

Supporting Information

Relationship between spatially heterogeneous reaction dynamics and photochemical kinetics in single crystals of anthracene derivatives

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Table of Contents for supporting videos.

Movie S1. Associated with Figure 2a.

Movie S2. Associated with Figure 2b.

Movie S3. Associated with Figure 2c.

Movie S4. Associated with Figure 2d.

Movie S5. Fluorescence intensity change of **9MA** single crystal

Movie S6. Fluorescence intensity change of **9AcA** single crystal

Movie S7. Fluorescence intensity change of **9CA** single crystal

Movie S8. Fluorescence intensity change of **9AA** single crystal

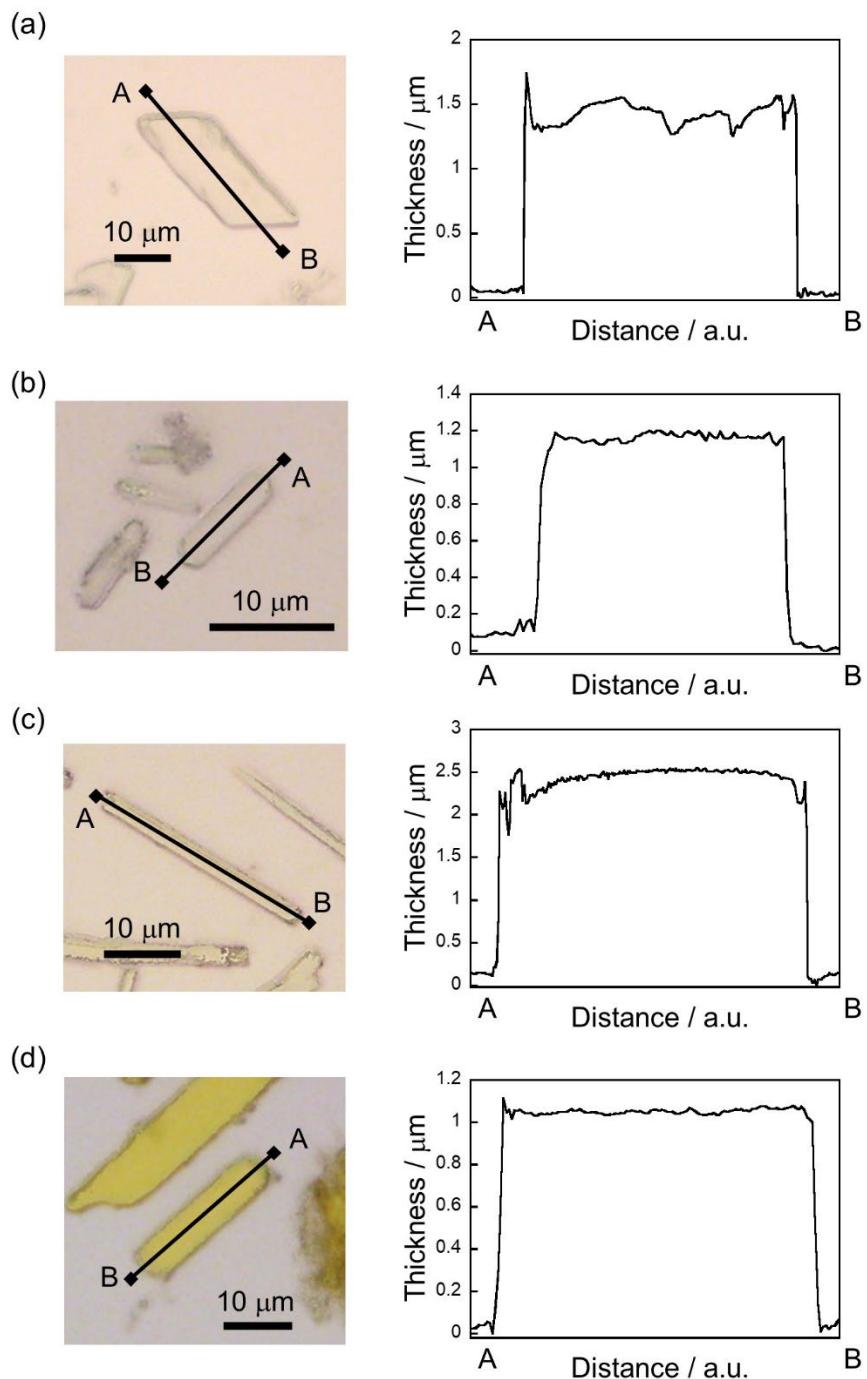


Fig. S1. Profiles of crystal thickness for (a) 9MA, (b) 9AcA, (c) 9CA, and (d) 9AA.

