

Electronic Supplementary Information

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Bandgap-Tuned Fluorescent CuGaS₂/ZnS Core/Shell Quantum Dots for Photovoltaic Applications

Shunnosuke Hase, Yoshiki Iso,* and Tetsuhiko Isobe*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University,

3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

*Corresponding Authors:

Yoshiki Iso – E-mail: iso@applc.keio.ac.jp; Tel.: +81 45 566 1558; Fax: +81 45 566

1551; orcid.org/0000-0001-7483-2828

Tetsuhiko Isobe – E-mail: isobe@applc.keio.ac.jp; Tel.: +81 45 566 1554; Fax: +81 45

566 1551; orcid.org/0000-0002-0868-5425

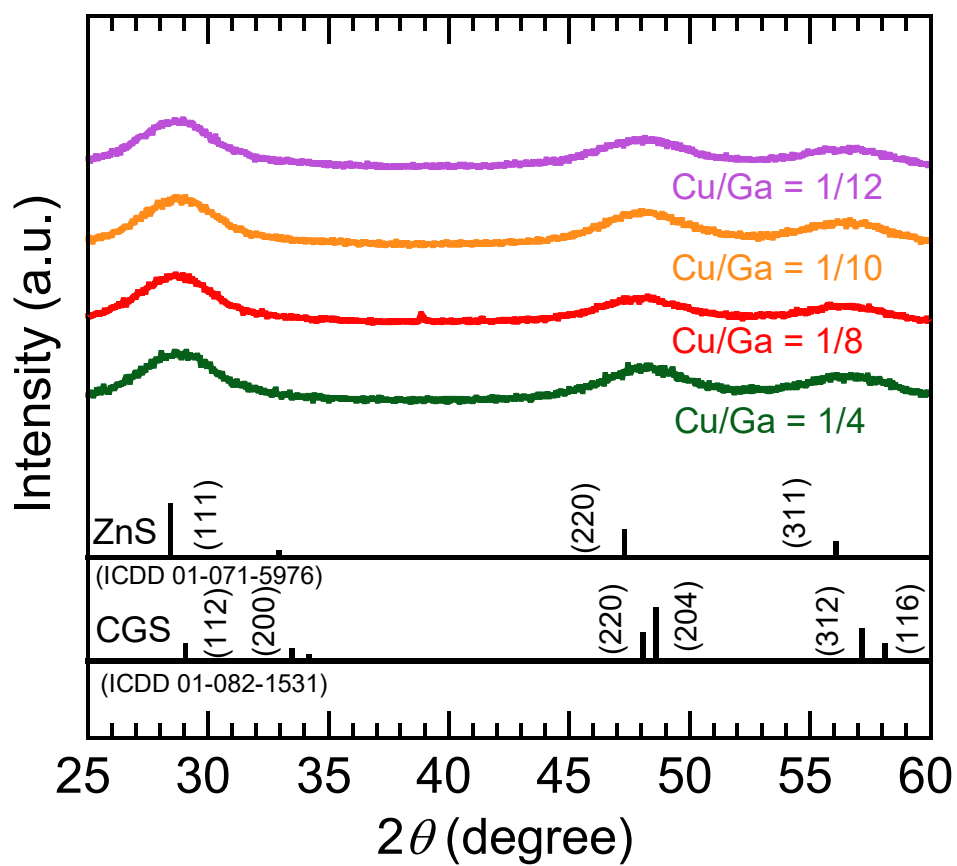


Fig. S1 XRD profiles of CGS/ZnS QDs at Cu/Ga = 1/4, 1/8, 1/10, and 1/12. ICDD data of CGS and ZnS are also shown.

