USER GUIDE FOR GR-RESQ APP

Who is a *User*?
User refers to any user of the web application. *Users* can do the following:

1) can submit their experiments and set visibility and ownership of the same.
2) can be part of different experiment groups and can submit experiments only visible to the group.
3) can query for experiments based on substrate, properties, environmental conditions, author, and furnace.
4) can view public experiments, ones submitted by themselves, or those made visible to the groups they are part of.
5) can view their profile information like name, institution, email, and password.

Who is an *Author*?

- *Author* refers to the author of the experiment.
- All *Users* have an *Author* profile created when they sign up.
- If a *User* is deleted, they remain as an *Author* of the experiments that they submitted. Their *Author* profile is not removed.
- Any *User* can select an *Author* profile while submitting experiments and can submit experiment on the behalf of other *Authors*. For example, A signed up as *User* and submitted EXP-EA and EXP-EB. A was then removed. If any other *User* in A's group wants to submit A's experiments, they can select A as an *Author* while submitting the experiment. A loses access to the web tool when the *User* profile is deleted. A, however, remains in *Author* database.

Who is the *Admin*?

- *Admin* refers to the person who has access to all experiments and user data and manages the tool. Only *Admin* has the privilege to create, read, update and delete any data.

What does a *Group* mean?

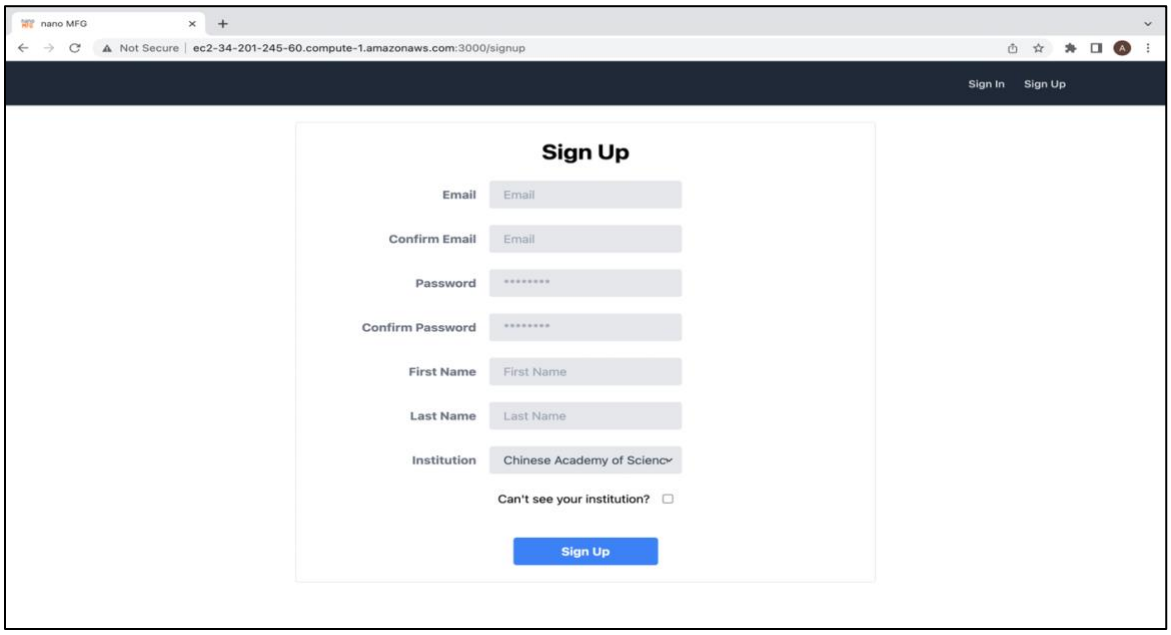
- A *Group* enables its members to share their data.
- *Group Moderator*: Has the privilege to update/delete experiments in their group and modify permissions of the members.
- *Group Member*: Can access the experiments submitted by other members in the group. For example, A, B, C belong to GRP-ONE. They can see each other's experiments that are made visible to their *Group*.

You need to complete the below steps to sign up as a new *User*. After signing up, please contact the admin/group manager to be added to group/s.

