## One-Step Synthesis of Silver Nanoplates with a High Aspect Ratio: Enhancing Lateral Growth by Coordination

Young Min Park,<sup>a,†</sup> Byung Gon Lee,<sup>a,†</sup> Jong-Il Weon,<sup>b</sup> and Mun Ho Kim<sup>a,\*</sup>

<sup>a</sup>Department of Polymer Engineering, Pukyong National University, 365 Sinseon-ro, Nam-gu,

Busan 48547, Republic of Korea.

<sup>b</sup>Department of Safety Engineering, Dongguk University, 707 Seokjang-dong, Gyeongju,

Gyeongbuk 780-714, Republic of Korea

Email: munho@pknu.ac.kr

<sup>*t*</sup>These two authors contributed equally to this work.

**Supporting Figures** 



Fig. S1. TEM image of Ag nanoplates formed in pure acetonitrile. The w/w ratio of PVP (29 kDa) to AgNO<sub>3</sub> was 19.5. All syntheses were performed at 100 °C over a period of 24 h.



Fig. S2. Plot of the lateral dimension of the Ag nanoplates as a function of the volume ratio of acetonitrile.



**Fig. S3.** Size distribution of Ag nanoplates formed in the presence of acetonitrile (sample shown in Figure 1B).



Fig. S4. AFM images and corresponding height profiles of the Ag nanoplates shown in Figure 1C. The thickness values of these Ag nanoplates were measured to be approximately 30 nm.



Fig. S5. Plot of the lateral dimension of Ag nanoplates as a function of reaction time.



**Fig. S6.** TEM image of Ag nanoplates formed in pure NMP. The w/w ratio PVP (29 kDa) to AgNO<sub>3</sub> was 9.75. All syntheses were performed at 100 °C over a period of 24 h.



Fig. S7. TGA curves of the conductive patterns formed by the Ag nanoplates used in the electrical conductivity measurements.