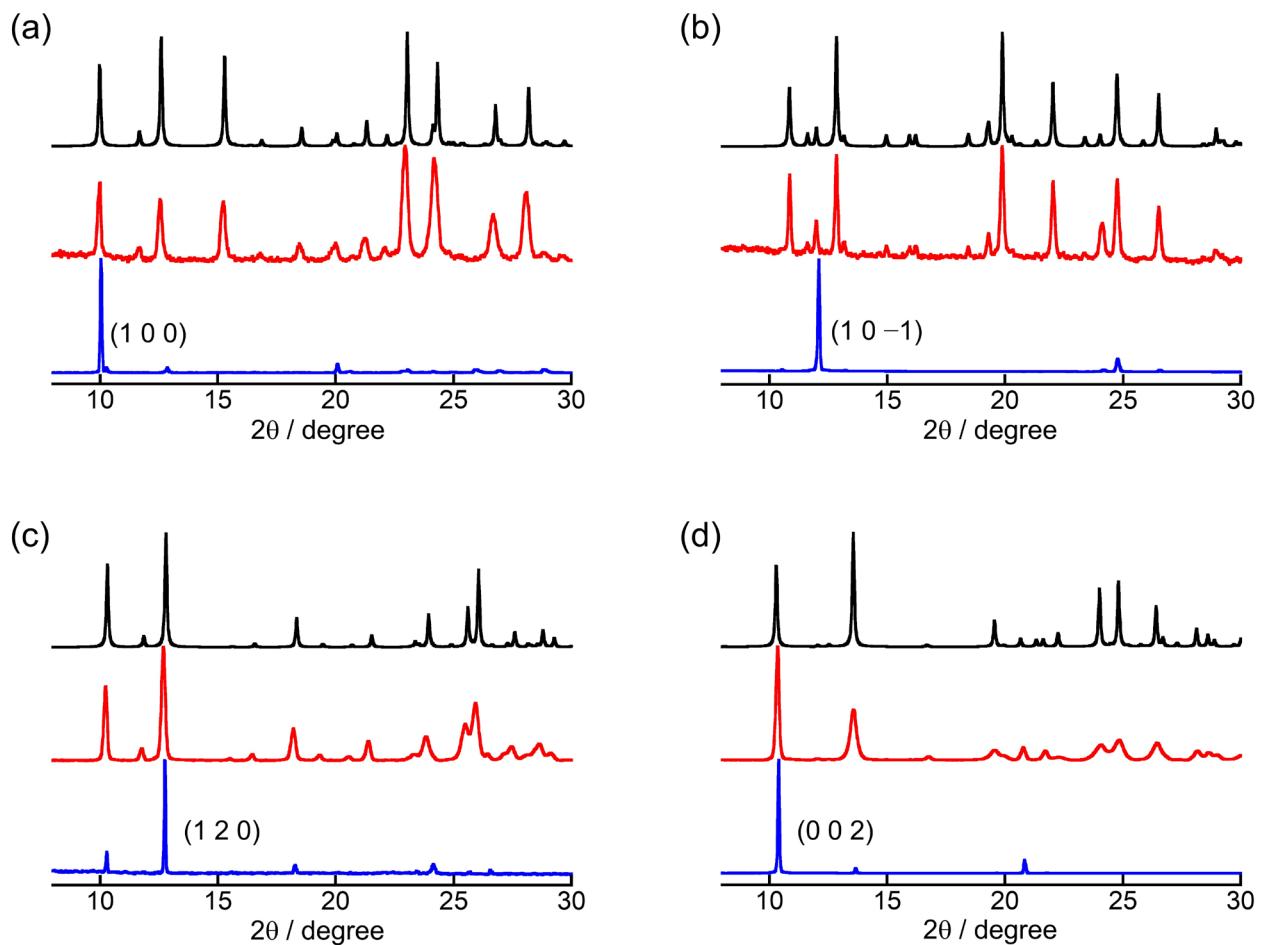


Fig. S2 PXRD pattern calculated from single crystal X-ray crystallographic data (black line), the pattern of powder crystals (red line), and the pattern of single crystals (blue line) for (a) **9MA**, (b) **9AcA**, (c) **9CA**, and (d) **9AA**.

