

## Supplementary Information

### Syntheses of Ag/Cu alloy and Ag/Cu alloy core Cu shell nanoparticles using a polyol method

Masaharu Tsuji,<sup>\*a,b,c</sup> Sachie Hikino,<sup>a</sup> Ryuichi Tanabe,<sup>b</sup> Mika Matsunaga<sup>c</sup> and Yoshiyuki Sano<sup>d</sup>

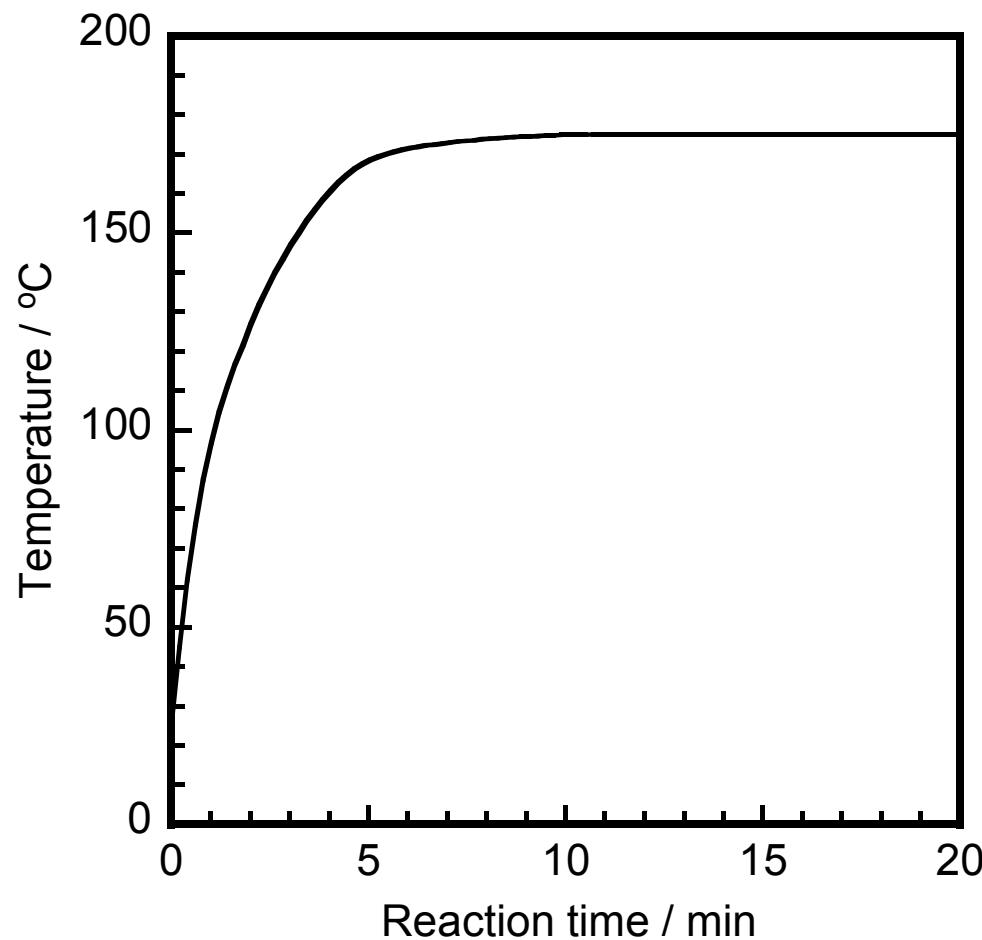
<sup>a</sup>*Institute for Materials Chemistry and Engineering, Kyushu University, Kasuga 816-8580, Japan,*

<sup>b</sup>*Department of Applied Science for Electronics and Materials, Graduate School of Engineering Sciences, Kyushu University, Kasuga 816-8580, Japan,*

