

Scheme captions

Scheme 1 Photoreaction of aminobenzoquinone derivative **1**.

Scheme 2 Proposed mechanism for the photoreaction of **1**.

Figure captions

Fig. 1 Chemical structures of (a) **4** and (b) **5**.

Fig. 2 UV-vis spectral changes of (a) **4** ($2.5 \times 10^{-3} \text{ mol dm}^{-3}$) and (b) **1** ($1.0 \times 10^{-2} \text{ mol dm}^{-3}$) in chloroform upon Xe lamp irradiation. The inset graphs show the changes in absorption intensity at specific wavelengths.

Fig. 3 ^1H NMR spectral changes of **1** (a) before and (b) after 300-min irradiation.

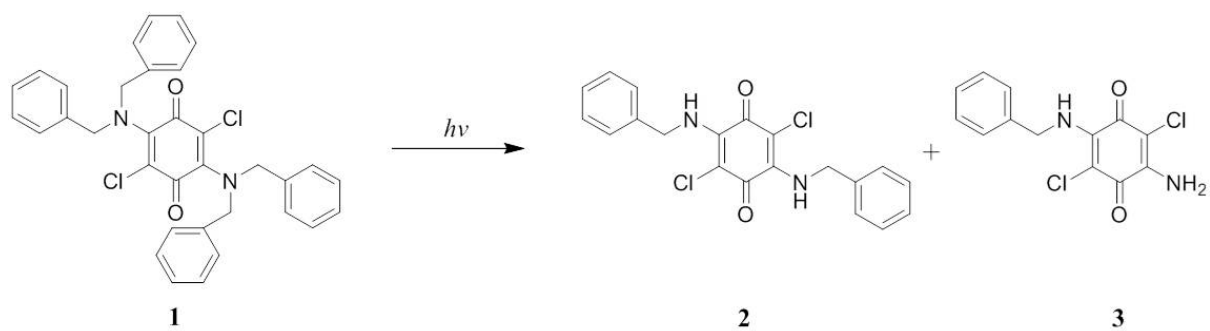
Fig. 4 Changes in the (a) LC-ESI-MS spectrum of **1** and (b) the corresponding spectrum with UV detection, during 300-min irradiation.

Fig. 5 Colour change of a chloroform solution of **1** ($1.0 \times 10^{-2} \text{ mol dm}^{-3}$) upon sunlight irradiation.

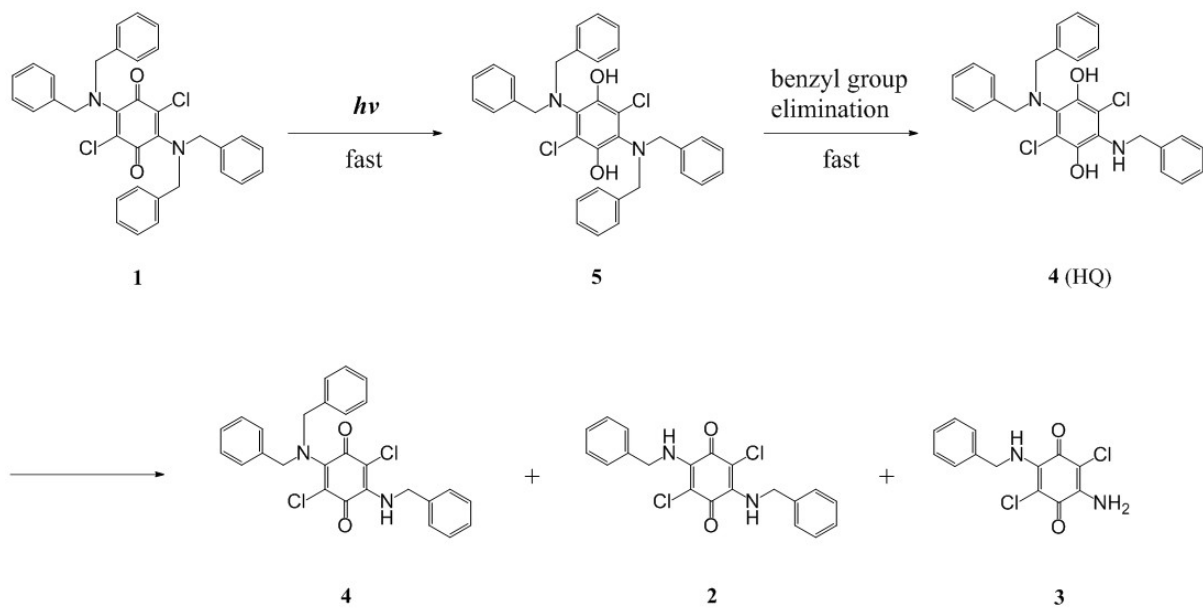
Table captions

Table 1 Photoreaction of **1** ($1.0 \times 10^{-2} \text{ mol dm}^{-3}$) under different irradiation conditions.

