

## **Solving Biofouling Problem of Uranium Extraction from Seawater by Plasma Technology**

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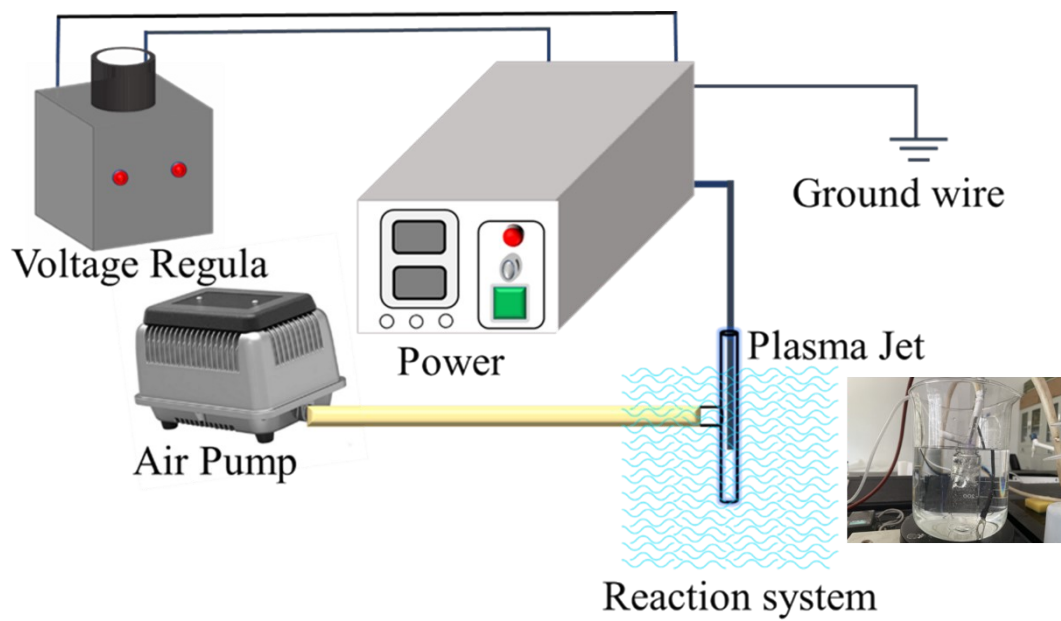
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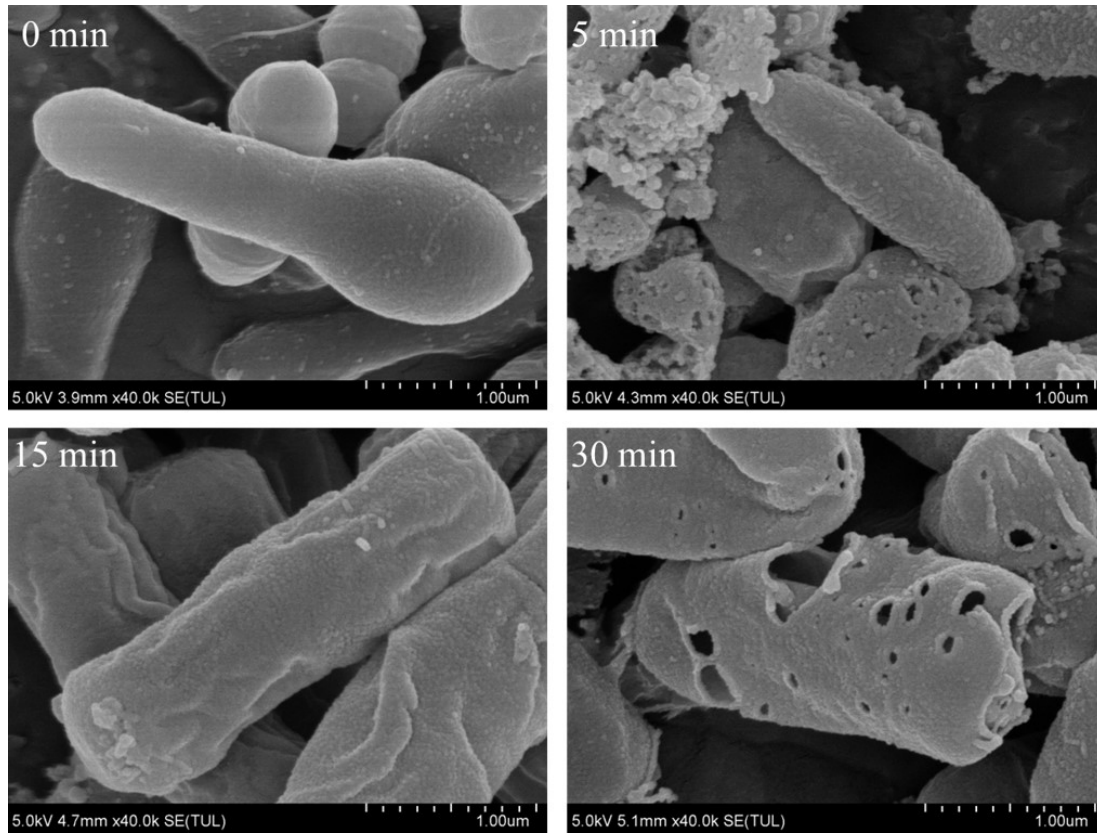
**Supplemental Information, 7 Pages, 7 Figures**

