

Materials List for:

# Using Flexible Gold-Titanium Reaction Cells to Simulate Pressure-Dependent Microbial Activity in the Context of Subsurface Biomining

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## Materials

Name	Company	Catalog Number	Comments
Acetone	Merck	100013	
CaN <sub>2</sub> O <sub>6</sub>	Fluka	31218	
Conax compression seal fittings	Conax Technologies	PG2-250-B-G	sealant could be selected according to temperatures in experiment
Copper paste	Caramba	691301	
Copper paste	CRC	41520	
CoSO <sub>4</sub> x7H <sub>2</sub> O	Sigma	10026-24-1	
CrKO <sub>3</sub> S <sub>2</sub> x12H <sub>2</sub> O	Roth	3535.3	
CuSO <sub>4</sub> x5H <sub>2</sub> O	Riedel de Haen	31293	
Disposable cuvettes	Sigma	z330388	
Ethanol absolute	Roth	9065.3	
FE-SEM	JEOL	model no. JSM-6330F	
Ferrozine	Aldrich	180017	
Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> x7H <sub>2</sub> O	Alfa Aesar	33316	
FeSO <sub>4</sub> x7H <sub>2</sub> O	Merck	103965	
Gold cell	Hereaus GmbH		manufactured according to dimensions supplied by customer
High-pressure reactor	PARR Instruments	model no. 4650 Series	reactors from other vendors could be used, too
High-pressure syringe pump	Teledyne ISCO	DM-100	
HCl	Roth	6331.3	
HNO <sub>3</sub>	Fluka	7006	
H <sub>3</sub> BO <sub>3</sub>	Sigma	B6768	
KCl	Sigma	P9541	
KH <sub>2</sub> PO <sub>4</sub>	Merck	104873	
L-(+)-Ascorbic acid/Vitamin C	Applichem	A1052	
Light microscope	Leica DM3000		
MgSO <sub>4</sub> x7H <sub>2</sub> O	Merck	105886	
(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	Sigma	A4418	
NaMoO <sub>4</sub> x2H <sub>2</sub> O	Sigma	331058	
NaO <sub>3</sub> Sex5H <sub>2</sub> O	Sigma	00163	
NaO <sub>3</sub> V	Sigma	590088	
Na <sub>2</sub> SO <sub>4</sub>	Merck	106649	

Na <sub>2</sub> WO <sub>4</sub> ·x2H <sub>2</sub> O	Sigma	72069	
NiSO <sub>4</sub> ·x6H <sub>2</sub> O	Sigma	31483	
Omnifix Luer	BRAUN	4616057V	
pH meter	Mettler Toledo		
Redox potential meter	WTW	ORP portable meter	
Safe-Lock Tubes, 2 mL	Eppendorf	0030120094	
Serum bottle	Sigma	33110-U	
Spectrophotometer	Thermo Scientific	model no. GENESYS 10S	
Sterican Hypodermic needle	BRAUN	4657519	
Stoppers	Sigma	27234	
Sulfur powder	Roth	9304	
Thoma Chamber	Hecht-Assistent		
Titanium parts of reaction cell	Titan-Halbzeug GmbH	121-238	manufactured by workshop at BGR according to dimensions supplied from Titanium grade 2 rods from Titan-Halbzeug GmbH
Titanium valve	Nova Swiss Technologies	ND-5002	
Whatman membrane filters nylon	Sigma	WHA7402004	
ZnSO <sub>4</sub> ·x7H <sub>2</sub> O	Sigma	Z4750	