Table 2 Photoreaction of **1** ($1.0 \times 10^{-2} \text{ mol dm}^{-3}$) in the presence of BHT as a radical scavenger.

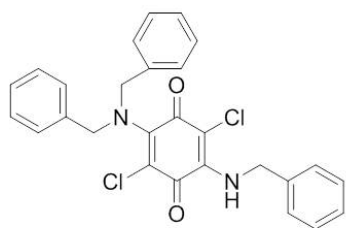


Scheme 1



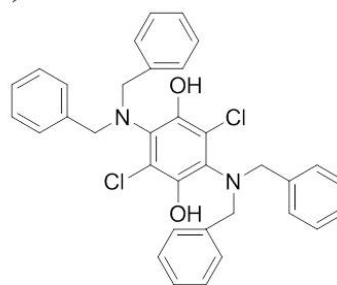
Scheme 2

(a)



4

(b)



5

Fig. 1

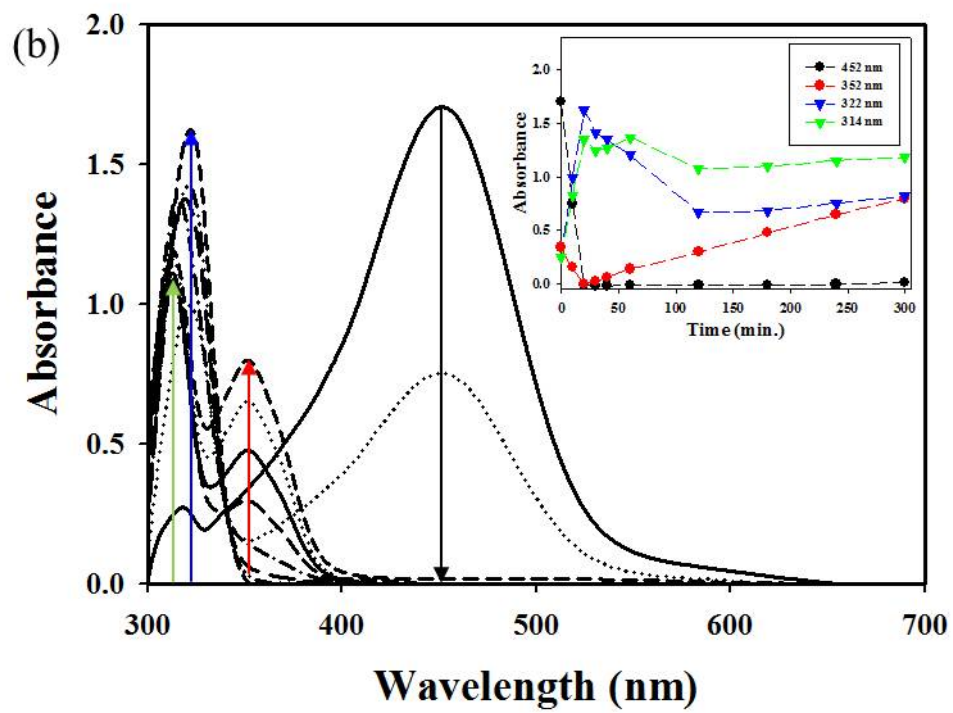
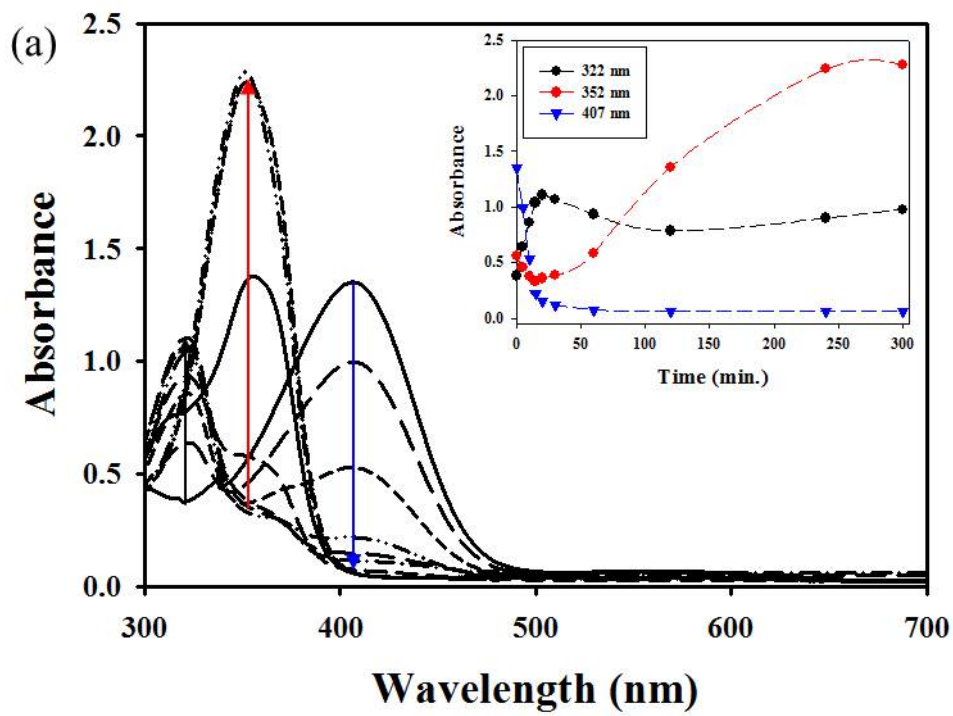


