
\textbf{Ag}_{7}(\text{MBISA})_{6} \text{ Nanoclusters Conjugated with Quinacrine for FRET-enhanced Photodynamic Activity under Visible Light Irradiation}

TOMINAGA C.\textsuperscript{1}, HIKOSOU D.\textsuperscript{1}, OSAKA I.\textsuperscript{2}, KAWASAK H.\textsuperscript{1,*}

\textsuperscript{1} Department of Chemistry and Materials Engineering, Faculty of Chemistry, Materials and Bioengineering, Kansai University, Suita-shi, Osaka, 564-8680, Japan.

\textsuperscript{2} Center for Nano Materials and Technology, Advanced Institute of Science and Technology, 1-1 Asahidai, Nomi-shi, Ishikawa, 923-1292, Japan.

*Corresponding author. Email: hkawa@kansai-u.ac.jp
Fig. S1  UV-vis spectra of Ag₇(MBISA)₆-QC conjugate before and after the filtration.

Fig. S2  UV-vis spectra of Ag₇(MBISA)₆ NCs in an aqueous media for the as-prepared sample, band A, and band B after gel electrophoresis (shown on the right).

Fig. S3  ESI-mass spectra of Ag₇(MBISA)₆ NCs.
Upper: experimental. Lower: calculated assuming the formula: Ag₇(C₇H₅N₂O₃S₂)₆Na₂.
Fig.S4  UV-vis spectra of Ag\textsubscript{7}(MBISA)\textsubscript{6} NCs and Ag\textsubscript{7}(MBISA)\textsubscript{6}–QC conjugate during white LED light irradiation.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig_s4}
\caption{Fig.S4 (a) UV-vis spectra of ABDA in the presence of Ag\textsubscript{35}(SG)\textsubscript{18} NCs during white LED light irradiation and Ag\textsubscript{75}(SG)\textsubscript{40} NCs in an aqueous media; (c) UV-vis spectra of ABDA in the presence of Ag\textsubscript{35}(SG)\textsubscript{18} NCs during white LED light irradiation, and Ag\textsubscript{75}(SG)\textsubscript{40} NCs in an aqueous media.}
\end{figure}
Fig. S6  (a, b) UV-vis spectra of ABDA in the presence of BSA-Au$_{25}$ NCs during white LED light irradiation and BSA-Au$_{25}$ NCs in an aqueous media; (c, d) UV-vis spectra of ABDA in the presence of BSA-Ag$_{14}$ NCs during white LED light irradiation and BSA-Ag$_{14}$ NCs in an aqueous media.

Fig. S7  (a, b) UV-vis spectra of ABDA in the presence of Ag$_{25}$(DHLA)$_{14}$ NCs during white LED light irradiation and Ag$_{25}$(DHLA)$_{14}$ NCs in an aqueous media.
Fig. S8  UV-vis spectra of ABDA in the presence of Ag$_7$(MBISA)$_6$-QC conjugates with different molar ratios of Ag$_7$(MBISA)$_6$ to QC or QC during white LED light irradiation. The molar ratio of Ag$_7$(MBISA)$_6$ to QC is shown in the figure. (a) Ag$_7$(MBISA)$_6$: QC = 1: 0.1, (b) 1:0.5, (c) 1:0.7, and (d) 0:1. The ratio of 0:1 represents ABDA in the presence of only QC.

Fig. S9  UV-vis spectrum of aqueous quinacrine.