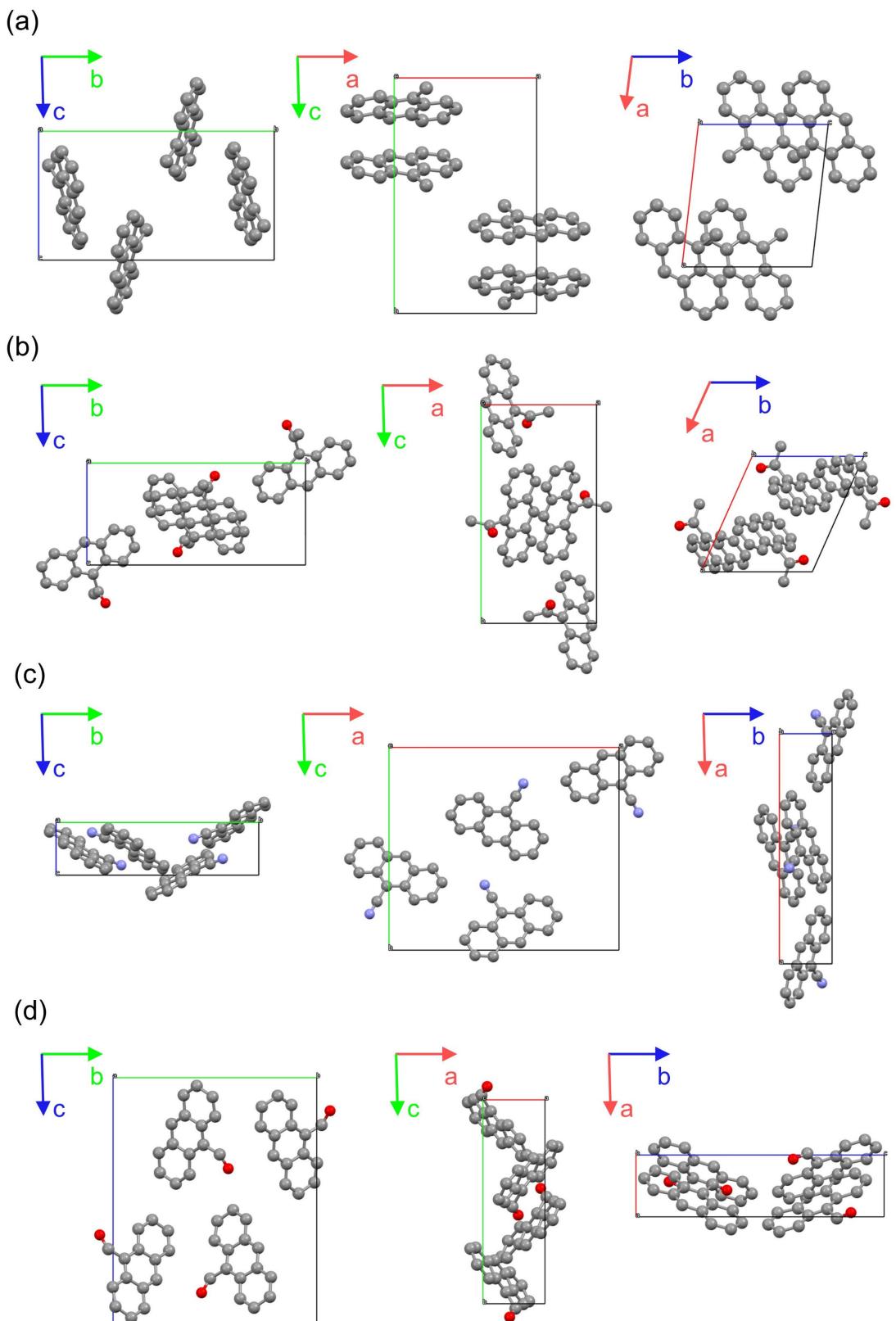


Fig. S3 Molecular packing diagrams for crystals of (a) **9MA**, (b) **9AcA**, (c) **9CA**, and (d) **9AA**.

