
Supporting Information

Electrochemical-Method-Induced Strong Metal-Support Interaction in

Pt-CNT@SnO₂ for CO-Tolerant Hydrogen Oxidation Reaction

Shen-Zhou Li ^{a,†}, Zi-Jie Lin ^{a,†}, Qi-An Chen ^{a,†}, Zhao Cai ^b and Qing Li ^{a,*}

^a State Key Laboratory of Materials Processing and Die & Mould Technology, School of Materials Science and Engineering, Huazhong University of Science and Technology, 1037 Luoyu Road, Wuhan, 430074, Hubei, China.

^b Faculty of Materials Science and Chemistry, China University of Geosciences (Wuhan), Wuhan 430074, China

* Corresponding Author: qing_li@hust.edu.cn

[†] Equal contributions

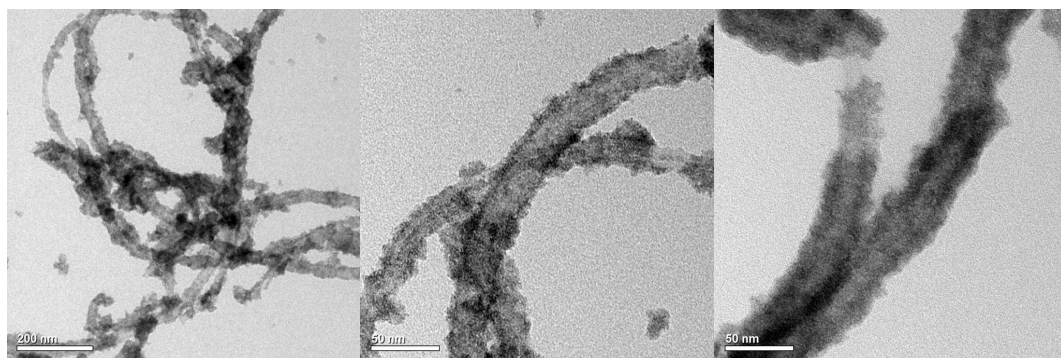


Figure S1: TEM image of the CNT@SnO₂.

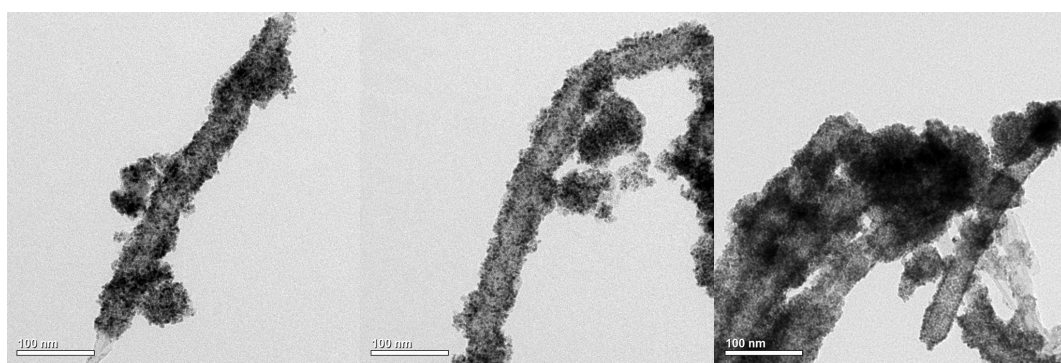


Figure S2: TEM image of the Pt-CNT@SnO₂.

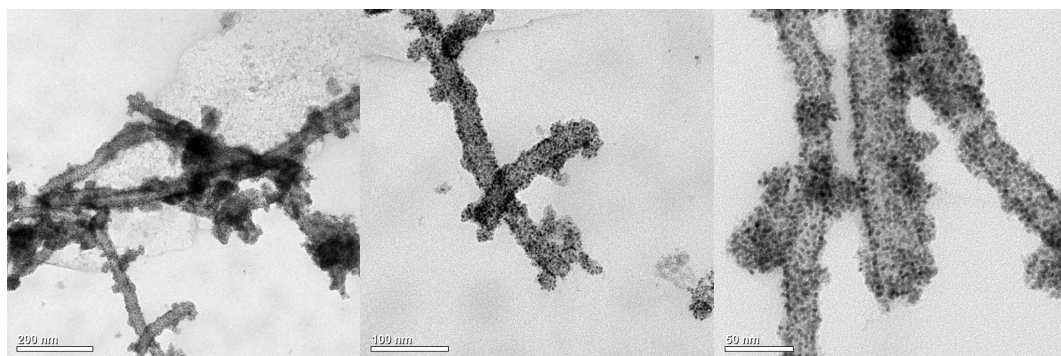


Figure S3: TEM image of the E-Pt-CNT@SnO₂.

