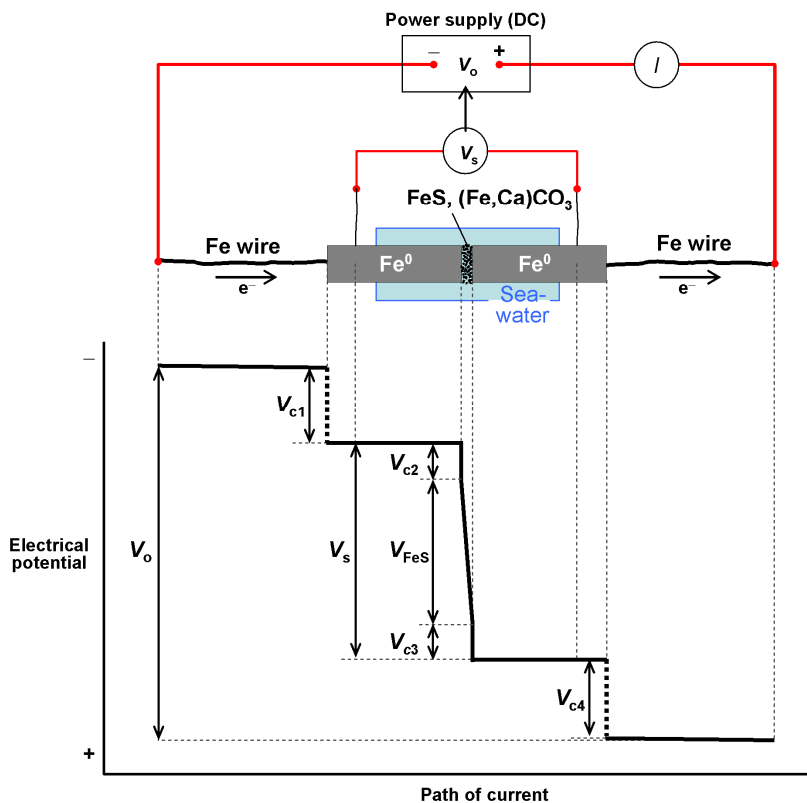


# Marine sulfate-reducing bacteria cause serious corrosion of iron under electroconductive biogenic mineral crust

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**Fig. S5.** Electro-technical scheme with approximate voltage drops of the split-coupon incubation device for conductance measurement of the biogenic crust formed on corroding iron. The device circumvents interference by the noticeable contact resistance between the iron wire and the iron coupon inside the incubated bottle (Fig. 3A). The plot in the lower part depicts the voltage drop along current flow. The outer voltage ( $V_o$ ) is supplied and adjusted such that the voltage across the split ( $V_s$ ) is kept at 0.20 V while the current ( $I$ ) is being measured. The adjusted low voltage for measurement avoids electrolysis. Measurement of  $V_s$  is carried out with a high-resistance voltmeter.  $V_{c1}$  and  $V_{c4}$  are the voltage drops due to contact resistance between the iron wire and the iron coupon (around 1  $\Omega$ ), and  $V_{c2}$  and  $V_{c3}$  the arbitrarily assumed voltage drops due to the contact resistance between iron and the sulfidic crust. Voltage drop along the iron wire and the iron coupons is negligible (resistance by two and four orders or magnitude lower, respectively, than resistance of wire-coupon contact and the crust).