Boosting Pollutant Degradation with Simultaneous H_2O_2 Production from its Electron Delocalization and Excitation Co-triggered by Microelectric field and Visible-light

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Fig. S11 (a) EPR trapping experiment of photocatalytic generation of •OH, and (b) the absorbed energy of O_2 on the surface of RSN.

Text Captions

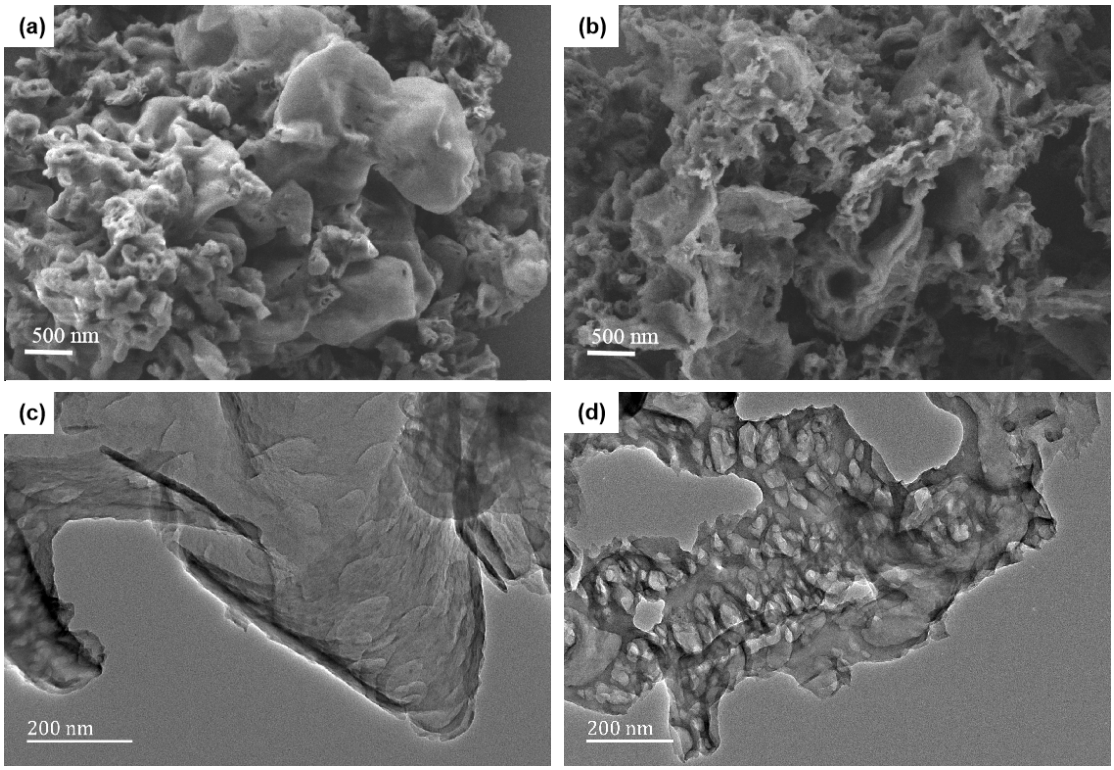
Text S1 Calculation of CO_2 selectivity.

Table Captions

Table S1 BET surface area of CN and RSN.

Table S2 The proportion of peaks of C-XPS.

Table S3 Atomic electron of BPA in optimal absorbed model RSN-BPA.



