Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Fabrication of Binary Components based Poly(ionic liquid) through "Grafting" and "Clicking" and their Synergistic Antifouling Activity

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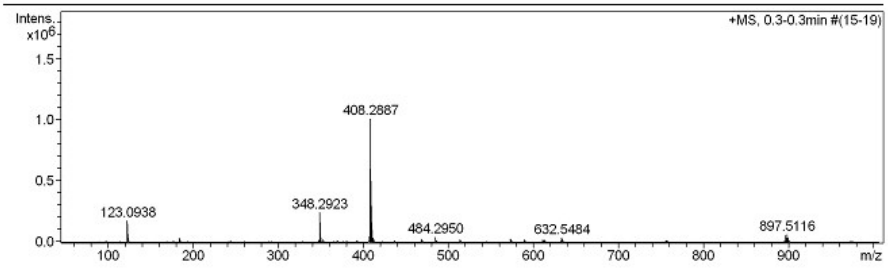
Mass Spectrum SmartFormula Report

Analysis Info

Analysis Name	D:\Data\user\yuqiangliang20141225-1.d	Acquisition Date	12/25/2014 4:19:43 PM
Method	tune_low.m	Operator	BDAL@CN
Sample Name	1	Instrument / Ser#	micrOTOF-Q II 10453
Comment			

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1000 m/z	Set Collision Cell RF	150.0 Vpp	Set Divert Valve	Waste



Meas. m/z	#	Formula	m/z	err [ppm]	Mean err [ppm]	rdb	N-Rule	e⁻ Conf	mSigma	Std I	Std Mean m/z	Std I Var Norm	Std m/z Diff	Std Comb Dev
408.2887	1	C 24 H 42 N O 2 S	408.2931	10.8	4.4	4.5	ok	even	115.0	164.9	4.1	53.1	7.6	842.7

Fig. S1 HR-MS data of SH-Py16.

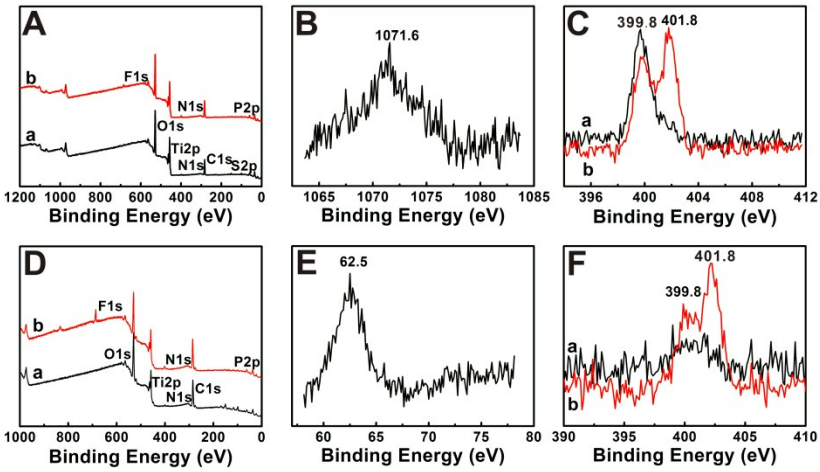


Fig. S2 (A) XPS survey spectra of (a) MESNA-TiO_2 nanowires, (b) MESNA-PIL-TiO_2 nanowires. (B) Na 1s spectra of MESNA-TiO_2 nanowires. (C) N 1s spectra of (a) MESNA-TiO_2 nanowires and (b) MESNA-PIL-TiO_2 nanowires. (D) XPS survey spectra of (a) Py16-TiO_2 nanowires, (b) Py16-PIL-TiO_2 nanowires. (E) Br 3d spectra of Py16-TiO_2 nanowires. (F) N 1s spectra of (a) Py16-TiO_2 nanowires, (b) Py16-PIL-TiO_2 nanowires.

