Supporting Information for

Facile Synthesis of ZnS-AgInS2 Solid Solution Nanoparticles for a Color-Adjustable Luminophore (JA0750470)

Tsukasa Torimoto,1* Tomohiro Adachi,1 Ken-ichi Okazaki,1 Miwa Sakuraoka,2 Tamaki Shibayama,3 Bunsho Ohtani,2 Akihiko Kudo,4 and Susumu Kuwabata5

1 Department of Crystalline Materials Science, Graduate School of Engineering, Nagoya University, Chikusa-ku, Nagoya 464-8603, Japan, 2Catalysis Research Center, Hokkaido University, Sapporo 001-0021, Japan, 3Center for Advanced Research of Energy Conversion Materials, Hokkaido University, Sapporo 060–8628, Japan, 4Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, 1-3 Kagurazaka, Shinjuku-ku, Tokyo 162-8601, Japan, 5Department of Applied Chemistry, Graduate School of Engineering, Osaka University, Suita, Osaka 565-0871, Japan.

E-mail: torimoto@apchem.nagoya-u.ac.jp
Figure S1. TEM images of ZAIS particles prepared by pyrolysis of $(\text{AgIn})_x\text{Zn}_{2(1-x)}(\text{S}_2\text{CN(C}_2\text{H}_5)_2)_4$. (a) A typical image of nanoparticles prepared with $x= 1.0$ over a large area. (b) Images with high magnification of individual particles. The value of $x$ is indicated in the figure.
Figure S2. FTIR spectra of ZAIS particles prepared with x = 1.0. The characteristic peaks of oleylamine were observed at 3007 (olefinic C-H stretching), 2924 (asymmetric CH$_2$ stretching), 2853 (symmetric CH$_2$ stretching), and 1583 cm$^{-1}$ (NH$_2$ deformation).
Figure S3. Photoluminescence excitation (solid lines) and absorption spectra (dotted lines) of ZAIS particles. The value of $x$ in $(\text{AgIn})_x \text{Zn}_{2(1-x)}(\text{S}_2\text{CN(C}_2\text{H}_5)_2)_4$ used as a precursor is indicated in the figure.