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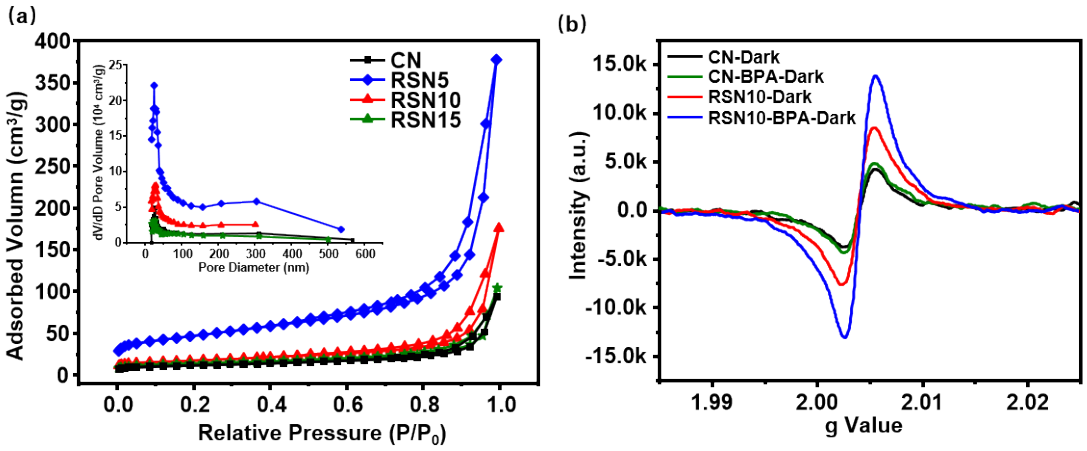

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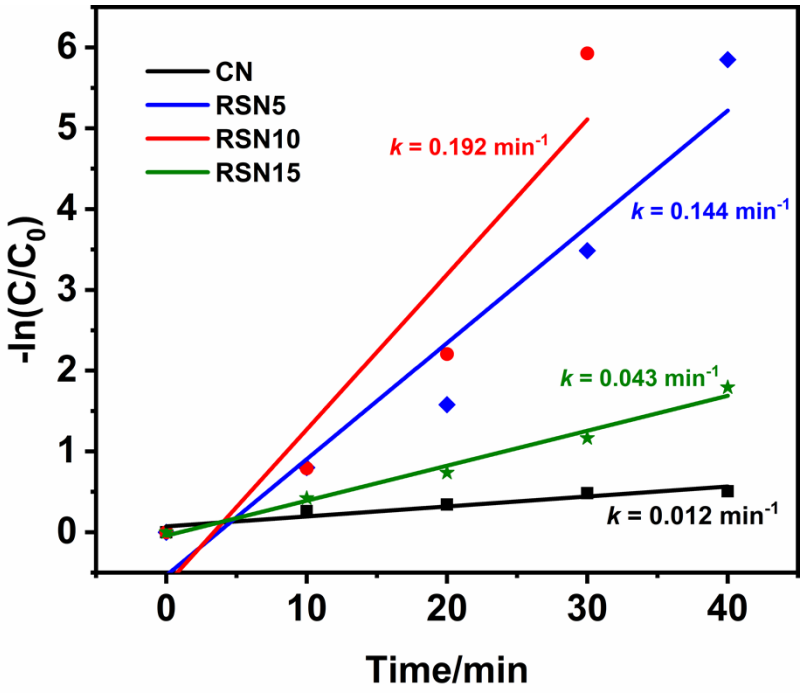
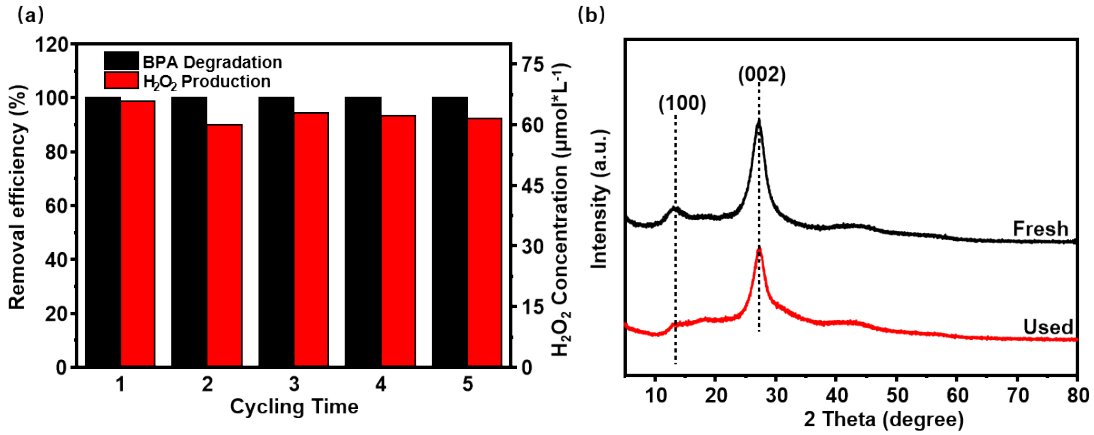


Fig. S3 Pesudo-first-order kineics of BPA degradation with CN and RSN under light irradiation.