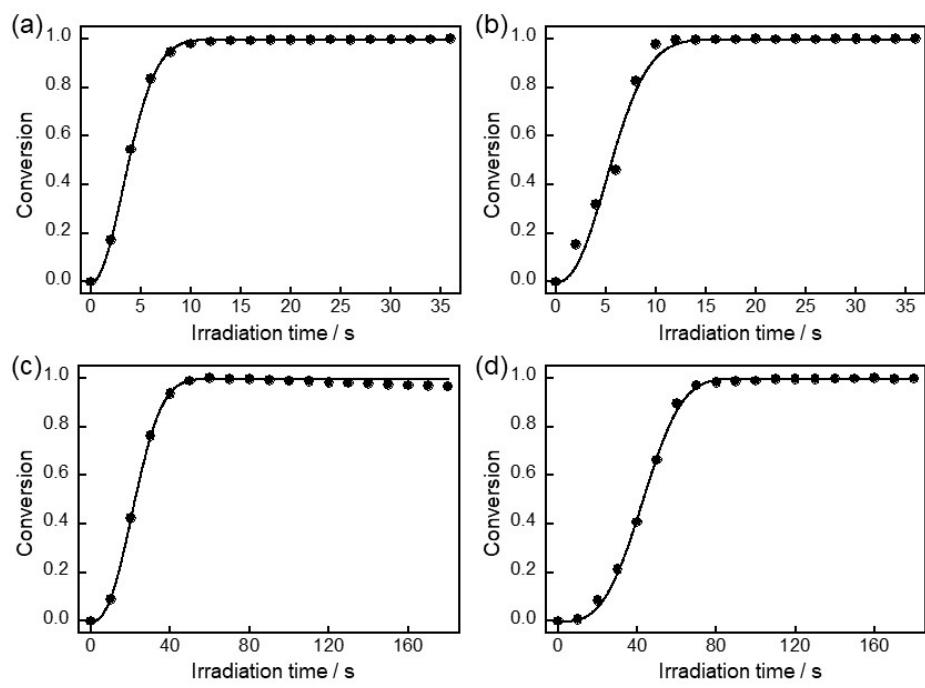


Fig. S4 Fitting of the change in conversion calculated from absorbance decay profiles of (a) 9MA (sample 1), (b) 9AcA (sample 4), (c) 9CA (sample 7), and (d) 9AA (sample 10) using Eq. (1).

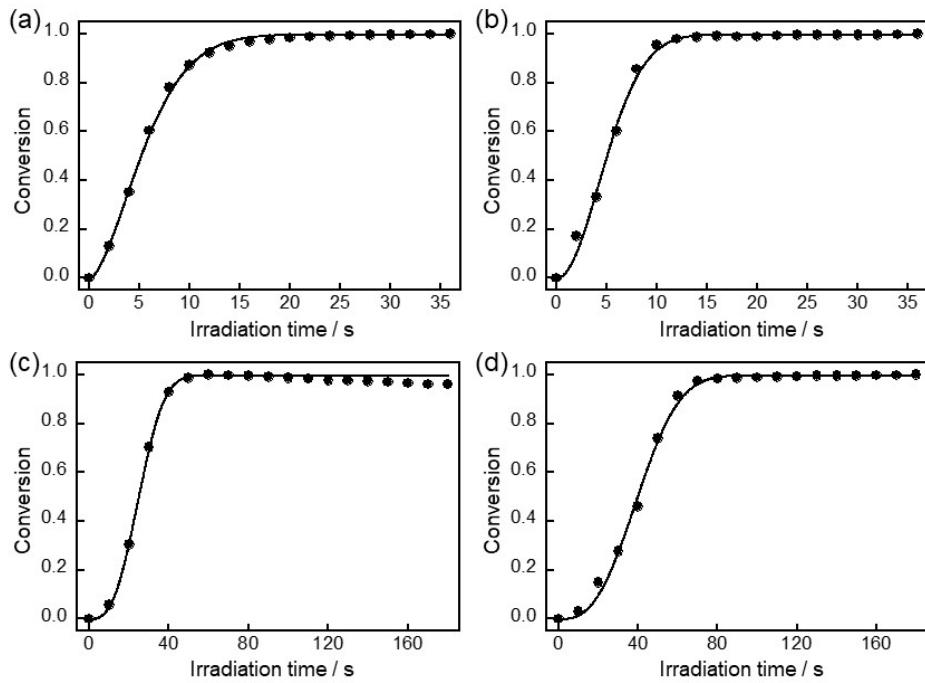


Fig. S5 Fitting of the change in conversion calculated from absorbance decay profiles of (a) 9MA (sample 2), (b) 9AcA (sample 5), (c) 9CA (sample 8), and (d) 9AA (sample 11) using Eq. (1).

