Technology Transfer Internship at MIT: Marketing and More

Robyn Bunch
Hanna Chastain, Stephanie Head, William Howland, Jared Lipsey
Sign up for upcoming sessions!

**Tuesday, January 10**
Basics of Obtaining a Patent (Virtual, MIT Only)
1:00pm-2:30pm

**Thursday, January 12**
The Engine: Supporting “Tough Tech” Startups and Making Investment Decisions (Virtual)
3:00pm-4:30pm

**Friday, January 13**
Introduction to Policies and Practices Developing Industry Sponsored Research (ISRA) (Virtual, MIT ONLY)
1:00pm-2:30pm
INTRODUCTIONS

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Manages daily marketing and communication efforts for the TLO. Coordinates social media updates and content.
LET'S BUILD SOME CONTEXT...

What is all this fuss about patents?

What is tech transfer?

What specific functions does tech transfer play at Universities such as MIT?
LET'S BUILD SOME CONTEXT...

Three types of Intellectual Property
- Copyrights
- Patents
  - Design & Utility*
- Trade Secrets

"New, novel, & nonobvious" requirement for patenting.
...seems simple, right?
LET'S BUILD SOME CONTEXT...

How does one file their application with the USPTO?

How do universities offset companies with more resources?
What is Technology Transfer?

What is Technology Transfer at MIT?

How Do We Handle the Large Number of Disclosures?

...By Strategically
- Evaluating;
- Protecting; and
- Licensing Technology

The process of technology transfer is summarized in the steps and diagram that follow. Note that these steps can vary in sequence and often occur simultaneously.
WHAT WILL I BE DOING AS A MARKETING INTERN?

What is a tech brief?
Let's Give an Example…

"Membrane-Less" Flow Battery

Applications
Flow batteries (also known as flow cells) are a type of large-scale energy storage that relies on the exchange of electrons in different electrolytes. The current technology provides a means of lowering the cost of flow batteries, as well as increasing their durability, by removing the need for an expensive membrane in their design. The technology described here can be applied to various flow battery chemistries, such as hydrogen-bromine, zinc-borine, lithium-oxygen and lithium-ion.

Problem Addressed
To enable the electrical reaction in a flow battery, the electrolytes must be separated, while still allowing for ions to transfer between them. This is typically done using an ion-perm-selective membrane, which only allows certain types of ions to pass through the membrane in specific directions. This membrane is costly and requires frequent replacement, driving the overall cost of the flow battery beyond commercial viability for large-scale energy storage.

Technology
The current technology separates electrolytes by leveraging laminar flow, rather than using a typical ion-perm-selective membrane. This design makes it a "membrane-less" flow battery, and allows the current technology to be far more durable than existing solutions.

Different electrolytes are separated using a porous dispersion blocker. The blocker permits the flow of ions, but reduces convective mixing — thus ensuring separated, laminar flow of the different electrolytes. The structure of the porous channels through which the electrolytes flow can also be varied, helping to control their degree of dispersion. This has the added benefit of allowing electrolytes to be pumped through at different pressures and even different directions, which can optimize power output and utilization of the different reactants.

Advantages
- Eliminates requirement for a costly ion-perm-selective membrane in a flow battery
- Able to maintain a constant charging and discharging current of 0.2 A/cm², thus retaining high voltage efficiency

What is this technology for?
Who should be interested?

In what ways are prior technologies lacking?

How does the new technology developed at MIT work?
How does it address weaknesses of existing technology?

tl;dr—what is this going to do for me?
Session Questions

What are our backgrounds?
Session Questions

What were alternate career paths, and how did you transition into tech transfer?
Session Questions

How has the MIT TLO supported you in achieving your personal and professional goals?
Session Questions

How do the interns stay connected?
Session Questions

Ice Breaker

What is your favorite de-stress activity?
Session Questions

What skills are we learning?
Q&A

• Post any questions you have in the chat!
Sign up for upcoming sessions!