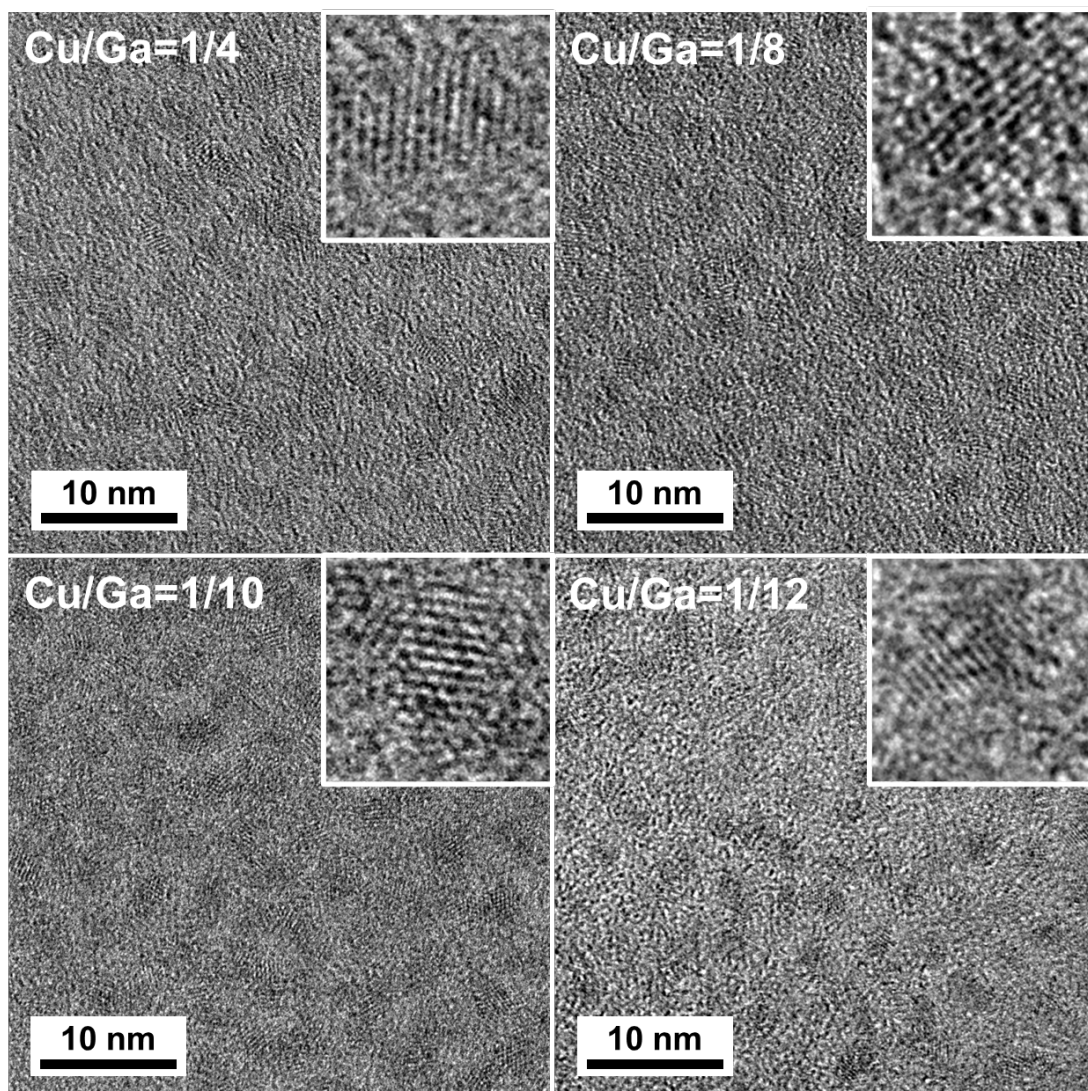


Fig. S2 High-resolution TEM images of the QDs. Observed particles were unclear due to scattering of the electron beam by the organic molecules on QDs. Lattice fringes indicate the presence of nanocrystals.

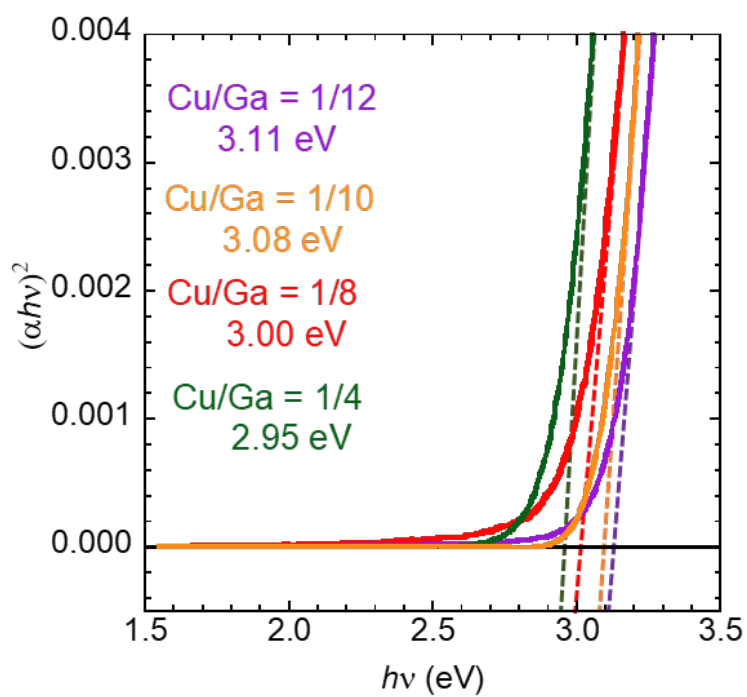


Fig. S3 Tauc plots converted from the UV-vis absorption spectra of Fig. 2.

