

Electronic Supplementary Information for:

**Pressure Effects on the Radical–Radical
Recombination Reaction of Photochromic
Bridged Imidazole Dimers**

Katsuya Mutoh[†] and Jiro Abe^{*,†,‡}

[†]*Department of Chemistry, School of Science and Engineering, Aoyama Gakuin University, 5-10-1 Fuchinobe, Chuo-ku, Sagamihara, Kanagawa 252-5258, Japan*

[‡]*CREST, Japan Science and Technology Agency, K's Gobancho, 7 Gobancho, Chiyoda-ku, Tokyo 102-0076, Japan*

E-mail: jiro_abe@chem.aoyama.ac.jp

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1. UV-vis absorption spectra of **1** and **2**

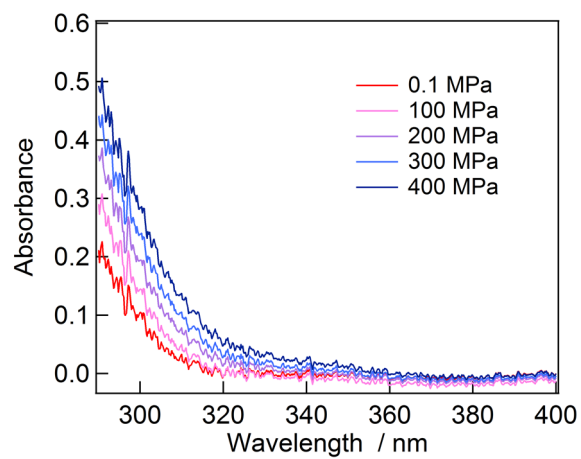


Figure S1. UV-vis absorption spectra of **1** in toluene (6.7×10^{-5} M) at 298 K.

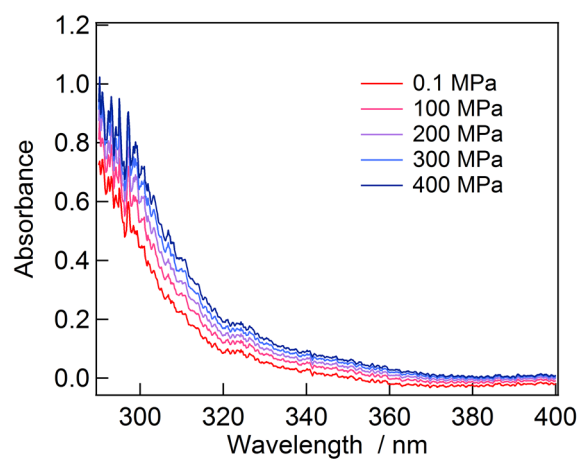


Figure S2. UV-vis absorption spectra of **2** in toluene (6.2×10^{-5} M) at 298 K.

2. Kinetics for the Thermal Back-Reaction

Table S1. Pressure dependence of the first-order rate constants for the thermal back-reaction of **2R** at 298 K in toluene.

P / MPa	k / s ⁻¹
0.1	6603.9
40	8036.6
80	9871.3
120	11658.1
160	14532.0
200	16355.8
240	18344.2
280	20641.5
320	23037.6
360	25427.0
400	26619.1

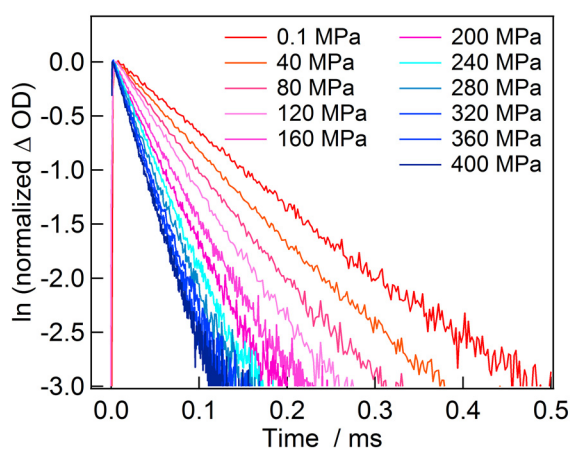


Figure S3. First-order kinetic plots of the colored species of **2** monitored at 400 nm in toluene (6.2×10^{-5} M) at 298 K.

Table S2. Temperature dependence of the first-order rate constants for the thermal back-reaction of **2R** in toluene at 0.1 MPa.

T / K	k / s ⁻¹
283	4062.0
288	4843.4
293	5590.5
298	6290.0
303	7341.9
308	8474.8
313	10045.9

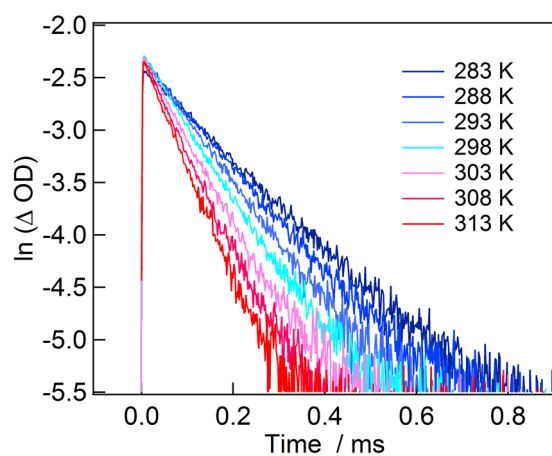


Figure S4. First-order kinetic plots of the colored species of **2** monitored at 400 nm in toluene (6.2×10^{-5} M) at 0.1 MPa.