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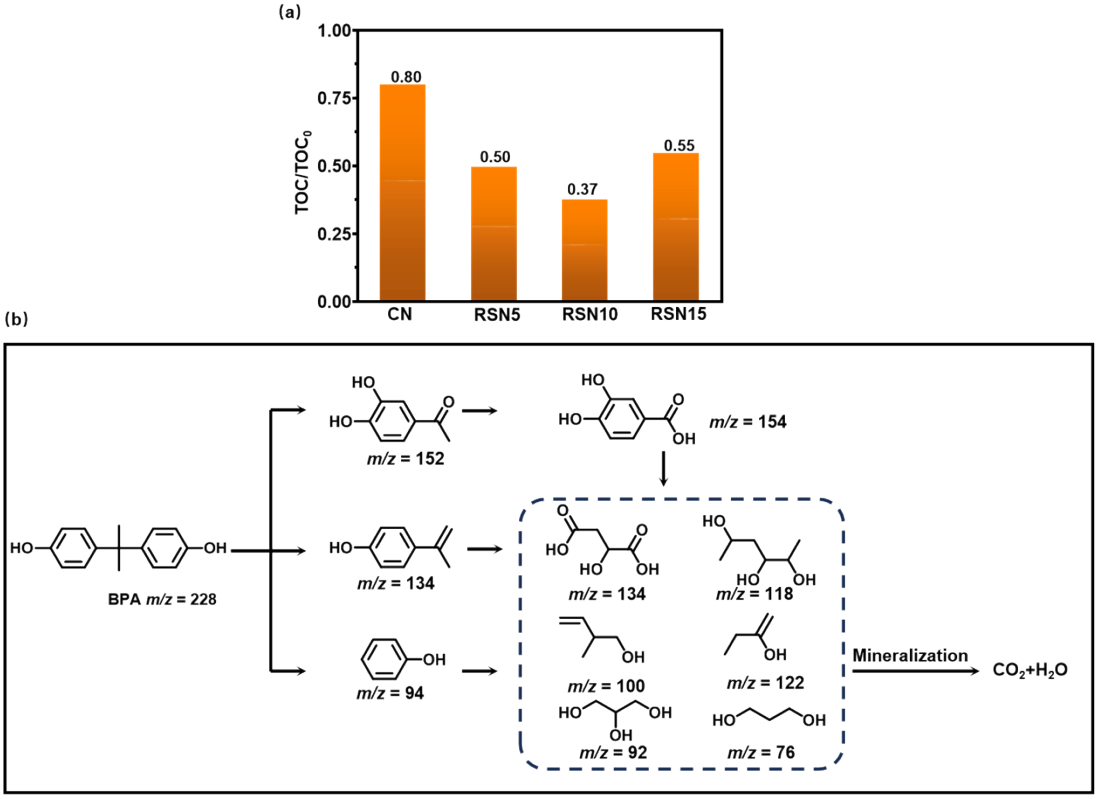


Fig. S5 (a) TOC removal of BPA and (b) its corresponding photocatalytic degradation route.

Text S1 Calculation of CO_2 selectivity.