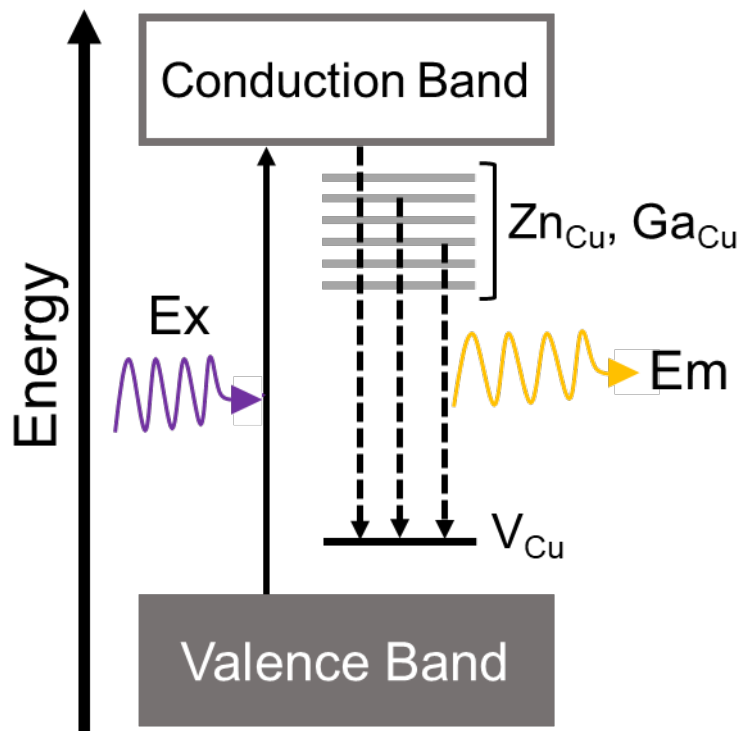


Fig. S4 Schematic illustration of the PL mechanism of CGS/ZnS QDs.^{S1}

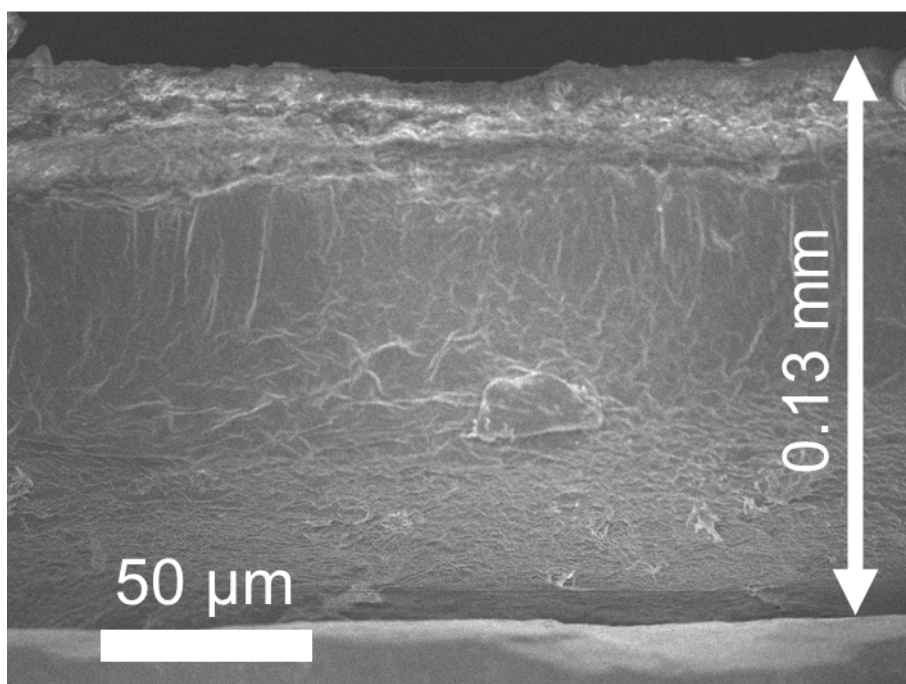


Fig. S5 Cross-sectional SEM image of a QDs@EVA film.

