Pulsed laser synthesis of free-standing Pt single atoms in iced block for enhancing photocatalytic hydrogen evolution of g-C_3N_4

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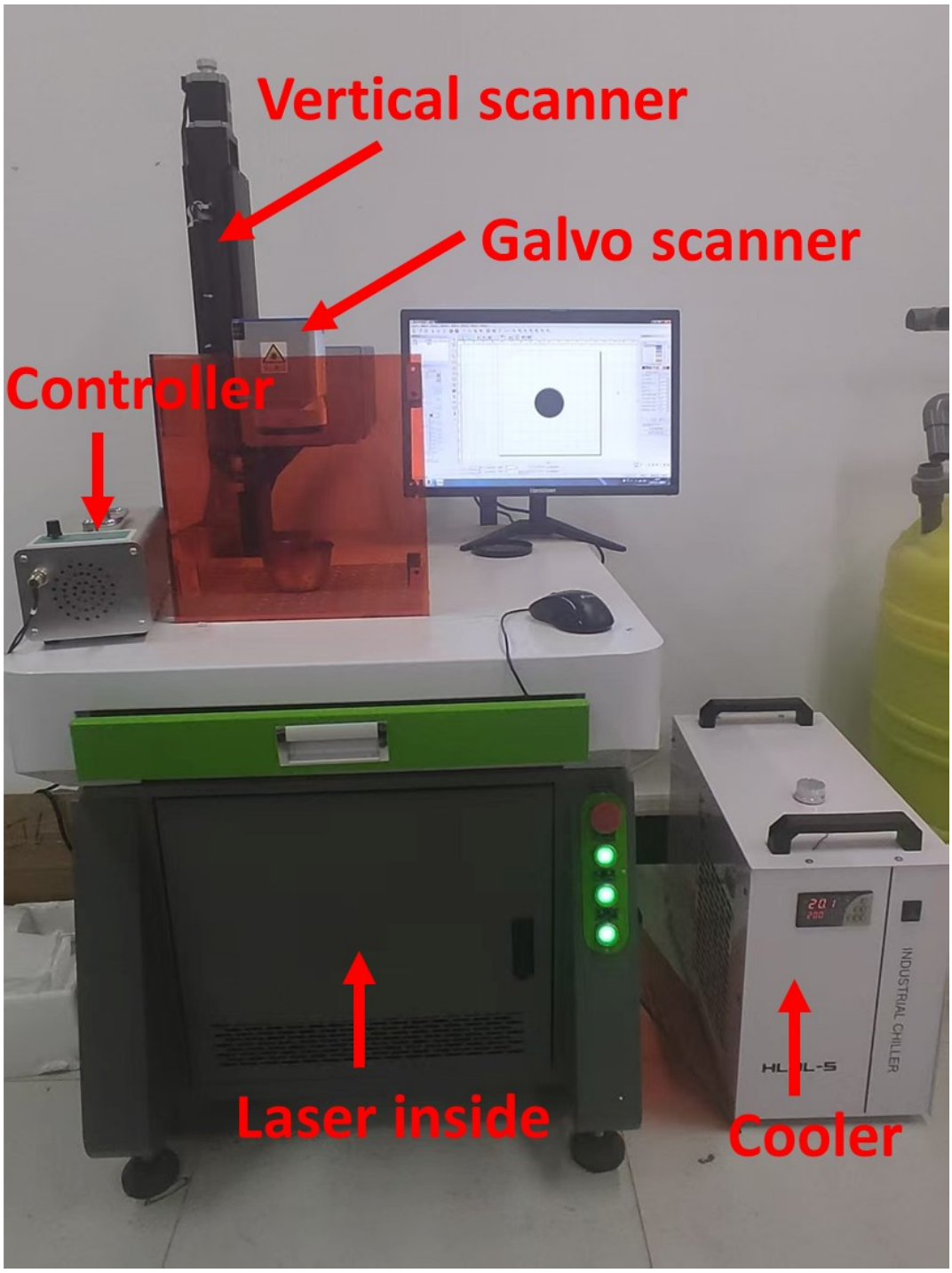

Fig. S1 The photograph of the laser scanning set.