BBPA : BPA concentration before irradiation

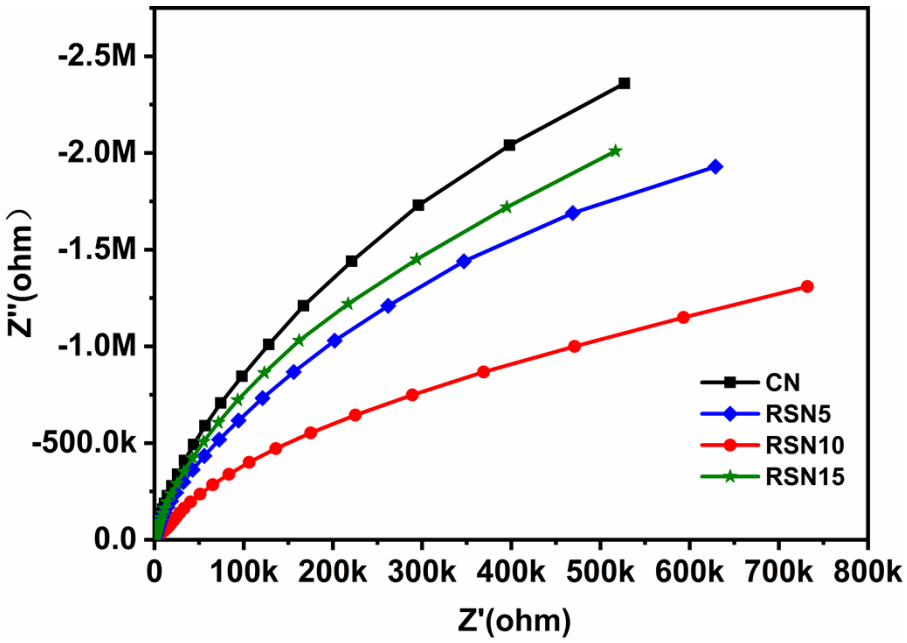
ABPA : BPA concentration after irradiation

BTOC : TOC value be1fore irradiation

ATOC : TOC value after irradiation

TTOC : Theoretical TOC value after irradiation = $\frac{ABPA \times BTOC}{BBPA}$

CO_2 selectivity = $\frac{BTOC - ATOC}{BTOC - TTOC} \times 100\%$



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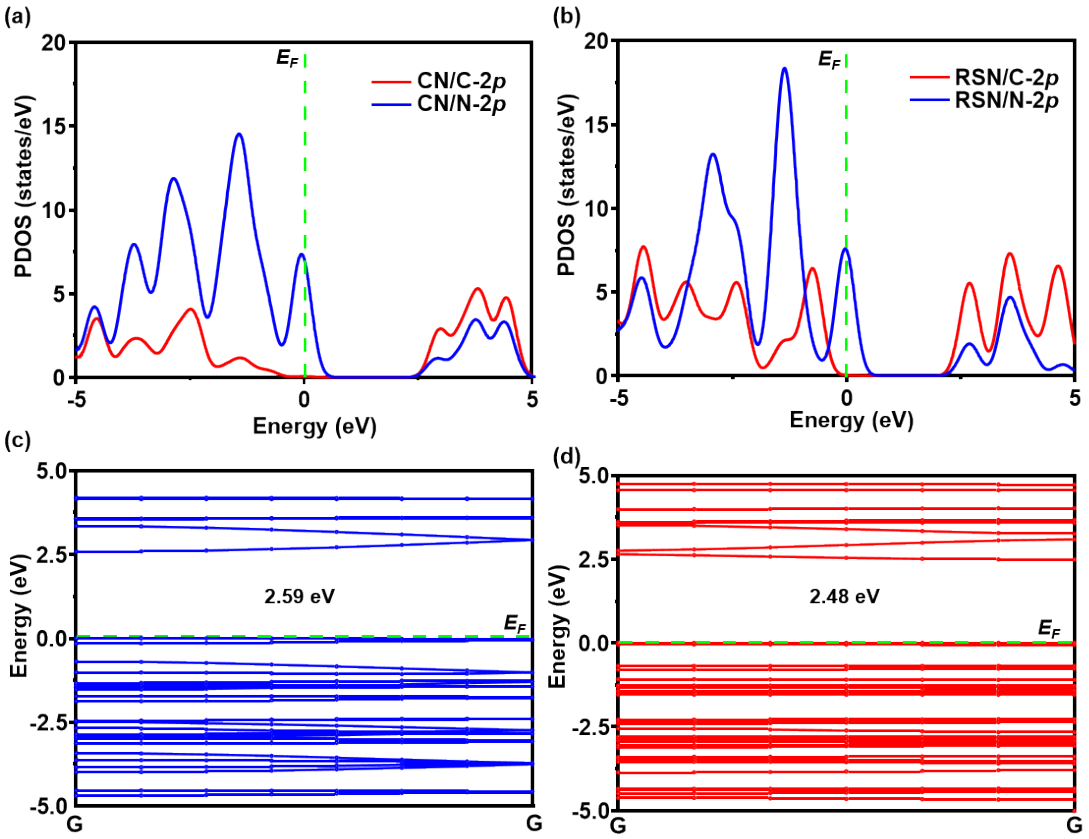

