Technology Transfer

What you need to know about protecting patent rights

Things You Need to Know to Protect Your Invention

Lab Notebook

-establishes date and details of invention

Record of Invention

-reports invention to Tech Transfer for patenting assessment

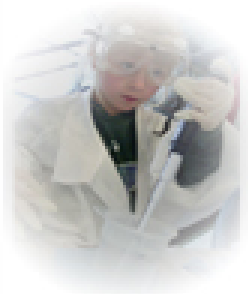
Lab Notebook Rules

- Use a bound notebook with consecutively numbered pages
- Date entries and identify subject matter
- Record ideas and results immediately *in ink*
- Include and explain relevant formula, sketches, photos, diagrams, etc.
- Do not change entries – make new entry to correct
- Draw a line through blank spaces
- Periodically (*e.g.,* once per week) have a person who understands the technology read and sign each page with:

"*Disclosed to and understood by* _____"

Lab Notebooks with these may not be useful in establishing the date of invention

- Loose leaf pages
- Pages not printed with numbers
- Written in pencil
- Entries not dated
- Erased or whited out entries
- No witness signatures



Record of Invention

- Fill out all relevant fields
- A manuscript (if available) can be attached
- Submit within 6 months of conceiving invention and definitely **before** a public disclosure (*e.g.,* in a journal or at a conference) *See Addendum*
- LBNL is obligated to report all inventions to DOE

The Record of Invention Form is available at:

http://www.lbl.gov/Workplace/patent/

LBNL File No.

RECORD OF INVENTION FORM

LAWRENCE BERKELEY NATIONAL LABORATORY

Date Received

This invention was made in the course of or under prime contract No. DE-AC02-05CH11231 between the U.S. Department of Energy and the University of California. This Form is prepared for the Technology Transfer and Intellectual Property Management - Patent Group at LBNL and the U.S. Department of Energy.

Instructions:

- Please feel free to save a copy of this form, add your information electronically, then print the form and sign it.
- Inter-Office Mail the completed and signed Form to LBNL Patent Group, Mail Stop 90B0104
- Telephone ext. 7058 if you have questions regarding this Form.

Title of Invention:

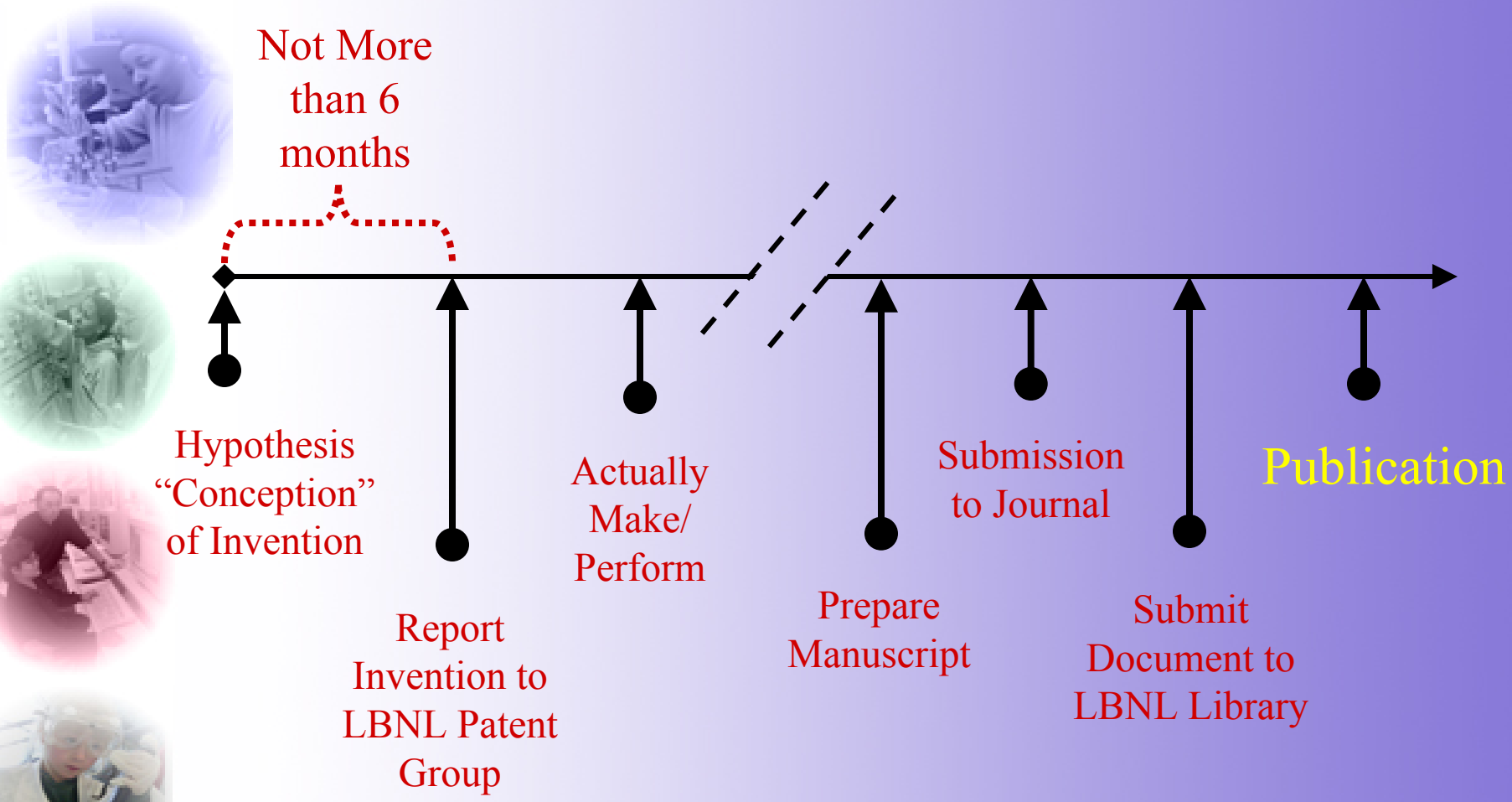
Contributor(s):

Please list names of those who contributed to the inventive thought and to the final result of the invention.

