

ESI

Spectral, electrochemical, and photochemical studies of a magnesium porphyrin-fullerene dyad

Mohamed E. El-Khouly,^a Yasuyuki Araki,^a Osamu Ito,^{*a} Suresh Gadde,^b Amy L. McCarty,^b Paul A. Karr,^b Melvin E. Zandler,^b and Francis D'Souza^{*b}

^a*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Katahira, Sendai, 980-8577, JAPAN, FAX: +81-22-217-5610, E-mail: ito@tagen.tohoku.ac.jp*

^b*Department of Chemistry, Wichita State University, 1845 Fairmount, Wichita, KS 67260-0051, USA, FAX: +316-978-3431, E-mail: Francis.DSouza@wichita.edu*

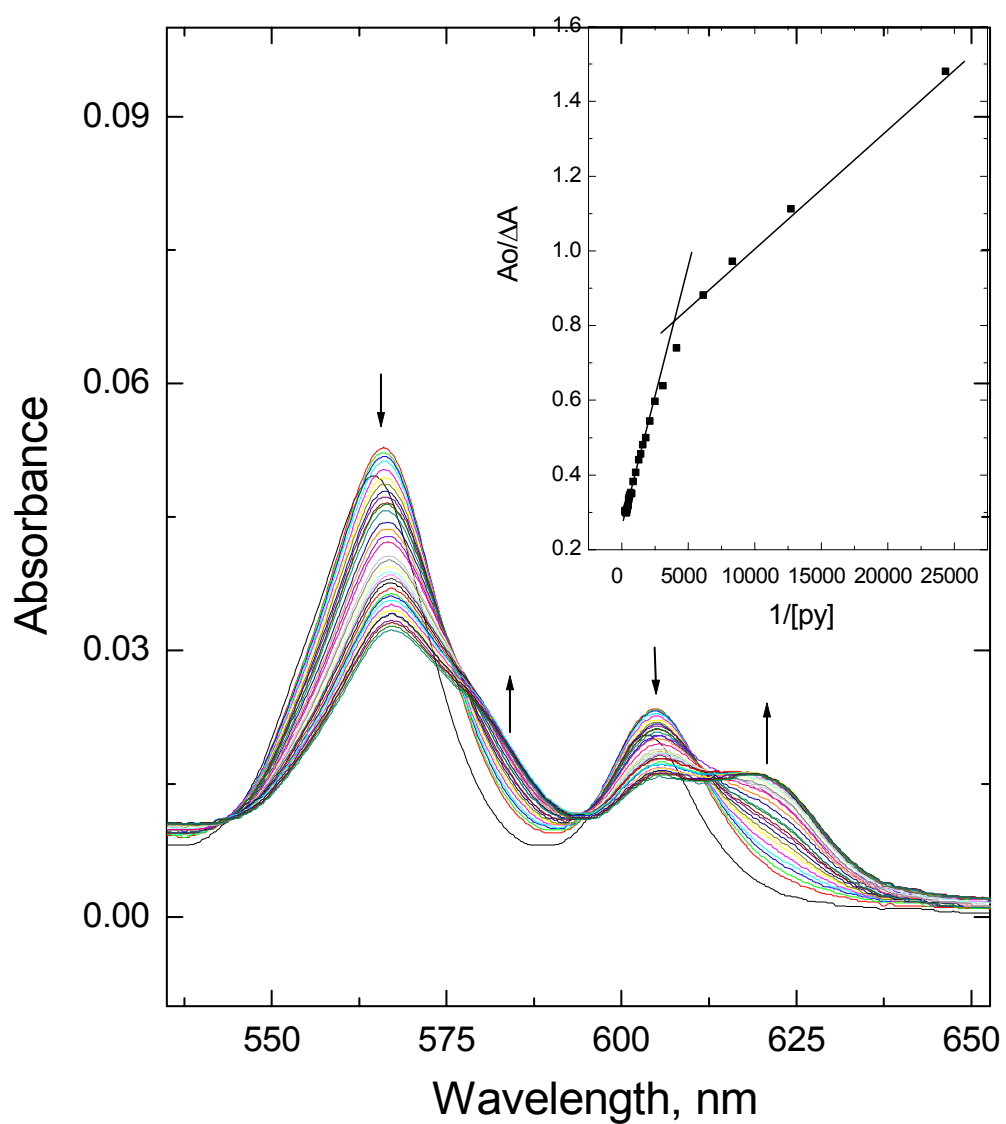


Fig. S1 Visible spectral changes observed for MgP₀-C₆₀ on increasing addition of pyridine in toluene. The inset figure shows the Benesi-Hildebrand plot of the spectral data monitored at 624 nm.

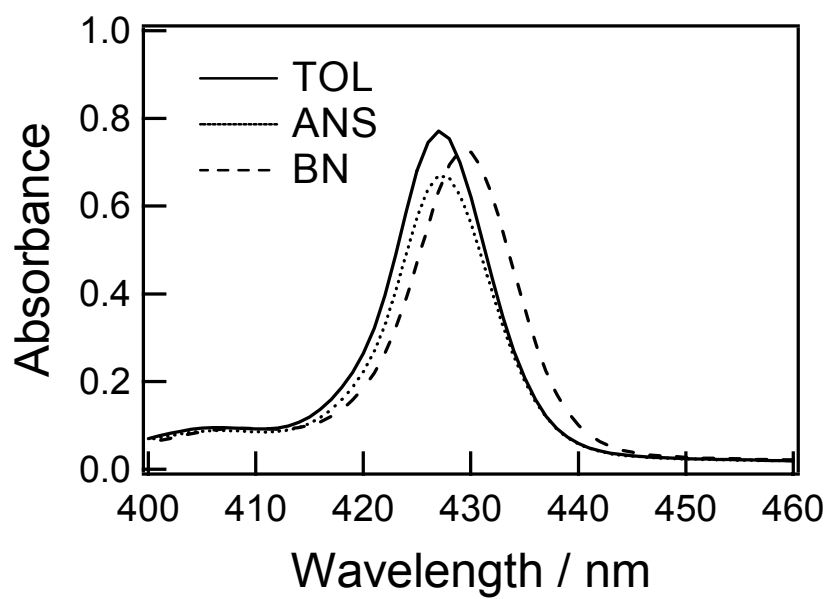


Fig. S2. Steady-state absorption spectra of MgPo~C₆₀ dyad in toluene, anisole and benzonitrile.

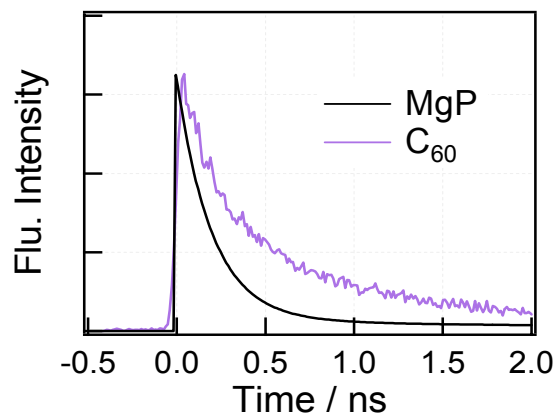


Fig. S3 Fluorescence decay profiles of the MgP entity (monitored at 600 - 700nm) and the C₆₀ entity (monitored at 700 - 800nm) of MgP_o~C₆₀ dyad in toluene.

