

Hierarchical Pt-In Nanowires for Efficient Methanol Oxidation Electrocatalysis

Zhao Lu ¹, Lu Zou ² and Wulin Song ^{1,2,*}

¹ Analytical and Testing Center of Huazhong University of Science and Technology, Wuhan 430074, China

² State Key Laboratory of Materials Processing and Die & Mould Technology,
Huazhong University of Science and Technology, 1037 Luoyu Road, Wuhan 430074, China

* Correspondence: wulins@126.com; Tel.: +86-027-875592025

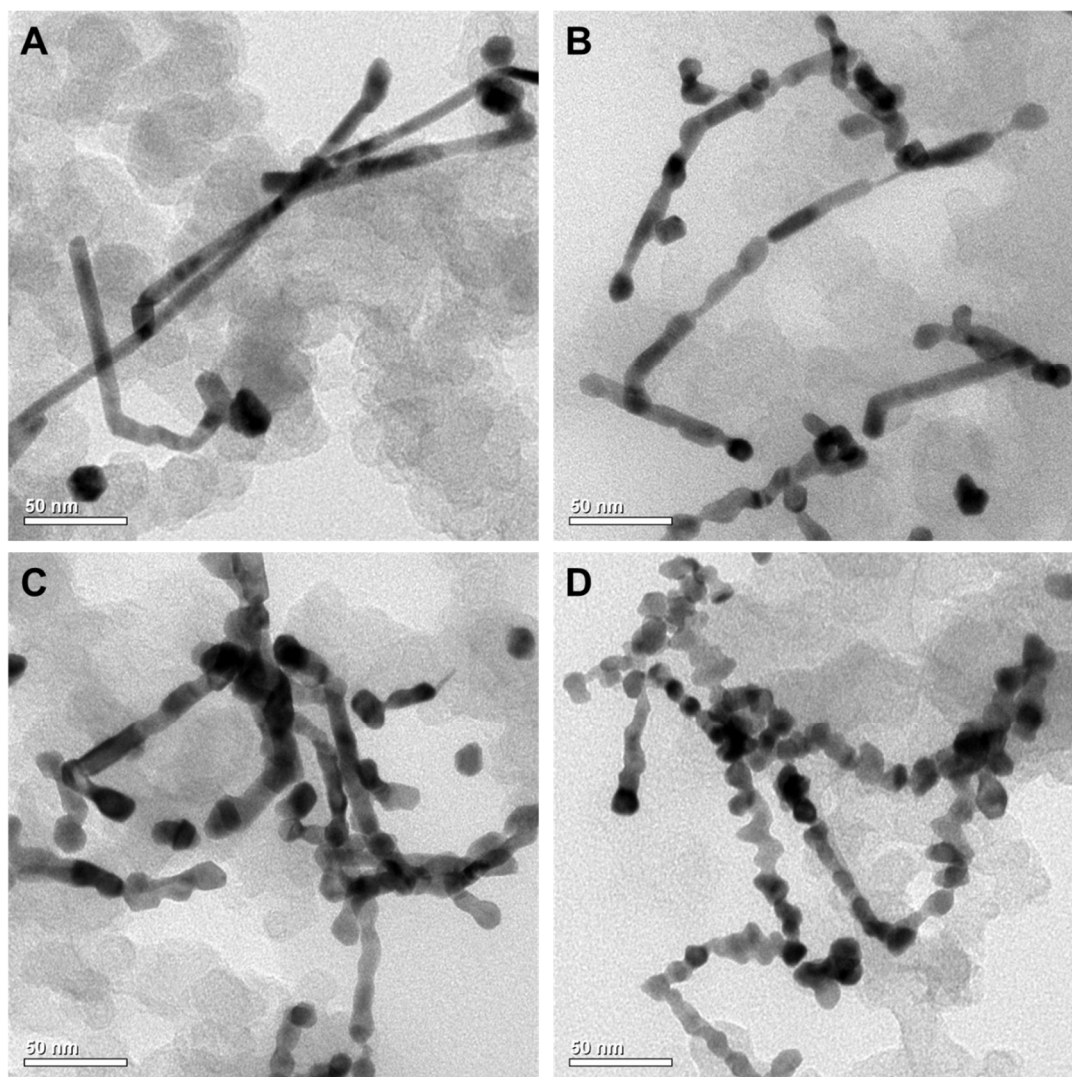


Figure S1. TEM images of carbon supported (A) Pt NWs, (B) Pt₉₄In₆ NWs, (C) Pt₈₉In₁₁ NWs, and (D) Pt₇₈In₂₂ NWs.