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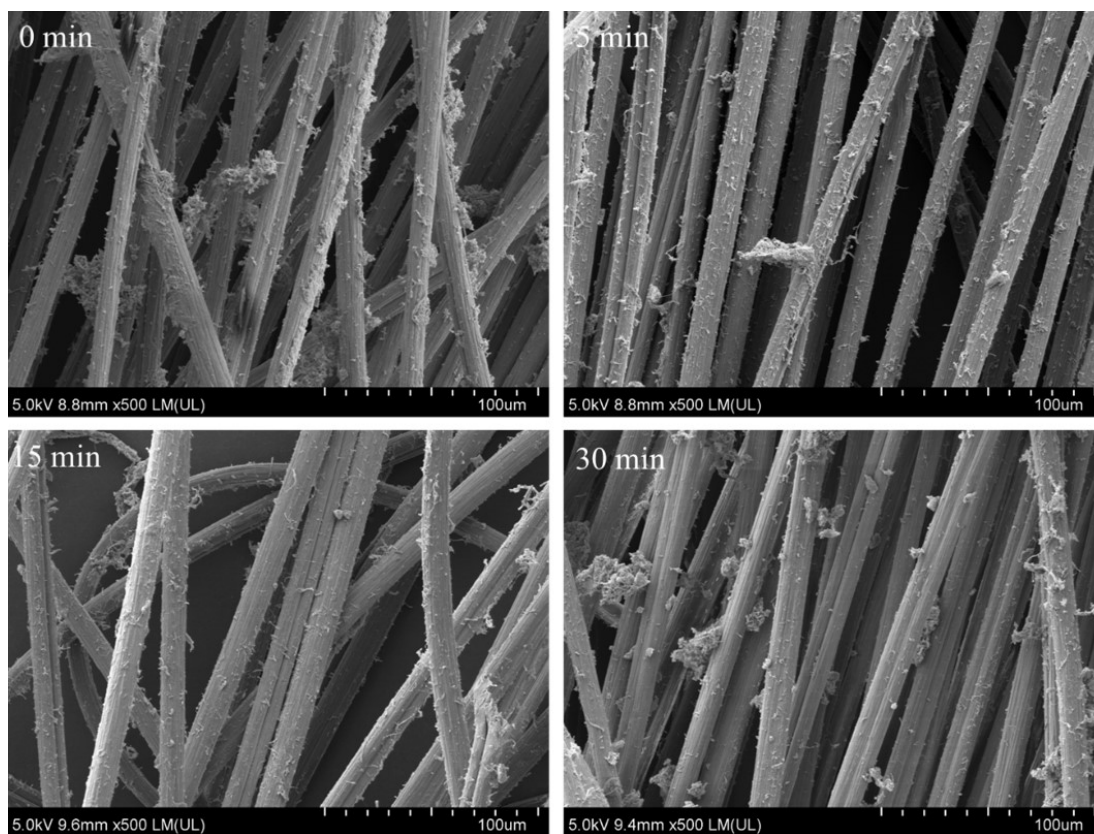
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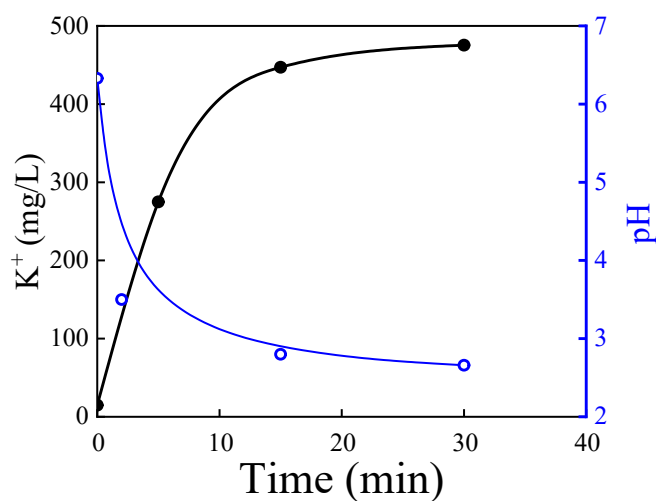
**Fig. S1.** Schematic diagram of plasma treatment system.