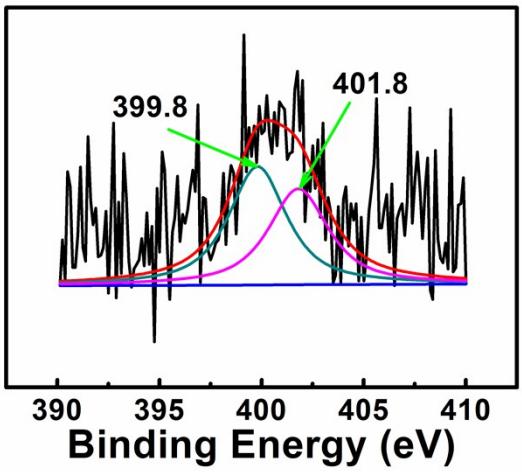


Fig. S3 The high resolution spectrum of the N 1s region of Py16-TiO_2 nanowires

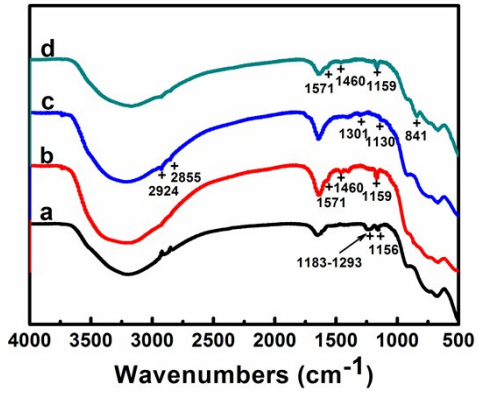


Fig. S4 FT-IR spectra of (a) MESNA-TiO2 nanowires, (b) MESNA-PIL-TiO2 nanowires, (c) Py16-TiO2 nanowires and (d) Py16-PIL-TiO2 nanowires.

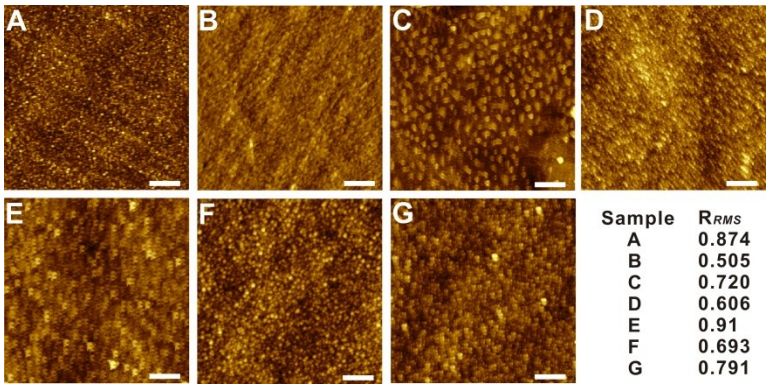


Fig. S5 3μm × 3μm AFM images for surfaces (A) bare Ti, (B) mPEG-Ti, (C) mPEG-PIL-Ti, (D) MESNA-Ti, (E) MASNA-PIL-Ti, (F) Py16-Ti, (G) Py16-PIL-Ti.

Table 1. The zeta potential analysis results of TiO_2 nanowires, mPEG-TiO_2 nanowires, MESNA-TiO_2 nanowires, Py16-TiO_2 nanowires, mPEG-PIL-TiO_2 nanowires, MESNA-PIL-TiO_2 nanowires, Py16-PIL-TiO_2 nanowires.

Samples	**ζ(mV)**
TiO_2 nanowires	-5.71 ± 0.9
mPEG-TiO_2 nanowires	-1.2 ± 0.3
MESNA-TiO_2 nanowires	-29.9 ± 0.4
Py16- TiO_2 nanowires	22.0 ± 1.2
mPEG-PIL-TiO_2 nanowires	31.9 ± 3.4
MESNA-PIL-TiO_2 nanowires	21.5 ± 1.8
Py16-PIL-TiO_2 nanowires	31.1 ± 3.4

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