BIOMINING

Miracles can be used for mining and recycling due to their sensitivity and affinity for metal ions. We want to bring these advantages up to space.

We're creating a chimeric flagellar system with metal-binding sites that allows the easy extraction and collection of minerals.

First we cut out the sequence in the native FliC for the disposable.

Multiple cloning sites allow us to design and insert sequences.

We've successfully inserted the copper binding sites Hyp41, Hyp82, and HT1C.

GRAPH 1: nrdP-promoted fluorescence suggests cell cycle dependence

OD and fluorescence were taken from a cell-synchronized culture. The peaks show that fluorescence increases with fusion, and thus the end promoter is cell cycle dependent. We expect these peaks to correlate with DNA replication.

GRAPH 2: polAP-promoted fluorescence suggests DNA replication dependence

OD and fluorescence were taken from a cell-synchronized culture. The peaks are more periodic than the nrdP-promoted fluorescence. We expect these peaks to correlate with DNA replication.