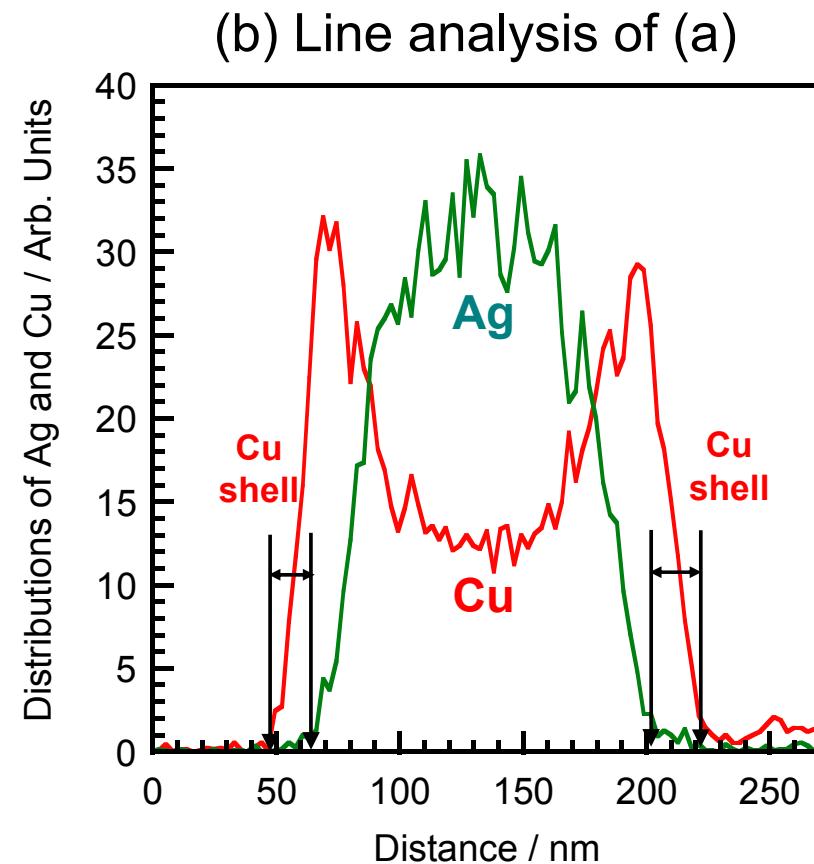
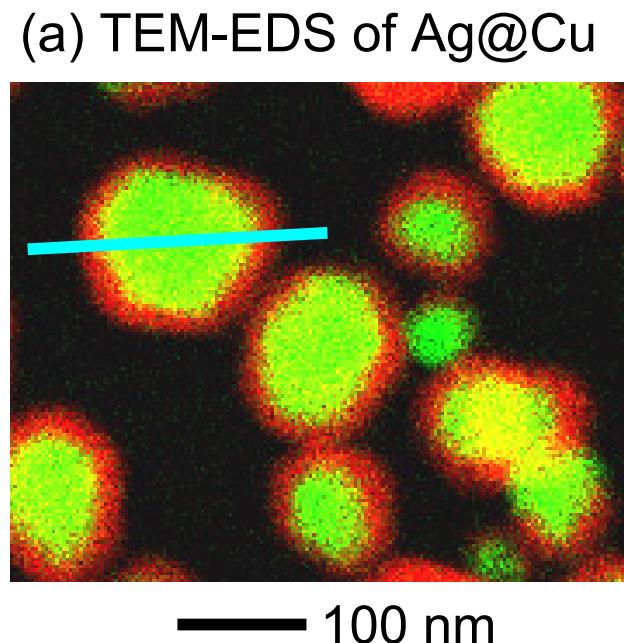
<sup>c</sup>*Department of Energy Science and Engineering, Faculty of Engineering, Kyushu University, Kasuga 816-8580, Japan,*

