

Electronic supplementary materials

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Underwater minirobots actuated by hybrid driving method

Xinghong YE^{1,5}, Yang YANG^{1,3,5}, Pengcheng JIAO^{1,2}✉, Zhiguo HE^{1,2,4}✉, Lingwei LI¹

¹*Institute of Port, Coastal and Offshore Engineering, Ocean College, Zhejiang University, Zhoushan 316021, China*

²*Engineering Research Center of Oceanic Sensing Technology and Equipment of Ministry of Education, Zhejiang University, Zhoushan 316021, China*

³*Department of Biomedical Engineering (BME), National University of Singapore, Singapore 119077, Singapore*

⁴*Key Laboratory of Marine Geotechnical Engineering and Materials, Zhoushan 316021, China*

⁵*Authors contributed equally to work*

✉ Pengcheng JIAO, pjiao@zju.edu.cn

✉ Zhiguo HE, hezhihuo@zju.edu.cn

Video S1 Experimental performances of the rising mode testing (under the condition of $V_{\text{gas}} = 25 \text{ ml}$; $\Delta T = 500 \text{ ms}$).

Video S2 Experimental performances of the drifting mode testing (under the condition of $V_{\text{gas}} = 25 \text{ ml}$; $\Delta T = 500 \text{ ms}$).

Video S3 Experimental performances of the hovering mode testing (under the condition of $V_{\text{gas}} = 25 \text{ ml}$; $\Delta T = 800 \text{ ms}$).

Video S4 Simulation results of the rising mode testing (under the condition of $V_{\text{gas}} = 25 \text{ ml}$; $\Delta T = 500 \text{ ms}$).

Video S5 Simulation results of the drifting mode testing (under the condition of $V_{\text{gas}} = 25 \text{ ml}$; $\Delta T = 500 \text{ ms}$).

Video S6 Simulation results of the hovering mode testing (under the condition of $V_{\text{gas}} = 20 \text{ ml}$; $\Delta T = 800 \text{ ms}$).

Videos S1-S6 can also be found at <https://cowtransfer.com/s/b3fc8e246e8941>