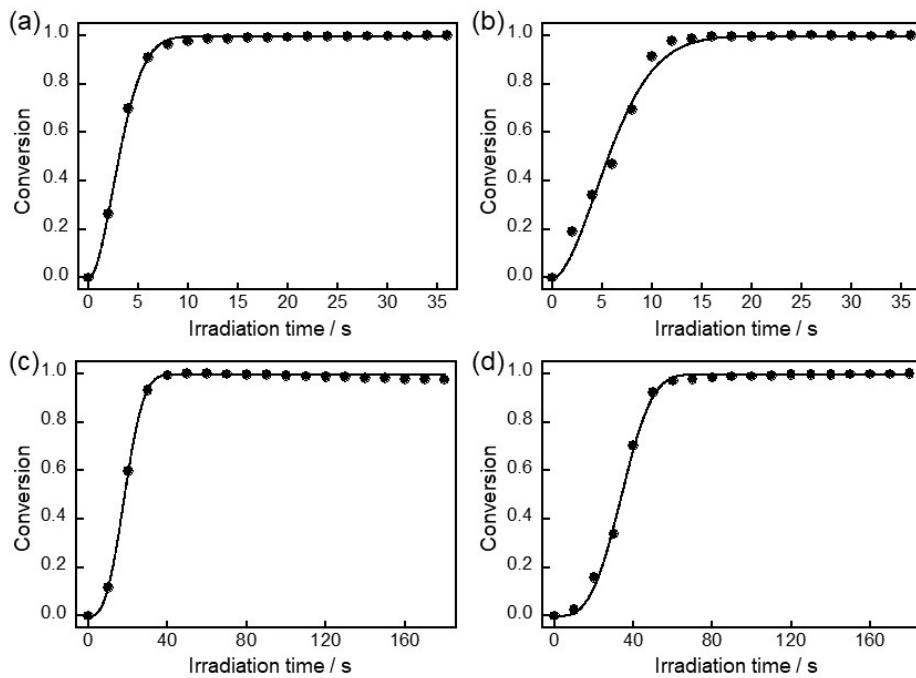


Fig. S6 Fitting of the change in conversion calculated from absorbance decay profiles of (a) 9MA (sample 3), (b) 9AcA (sample 6), (c) 9CA (sample 9), and (d) 9AA (sample 12) using Eq. (1).

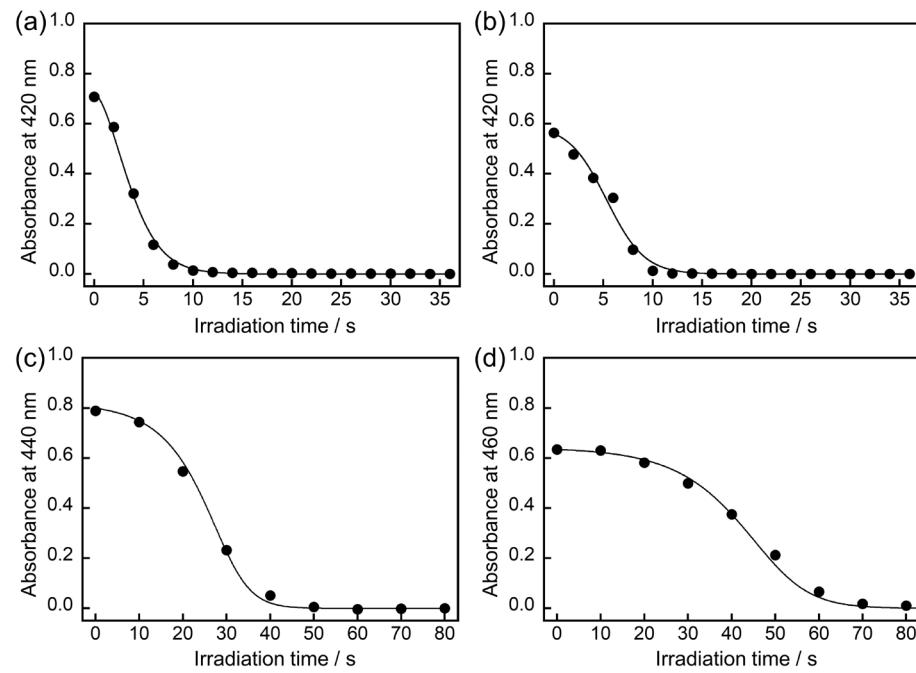


Fig. S7 Fitting of the absorbance decay profiles of (a) 9MA (sample 1), (b) 9AcA (sample 4), (c) 9CA (sample 7), and (d) 9AA (sample 10) using Eq. (3).