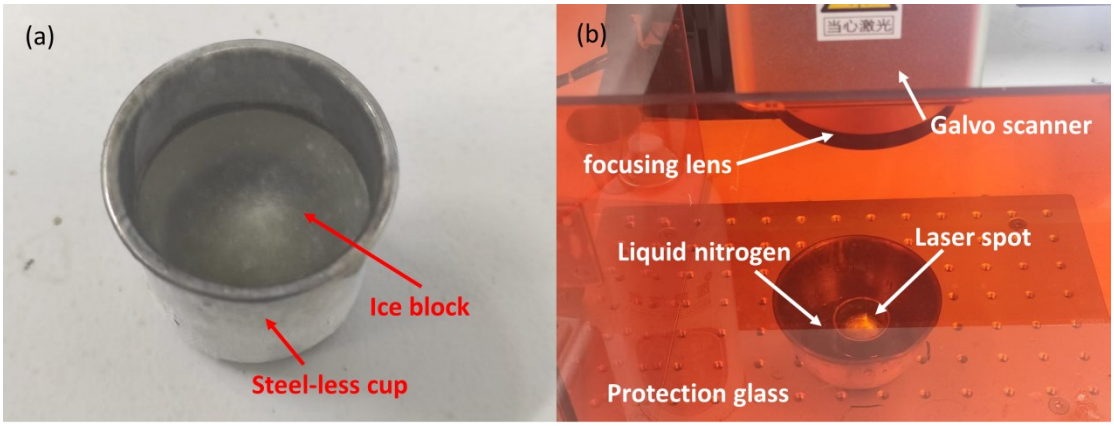

Fig. S2 The photographs of ice block in stainless-steel cup (a) and laser scanning process (b).

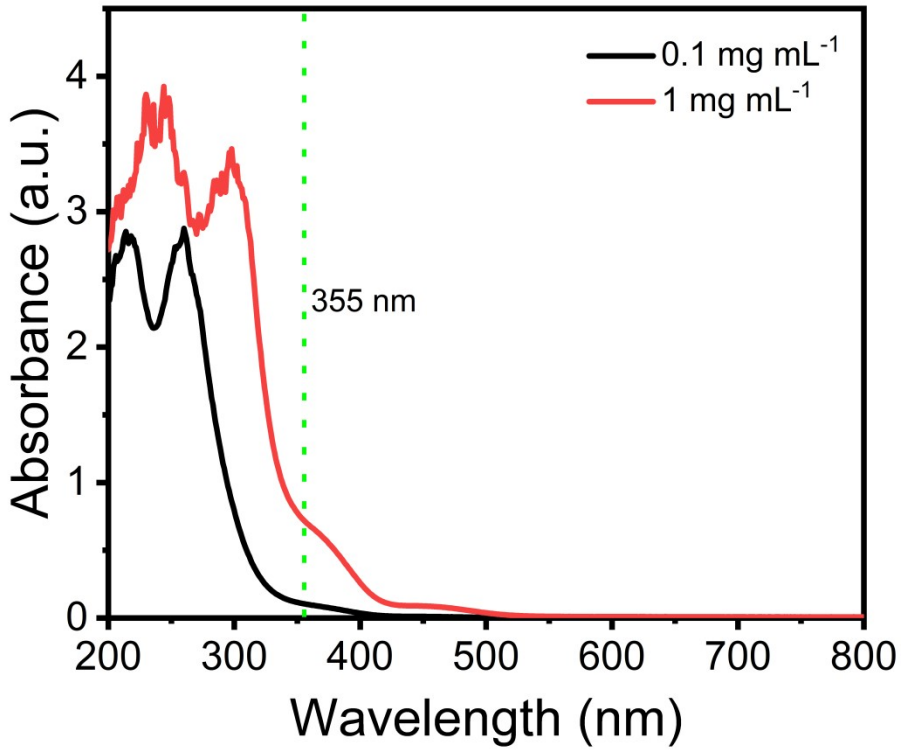

Fig. S3 The absorbance of the ice blocks with different H_2PtCl_6 concentrations.