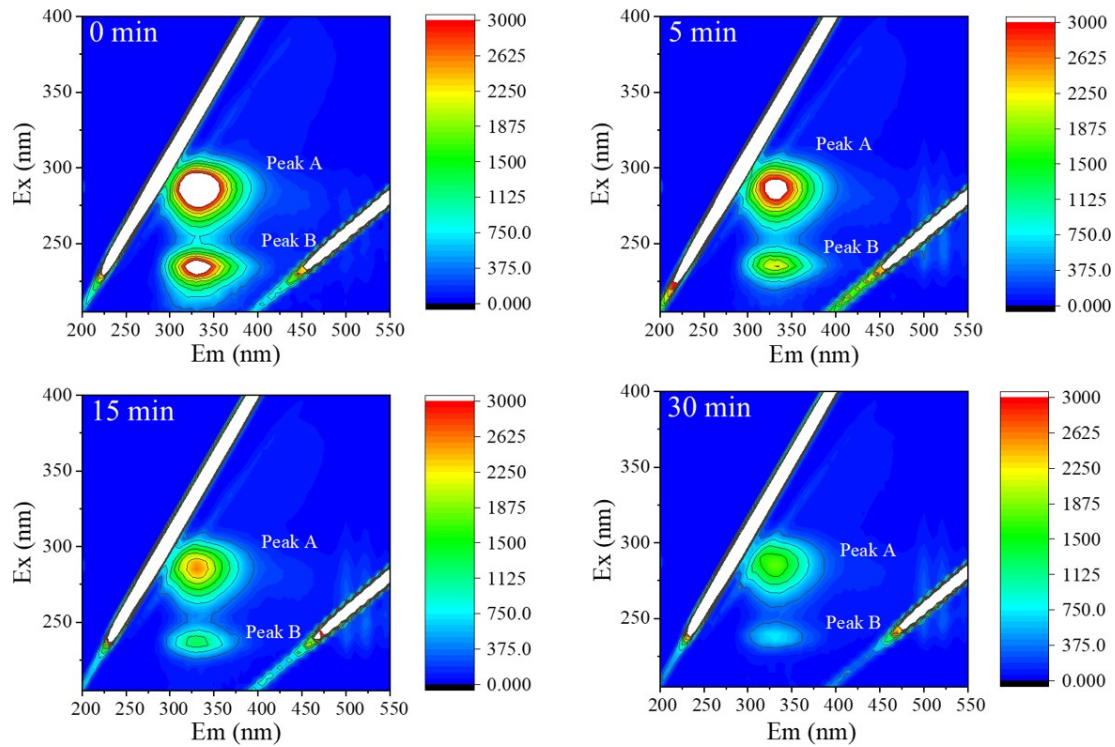
**Fig. S2.** Effect of treating time on SEM images of *V. alginolyticus* in PBS solution.  $C[V. alginolyticus] = 1.0 \times 10^8$  CFU/mL.



