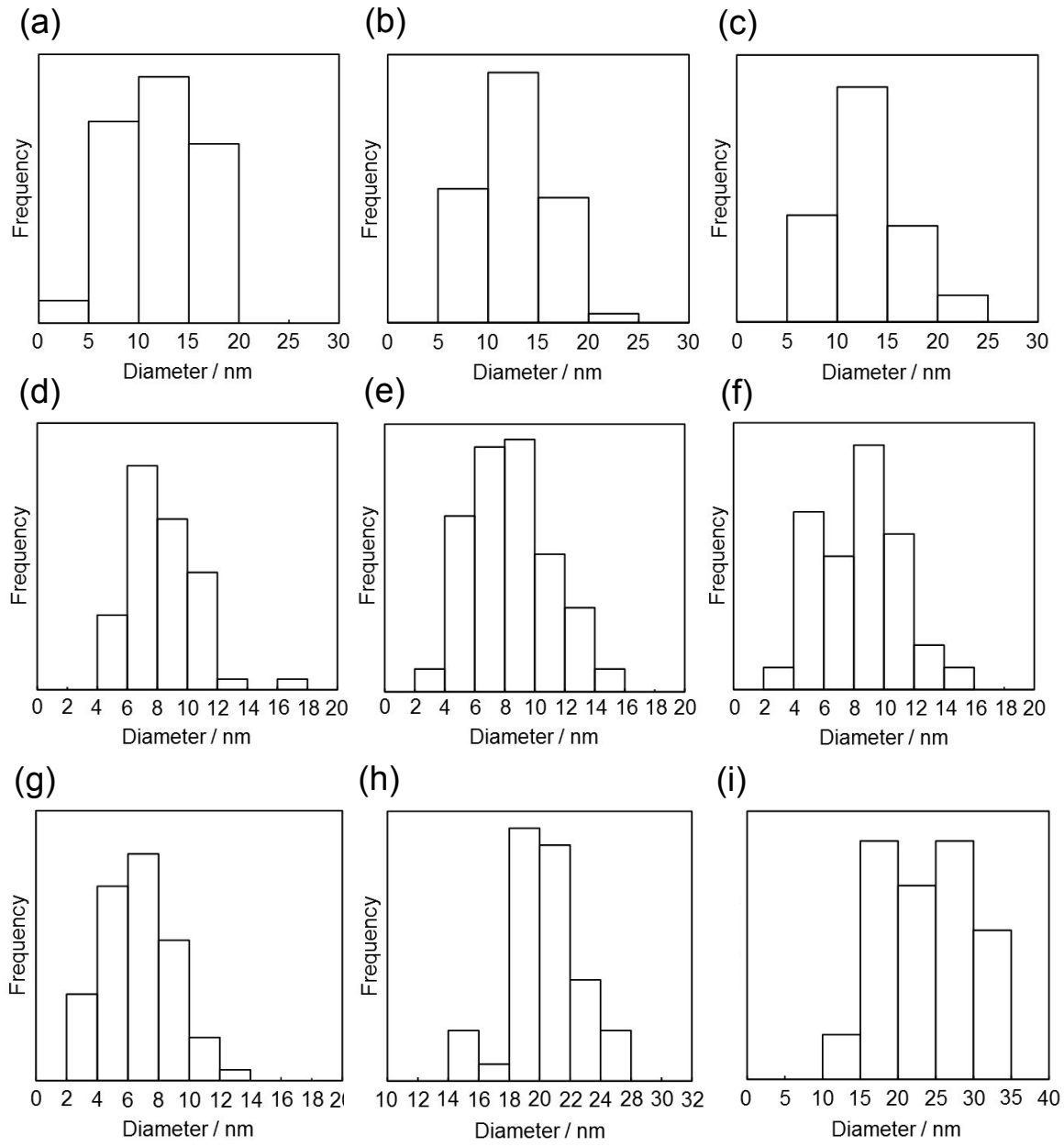

Figure S3. Histograms of the diameter of the Cu NPs: (a) {0.5:0.5}, (b) {1:1}, (c) {2:2}, (d) {0.2:0.5}, (e) {0.4:1}, (f) {0.8:2}, (g) {0.1:0.5}, (h) {1:1}, and (i) {2:2}, respectively. Samples (a)-(g) were prepared with the slow drip rate, while (h) and (i) were prepared with the fast drip rate.