https://gresq.graphene.illinois.edu

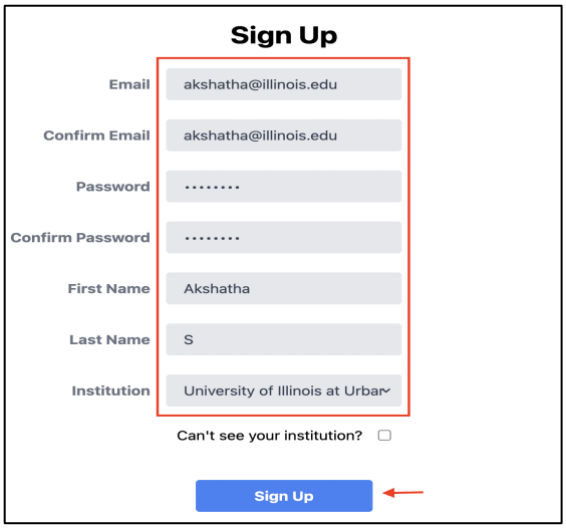
I. Sign Up As A New User

Figure 1 Sign Up Page



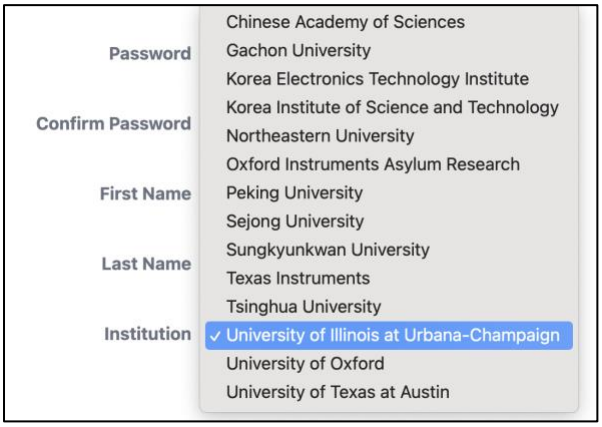
Enter your details: **university/institution email, password, first name, last name** and select your **institution** from the dropdown menu.

Figure 2 Enter New User Details



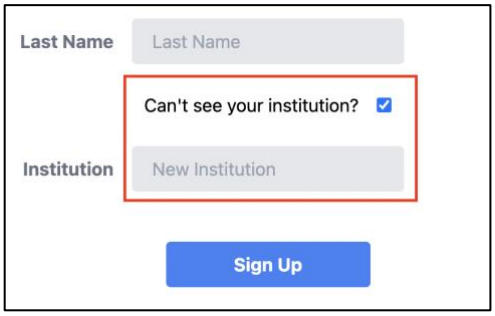
Note*:* Password must be minimum 8 characters with at least one uppercase letter, one lowercase letter, one digit and one special character.

Figure 3 Dropdown to Select Institution



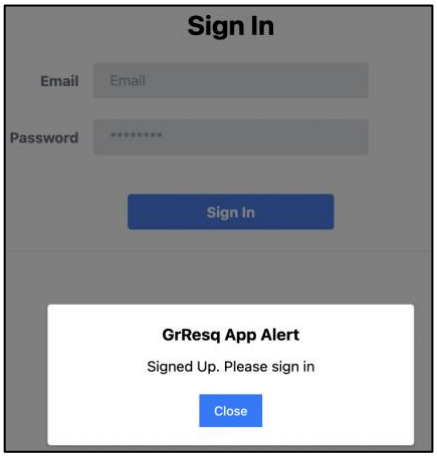
If you cannot see your institution, select the checkbox, and enter your institution name.

Figure 4 Enter New Institution



On successful registration of new user, you will see below alert box.

Figure 5 Sign Up Successful



Sign up will fail if the email id is already registered or the password does not match the criteria. If the sign up fails for any other reason, please refresh and try again.

II. Sign In for Existing Users

Enter your username, password and sign in to query/submit experiments.

Figure 6 Sign In

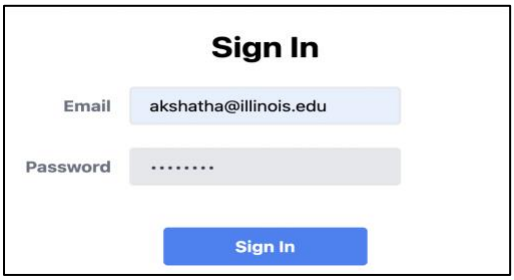
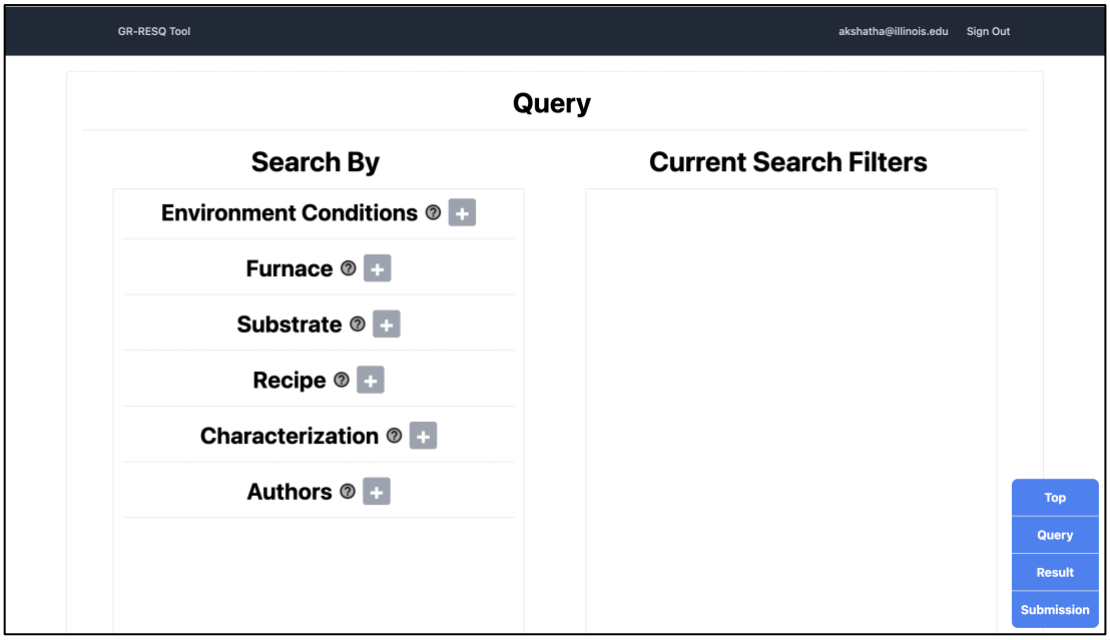
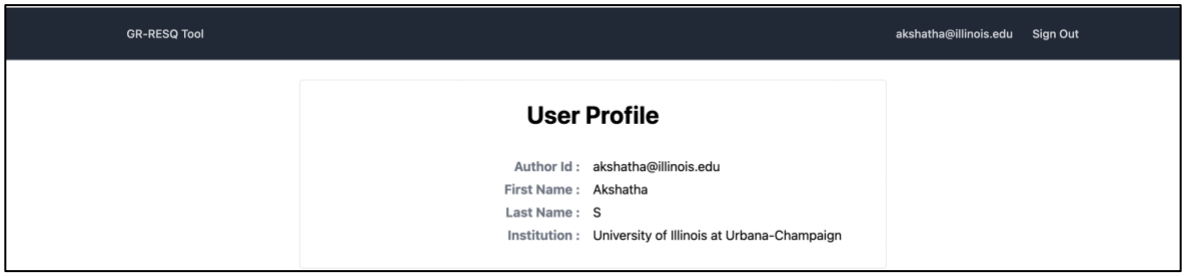