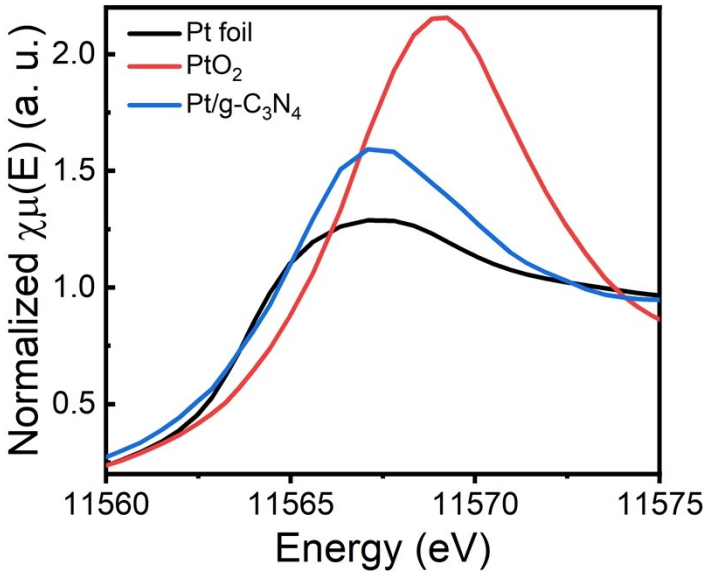

Fig. S4 The enlarged view of EXNES spectra.

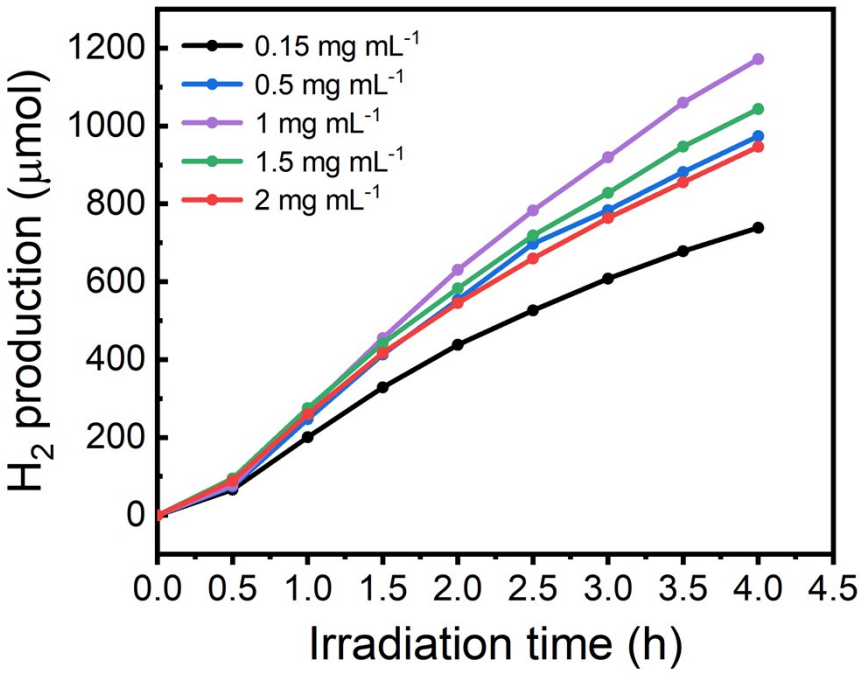

Fig. S5 The photocatalytic hydrogen production of Pt/g-C_3N_4 with different H_2PtCl_6 concentration.