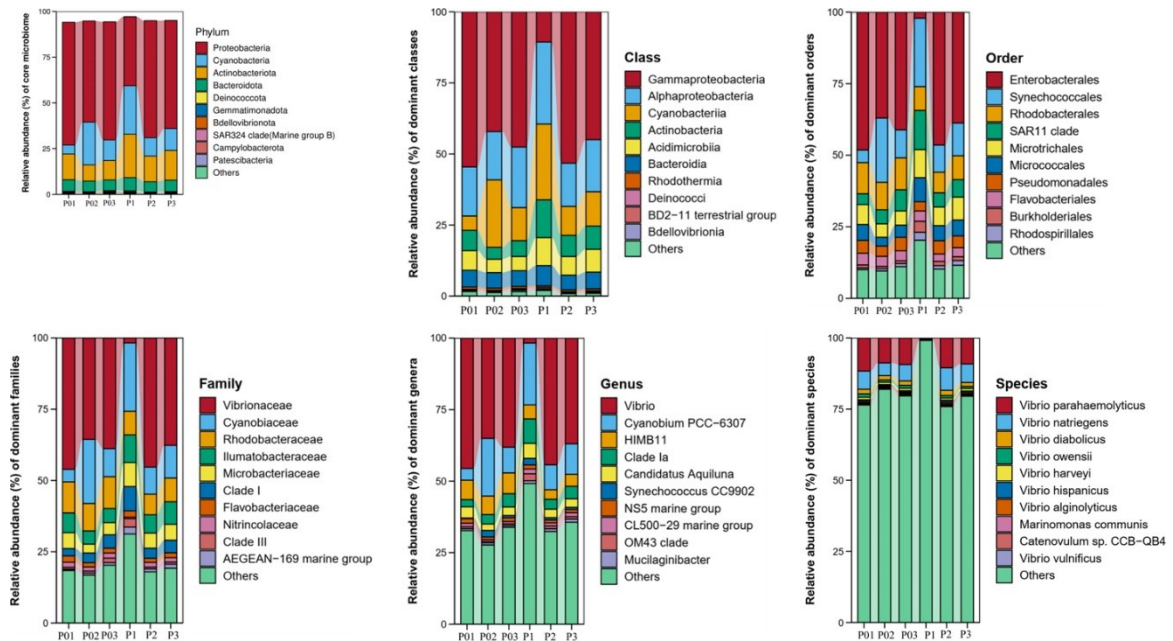
**Fig. S3.** Effect of treating time on SEM images of *V. alginolyticus* on PAO surface. 6.0 mg PAO was pre-balanced with 30 mL  $1.0 \times 10^8$  CFU/mL *V. alginolyticus* PBS solution for 24 h.