Figure 7 Landing Page after sign in



When you click on your email id, you can view your profile. Your email id is your author id.

Figure 8 User Profile Page

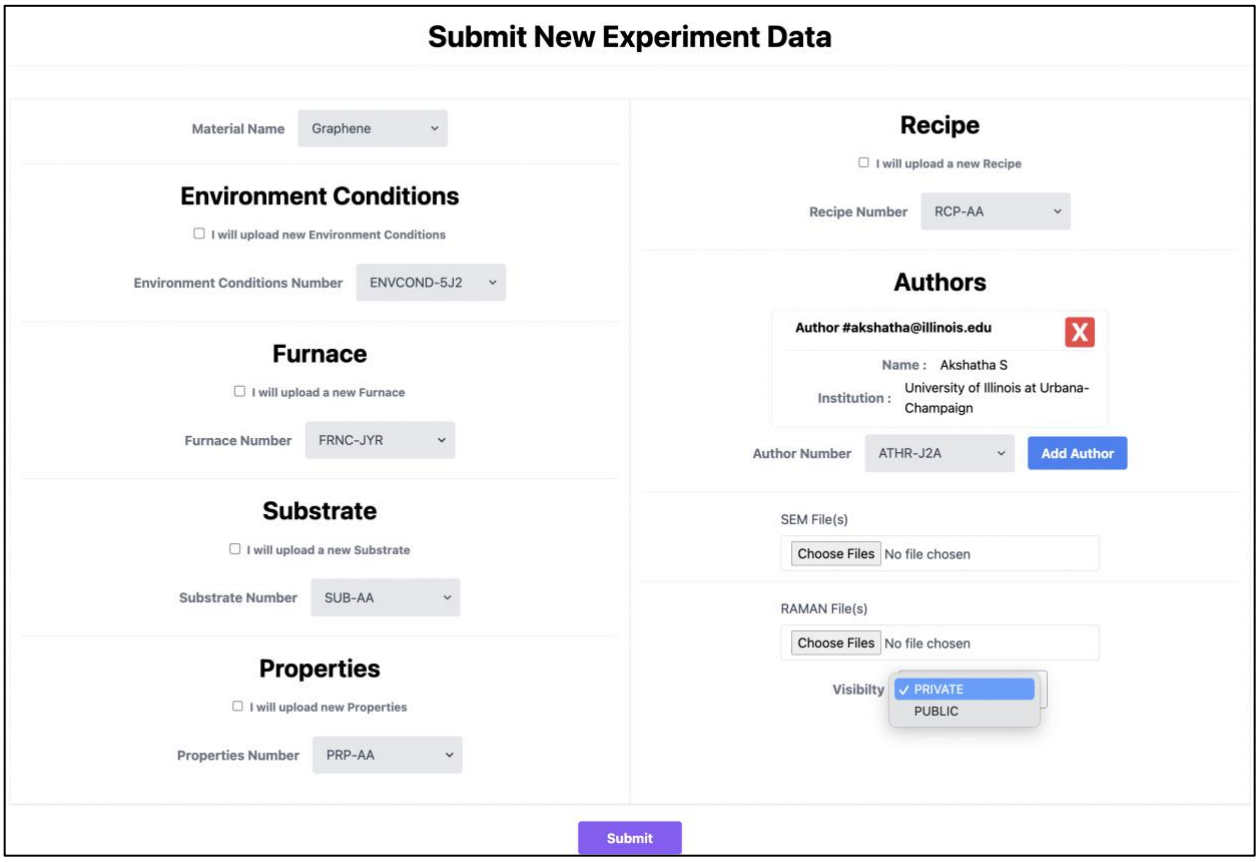


Note: Refreshing the page after signing in will automatically sign out. DO NOT REFRESH.

