

## Efficient Cancer Cell Capturing SiNWAs Prepared via Surface-Initiated SET-LRP and Click Chemistry

Lulu Xue, Zhonglin Lyu, Yafei Luan, Xinhong Xiong, Jingjing Pan, Gaojian Chen\* and Hong Chen\*

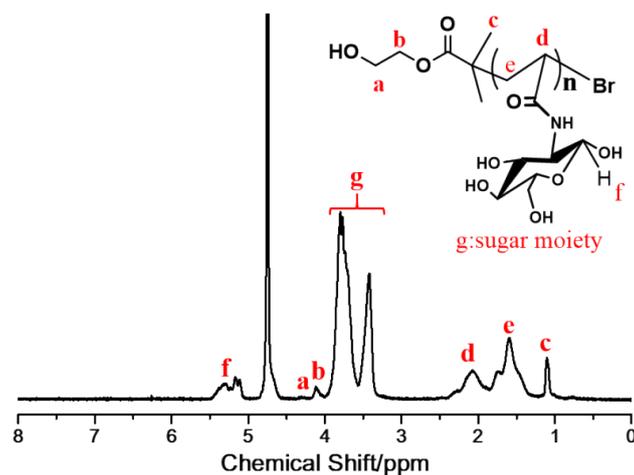


Figure S1. Typical <sup>1</sup>H NMR spectrum (D<sub>2</sub>O) of PAGA prepared using 2-hydroxyethyl α-bromoisobutyrate (HEBiB) as the sacrifice initiator for the surface-initiated polymerization.

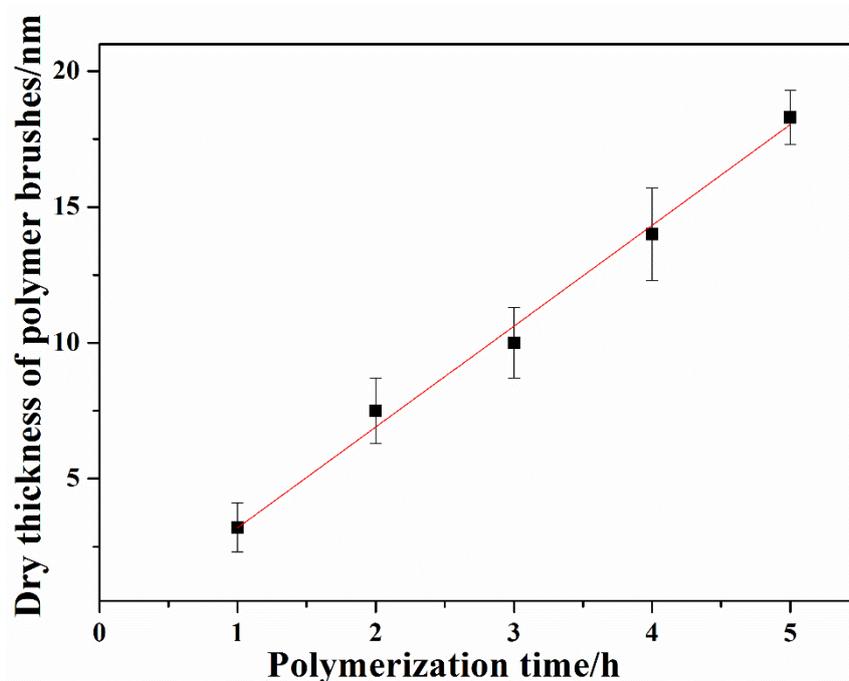


Figure S2. The dry thickness of polymer brushes grafted on silicon wafers at different polymerization time. Data are the mean ± SD (n = 3).