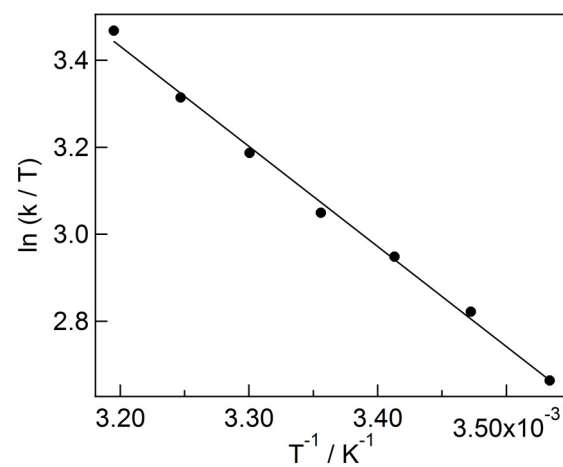


Figure S5. Eyring plots for the thermal back-reaction of the colored species of **2** in toluene (6.2×10^{-5} M) at 0.1 MPa.

Table S3. Temperature dependence of the first-order rate constants for the thermal back-reaction of **2R** in toluene at 200 MPa.

T / K	k / s ⁻¹
283	9738.6
288	12069.9
293	14238.8
298	17180.3
303	20117.1
308	23351.1
313	26728.7

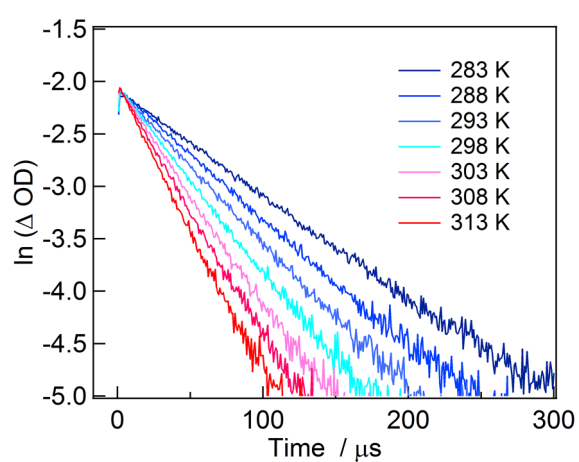


Figure S6. First-order kinetic plots of the colored species of **2** monitored at 400 nm in toluene (6.2×10^{-5} M) at 200 MPa.

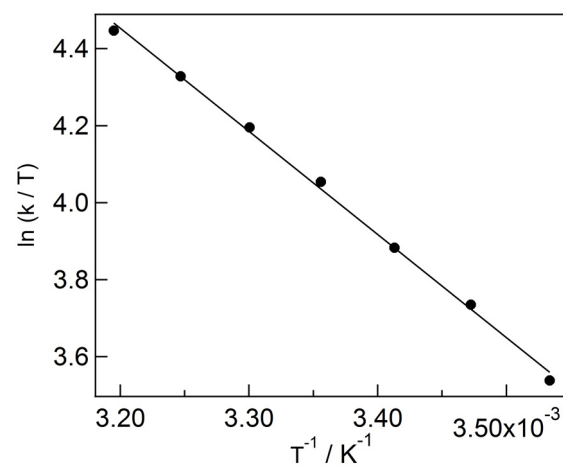


Figure S7. Eyring plots for the thermal back-reaction of the colored species of **2** in toluene (6.2×10^{-5} M) at 200 MPa.

Table S4. Temperature dependence of the first-order rate constants for the thermal back-reaction of **2R** in toluene at 400 MPa.

T / K	k / s ⁻¹
283	13742.0
288	17099.7
293	22171.8
298	27749.8
303	32592.5
308	40487.1
313	48331.6

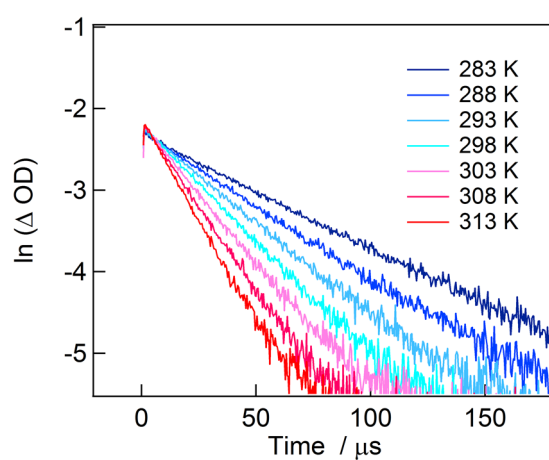


Figure S8. First-order kinetic plots of the colored species of **2** monitored at 400 nm in toluene (6.2×10^{-5} M) at 400 MPa.

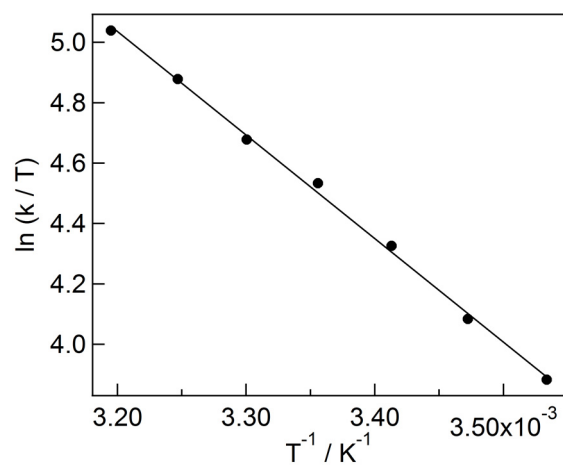


Figure S9. Eyring plots for the thermal back-reaction of the colored species of **2** in toluene (6.2×10^{-5} M) at 400 MPa.