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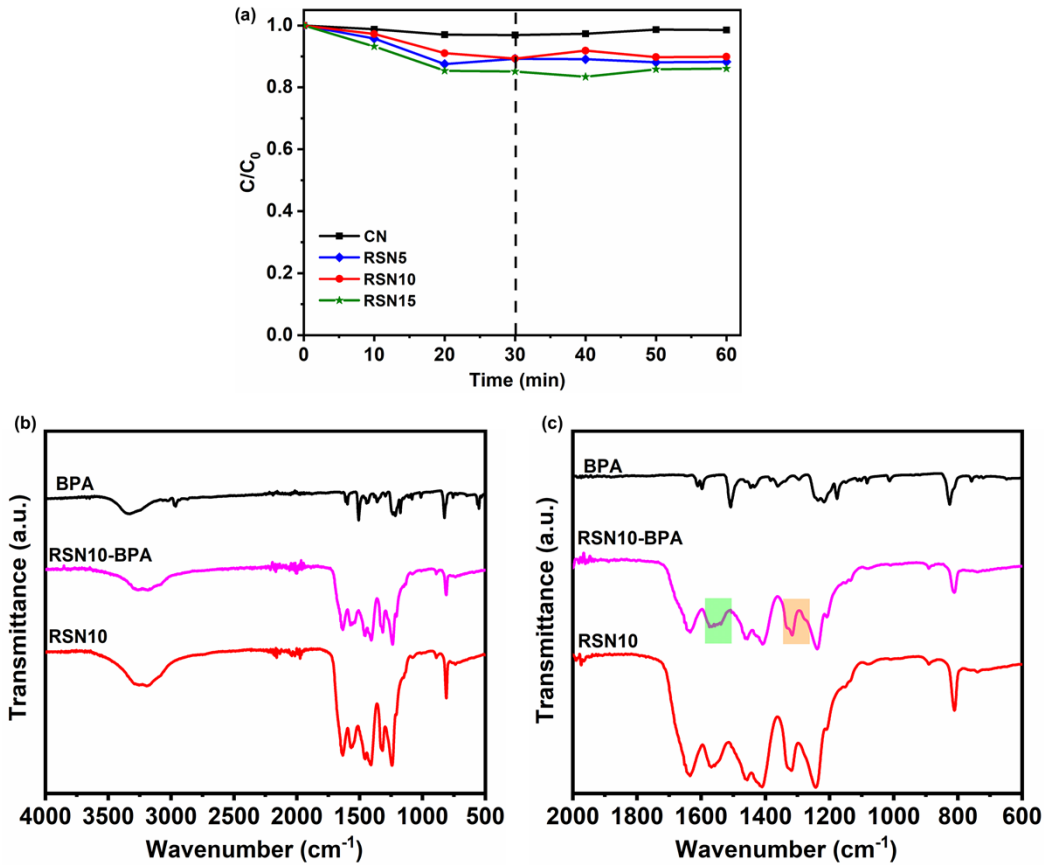