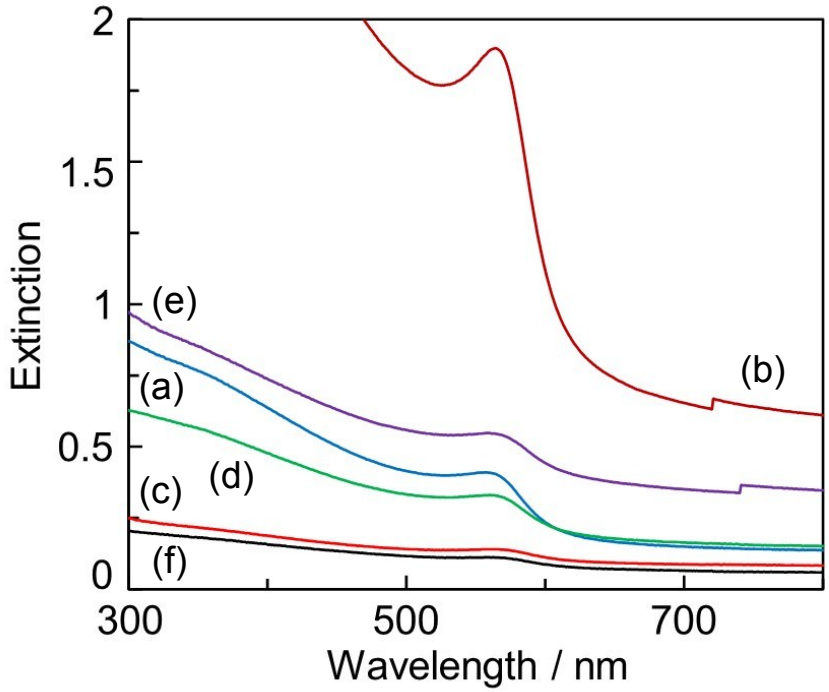

Figure S4. UV-vis-NIR extinction spectra of (a) {1:1} (blue), (b) {2:2} (brown), (c) {0.2:0.5} (red), (d) {0.4:1} (green), (e) {0.8:2} (purple) and (f) {0.1:0.5} (black), respectively.

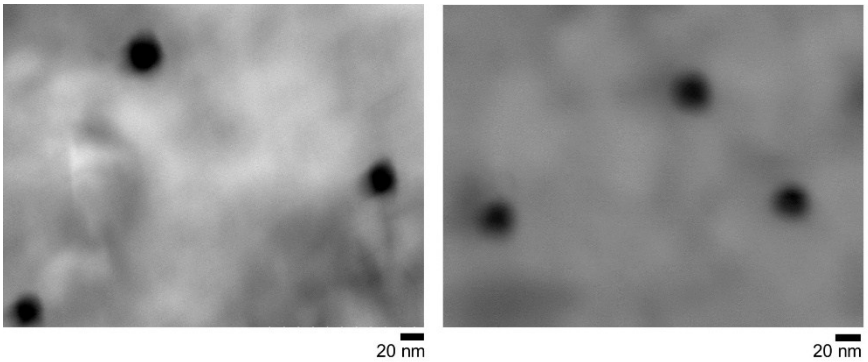

Figure S5. TEM images of (a) {1:1} and (b) {2:2} prepared with the fast drip rate, respectively.

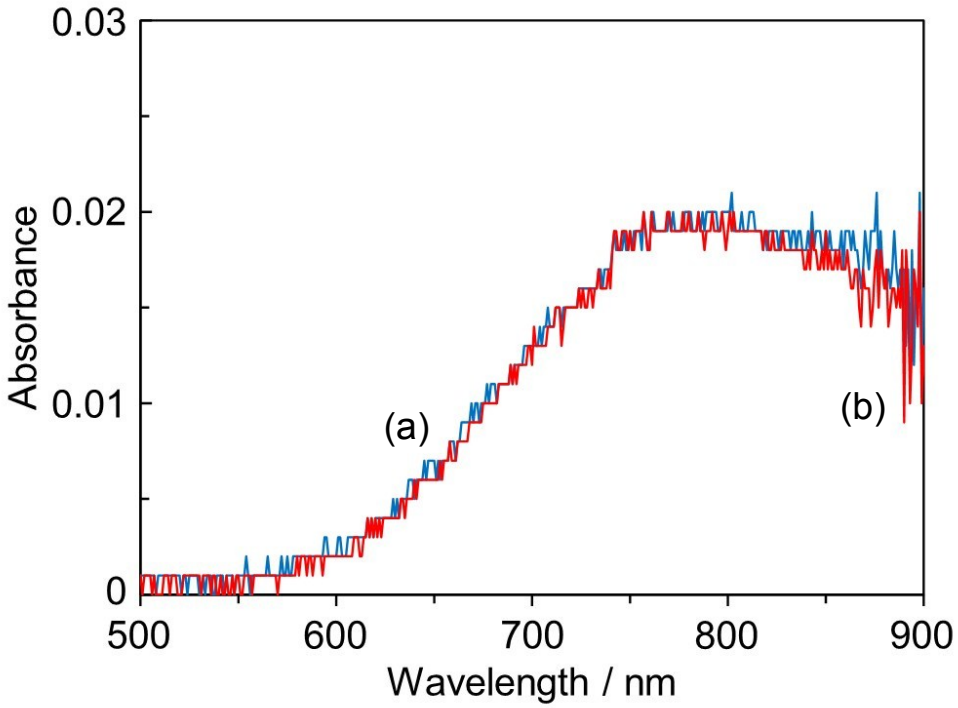

Figure S6. Absorption bands of Cu^{2+} in the supernatant obtained from {2:2} before the UV irradiation prepared by (a) the slow (blue) and (b) the fast drip rate (red), respectively.