III. Submitting Experiment

After sign in, you can either click on "**submission"** at the bottom right corner or scroll down.

Figure 9 Submitting new experiment



If a user does not belong to any group, they can set visibility of experiment to be private (only them) or public (any user can query the experiment). They cannot set the owner of the experiment.

Once the user is part of one/more groups, they can select the group they want to submit the experiment to as the owner. They can set visibility to private/public/group (visible to members of their group only).

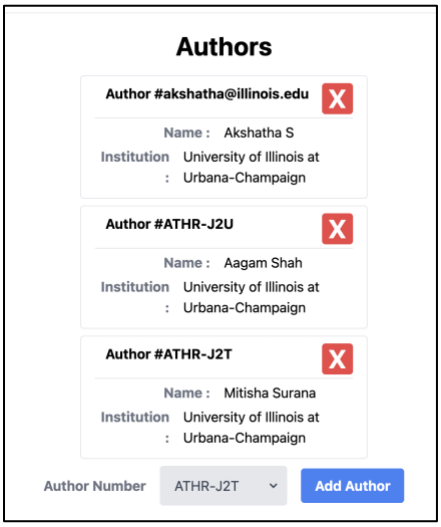
Figure 10 Select ownership and visibility

Select pre-existing experimental/recipe parameters from the dropdowns or upload new ones by selecting the check box.

Upload Raman and Scanning Electron Microscopy (SEM) files related to the experiment.

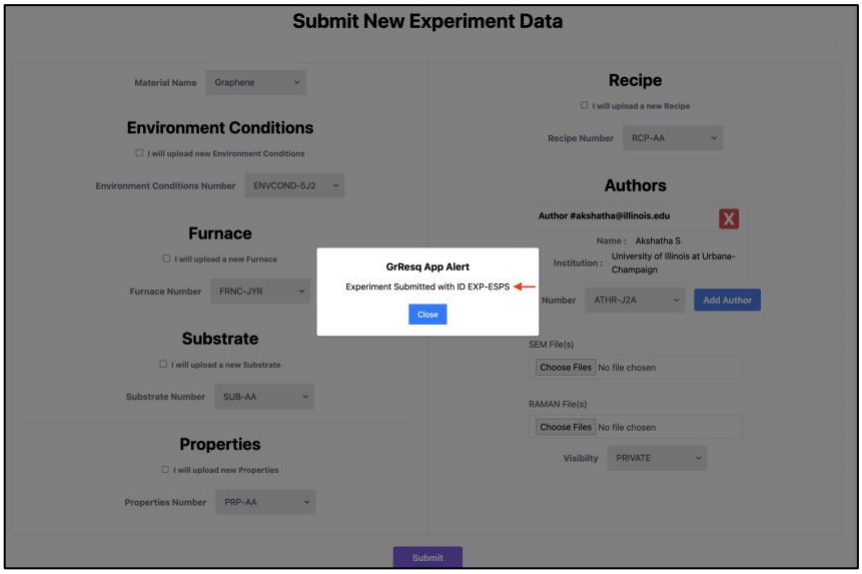
You can add multiple authors to the experiment.
Select author id (author's email) from the dropdown and click on Add Author.
Click on the red "X" if you want to remove author from your experiment.

Figure 11 Adding multiple authors while submitting the experiment



After successful submission, you can note down the experiment id for future reference.

Figure 12 Experiment Submission Successful

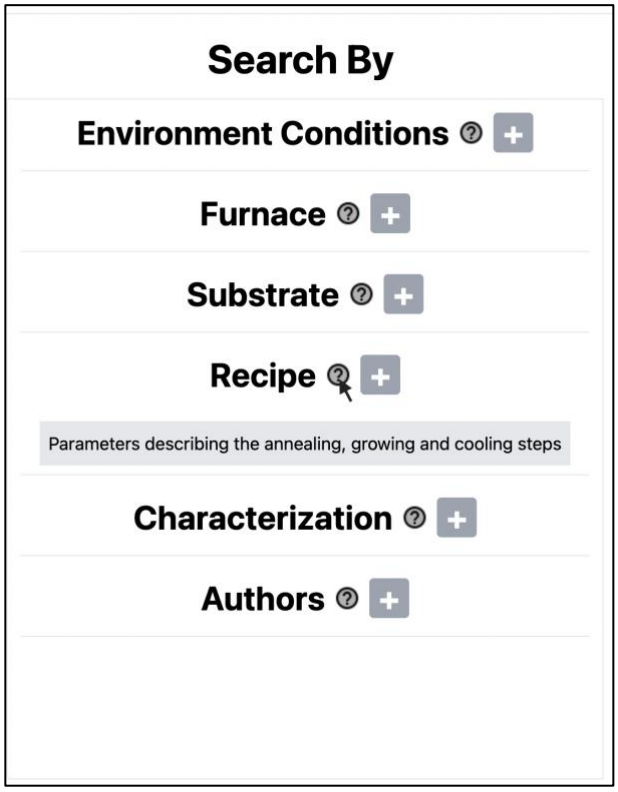


IV. Querying Experiments

Note: You will be able to see experiments submitted by you, those which are public and those submitted by members of any group that you are a part of.