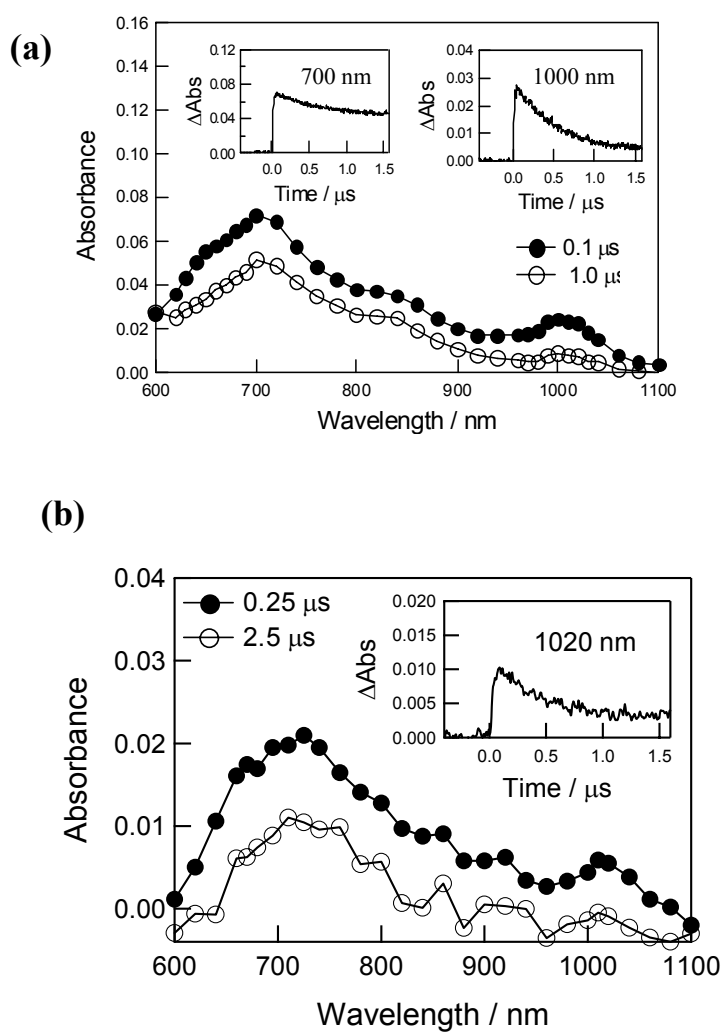


Fig. S4 Nanosecond transient absorption spectra of MgPO- C_{60} (0.05 mM) in argon saturated solution after the 532 nm-laser irradiation; (a) benzonitrile and (b) anisole at 0.1 μ s (\bullet) and 1.0 μ s (\circ). Inset: Time profiles.

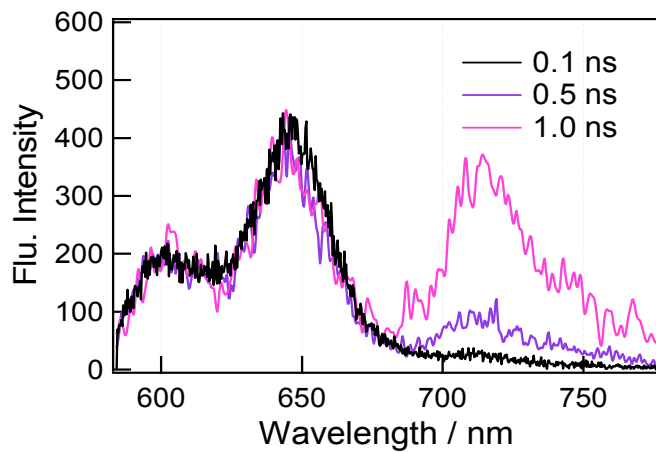


Fig. S5 Time resolved spectra of ZnPo~C₆₀ in toluene. $\lambda_{\text{ex}} = 400$ nm.