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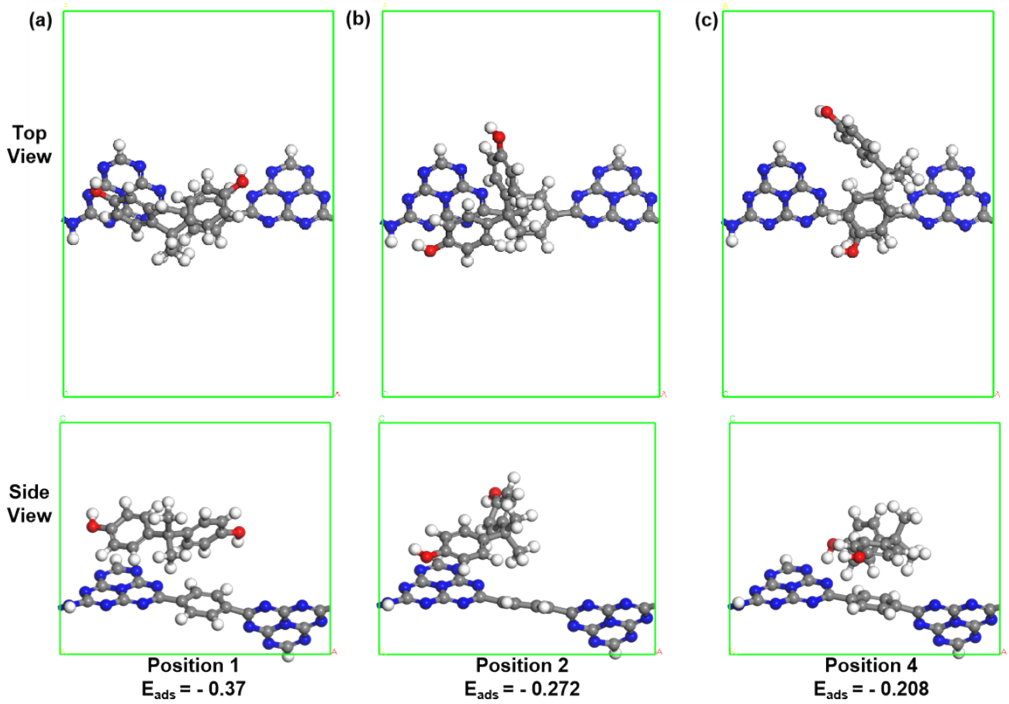

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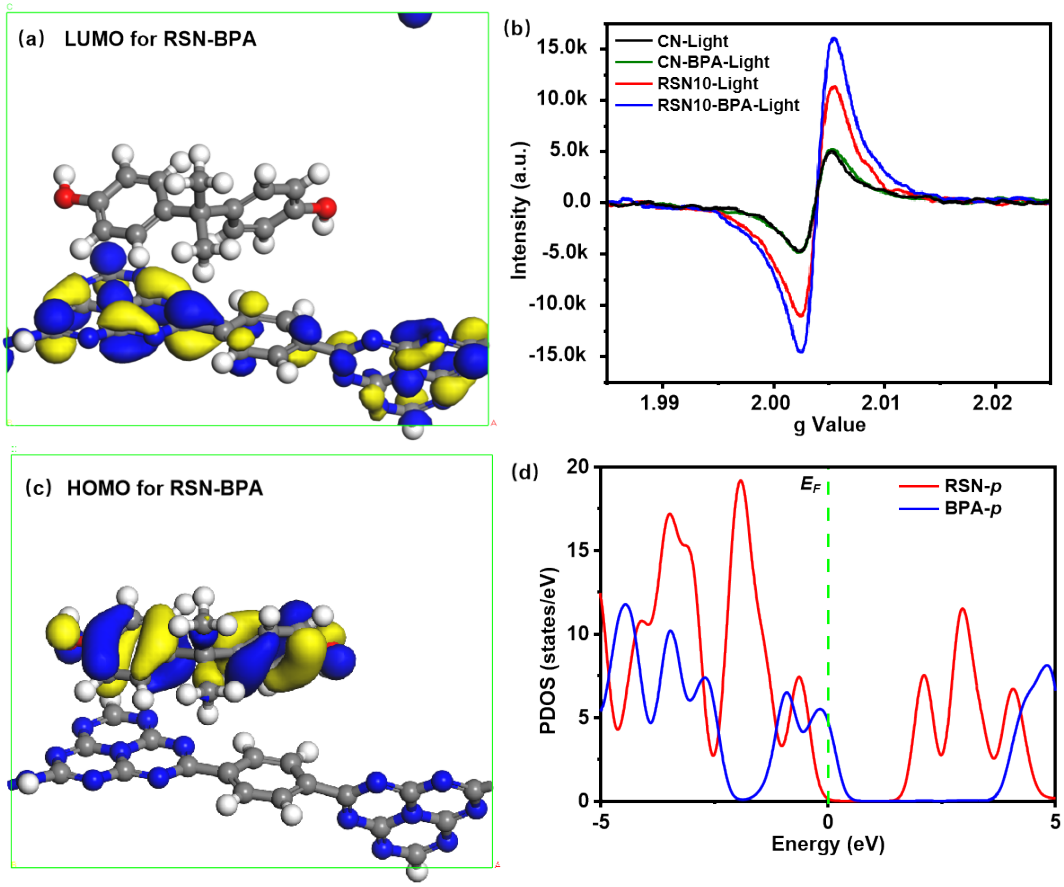

