

Supplementary Information

Use of Iron Powder to Obtain High Yields of Leptothrix Sheaths in Culture. *Minerals* 2015, 5, 335-345

Tomoko Suzuki ^{1,2}, **Tatsuki Kunoh** ^{1,2}, **Daisuke Nakatsuka** ^{1,2}, **Hideki Hashimoto** ^{1,2},
Katsunori Tamura ^{1,2}, **Hitoshi Kunoh** ^{1,2} and **Jun Takada** ^{1,2,*}

- ¹ Core Research for Evolutionary Science and Technology (CREST), Japan Science and Technology Agency (JST), Okayama 700-8530, Japan; E-Mails: suzukito@cc.okayama-u.ac.jp (T.S.); tkunoh06@cc.okayama-u.ac.jp (T.K.); ndnakatsuka@gmail.com (D.N.); hideki-h@cc.okayama-u.ac.jp (H.H.); ktamura@okayama-u.ac.jp (K.T.); hkunoh@cc.okayama-u.ac.jp (H.K.)
- ² Graduate School of Natural Science and Technology, Okayama University, Okayama 700-8530, Japan

* Author to whom correspondence should be addressed; E-Mail: jtakada@cc.okayama-u.ac.jp; Tel./Fax: +81-86-251-8106.

Table S1. Composition of silicon-glucose-peptone medium (SGP).

Component	Amount (g/L)	Concentration (mM)
Glucose	1.000	5.55
Soy peptone	1.000	ND
Na ₂ SiO ₃ ·9H ₂ O	0.200	0.70
CaCl ₂ ·2H ₂ O	0.044	0.30
MgSO ₄ ·7H ₂ O	0.041	0.17
Na ₂ HPO ₄ ·12H ₂ O	0.076	0.21
KH ₂ PO ₄ ·2H ₂ O	0.020	0.15
HEPES	2.383	10.00
Medium was adjusted to pH 7.0 with 0.1 N NaOH, then brought to 1 L with UPW		
ND: not determined		

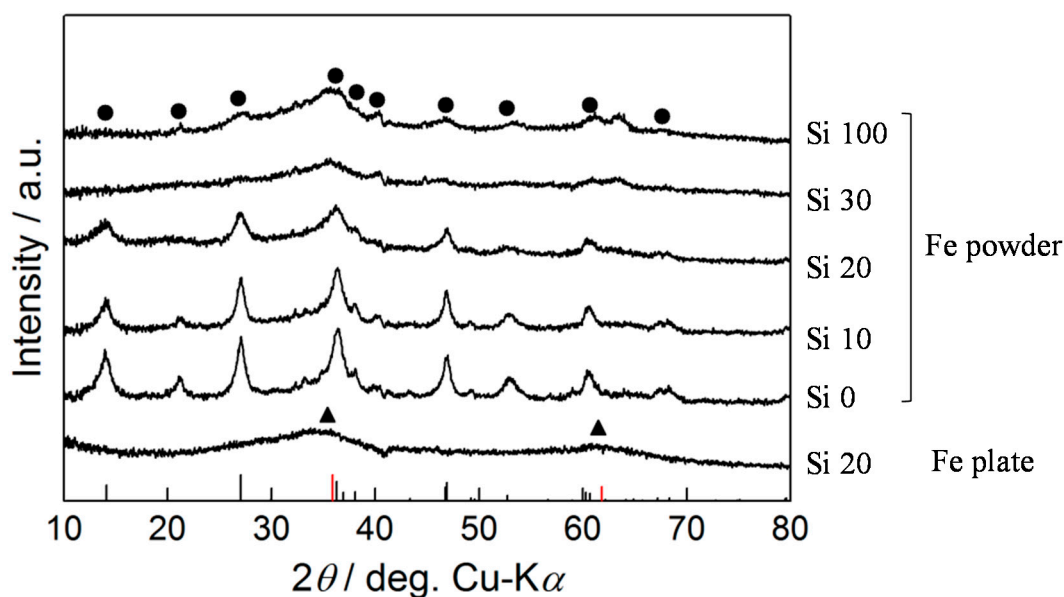


Figure S1. Crystallinity of sheaths formed in Fe powder containing media supplemented with various amounts of Si which was determined by XRD 14 days after the onset of incubation. Media were composed of GP medium (the basal SGP minus Si- and P-containing components) containing 1.4 g/flask of 150 μm Fe powder and varied concentrations of $\text{Na}_2\text{SiO}_3 \cdot 9\text{H}_2\text{O}$ (as 10, 30, or 100 $\mu\text{g/mL}$ of Si content). The regular SGP containing 20 $\mu\text{g/mL}$ of $\text{Na}_2\text{SiO}_3 \cdot 9\text{H}_2\text{O}$ (as Si content) and three Fe plates/flask or 1.4 g/flask of 150 μm Fe powder was also used for reference. Note that sheaths composed of the mixture phase of lepidocrocite and 2Fh were obtained in the Fe powder medium supplemented with 100 $\mu\text{g/mL}$ Si, suggesting that crystallinity of sheaths could be affected by the balance of Fe and Si in the medium. ● lepidocrocite peak; ▲ 2-line ferryhydrite (2Fh) peak.