Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

A Facile Strategy for the Synthesis of Monodispersed $W_{17}O_{47}$ Nanoneedles

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Table S1. The length, width and aspect ratio of $W_{17}O_{47}$ nanostructures under different volume ratios of oleic acid (OA) to 1-octadecene (ODE) with 0.2 mmol of sulfur power and the reaction time at 1 h.

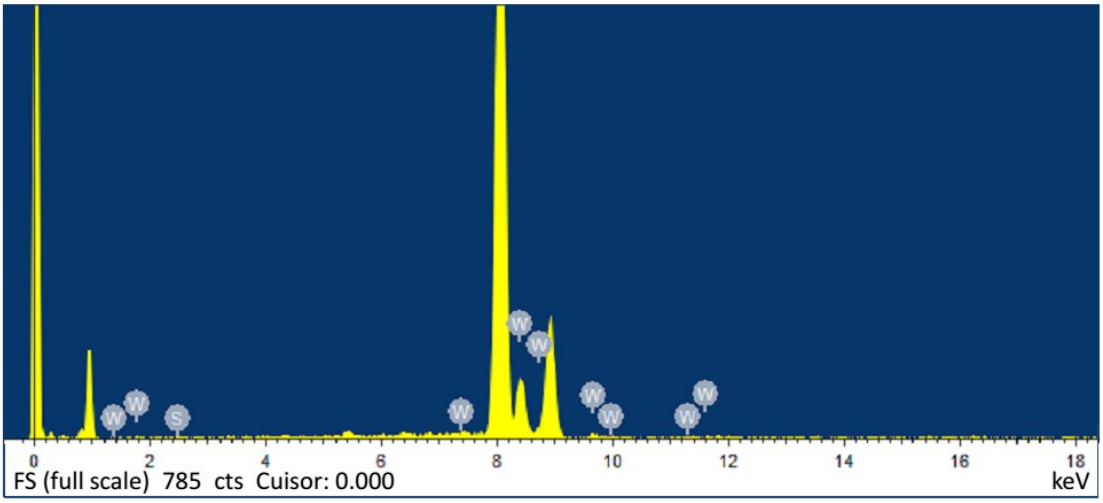
OA/ODE	0.5:9.5	1:9	2:8	3:7	5:5	7:3	8:2	10:0
Length (nm)	46.5	75.3	88.0	_	_	_	_	_
Width (nm)	6.7	4.2	9.0	_	_	_	_	_
aspect ratio	6.94	17.93	9.78	_	_	_	_	_

Table S2. The length, width and aspect ratio of $W_{17}O_{47}$ nanostructures with the amount of sulfur powder. OA：ODE = 2:8; Reaction time = 1 h.

sulfur powder(mmol)	0	0.01	0.05	0.10	0.20	0.30
Length (nm)	_	88.0	65.6	87.3	88.0	133.3
Width (nm)	4.9	13.5	11.5	17.0	9.0	11.1
aspect ratio	_	6.52	5.70	5.14	9.78	12.01

Table S3. The length, width and aspect ratio of $W_{17}O_{47}$ nanostructures according to different reaction time with 0.2 mmol of sulfur power. OA:ODE=2:8.

reaction time	10 min	30 min	1 h	2 h
Length (nm)	72.3	78.0	88.0	83. 7
Width (nm)	8.6	9.9	9.0	8.7
aspect ratio	8.4	7.88	9.78	9.6



element	weight percent	atomic percent
S K	0.29	1.63
W L	99.71	98.37
total	100.00	

Figure S1. The EDS images of $W_{17}O_{47}$ nanoneedles.

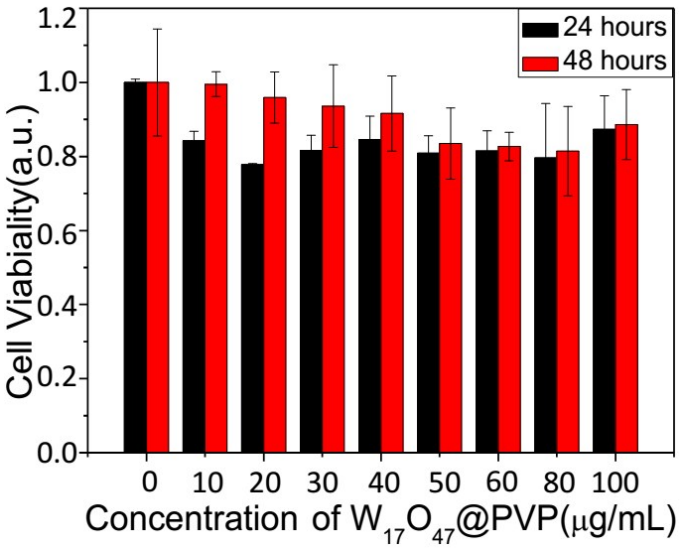


Figure S2. Cell viability tests of $W_{17}O_{47}$@PVP nanoneedles after 24 and 48 h incubation, respectively. The cells used here are HeLa cells.