



Cite this: *Dalton Trans.*, 2026, **55**, 4337

## Correction and removal of expression of concern: Enhanced photocatalytic activity of g-C<sub>3</sub>N<sub>4</sub>/MnO composites for hydrogen evolution under visible light

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DOI: 10.1039/d6dt90017h  
rsc.li/dalton

Correction and removal of expression of concern for 'Enhanced photocatalytic activity of g-C<sub>3</sub>N<sub>4</sub>/MnO composites for hydrogen evolution under visible light' by Na Mao, *et al.*, *Dalton Trans.*, 2019, **48**, 14864–14872, <https://doi.org/10.1039/c9dt02748c>.

The authors regret that incorrect data for the characterization of g-C<sub>3</sub>N<sub>4</sub> was presented in this article since the same sample of g-C<sub>3</sub>N<sub>4</sub> was used as the control sample to make composites in different papers and systems. All updated data re-measured from the original g-C<sub>3</sub>N<sub>4</sub> sample are shown here (relevant parts of Fig. 1–5). Table S3 has been updated in the SI file, with the corrected version also shown here as Table 1.

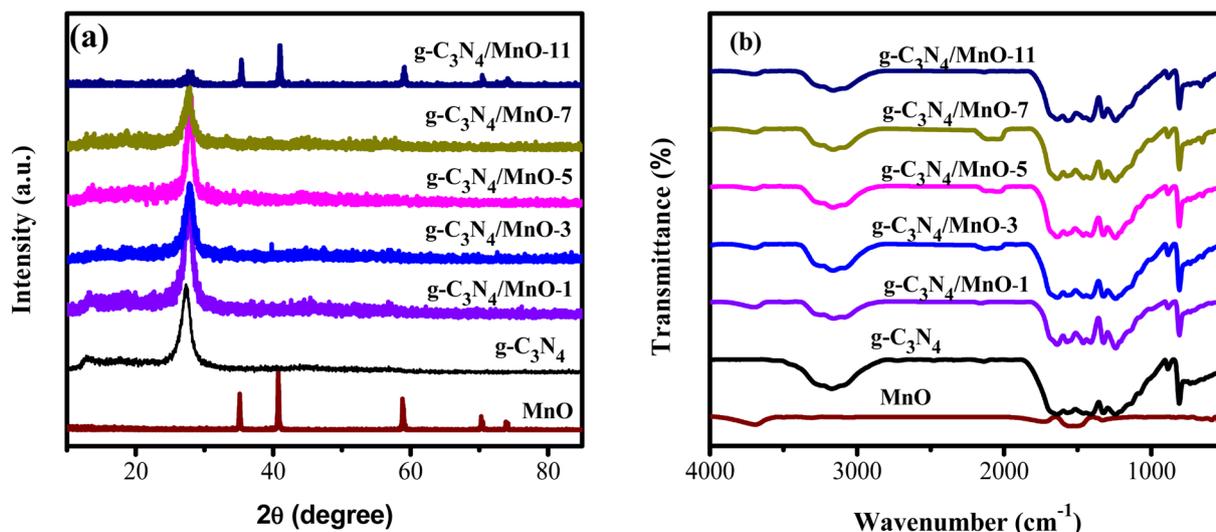


Fig. 1 (a) Powder XRD patterns of the samples of g-C<sub>3</sub>N<sub>4</sub>, MnO and the g-C<sub>3</sub>N<sub>4</sub>/MnO composites and (b) FT-IR spectra of the samples of g-C<sub>3</sub>N<sub>4</sub>, MnO and the g-C<sub>3</sub>N<sub>4</sub>/MnO composites.

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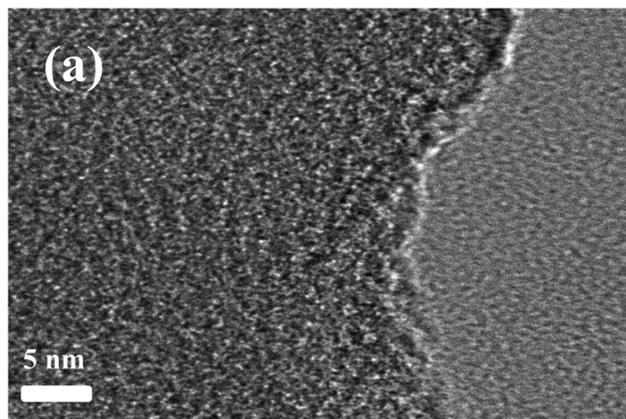


Fig. 2 (a) High-resolution TEM image of pure g-C<sub>3</sub>N<sub>4</sub>.

