

Supplementary data

Strong UV-Protection and Fluorescence Properties from Living Diatom Exoskeleton Modified by Eu^{3+} -Complex

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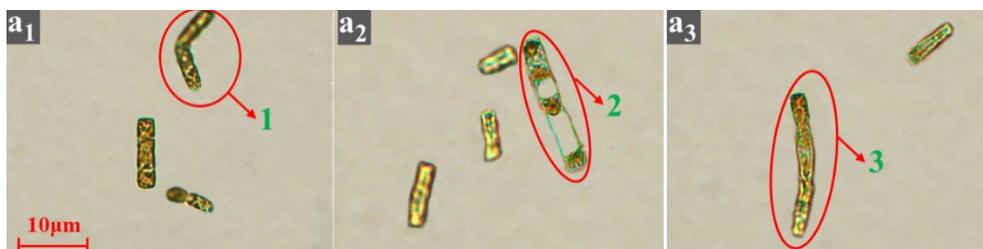


Figure S1 Optical microscope pictures of living diatoms(a_1 , a_2 and a_3). The magnification is 40×10 .

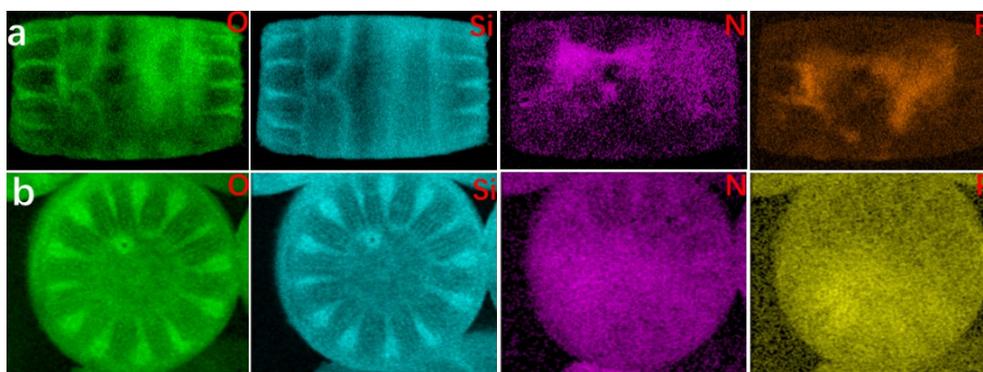


Figure S2 Energy dispersive X-ray spectroscopy (EDS) mappings images about girleband (a) and epitheca (b) of the DS.

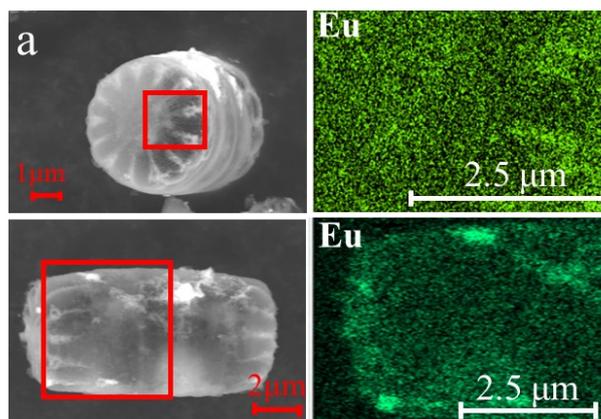


Figure S3 Energy dispersive X-ray spectroscopy (EDS) mappings images of the USDU (a).