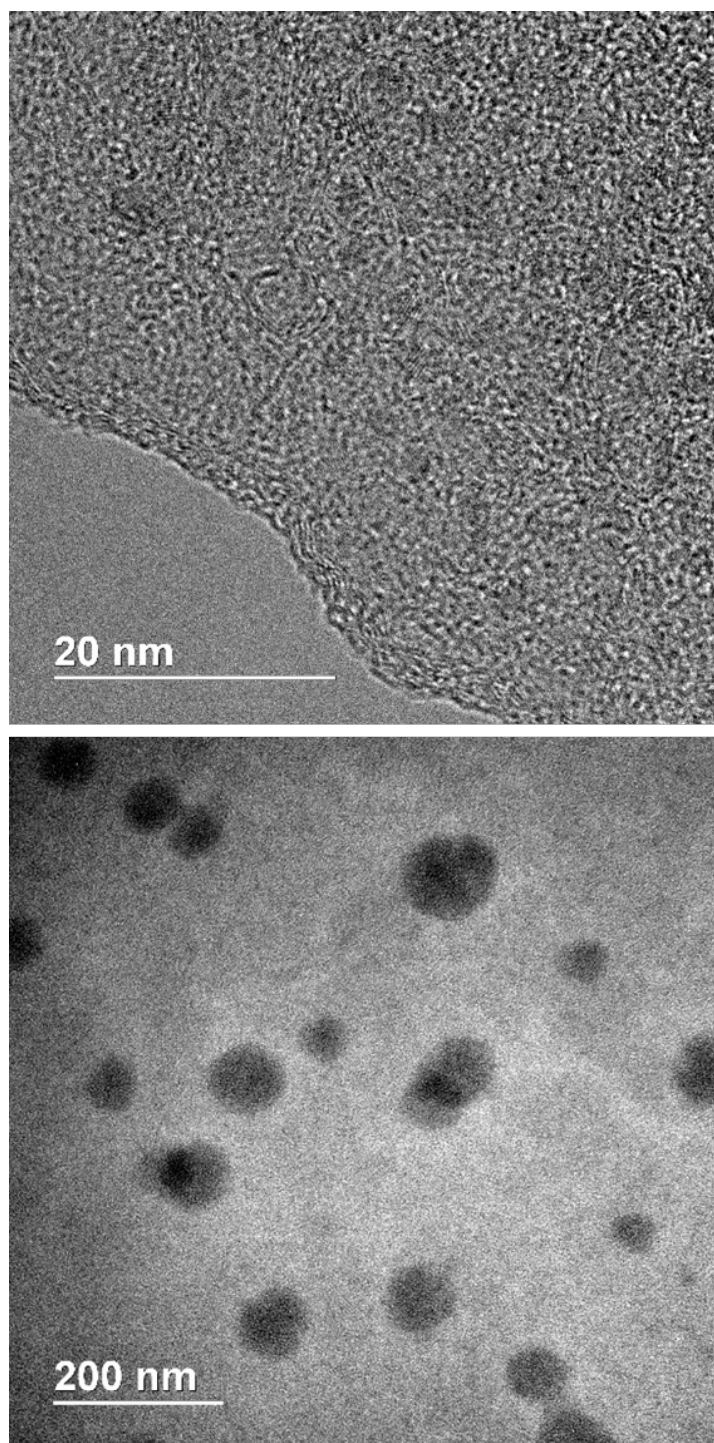


Fig. S6 TEM images of dispersed and aggregated QDs in EVA for a QDs@EVA film.