<sup>d</sup>*R & D Department, DIC Corporation, Sakura 285-8668, Japan*

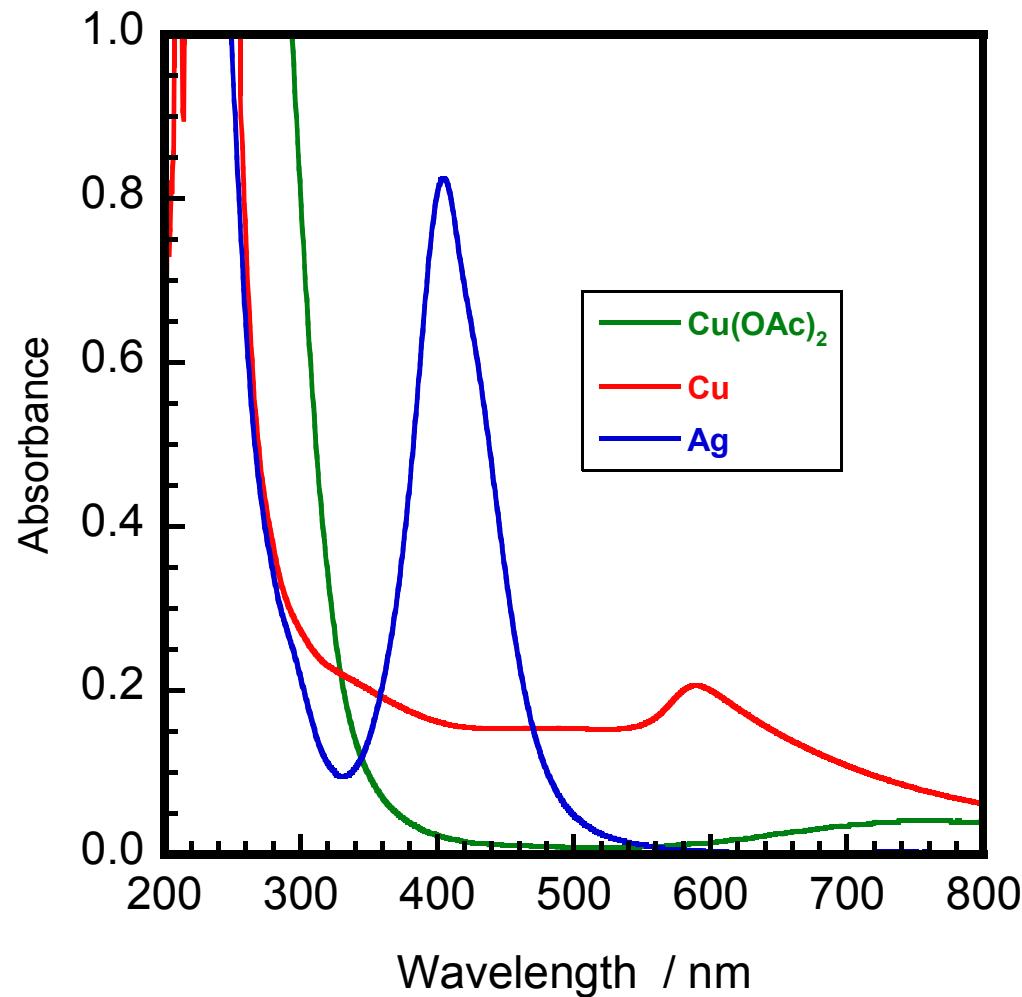
\*To whom correspondence should be addressed: E-mail: tsuji@cm.kyushu-u.ac.jp



**Fig. S1** Temperature profile of reagent solution after injection of  $\text{AgNO}_3/\text{Cu}(\text{OAc})_2\cdot\text{H}_2\text{O}/\text{PVP}$  mixtures.



**Fig. S2** (a) TEM-EDS of Ag@Cu particles and (b) its line analysis along cross section line shown in (a).



**Fig. S3** UV-Vis extinction spectra of  $\text{Cu(OAc)}_2$ , Cu particles, and Ag particles.