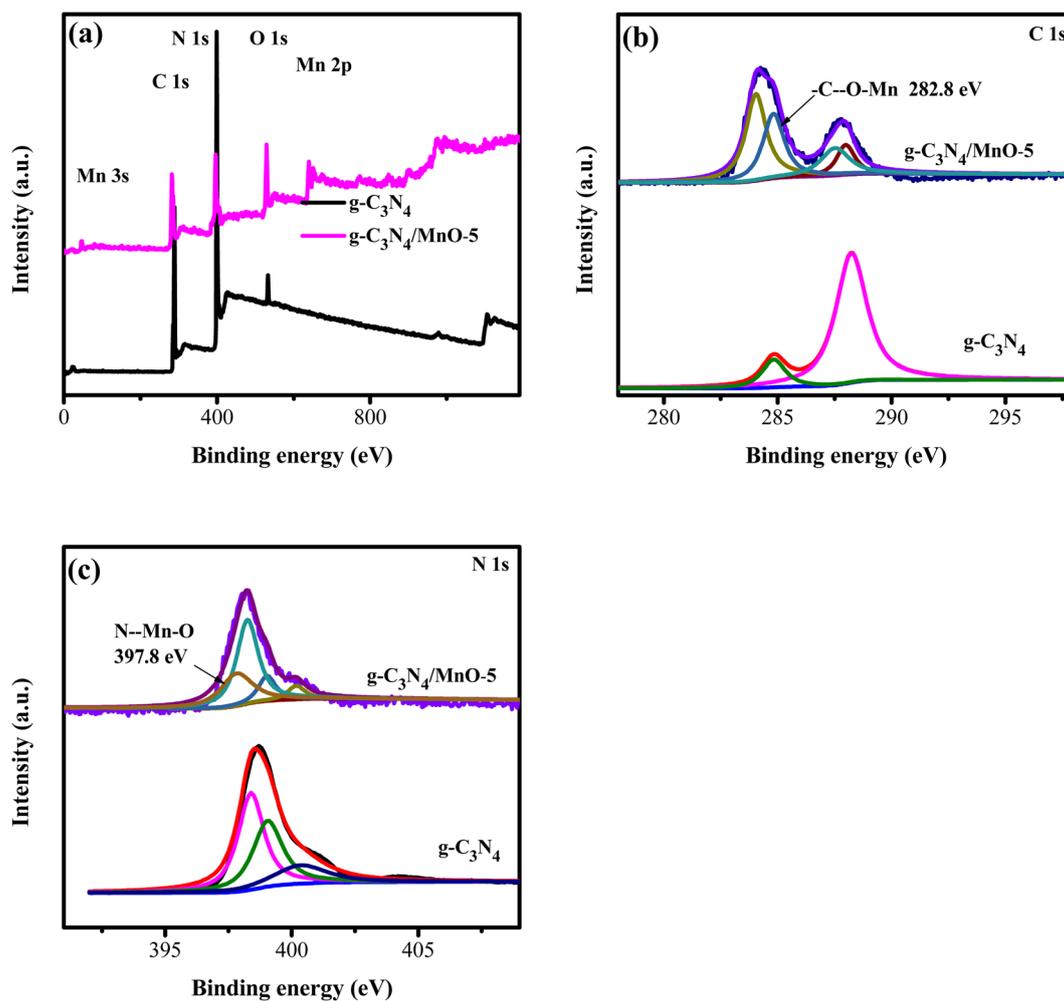


Fig. 3 (a) XPS spectra of g-C<sub>3</sub>N<sub>4</sub> and the g-C<sub>3</sub>N<sub>4</sub>/MnO-5 composite; (b) high-resolution XPS spectra of C 1s; (c) N 1s for g-C<sub>3</sub>N<sub>4</sub> and the g-C<sub>3</sub>N<sub>4</sub>/MnO-5 composite.