You can view a one-line description of the parameters in each filter section by moving the mouse pointer on question mark icon.

Figure 13 Search Filters



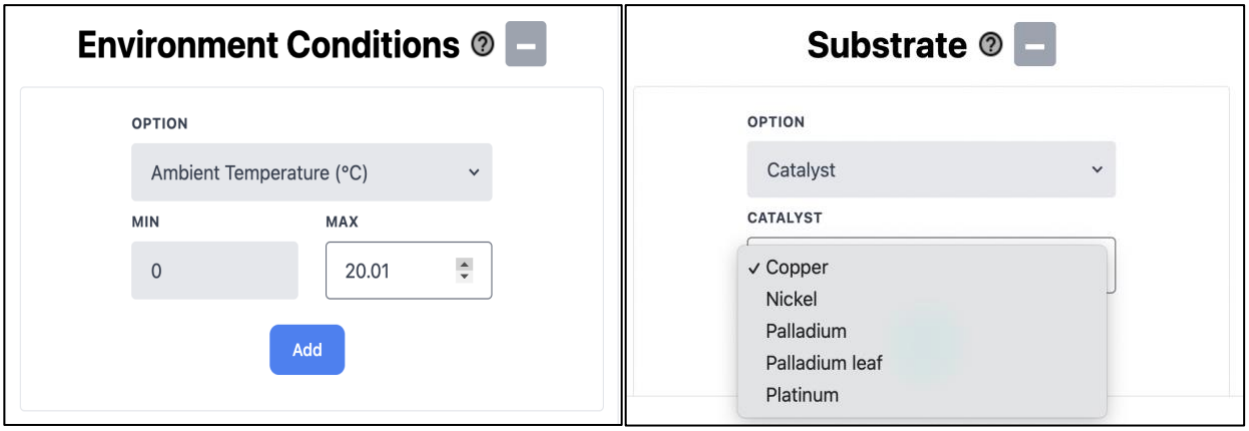
You can click on the + (plus) icon to expand the search parameter.
Select the parameter from dropdown and select its value using min-max or dropdown. In min-max, using the arrows, you can adjust the number with 0.01 precision. Otherwise, you can clear the value and enter on your own.

Click Add to add the filter to current search filter.

You can add multiple filters.

If a filter is already added, it will not let you add another filter for the same parameter again.
Click on red “X” of a filter under “current search filters” if you want to remove a filter.

Figure 14 Search Parameters



You can type author name or institution in the provided text box. As you type each letter, the tool will filter out authors displayed to you. Click on the green + (plus) icon to add the author to current search filter.

Figure 15 Search by Author

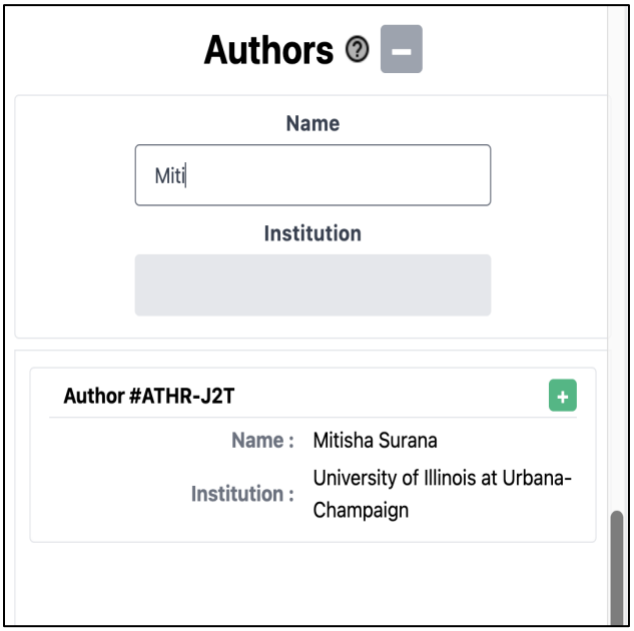
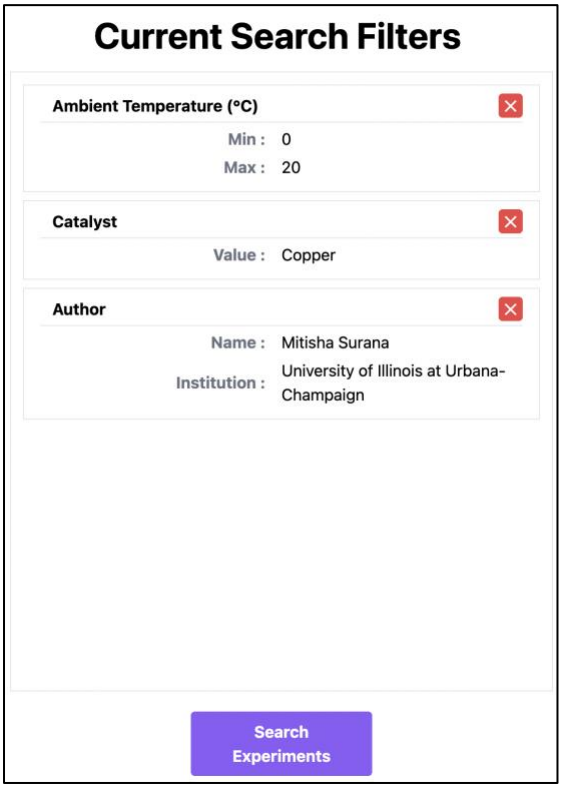


Figure 16 Search Filters



Review added filters and click on Search Experiments. Then click on Go to Results to view.