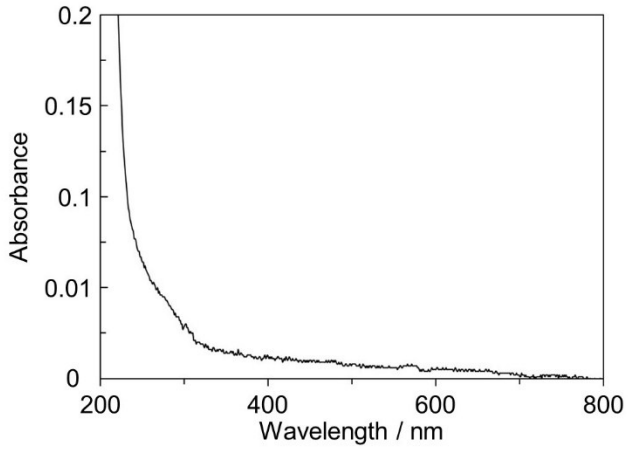

Figure. S7. An UV-vis-NIR absorption spectrum of the supernatant in {2:2}.

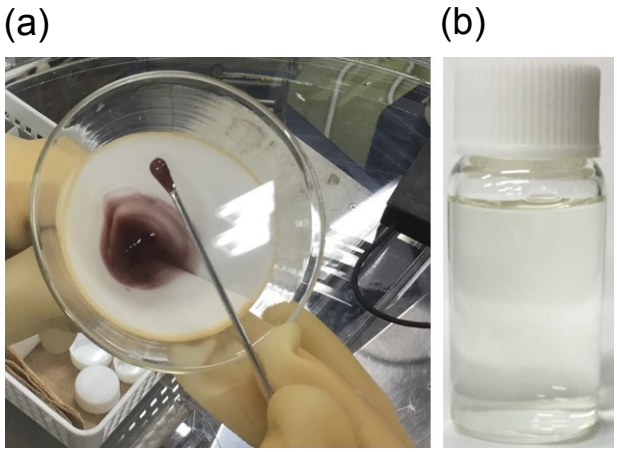

Figure S8. Photograph of the Cu−Sapo solution by the filtration: (a) the residue and (b) the filtrate, respectively.

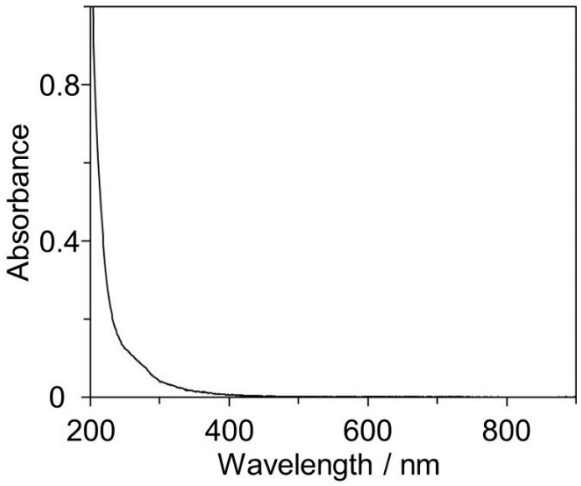

Figure S9. An UV-vis-NIR absorption spectrum of the filtrate.

Figure S10. Phase separation of {0.5:0.5} before the UV irradiation.

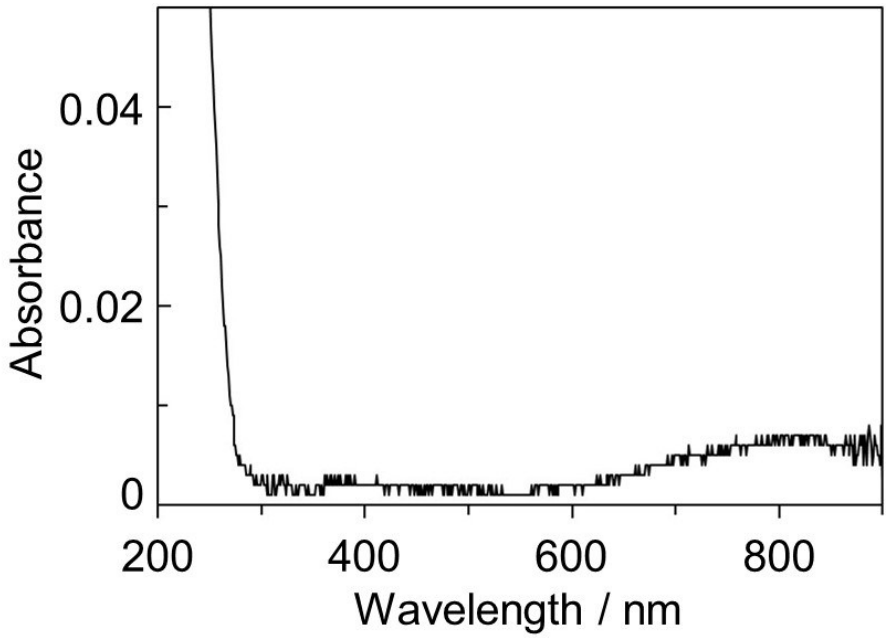

Figure S11. An UV-vis-NIR absorption spectrum of the supernatant of {0.5:0.5} before the UV irradiation.