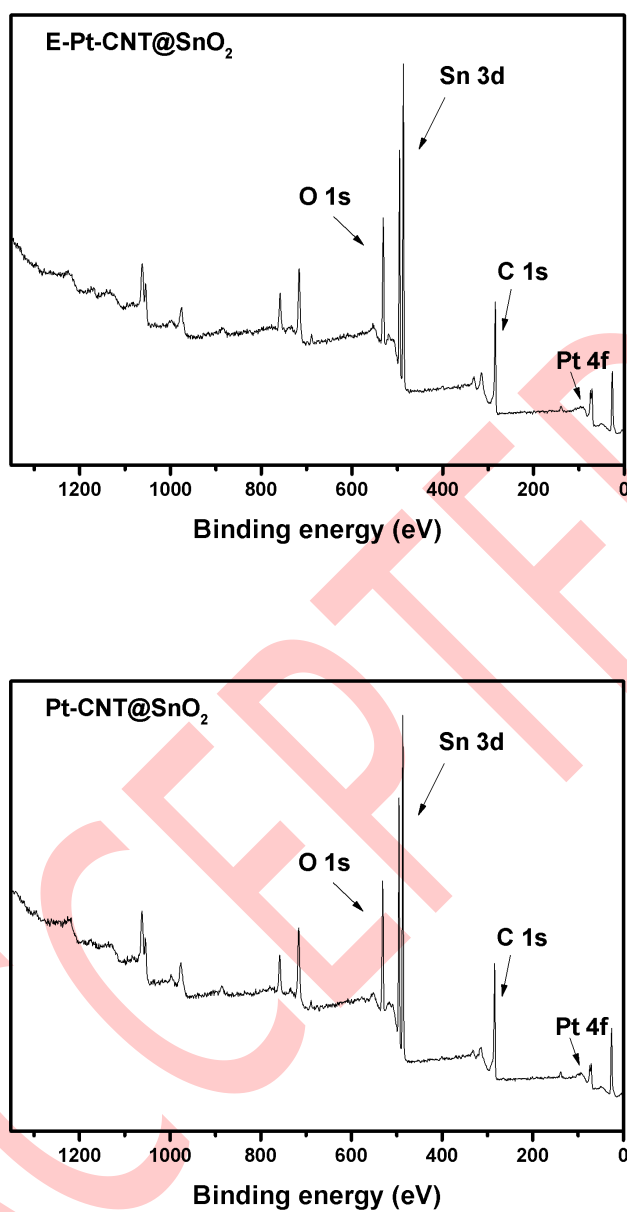


Figure S4: Survey XPS spectra of E-Pt-CNT@SnO₂ and Pt-CNT@SnO₂.

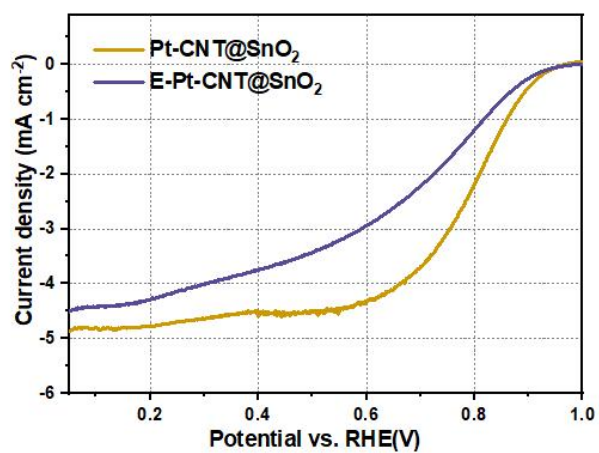


Figure S5: ORR polarization curves of E-Pt-CNT@SnO₂ and Pt-CNT@SnO₂ in O₂-saturated 0.1 M HClO₄ (rotating speed, 1600 rpm; scan rate, 10 mV s⁻¹).