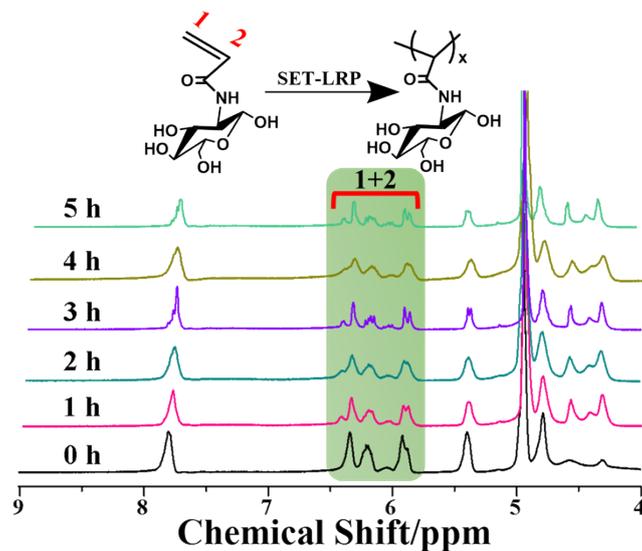


Figure S3.  $^1\text{H}$  NMR spectra ( $\text{DMSO-}d_6$ ) of the freeze-dried reaction mixture using 2-hydroxyethyl  $\alpha$ -bromoisobutyrate (HEBiB) as the sacrifice initiator during the surface-initiated polymerizations at different times.

Table S1. XPS atomic concentration of SN- $\text{N}_3$  and SN-APT surfaces.

Sample	XPS atomic concentration (%)					
	[Si]	[C]	[N]	[O]	[Br]	[P]
SN- $\text{N}_3$	17.4	48.2	7.3	27.1	--	--
SN-APT	7.8	49.1	8.5	33.4	--	1.2

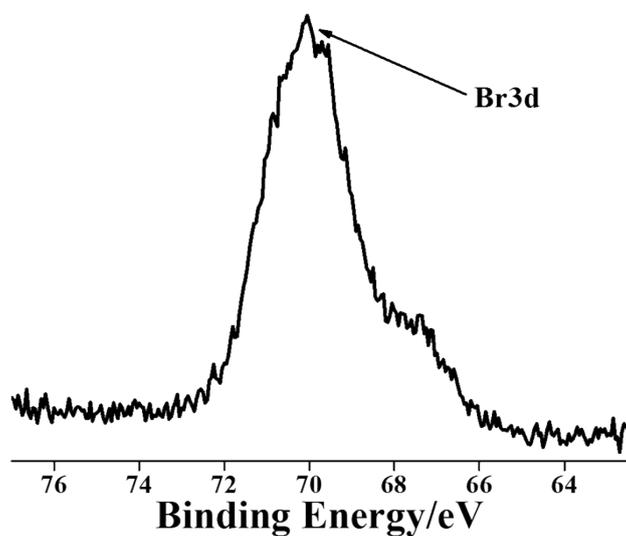


Figure S4. High-resolution XPS spectrum of the Br 3d regions on SN-Br surface.

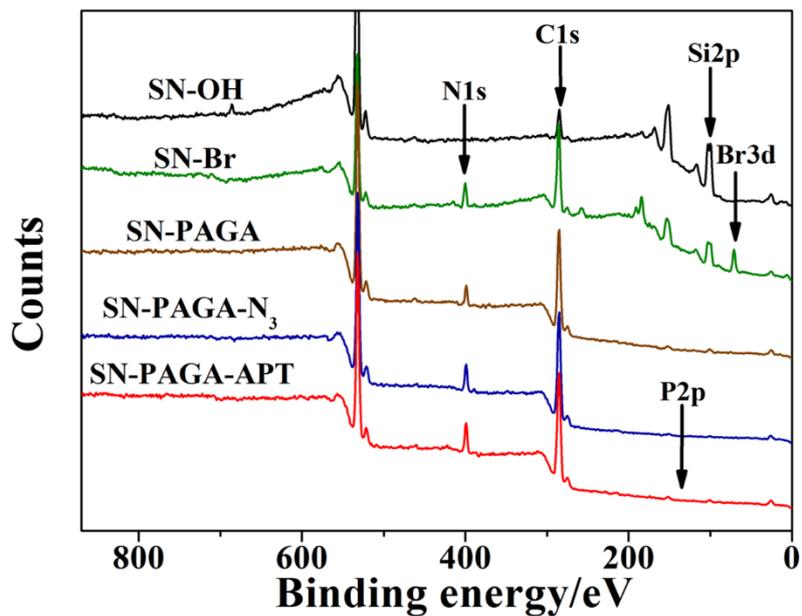


Figure S5. XPS spectra of each modification steps.