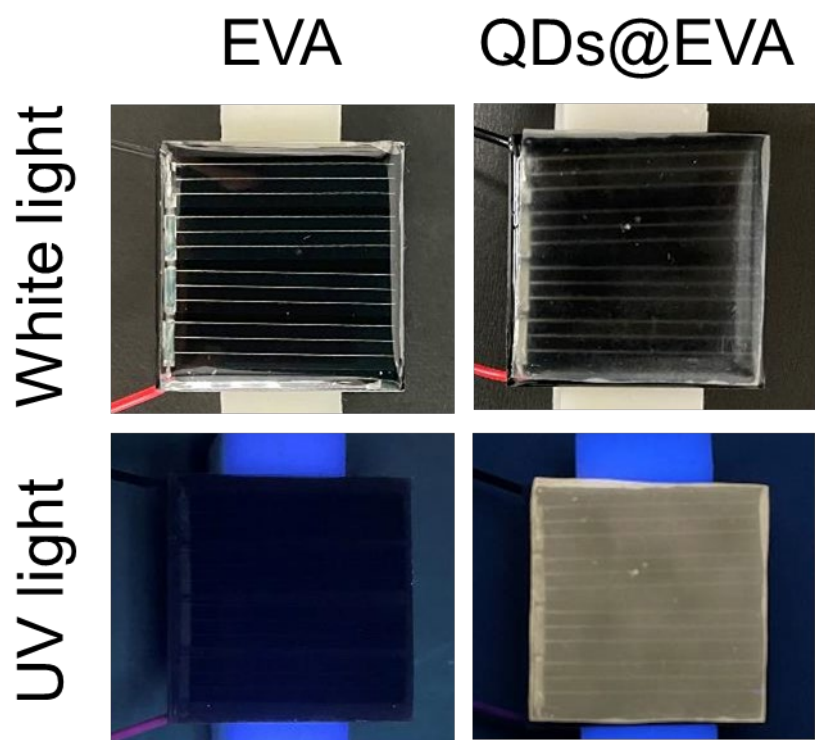


Fig. S7 Commercial c-Si solar module with a blank EVA film and a QDs@EVA film under white light and 365 nm UV light.

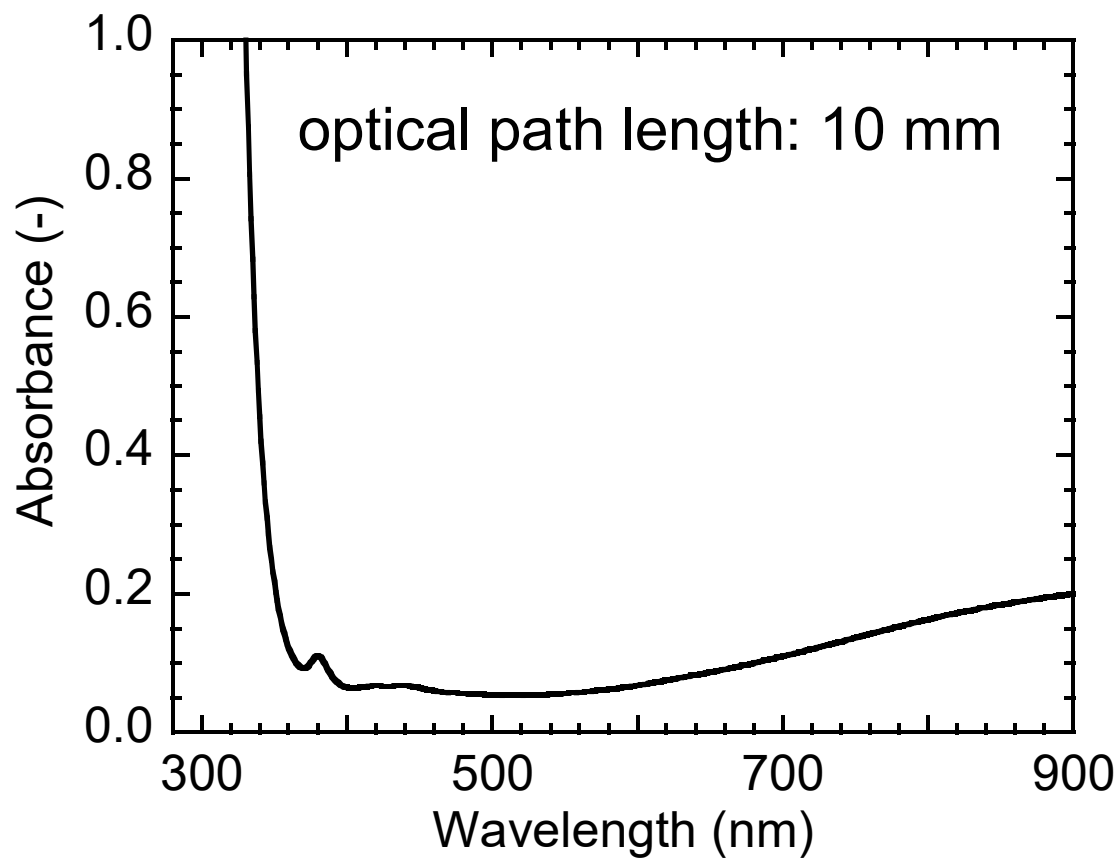


Fig. S8 UV-vis absorption spectrum of a soda glass plate for LSC.

Reference

[S1] M. Jalalah, M. S. Al-Assiri, and J.-G. Park, *Adv. Energy Mater.*, 2018, **8**, 1703418.