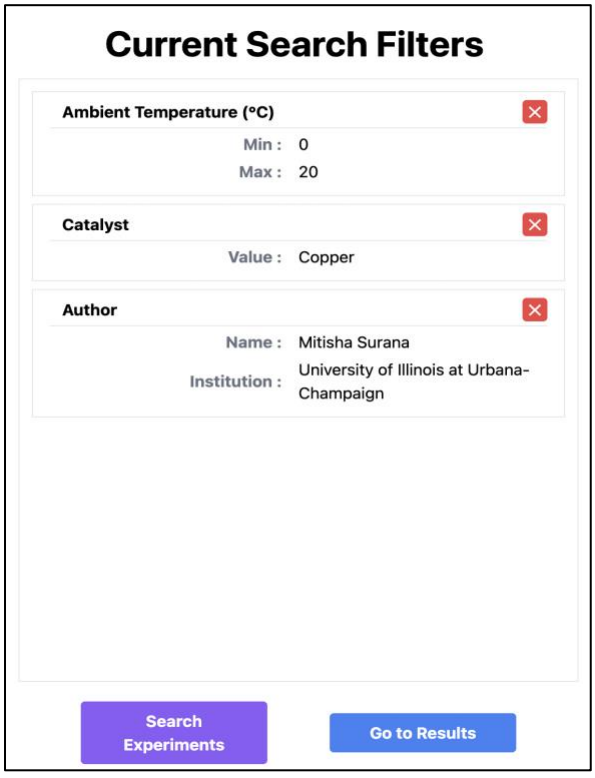


Figure 17 Query Result

Query Result

EXPERIMENT ID	FURNACE ID	SUBSTRATE ID	NO. OF LAYERS	GROWTH COVERAGE (%)	AUTHOR	CARBON SOURCE	AMBIENT TEMPERATURE (°C)	CATALYST
EXP-CV	FRNC-JYY	3c71fc79-62c1-4176-a021-0af57c825cc3			Mitisha Surana	CH4	10	Copper
EXP-DP	FRNC-JYZ	05227128-cb27-497d-b6b5-ffdbc925ad68			Mitisha Surana	CH4	10	Copper
EXP-DS	FRNC-JYZ	05227128-cb27-497d-b6b5-ffdbc925ad68			Mitisha Surana	CH4	10	Copper
EXP-DT	FRNC-JYZ	05227128-cb27-497d-b6b5-ffdbc925ad68			Mitisha Surana	CH4	10	Copper
EXP-J2J	FRNC-JYZ	05227128-cb27-497d-b6b5-ffdbc925ad68			Mitisha Surana	CH4	10	Copper
EXP-J2U	FRNC-JYZ	05227128-cb27-497d-b6b5-ffdbc925ad68			Mitisha Surana	CH4	10	Copper

You can click on the experiment id (blue hyperlink) to view the experiment in detail.

