

—

A ~ 0.3 μm

-A (Na⁺) [4]. -

(substrate), (quartz),

Avidin 0.9 μM [5]. 0.9 μM avidin

biotin 25 °C 2

avidin 2 가

μM avidin 0.9

—

a) (contact angle) biotin avidin

piranha solution(H₂SO₄:H₂O₂=3:1)

5° 10 2μL

15 biotin avidin

60°, 34° 가

avidin biotin

biotin avidin

b) XPS (X-ray Photoelectron Spectroscopy) biotin group

Biotin XPS

100 % Biotin-UD-TMS 0 ~ 1300 eV

XPS biotin

(285 eV), (532.5 eV), (400 eV) (169 eV)

biotin biotin

c) Avidin UV-visible spectra

UV-visible spectrophotometer avidin

0.9 μM avidin uv-vis 2 ml UV-visible

. Biotin

가
avidin

가 가 biomineralization, self-assembly, biomimetics
가 [7].

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