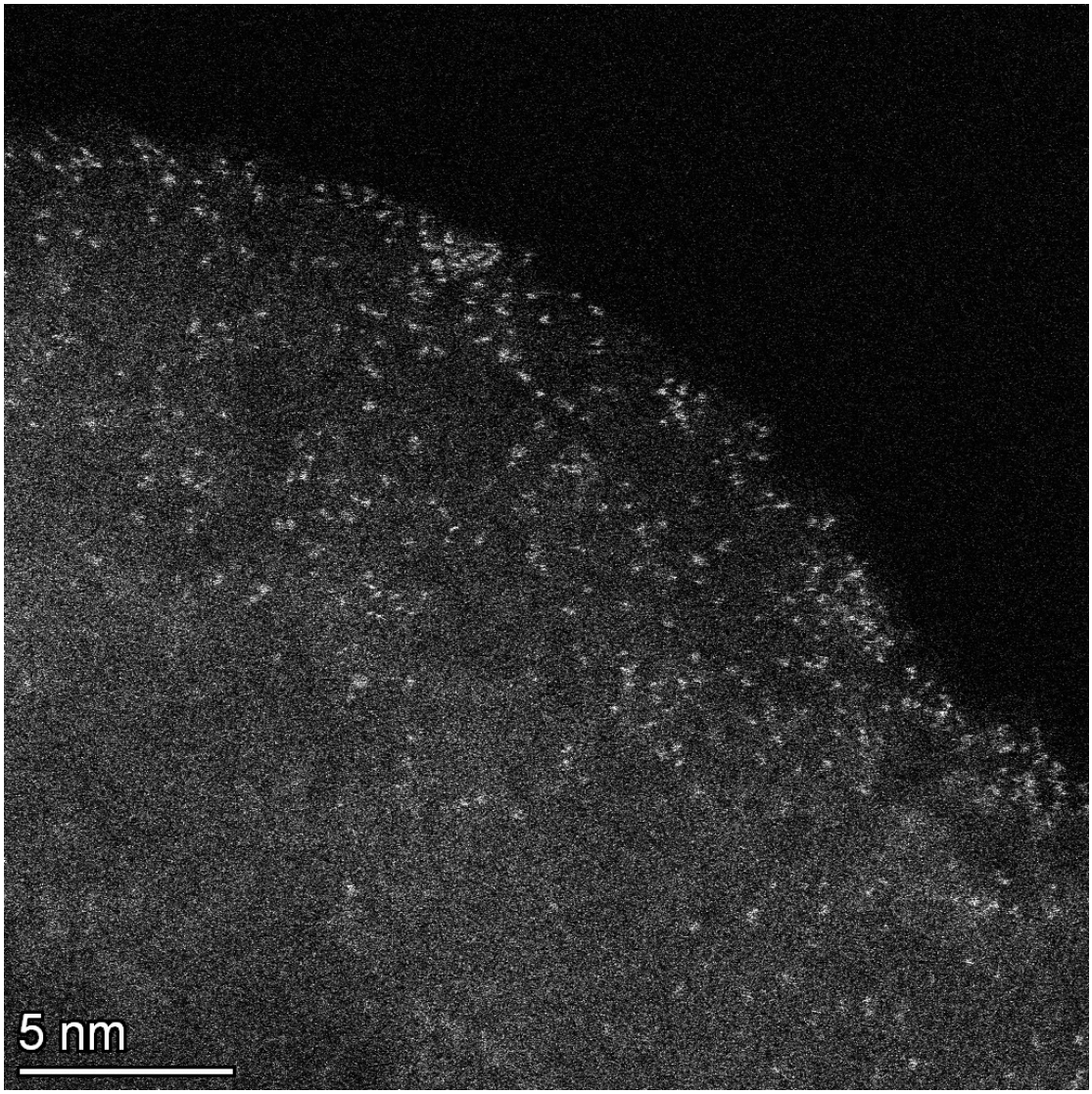

Fig. S6 The HAADF-STEM image of Pt/g-C_3N_4 after use.

Table S1. The precise fitting parameters of the EXAFS result.

Sample	**Bond type**	**CN**	**R (Å)**	**σ2 (10^{-3}Å^2)**	**R factor**
Pt/g-C_3N_4	Pt-N	3.8±0.2	2.25±0.01	2.3±1.6	0.012
Pt foil	Pt-Pt	12	2.75±0.01	6.7±2.2	0.006
PtO_2	Pt-O	5.9±1.2	2.03±0.01	1.9±1.6	0.011

CN: coordination number. S_0^2 was fixed to be 0.88 from Pt foil.
σ2: Debye−Waller factors