Fig. 2

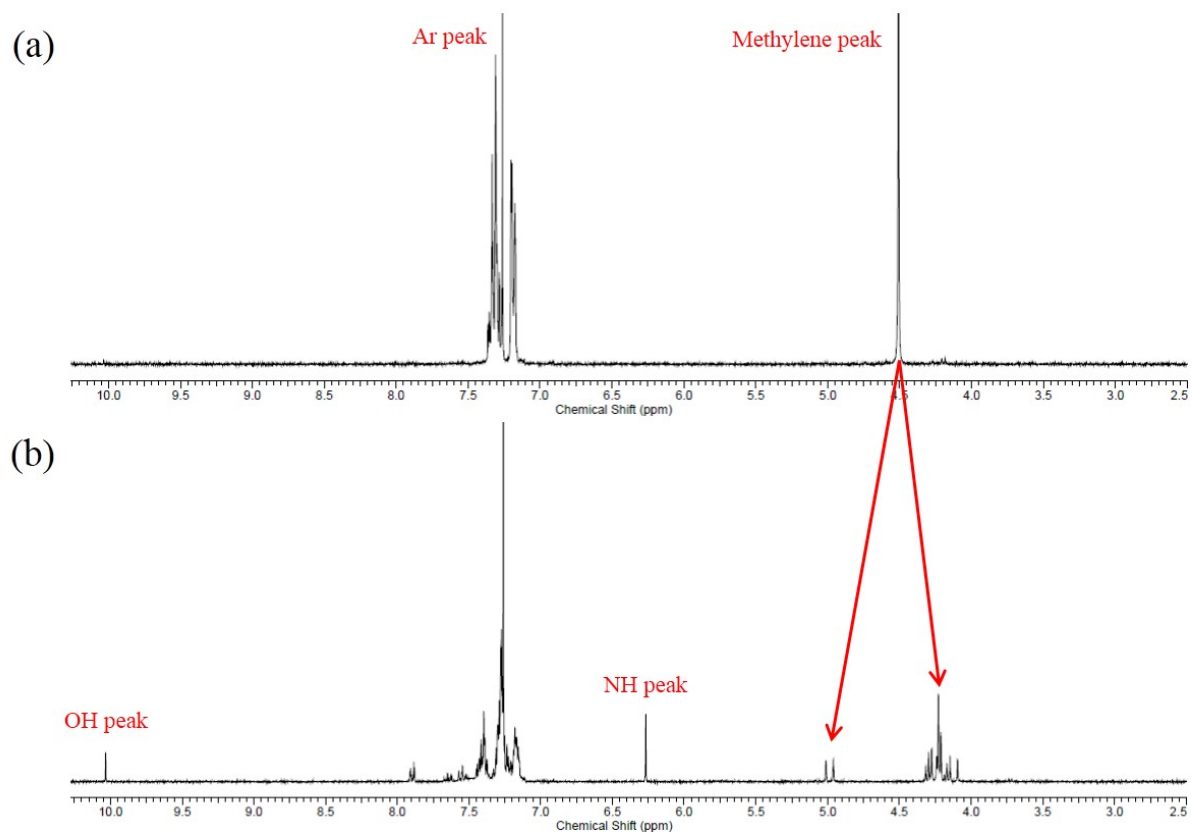


Fig. 3

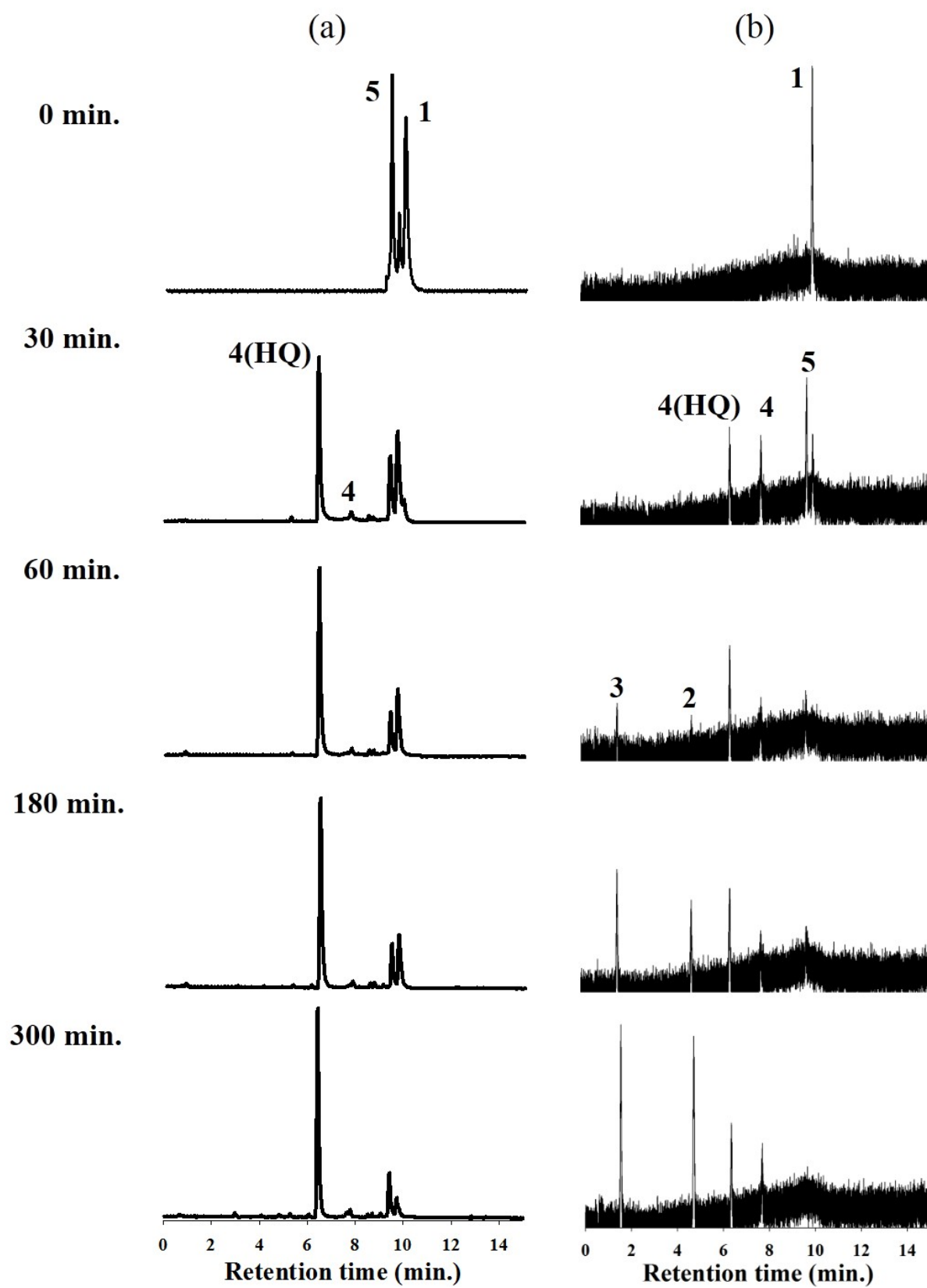


Fig. 4



Fig. 5

Condition	2	3	4
1	19%	20%	53%
Light intensity (0.3 W/cm ²)	18%	20%	59%
Light intensity (0.9 W/cm ²)	17%	26%	51%
Long time (10 h)	18%	26%	53%
N ₂ condition	20%	22%	51%
Sunlight	18%	23%	48%

Table 1

BHT	2	3	4
20%	15%	18%	55%
50%	7%	5%	72%
100%	5%	5%	67%
50% (N ₂ condition)	5%	5%	65%

Table 2