Figure 18 Experiment Detail Page

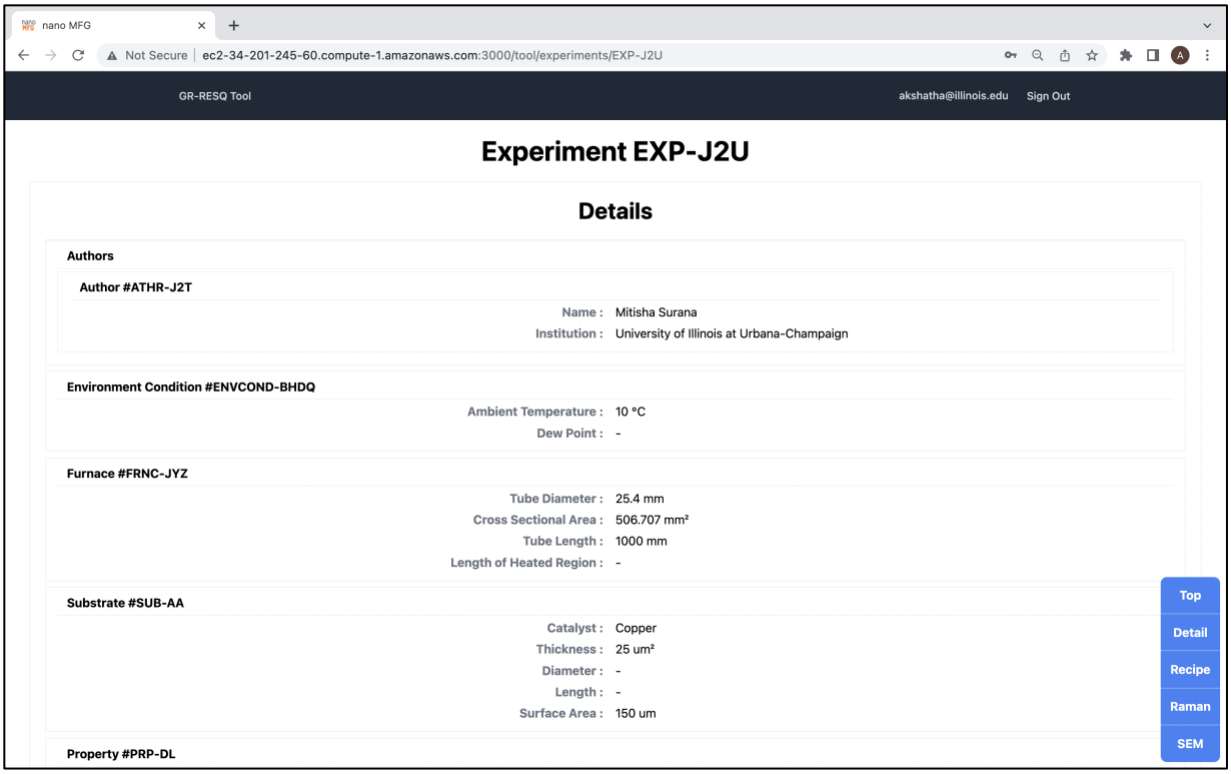
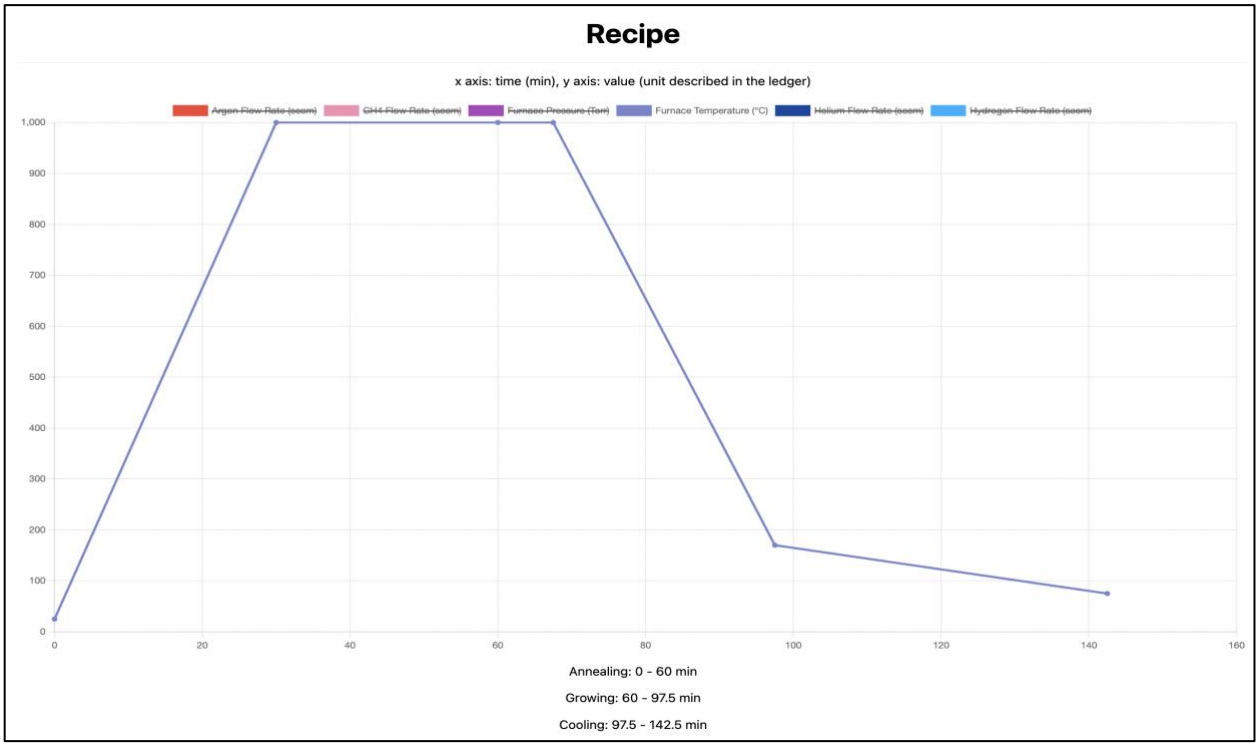


Figure 19 Graph



You can click on the strikethrough options to toggle the view of different data on the graph.