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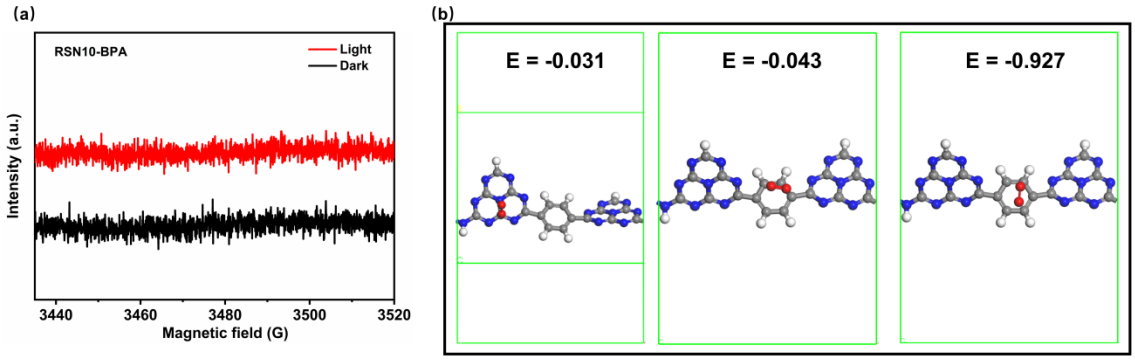

Fig. S11 (a) EPR trapping experiment of photocatalytic generation of •OH, and (b) the absorbed energy of O_2 on the surface of RSN.

Table S1 BET surface area of CN and RSN.

Sample	ABET (m^2/g)	Vpore (cm^3/g)	dpore(nm)
CN	42.4435	0.141233	18.0356
RSN5	167.2043	0.574007	16.3569
RSN10	63.1741	0.118827	9.6088
RSN15	43.7187	0.150442	22.8219

Table S2 The proportion of peaks of C-XPS.

Sample	Peak area content (%)		
	C-C/C=C	C-NHx/C=O	N-C=N
CN	14.90	13.82	71.28
RSN10	18.71	10.03	71.26

Table S3 Atomic electron of BPA in optimal absorbed model RSN-BPA.

C	0.349
C	-0.151
C	-0.099
C	0.067
C	-0.091
C	-0.185
C	0.062
C	-0.11
C	-0.169
C	0.351
C	-0.17
C	-0.077
O	-0.513
H	0.283
H	0.094
H	0.091
H	0.1
H	0.105
C	-0.202
C	-0.29
C	-0.314
O	-0.519
H	0.284
H	0.114
H	0.11
H	0.111
H	0.15
H	0.108
H	0.111
H	0.098
H	0.132
H	0.095
H	0.086
Total electron	0.011