Nanoflower-shaped MXene-based field-effect transistor capable of ultrasensitive microRNA-21 determination towards efficient lung cancer diagnosis

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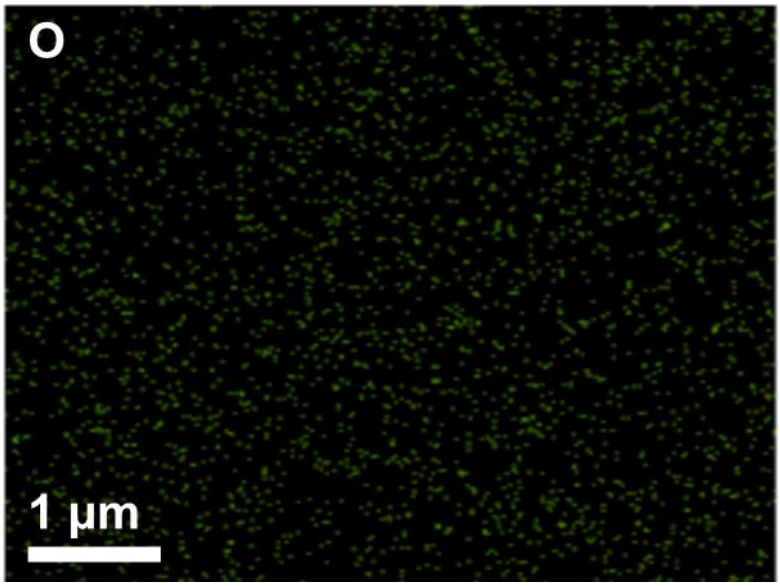

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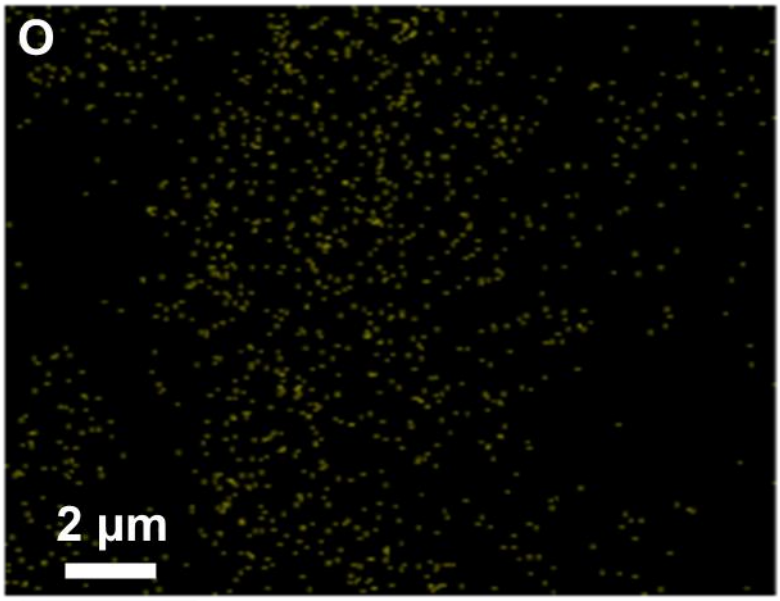
S1. O mapping for MXene.



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S2. O mapping for NSMX.

Table S1. Comparisons of biosensors for determination of miR-21.

Platform	**Strategy**	**NPs**	**Electrode**	**Linear range**	**References**
Aptamer	DPV	CuNCs	Gold	10 pM-0.1 fM	[1]
Enzyme free	EIS	CeO_2	GCE	1 fM to 1nM	[2]
HCR	CV	-	Gold	10 fM to 1nM	[3]
ELC	-	AuNPs	ITO	1 fM to 1nM	[4]
Label-free ELC	SWV	AuNPS	GCE	1.0 pM- 10 nM	[5]
NSMXFETs	Field effect transistor	Flower-shaped MXene	Au	0.64 fm-100 nM	Our work

HCR is hybridization chain reaction; SWV is square wave cyclic voltammetry; DPV is differential pulse voltammetry.

Table S2. Detailed informatization of clinical cohorts.

Number	Age	Category	Stage
1	60	Lung cancer	IIIb
2	75	Lung cancer	Ia3
3	68	Lung cancer	IIIb
4	56	Lung cancer	IVb
5	58	Lung cancer	IVa
101	50	Health control	/
102	56	Health control	/
103	52	Health control	/
104	59	Health control	/
105	56	Health control	/

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