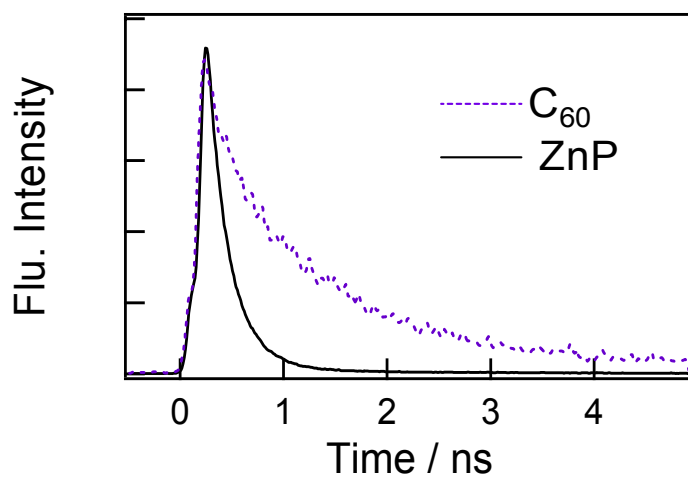


Fig. S6 Fluorescence decay profiles of the ZnP entity (monitored at 600 - 700nm) and the C₆₀ entity (monitored at 700 - 78nm) of ZnPo~C₆₀ dyad in toluene.

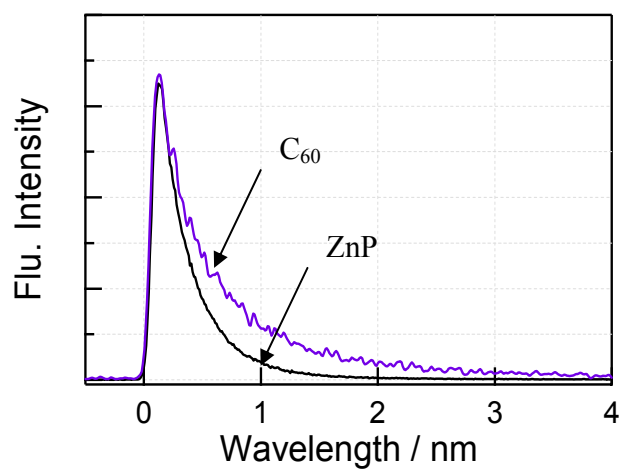


Fig. S7 Fluorescence decay profiles of the ZnP entity (monitored at 600 – 700 nm) and the C₆₀ entity (monitored at 700 – 780 nm) of ZnP_o-C₆₀ dyad in *o*-dichlorobenzene.

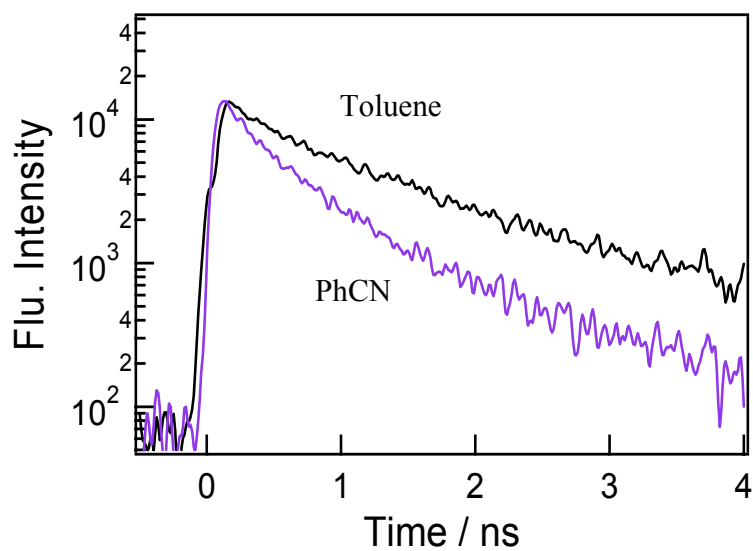


Fig. S8 Logarithmic plots of fluorescence decay profiles of the C₆₀ entity (monitored at 700 - 780nm) of ZnP_o-C₆₀ dyad in toluene and benzonitrile (PhCN).