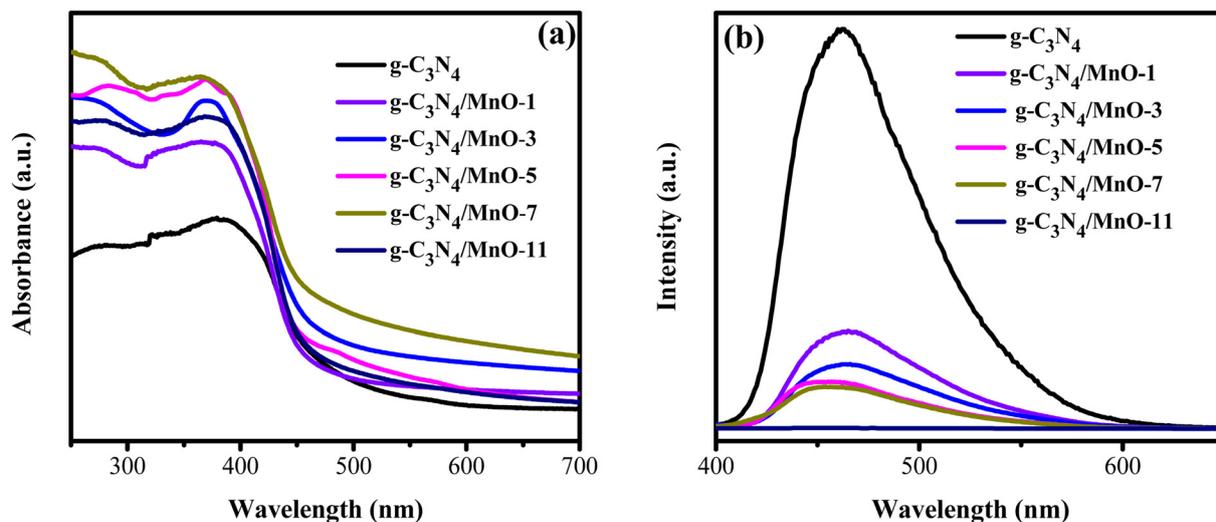


Fig. 4 (a) The UV-Vis absorption spectra of the composites; (b) photoluminescence spectra of the samples measured in solid state.