If a patent application is filed, the Patent Department will make a legal determination of inventorship. ***Note: the legal standards for inventorship are different than the standards used for authorship.***

Full Name	Title/Position	Employer	Division	Phone No.	Mail Stop

Ideal Timeline of Invention and Disclosure



What is in it for you?

- Disclosing your invention to Tech Transfer is a first step in meeting your LBNL IP obligations;
  - As a requirement of employment, inventions must be reported & assigned to UC Regents
- When a patent is licensed, the revenue is applied first to reimburse patent costs and then the net income is distributed:
  - 35% to inventors
  - 15% to inventors' division
  - 50% to LBNL
- Inventor distributions for FY2007 total about $1M

Addendum

WHAT YOU NEED TO KNOW ABOUT THE IMPACT OF PUBLIC DISCLOSURE ON PATENT PROTECTION

Disclosing an invention before a patent application is filed can result in loss of patent rights.

By law, a patent application must be filed before the invention is publicly disclosed as established by the laws of the country in which patent protection is sought. Novelty, a minimum requirement for a patent, is lost after the invention is publicly disclosed.

> In most foreign countries, no patent application can be filed after the actual day on which the first public disclosure of the invention occurs.
>
> In the United States, there is a one year grace period for filing a patent application after the first public disclosure.

Virtually *anything* can constitute a printed publication for patent purposes.

Under United States law, a public disclosure occurs when an invention is described in a publicly-available "printed" publication anywhere in the world. Some examples are:

a printed publication	a thesis or dissertation on a library shelf
a poster presentation	a proposal to a federal agency
a report to a research sponsor	a television or radio interview
a book proposal	an oral presentation to an audience that includes non-LBNL people
an abstract submitted for a professional conference	a newspaper article written by a reporter who attended an oral presentation

The public disclosure must be "enabling" to impact patent rights.

In order to impact patent rights, the public disclosure must contain a description of the invention that is detailed enough to enable a person "skilled in the art" to duplicate or use it, or would make the invention obvious to such a person. It is best to be conservative in assessing enablement.

Tips to avoid public disclosure of your invention:

- publish only broad generalities, carefully avoiding the disclosure of detailed information that might be "enabling," such as

description of structures	gene names or sequences
exact compositions	sources of origin
graphs or figures that show the novel features of the invention	ultimate use of the invention as part of a larger or more complex novel device

- doesn't work for preserving rights if the broad generalities are the basis for the invention (*e.g.*, using broken silicon wafers to make knives)

How to make public disclosure that is enabling and still avoid loss of patent rights:

- notify Patent Group a few months prior to publication so a patent application can be filed if warranted (see http://www.lbl.gov/Workplace/patent/)

Addendum

Abstract Examples

"Helical microtubules of graphitic carbon" Sumio Iijima
Nature 354, 56 - 58 (07 November 1991)

Enabling disclosure
The synthesis of molecular carbon structures in the form of C60 and other fullerenes has stimulated intense interest in the structures accessible to graphitic carbon sheets. Here I report the preparation of a new type of finite carbon structure consisting of needle-like tubes. Produced using an arc-discharge evaporation method similar to that used for fullerene synthesis, the needles grow at the negative end of the electrode used for the arc discharge. Electron microscopy reveals that each needle comprises coaxial tubes of graphitic sheets, ranging in number from 2 up to about 50. On each tube the carbon-atom hexagons are arranged in a helical fashion about the needle axis. The helical pitch varies from needle to needle and from tube to tube within a single needle. It appears that this helical structure may aid the growth process. The formation of these needles, ranging from a few to a few tens of nanometres in diameter, suggests that engineering of carbon structures should be possible on scales considerably greater than those relevant to the fullerenes.

Non-enabling disclosure
New linear structures have been made from molecular carbon. Electron microscopy reveals the details of the structures, which are related to fullerenes and can be formed with varying diameters from a few to a few tens of nanometers using simple growth methods. The formation of these structures suggests that engineering of carbon structures should be possible on scales considerably greater than those relevant to fullerenes.

"Atomic force microscope and method for imaging surfaces with atomic resolution" Gerd Bennig
United States Patent 4,724,318 issued February 9, 1988

Enabling disclosure
A sharp point is brought so close to the surface of a sample to be investigated that the forces occurring between the atoms at the apex of the point and those at the surface cause a spring-like cantilever to deflect. The cantilever forms one electrode of a tunneling microscope, the other electrode being a sharp tip. The deflection of the cantilever provokes a variation of the tunnel current, and that variation is used to generate a correction signal which can be employed to control the distance between said point and the sample, in order, for example, to maintain the force between them constant as the point is scanned across the surface of the sample by means of an xyz-drive. In certain modes of operation, either the sample or the cantilever may be excited to oscillate in z-direction. If the oscillation is at the resonance frequency of the cantilever, the resolution is enhanced.

Non-enabling disclosure
A sharp point close to the surface of a sample undergoes deflections as it is scanned across the surface by means of an xyz-drive. These deflections can be measured and used to generate a topographical image of the surface. This imaging method does not require high energies or preparatory metal coating and is not limited to samples that are electrical conductors. The images produced by this method have a resolution better than 100 nanometers.