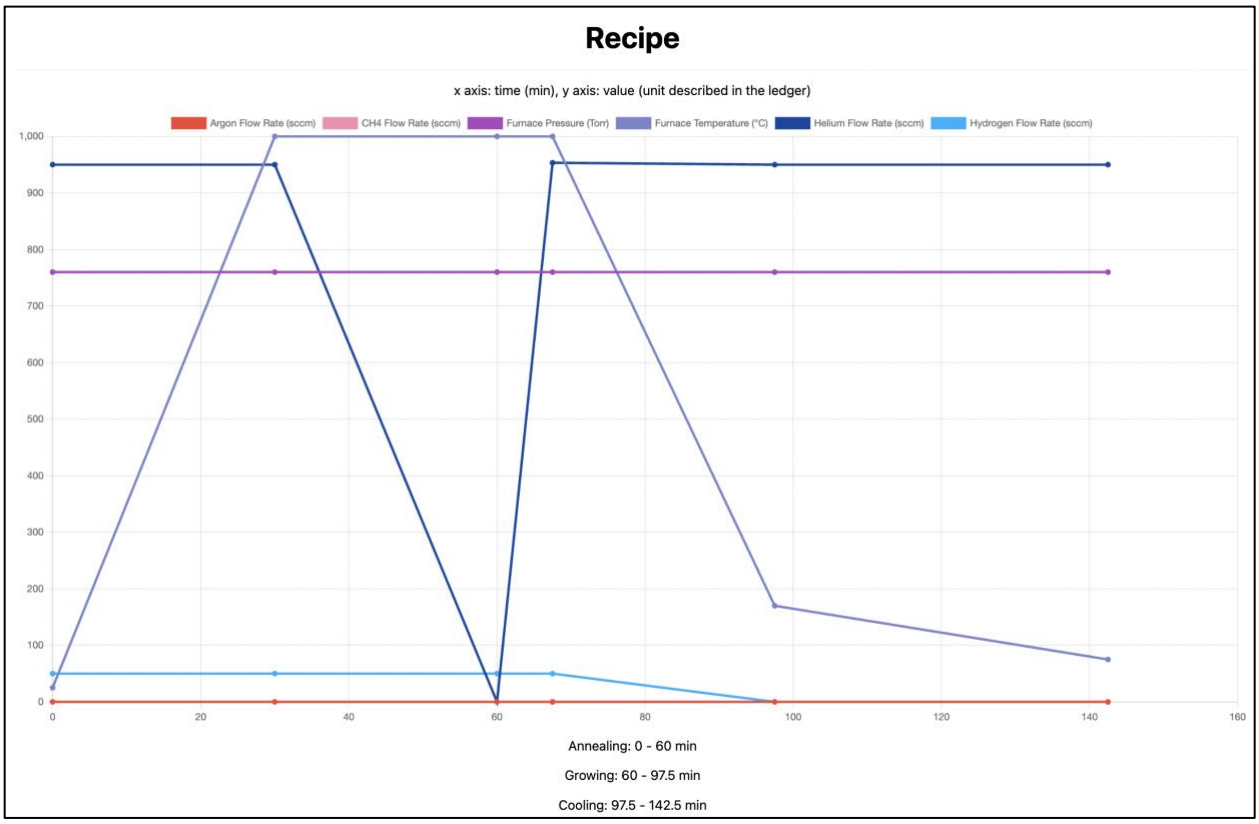


Figure 20 Raman Data

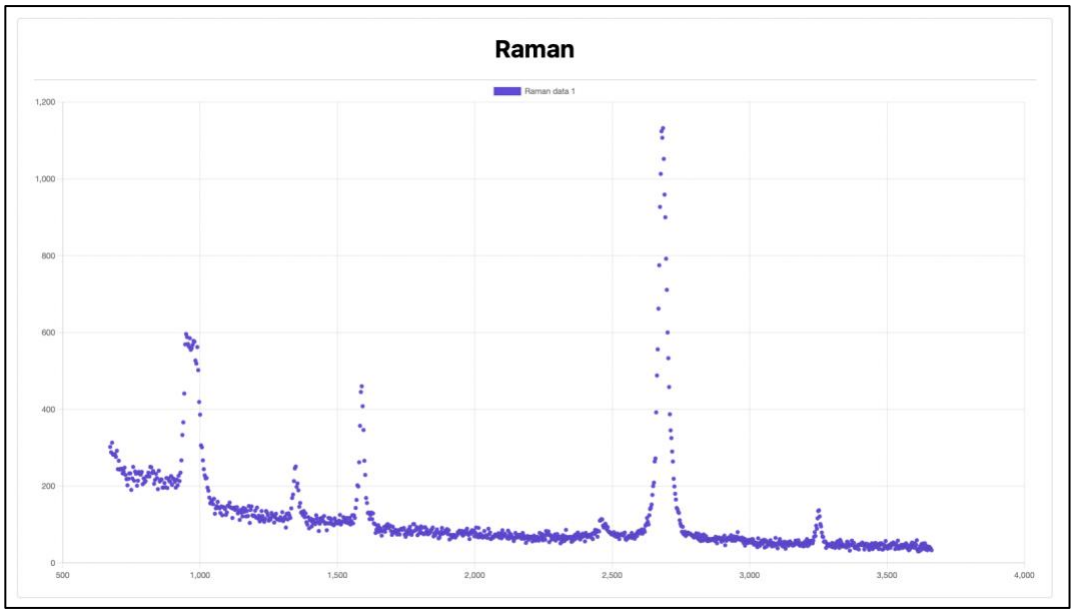


Figure 21 SEM Data