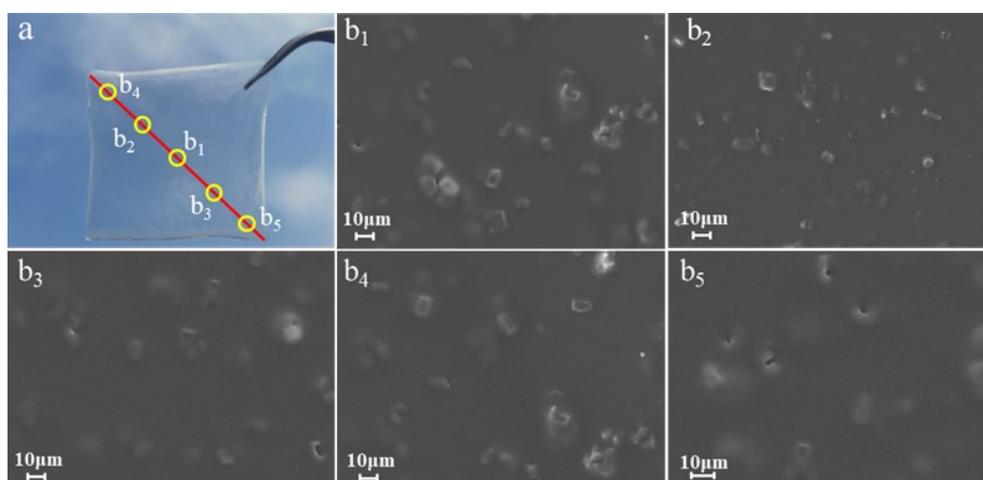


Figure S4 USDU@PAN film under sunlight (a). SEM images of different parts of USDU@PAN film (b_1 , b_2 , b_3 , b_4 and b_5).

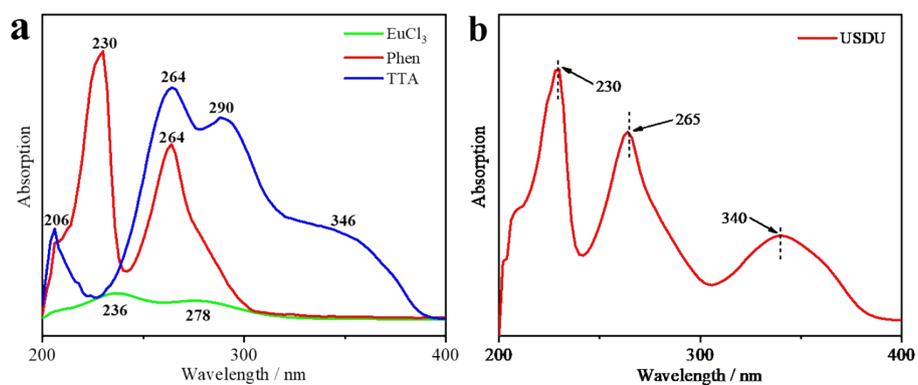


Figure S5 UV-vis absorption of EuCl_3 , Phen, TTA (a) and USDU (b).

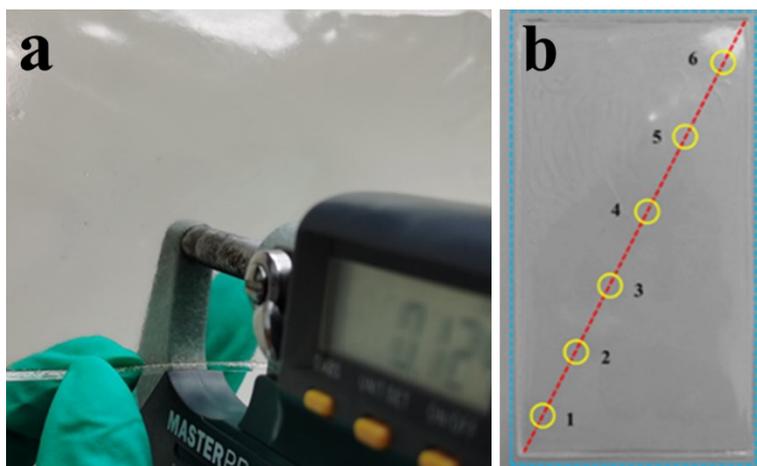


Figure S6 USDU@PAN Film thickness measurement (a) and the location selected on USDU@PAN film.

Table S1 the thickness of the film.

location	1	2	3	4	5	6	average
Thickness(μm)	113	118	121	124	119	115	118.3