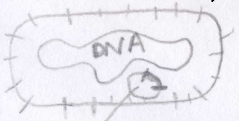
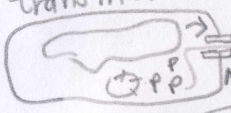
From anyones -80°c freezer stock →

Free, Unpatented Bacterium



+



Bacterium expresses pyrrole's dedicated transmembrane receptor (& pyrrole)

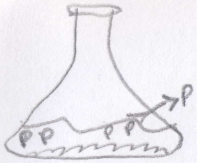
=(pyrrole) transport receptor/channel

And RNA polymerase & Ribosomal machinery to express pyrrole/(conductive) polymer in cell and passively actively, is transported to membrane & exits cell (secretion)

plasmid (transformed in microbe) with pyrrole synthase gene + pyrrole transport receptor for (cell wall)

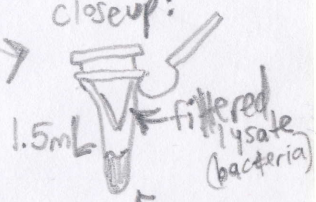
Grow Bacteria w/media

Incubate & Shake



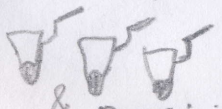
settled Floor with ^bacteria or if in shaker, all lysates/supernatant in medium; either way, should be filtered during centrifugation step using spin columns, such as .2μm nanoporous membrane (200nm)

closeup:



pyrrole! (battery juice)

Combine Lots of juice:



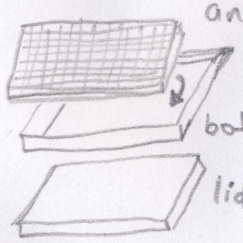
& pour juice

Battery layer/ Sheet (per sheet #sheets per battery? ___. 60% ≈ Density of LiFePO4

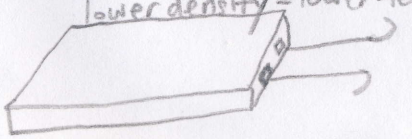
Prepare for Polymerization step:

Polymerization (by organic synthesis? or other method)

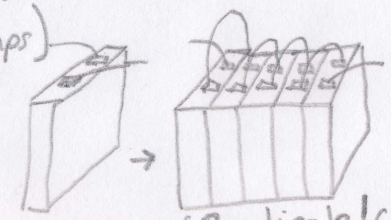
After Polymerization, Seal battery (add cathodes & anodes)



Use RepRap to print w/ PLA or other shell plastic as seal cover (needs to handle battery temps) lower density = lower temps



[stack in deck:]



(Replicate! Cheaply!)

Amps ↑ cost ↓

KWh ↑