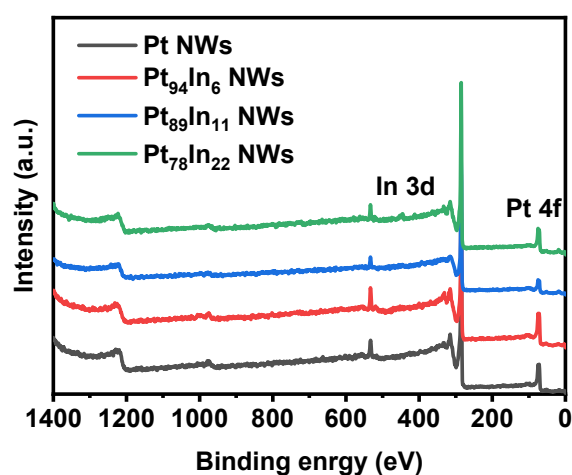


Figure S2. XPS survey spectra of Pt and Pt-In NWs.

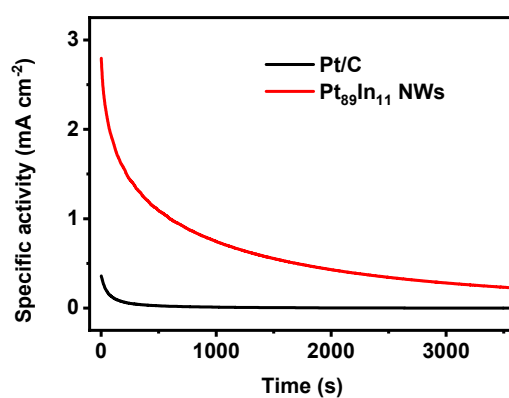


Figure S3. I-t curves of Pt/C and Pt₈₉In₁₁ NWs.

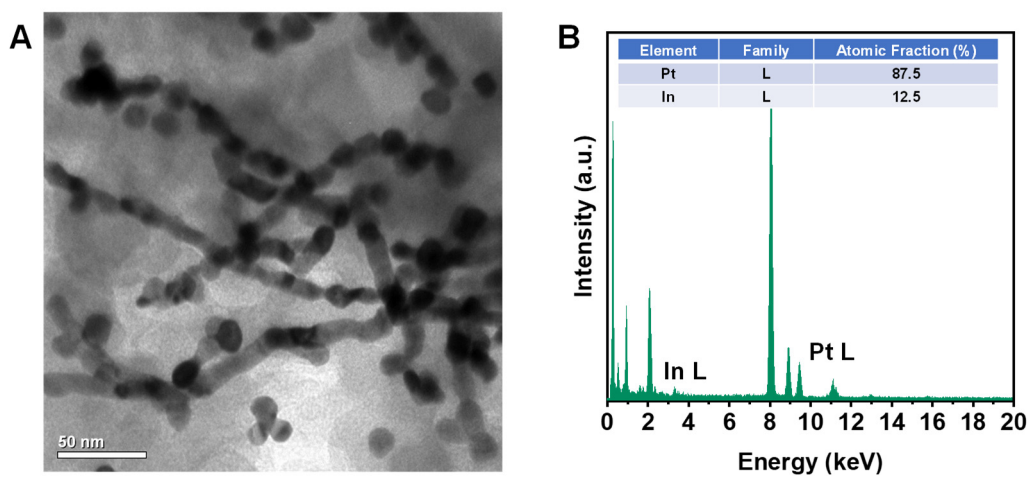


Figure S4. (A) TEM image, and (B) TEM-EDS profile of Pt₈₉In₁₁ NWs after stability test.

Table S1. MOR activity of Pt alloy catalysts in recent reports.

Catalyst	MA (A mg ⁻¹ Pt)	SA (mA cm ⁻²)	Electrolytes	Ref.
Pt₈₉In₁₁ NWs	1.42	6.2	0.1 M HClO₄ + 0.5 M Methanol	This Work
PtRu ₂ Fe Nanowires	NA	2.27	0.1 M HClO ₄ + 0.5 M Methanol	[1]
Pt Nanosheets	0.27	0.57	0.5 M H ₂ SO ₄ + 1 M Methanol	[2]
PtPb/Pt Nanoplates/C	1.50	2.70	0.1 M HClO ₄ + 0.1 M Methanol	[3]
PtCu _{2.1} Nanowires/C	1.56	3.31	0.1 M HClO ₄ + 0.2 M Methanol	[4]
PtRu Nanowires/C	0.82	1.16	0.1 M HClO ₄ + 0.5 M Methanol	[5]
PtRu Nanodendrites	1.08	10.08	0.1 M HClO ₄ + 1 M Methanol	[6]
Co-PtCu Nanoframes/C	4.11	7.09	0.1 M HClO ₄ + 1 M Methanol	[7]
PtRuCu Hexapods	1.35	3.91	0.1 M HClO ₄ + 1 M Methanol	[8]
Pd _{0.97} Ru _{0.44} Pt Nanowire Networks	1.10	1.98	0.1 M HClO ₄ + 0.5 M Methanol	[9]
PtCoNiRh Nanowires/C	1.36	2.08	0.1 M HClO ₄ + 0.5 M Methanol	[10]
f-Pt ₂ Cu ₁ Nanowires	1.14	2.78	0.1 M HClO ₄ + 0.5 M Methanol	[11]
Pt ₃ Sn Intermetallic Nanocubes	2.19	4.00	0.1 M HClO ₄ + 1 M Methanol	[12]

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