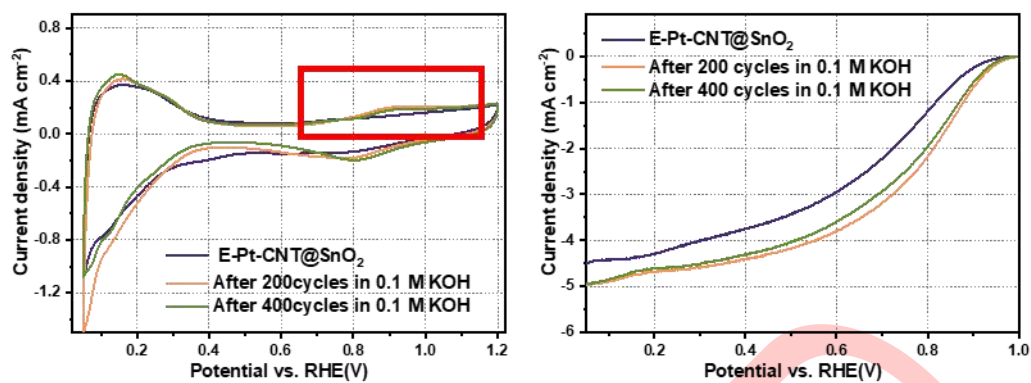


Figure S6: CV curves and ORR polarization curves of E-Pt-CNT@SnO₂ with and without alkaline treatment in 0.1 M HClO₄.

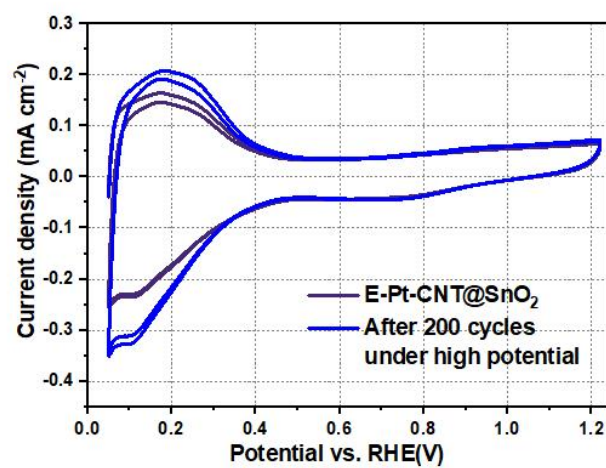


Figure S7: CV curves of E-Pt-CNT@SnO₂ with high potential (1.0-1.6V) treatment in 0.1 M HClO₄.

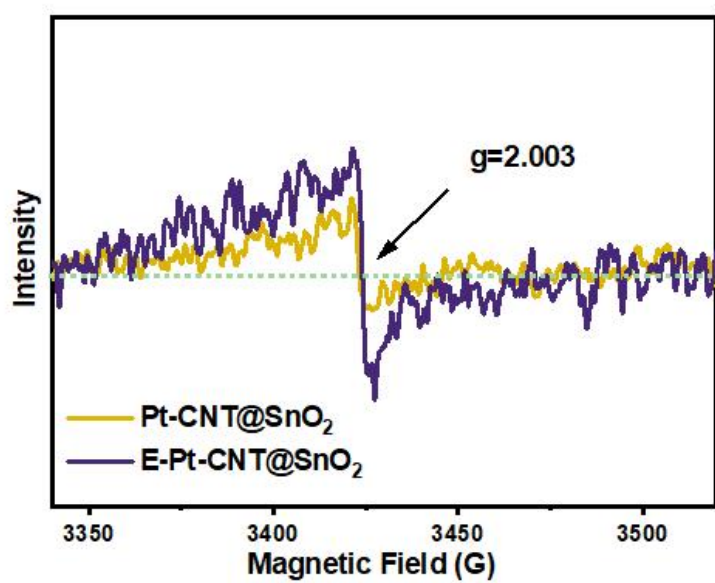


Figure S8: EPR spectra of E-Pt-CNT@SnO₂ and Pt-CNT@SnO₂.

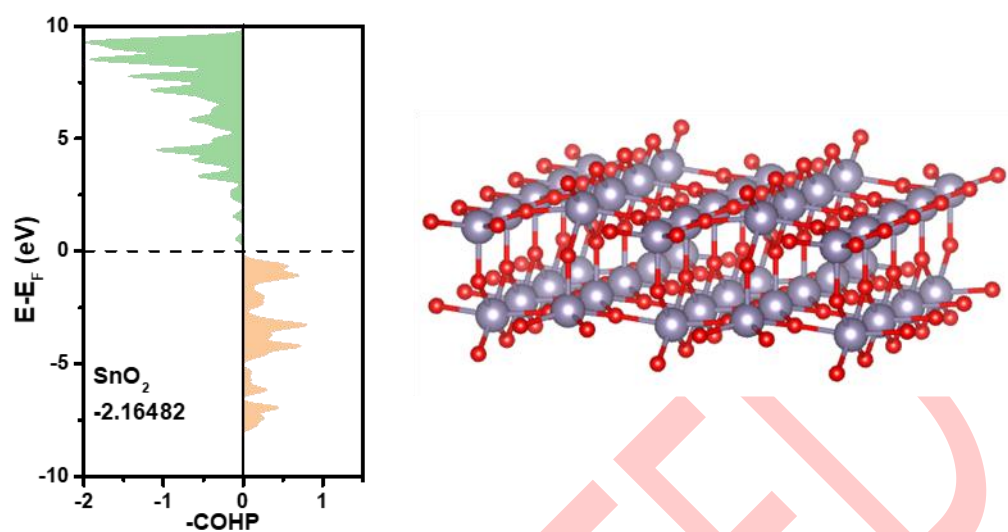


Figure S9: pCOHP for the Sn-O interactions in rutile SnO₂ and the crystal structure of rutile SnO₂.