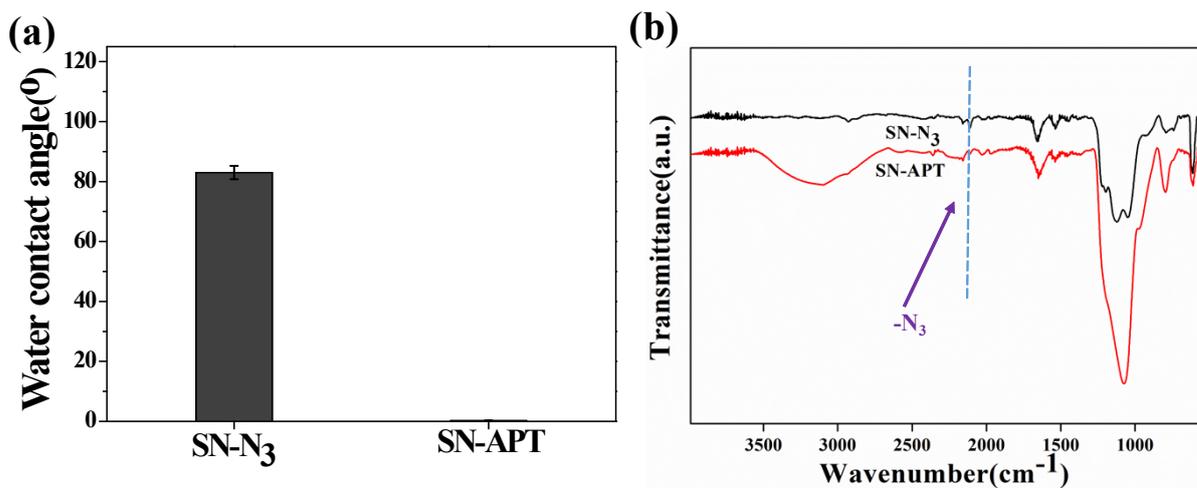


Figure S6. (a) Water contact angles of SN-N<sub>3</sub> and SN-APT. (b) ATR-FTIR spectra of SN-N<sub>3</sub> and SN-APT.

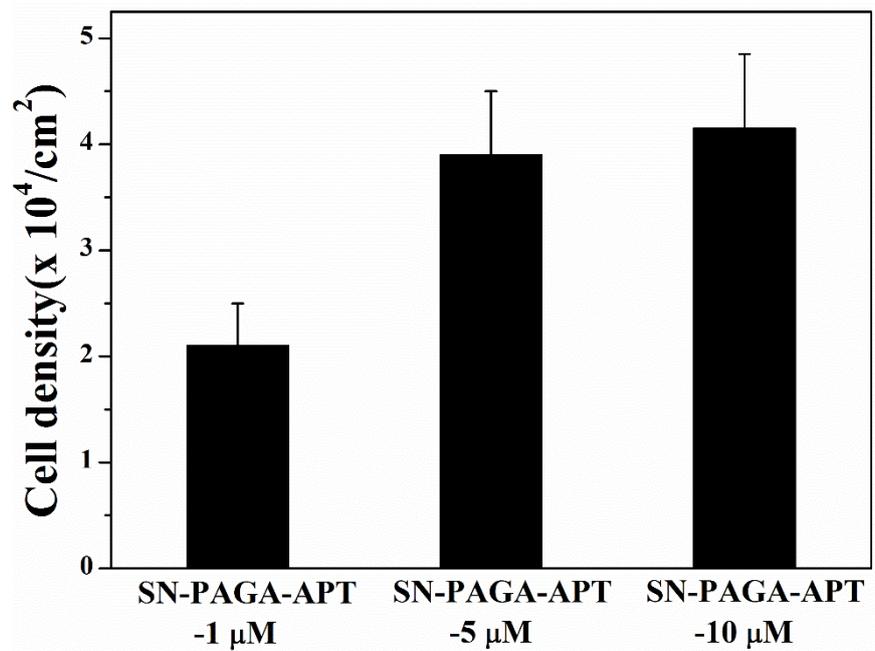


Figure S7. The density of Ramos cells captured by SN-PAGA-APT surfaces with different aptamer ratios. Data are the mean  $\pm$  SD ( $n = 5$ ).