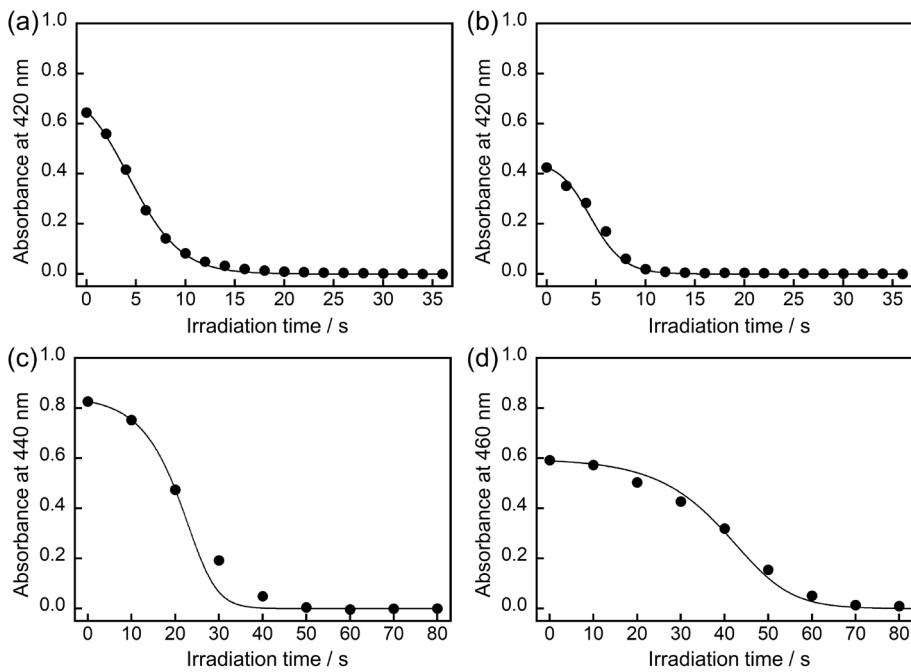


Fig. S8 Fitting of the absorbance decay profiles of (a) 9MA (sample 2), (b) 9AcA (sample 5), (c) 9CA (sample 8), and (d) 9AA (sample 11) using Eq. (3).

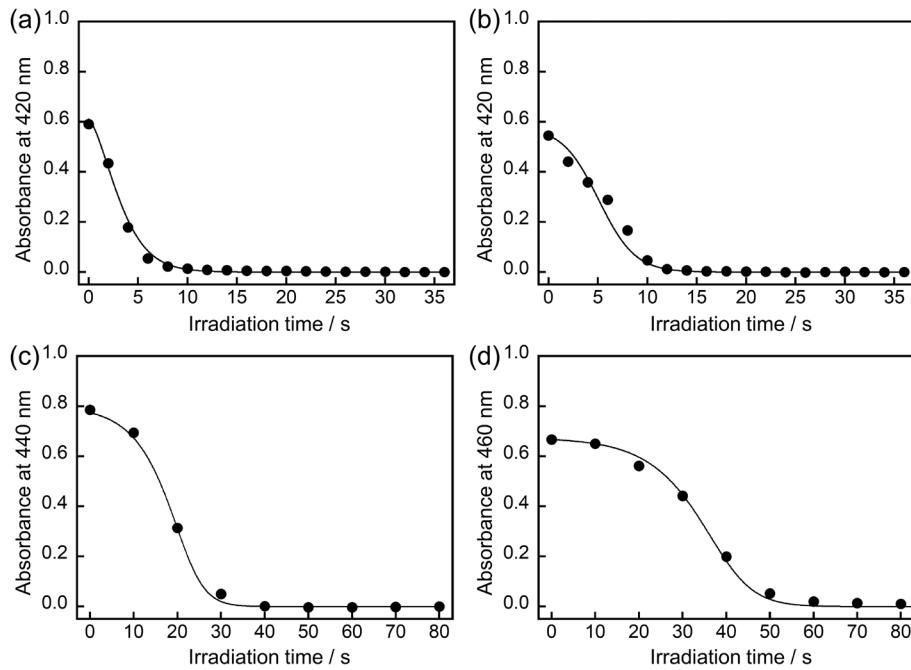


Fig. S9 Fitting of the absorbance decay profiles of (a) 9MA (sample 3), (b) 9AcA (sample 6), (c) 9CA (sample 9), and (d) 9AA (sample 12) using Eq. (3).