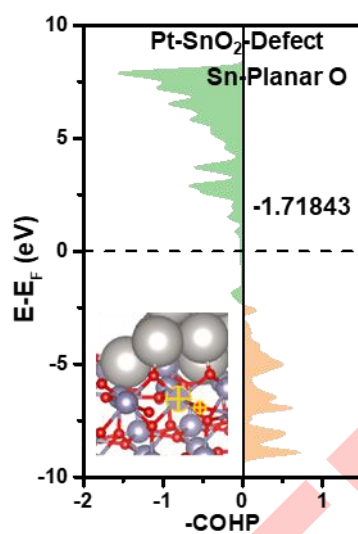


Figure S10: pCOHP for the Sn-planar O interactions in Pt-defect SnO₂.

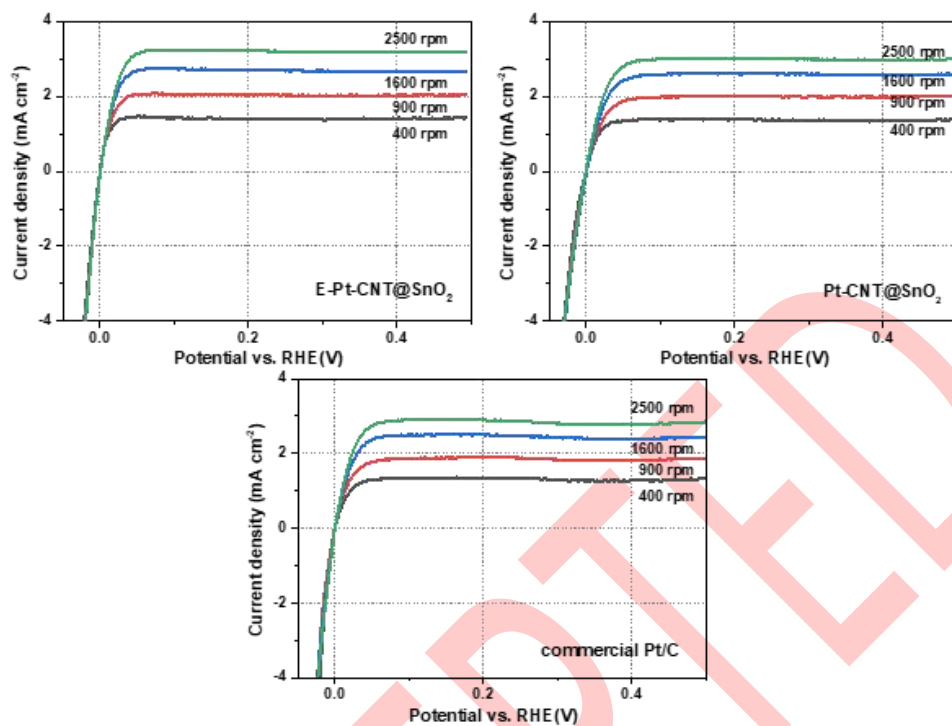


Figure S11: Polarization curves of E-Pt-CNT@SnO₂, Pt-CNT@SnO₂ and Pt-CNT@SnO₂ at various rotation speeds.

Table S1: Comparing the performance of HOR catalysts in this study and literatures in acidic media

Catalysts	J_0 (mA mg ⁻¹)	J_k (mA mg _{Pt} ⁻¹) @ η	Refs.
E-Pt-CNT@SnO ₂	1550	1060 @ 20 mV	This work
Pt-PdO/C	552	-	[1]
PtW ₆ O ₂₄	2700	-	[2]
PtW ₆ O ₂₄ -CDs-4	3780	-	[2]
Pt-N ₂ /KB	-	2788 @30 mV	[3]
Pt-Er/h-NC	-	428 @ 20 mV	[4]
LD-Pt WNPs	-	968.5 @ 50mV	[5]
Pt ₁ @Co ₁ CN	1940	2400 @ 50 mV	[6]
PtRu/C	-	575 @ 50mV	[7]
Pt SACs/CrN	1110	-	[8]
Pt NPs/CrN	210	-	[8]

Reference:

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