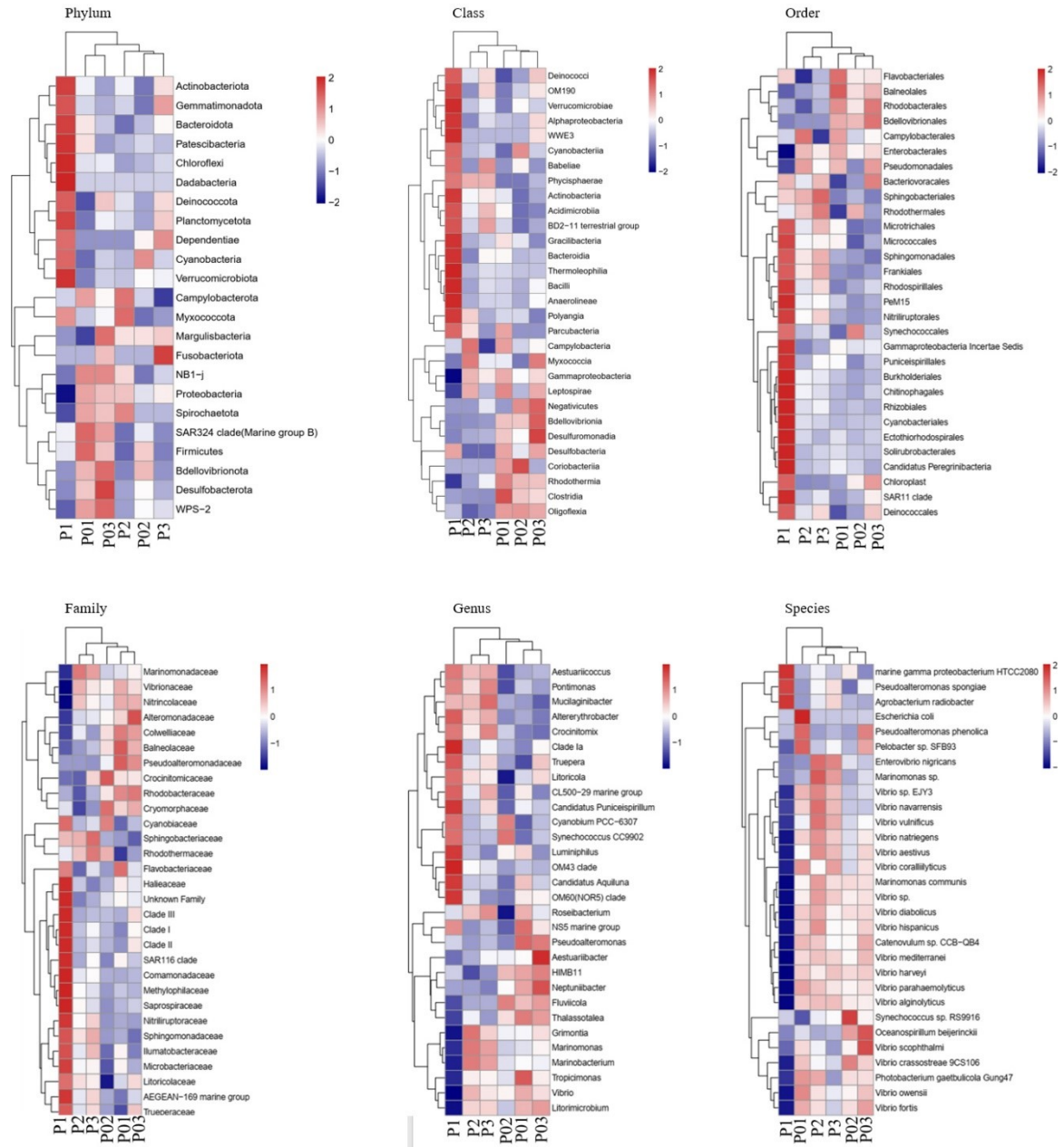
**Fig. S4.** Effect of treating time on  $K^+$  concentration and pH value in PBS solution.  $pH_{\text{initial}} = 8.2 \pm 0.1$ ,  $C[V. alginolyticus] = 1.0 \times 10^8$  CFU/mL.



**Fig. S5.** Effect of treating time on 3D-EEM spectra of *V. alginolyticus* EPS.  $C[V. alginolyticus] = 1.0 \times 10^8$  CFU/mL,  $C[U(VI)] = 2.0 \times 10^{-5}$  mol/L.



**Fig. S6.** Relative abundance of seawater before (P01-03) and after plasma treatment (P1-3). Treating time: 30 min.



**Fig. S7.** Heatmap of dominant species in seawater before (P01-03) and after plasma treatment (P1-3). Treating time: 30 min.