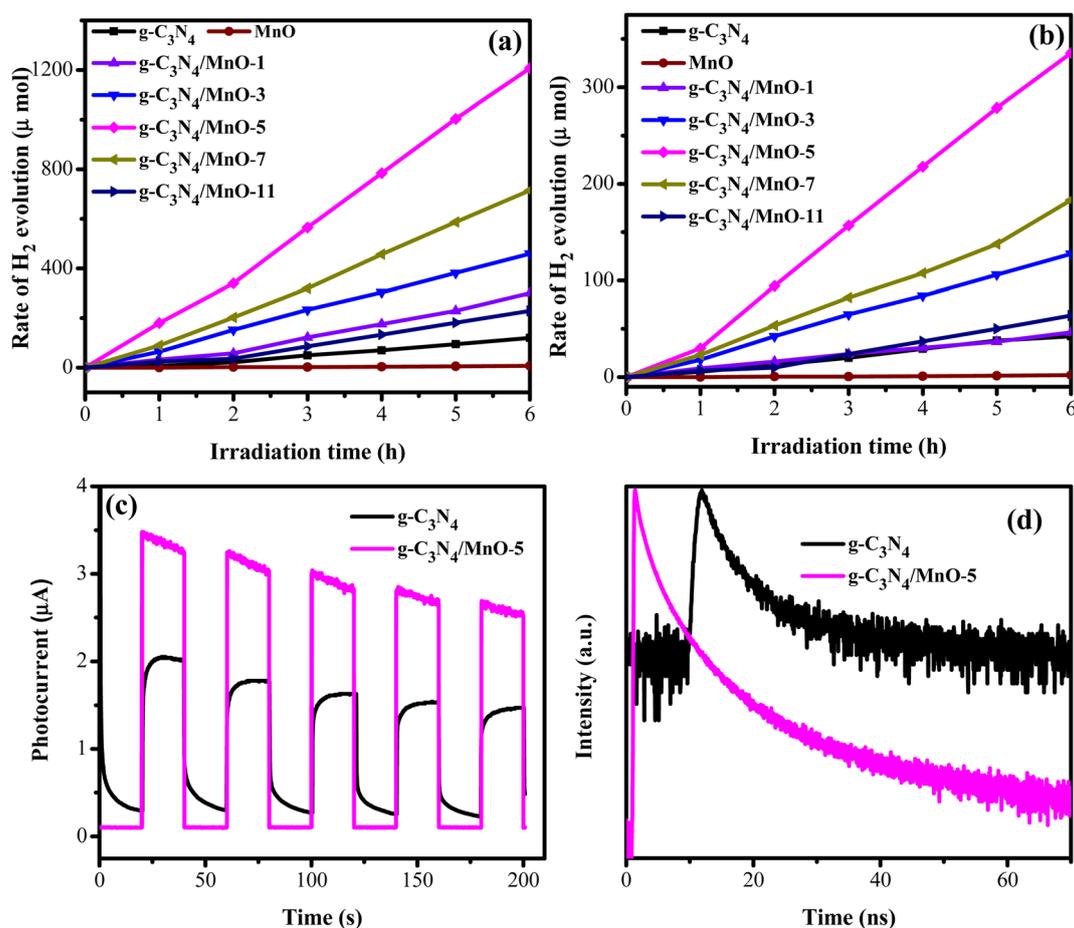


Fig. 5 (a) Hydrogen evolution rate of the samples with 3 wt% Pt under light irradiation ( $\lambda > 300$  nm); (b) hydrogen evolution rate of the samples with 3 wt% Pt under visible light irradiation ( $\lambda > 400$  nm); (c) transient photocurrent curves of the photocatalysts ( $\text{g-C}_3\text{N}_4$ ,  $\text{g-C}_3\text{N}_4/\text{MnO-5}$ ) in 0.5 M  $\text{Na}_2\text{SO}_4$  under visible light irradiation ( $\lambda > 400$  nm) at room temperature; (d) fluorescence decay of the photocatalysts ( $\text{g-C}_3\text{N}_4$ ,  $\text{g-C}_3\text{N}_4/\text{MnO-5}$ ) measured in solid.



**Table 1** Radiative fluorescence lifetimes and their relative percentages of photoexcited charge carriers in the g-C<sub>3</sub>N<sub>4</sub> and g-C<sub>3</sub>N<sub>4</sub>/MnO-5 composite

Sample	$\tau_1$ (ns) (rel%)	$\tau_2$ (ns) (rel%)	$\tau_3$ (ns) (rel%)	$t_{av}^a$ (ns)
g-C <sub>3</sub> N <sub>4</sub>	1.39–25.84	3.92–47.45	16.55–26.71	12.19
g-C <sub>3</sub> N <sub>4</sub> /MnO-5	0.90–37.56	3.49–52.91	19.73–9.53	10.79

<sup>a</sup>The average lifetime.

Additionally, the following discussions should be revised according to the updated data.

1. On page 14869, line 2 (right column), the discussion “which is almost ten times that of g-C<sub>3</sub>N<sub>4</sub> (204  $\mu\text{mol h}^{-1} \text{g}^{-1}$ )” should be corrected to “which is almost ten times that of g-C<sub>3</sub>N<sub>4</sub> (200  $\mu\text{mol h}^{-1} \text{g}^{-1}$ )”.
2. On page 14869, line 34 (right column), the discussion “The time-resolved fluorescence decay spectrum also demonstrated that the g-C<sub>3</sub>N<sub>4</sub>/MnO-5 composite has a shorter excited-state lifetime of 10.79 ns than the bulky g-C<sub>3</sub>N<sub>4</sub> (17.62 ns)” should be corrected to “The time-resolved fluorescence decay spectrum also demonstrated that the g-C<sub>3</sub>N<sub>4</sub>/MnO-5 composite has a shorter excited-state lifetime of 10.79 ns than the bulky g-C<sub>3</sub>N<sub>4</sub> (12.19 ns)”.

The conclusion made in the paper remains valid and the related discussions are not affected by this change.

An independent expert has viewed the corrected images and has concluded that they are consistent with the discussions and conclusions presented.

This correction supersedes the information provided in the Expression of Concern related to this article.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

